

ALUMINUM CORP OF CHINA LTD  
Form 20-F  
April 25, 2013

As filed with Securities and Exchange Commission on April 25, 2013

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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, 2012

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)

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Xiong Weiping

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

(86) 10 8229 8103

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

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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, pursuant to the requirements of the Securities and Exchange Commission	

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)

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Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of December 31, 2012:

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 [X]

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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 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 China 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, investment and acquisition 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 - D. 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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## 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;

"AUD"

or "**Australian dollars**" refers to the lawful currency of the Commonwealth of Australia;

"Baotou Aluminum"

refers to Baotou Aluminum Company Limited, 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;

"Board"

refers to our board of directors;

"Chalco Energy"

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

"Chalco Hong Kong"

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

"Chalco Iron Ore"

refers to Chalco Iron Ore Holding Limited, 65% of the equity interest of which is owned by us;

"Chalco Liupanshui"

refer to Chalco Liupanshui Hengtaihe Mining Co., Ltd., 49% of the equity interest of which is owned by us;

"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, 93.30% 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 Trading"

or "**CIT**" refers to China Aluminum International Trading Co., Ltd., our wholly-owned subsidiary established under PRC Law ;

"Chalco Xing Xian"

refers to the construction of Bayer process production system and ancillary facilities at Xing Xian, Lvliang City of Shanxi Province with designed capacity of 800,000 tonnes of metallurgical grade alumina per year;

"China"



and the "**PRC**" refers 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 Aluminum Ningxia"

refers to China Aluminum Ningxia Energy Group Co., Ltd. (formerly Ningxia Electric Power Group Co., Ltd.), 70.82% of the equity interest has been owned by us since January 23, 2013;

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"**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;

"Chinalco Finance"

refers Chinalco Finance Co., Ltd.;

"CSRC"

refers to China Securities Regulatory Commission;

"C\$"

refers to the legal currency of Canada;

"Dongdong Coal"

refers to Shaanxi Chengcheng Dongdong Coal Co., Ltd., 45% of the equity interest of which is owned by us;

"Energy-Saving and Emission Reduction Goals"

refer to the energy-saving and emission reduction goals set out in China's 12th Five-Year Plan for National Economic and Social Development laid out in 2011, by which China expects to cut its per unit GDP energy consumption by 16 percent compared with the 2010 level by the end of 2015;

"Exchange Act"

refers to the U.S. Securities Exchange Act of 1934, as amended;

"Euros"

or "**EUR**" refers to the lawful currency of the Euro zone;

"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;

"Gansu Huayang"

refers to Gansu Huayang Mining Development Company Limited, 70% of the equity interest of which is owned by us;

"Guangxi Huayin"

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

"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;

"Guizhou Yuneng"

refers to Guizhou Yuneng Mining Co., Ltd., 25% of the equity interest of which is owned by us;

"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;

"HK\$"

and "**HK dollars**" refers to Hong Kong dollars, the lawful currency of the Hong Kong Special Administrative Region of the PRC;

"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 subsequently ceased its existence as an independent legal person and became part of our Zhongzhou branch;

"Huatong Charcoal"

refers to Qinghai Aluminum Huatong Charcoal Co., Ltd., a subsidiary of Chinalco;

"Huaxi Aluminum"

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

"Bayer-sintering combined process"

and "**Bayer-sintering series process**" refer to the two methods of refining process developed in China which involve the combined application of the Bayer process and the sintering process to extract alumina from bauxite;

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"**Japanese Yen**" refers to the lawful currency of Japan;

"Jiaozuo Wanfang"

refers to Jiaozuo Wanfang Aluminum Manufacturing Co. Ltd., 24.002% of the equity interest of which was owned by us as of December 31, 2012. 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 kilampere equaling to 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., a wholly-owned subsidiary of us since April 2007 and until July 2007 when it was divided into two wholly-owned entities: Lanzhou branch and Northwest Aluminum;

"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**" refers 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., 55% of the equity interest of which is owned by us;

"Luxin Company"

refers to Jiexiu Luxin Coal Gasification Company Limited;

"Nanping Aluminum"

refers to Fujian Nanping Aluminum Company Limited;

"NDRC"

refers to China National Development and Reform Commission;

"Northwest Aluminum"

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

"NYSE"

or "**New York Stock Exchange**" refers to the New York Stock Exchange Inc.;

"ore-dressing Bayer process"

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

"Pingguo Aluminum"

refers to Pingguo Aluminum Company;

"Qinghai Energy"

refers to Qinghai Province Energy Development (Group) Co., Ltd., 21% of the equity interest of which is owned by us;

"refining"

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

"Research Institute"

refers to Zhengzhou Research Institute, our wholly-owned branch mainly providing research and development services;

"Rio Tinto"

refers to Rio Tinto plc, a company incorporated in England and Wales, the shares of which are listed on the London Stock Exchange and the New York Stock Exchange;

"RMB"

or "**Renminbi**" refers to the lawful currency of the PRC;

"SASAC"

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

"SEC"

refers to the U.S. Securities and Exchange Commission;

"Securities Act"

refers to the U.S. Securities Act of 1933, as amended;

"Shandong Aluminum"

refers to Shandong Aluminum Industry Co., Limited, a wholly-owned subsidiary of Chinalco;

"Shandong Huayu"

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

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**"Shanxi Jiexiu"** refers to Shanxi Jiexiu Xinyugou Coal Industry Co., Ltd., 34% of the equity interest of which is owned by us;

"Shanxi Huasheng"

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

"Shanxi Huaxing"

refers to Shanxi Huaxing Aluminum Co., Ltd., our wholly-owned subsidiary;

"Shanxi Huaze"

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

"Shanxi Other Mines"

refers to the seven of our jointly-operated mines, including Shangtan mine, Jindui mine, Shicao mine, Nanpo mine, Xishan mine, Niucaogou mine and Sunjiata mine in Shanxi Province that became the mining areas of our new own mine in 2010;

"SHFE"

refers to the Shanghai Futures Exchange;

"Shuicheng Panlong"

refers to Shuicheng County Panlong Coal Co., Ltd.;

"Simandou Project"

refers to the project to develop and operate the Simandou iron ore mine located in Guinea in West Africa as further described in the Simandou joint development agreement dated July 29, 2010 entered into amongst Rio Tinto, Rio Tinto Iron Ore Atlantic Limited and us for the purpose of development of the Simandou Project;

"sintering process"

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

"smelting"

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

"SouthGobi"

refers to SouthGobi Resources Ltd.;

"tonne"

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

"US\$", "dollars"

or "**U.S. dollars**" refers to the legal currency of the United States;

"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.;

"Zhaogu Coal"

refers to Jiaozuo Coal Group Xinxiang (Zhaogu) Energy Co., Ltd.;

"Zhongzhou Aluminum"

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

"Zunyi Alumina"

refers to Chalco Zunyi Alumina Co., Ltd., 73.28% of the equity interest of which is owned by us; and

"Zunyi Aluminum"

refers to Zunyi Aluminum Co., Ltd., 62.1% 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 RMB6.2301 to US\$1.00, the exchange rate as set forth in the H.10 statistical release of the Federal Reserve Board for December 31, 2012. 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.

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## **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 flows data for the years ended December 31, 2008, 2009, 2010, 2011 and 2012 and selected statement of financial position data as of December 31, 2008, 2009, 2010, 2011 and 2012 that were prepared under 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. 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 or our previous annual reports.

Our consolidated financial statements as of December 31, 2011 and 2012 and for the years ended December 31, 2010, 2011 and 2012 included in this annual report on Form 20-F have been prepared in accordance with IFRS. We make an explicit and unreserved statement of compliance with IFRS with respect to our consolidated financial statements as of December 31, 2011 and 2012 and for the years ended December 31, 2010, 2011 and 2012 included in this annual report. Ernst & Young, our current independent registered public accounting firm, has issued an unqualified auditor's report on our consolidated statement of financial position as of December 31, 2012, and the related consolidated statement of comprehensive income, statement of changes in equity and statement of cash flows for the year ended December 31, 2012. PricewaterhouseCoopers, our predecessor independent registered public accounting firm, has issued an unqualified auditor's report on our consolidated statement of financial position as of December 31, 2011, and the related consolidated statement of comprehensive income, statement of changes in equity and statement of cash flows for the years ended December 31, 2010 and 2011.

Year Ended December 31,

	2008
	2009
	2010
	2011
	2012
	2012

RMB

RMB

RMB

RMB

RMB

US\$

(in thousands, except per share and per ADS  
data)**STATEMENT OF  
COMPREHENSIVE  
INCOME DATA**

Revenue	76,728,147	70,268,005	120,994,847	145,874,433	149,478,821	23,993,005
Cost of sales	(70,960,668)	(69,079,446)	(113,349,941)	(138,111,367)	(149,802,658)	(24,044,985)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Gross profit/(loss)	5,767,479	1,188,559	7,644,906	7,763,066	(323,837)	(51,980)
Selling and distribution expenses	(1,562,841)	(1,264,920)	(1,573,301)	(1,622,788)	(1,967,922)	(315,873)
General and administrative expenses	(2,507,011)	(2,956,506)	(2,623,740)	(2,779,429)	(2,992,968)	(480,404)
Research and development expenses	(177,507)	(177,756)	(164,235)	(218,026)	(198,946)	(31,933)
Impairment loss on property, plant and equipment	(1,334)	(623,791)	(701,781)	(279,750)	(19,903)	(3,195)

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Other income

100,781

151,142

328,853

185,501

744,490

	119,499
Other gains/(losses), net	
	212,840
	403,836
	491,024
	538,033
	(25,484)
	(4,090)
Operating profit/(loss)	
	1,832,407
	(3,279,436)
	3,401,726
	3,586,607
	(4,784,570)
	(767,976)
Finance costs, net	
	(1,709,667)
	(2,137,825)
	(2,495,184)
	(3,293,574)
	(4,599,380)

(738,252)

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Operating profit/(loss) after finance costs

122,740

(5,417,261)

906,542

293,033

(9,383,950)

(1,506,228)

Share of profits/(losses) of jointly-controlled entities

1,672

(50,392)

233,784

122,262

37,040

5,945

Share of profits of associates

10,045

77,056

240,028

402,701

254,848

40,906

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Profit/(loss) before income tax

134,457

(5,390,597)

1,380,354

817,996

(9,092,062)

(1,459,377)

Income tax benefit/(expense)

34,172

711,003

(411,216)

(127,492)

448,479

71,986

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Profit/(loss) for the year

168,629  
 (4,679,594)  
 969,138  
 690,504  
 (8,643,583)  
 (1,387,391)

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Attributable to:

Owners of the parent

19,485  
 (4,642,894)  
 778,008  
 237,974  
 (8,233,754)  
 (1,321,609)

Non-controlling interests

149,144  
 (36,700)  
 191,130  
 452,530  
 (409,829)

(65,782)

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168,629

(4,679,594)

969,138

690,504

(8,643,583)

(1,387,391)

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Earnings/(loss) per share for profit/(loss) attributable

to ordinary equity holders of the parent

(expressed in RMB and US\$ per share and per ADS):

Basic and diluted earnings/(loss) per share

0.0014

(0.34)

	0.06
	0.02
	(0.61)
	(0.10)
Earnings/(loss) per ADS	
	0.035
	(8.58)
	1.44
	0.44
	(15.22)
	(2.44)

Dividends (expressed in RMB and US\$ per share and per ADS)

Interim dividends per share

0.05

-

-

-

-

-

Interim dividends per ADS



	1.30
	-
	-
	-
	-
	-
Special dividends per share	-
	-
	-
	-
	-
	-
Special dividends per ADS	-
	-
	-
	-
	-
	-
Final dividends per share	-
	-
	-
	0.0114
	-
	25

	-
Final dividends per ADS	-
	-
	-
	-
	0.2850
	-
	-
Proposed dividends per share	-
	-
	0.0114
	-
	-
	-
Proposed dividends per ADS	-
	-
	0.2850
	-
	-
	-

2008

2009

2010

2011

2012

2012

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RMB

RMB

RMB

RMB

RMB

US\$

(in thousands)

**STATEMENT OF  
FINANCIAL POSITION  
DATA**

Total current assets	42,556,995	36,333,877	41,324,547	49,969,708	49,016,016	7,867,614
Total non-current assets	93,055,157	97,641,312	99,997,492	107,164,449	126,000,866	20,224,533
	_____	_____	_____	_____	_____	_____
Total assets	135,612,152	133,975,189	141,322,039	157,134,157	175,016,882	28,092,147
	_____	_____	_____	_____	_____	_____

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Total current liabilities	38,622,098	40,029,861	55,733,547	62,360,398	83,853,411	13,459,401
Total non-current liabilities	36,808,624	38,364,171	28,401,637	36,619,073	37,392,321	6,001,881
	_____	_____	_____	_____	_____	_____
Total liabilities	75,430,722	78,394,032	84,135,184	98,979,471	121,245,732	19,461,282
	_____	_____	_____	_____	_____	_____
Net assets	60,181,430	55,581,157	57,186,855	58,154,686	53,771,150	8,630,865
	_____	_____	_____	_____	_____	_____
Long-term interest bearing loans and borrowings						
(excluding current portion)	36,042,552	37,804,482	27,723,867	35,968,526	36,635,652	5,880,428
	_____	_____	_____	_____	_____	_____

Year Ended December 31,

2008

2009

2010

2011

2012

2012

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RMB

RMB

RMB

RMB

RMB

US\$

(in thousands)

**OTHER FINANCIAL DATA**

Net cash flows generated from/(used in) operating actives	5,023,984	(705,954)	7,103,859	2,489,756	1,122,352	180,150
Net cash flows used in investing activities	(22,207,473)	(9,477,193)	(8,260,317)	(9,714,547)	(23,153,090)	(3,716,327)
Net cash flows generated from financing activities	24,370,350	1,576,713	2,717,553	8,842,453	20,428,953	3,279,073
	_____	_____	_____	_____	_____	_____
Net increase/(decrease) in cash and cash equivalents	7,186,861	(8,606,434)	1,561,095	1,617,662	(1,601,785)	(257,104)
	_____	_____	_____	_____	_____	_____

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**Exchange Rate Information**

The following table sets forth information concerning exchange rates between the Chinese 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 April 19, 2013, the exchange rate for Renminbi was US\$1.00 = RMB6.1772.

**Period**

Period End

Average

(1)

Low

(RMB per US\$1.00)

2008	6.8225	6.9192	7.2946	6.7800
2009	6.8259	6.8307	6.8470	6.8176
2010	6.6000	6.7603	6.8330	6.6000
2011	6.2939	6.4475	6.6364	6.2939
2012	6.2301	6.2990	6.3879	6.2221
October	6.2372	6.2627	6.2877	6.2372
November	6.2265	6.2338	6.2454	6.2221
December	6.2301	6.2328	6.2502	6.2251
2013				
January	6.2186	6.2215	6.2303	6.2134
February	6.2213	6.2323	6.2438	6.2213
March	6.2108	6.2154	6.2246	6.2105
April (through April 19, 2013)	6.1772	6.1927	6.2078	6.1720

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- (1) Annual average are calculated by averaging the rates on the last business day of each month during the annual period. 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 and 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 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 and is significantly affected by general economic conditions. The global economy started to recover from the global financial crisis, which started in the fourth quarter of 2008, in the second half of 2009 and continued to gain its momentum in 2010. As a result, our production and sales volumes increased significantly in 2010 and continued to increase in the first half of 2011. However, since the third quarter of 2011, the European debt crisis and the continued weakness and uncertainty regarding the durability of the emerging economic recovery have adversely affected the global economy and resulted in a significant decrease in our sales volumes. If the European debt crisis or the weakened global economic recovery continues or a global recession recurs, demand for our products may continue to decline. Uncertainty about future economic conditions makes 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, primary aluminum and other non-ferrous metal prices may adversely affect our business, financial condition and results of operations.

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The prices of our key products have historically fluctuated 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, and domestic supply and demand, each of which may fluctuate beyond our control. In the second half of 2009, as the global economy started to recover from the global financial crisis, demand for alumina and primary aluminum gradually increased. In 2010, the Australian FOB spot price of alumina and the international spot price of primary aluminum on the LME reached a high of US\$390 per tonne and US\$2,447 per tonne, respectively. In the first half of 2011, the Australian FOB spot price of alumina and the international spot price of primary aluminum on the LME continued to increase and reached a high of US\$440 per tonne and US\$2,802 per tonne, respectively. However, since the third quarter of 2011, demand for alumina and primary aluminum has been negatively affected by the European debt crisis. As a result, the Australian FOB spot price of alumina and the international spot price of primary aluminum on the LME have been generally decreasing and reached a low of US\$308 per tonne and US\$1,837 per tonne, respectively, in 2012. Our average external selling price of self-produced alumina and primary

aluminum decreased by 6.8% and 7.5%, respectively, from 2011 to 2012. 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."

As a result of the implementation of our operational structural adjustment exercise, we established our trading business as a new operating segment in 2010. The trading segment primarily engages in the trading of alumina, aluminum ingots, other non-ferrous metal products and coal products. The outsourced products are mainly procured from third-party suppliers on the spot market, under long-term agreements or through short-term futures and options transactions. Sales of products manufactured by our manufacturing subsidiaries and branches through Chalco Trading are also included in the trading segment (see further discussion in Note 5b to our audited financial statements). The profits of our trading business may be negatively affected by fluctuations in the price of the non-ferrous metal products and coal products we trade.

As the profit margin of trading is based on price fluctuations in the short term, we need to make the correct prediction of the price fluctuations of the non-ferrous metal products and coal products on the markets to ensure the profit margin. If the price fluctuations on the market do not match our prediction, we may incur substantial losses. In addition, as we generate profit from the differences between the purchasing and sales prices of the non-ferrous metal products we deal in, significant fluctuations in the prices of the commodities we deal in may cause the value of the outsourced products in transit or in inventory to decline, and if the carrying value of our existing inventories exceeds the market price in the future periods, we may need to make additional provisions for our inventories' value. As a result, 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 substantial capital expenditures. See "Item 4. Information on the Company - D. Property, Plants 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. As a result, we expect to incur total capital expenditures of approximately RMB18.8 billion in 2013. 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 the acquired businesses will require us to, among other things:

- \* comply with the laws, regulations and policies applicable to the acquired businesses;
- \* gain market acceptance for new products and services and establish relationships with new customers and suppliers;
- \* achieve sufficient utilization of new production facilities to recover costs;
- \* obtain timely approval for the construction or expansion of alumina refineries, primary aluminum smelters and mining projects as required under PRC law;
- \* manage relationships with employees, customers and business partners during the course of our business expansion and integration of new businesses;
- \* attract, train and motivate members of our management and workforce;

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- \* access debt, equity or other capital resources to fund our business expansion, which may divert financial resources otherwise available for other purposes;
  - \* divert significant management attention and resources from our other businesses; and
  - \* strengthen 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 implement our expansion plans, or result in failure to achieve the expected benefits of the combination or acquisition or write-offs of acquired assets or investments, 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 could be materially and adversely affected.

Risks associated with entering into new areas of business.

Since 2010, we have participated in joint ventures and made strategic investment in coal mining and iron ore production. We may not achieve our business objectives due to our lack of experience in these new areas. For example, coal mining and the production of iron ore involve processes and technologies that are significantly different from the production of alumina, primary aluminum and aluminum fabrication products. We will also need to establish relationships with customers of iron ore and coal products, which will be different from our existing customers. As such, we face various risks relating to the commencement of these new business operations, including our potential failure to:

- \* attract, train, motivate and retain skilled employees for our coal mining and the production of iron ore business;
- \* keep abreast of evolving industry standards and respond to competitive market conditions;
- \* maintain adequate control of our expenses in relation to such new businesses; and
- \* achieve acceptable quality standard for our coal and iron ore products.

If we are unsuccessful in addressing any of these risks, our business, financial condition and results of operations may be materially and adversely affected.

Our joint ventures and strategic investment may not be successful.

We may from time to time enter into joint venture arrangements to grow our business and operations. For example, in 2012, we established Chalco Liupanshui with Liupanshui Hengtaihe Mining Investment Co., Ltd. We currently hold 49% of the equity interest in Chalco Liupanshui with the remaining 51% of the equity interest held by Liupanshui Hengtaihe Mining Investment Co., Ltd. In addition, we also acquired 45% of the equity interest

in Dongdong Coal from Shaanxi Sanqin Energy Co., Ltd. and 25% of the equity interest in Guizhou Yuneng from Chongqing Wujiang Shiye (Group) Co., Ltd. in 2012.

We have non-controlling interests in a number of joint ventures. Although we have not been materially constrained by the nature of our ownership interests, no assurance can be given that our joint venture partners will not exercise their power of veto or their controlling influence in any of our ventures in a way that will hinder our corporate objectives and reduce any anticipated cost savings or revenue enhancement resulting from these joint ventures. In addition, whether or not we hold majority interests or maintain operational control in such joint ventures, such arrangements necessarily involve special risks and our partners may:

- \* have economic or business interests or goals that are inconsistent with or opposed to ours;
- \* exercise veto rights so as to block actions that we believe to be in our or the joint venture's best interests;
- \* take action contrary to our policies or objectives with respect to the investments; or
- \* as a result of financial or other difficulties, be unable or unwilling to fulfill their obligations under the joint venture, other agreements, such as contributing capital to expansion or maintenance projects.

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

During 2012, we expanded the production capacity by upgrading or remoulding some of our alumina and primary aluminum production facilities. However, our primary aluminum production may be adversely affected by the administrative policies and orders implemented by the local governments to fulfill China's Energy-Saving and Emission Reduction Goals. Please see "- We are subject to administrative policies and orders relating to China's Energy-Saving and Emission Reduction Goals that could adversely affect our production." We also increased our external purchases of alumina and primary aluminum for trading purposes to capitalize on fluctuating market prices in 2012 and to enhance resource planning to achieve cost savings in our production. The increase in our external purchases has reduced our utilization of certain production facilities, but has not resulted in a 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.

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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. For example, as a result of the decrease in our procurement of imported bauxite from Indonesia in response to the change in Indonesian bauxite export policy, since May 2012, we have suspended the operations of certain alumina production facilities in our Shandong branch, Henan branch and Zhongzhou branch with an aggregate annual designed production capacity of 170,000 tonnes, which adversely affected our results of operations and financial condition. Please see "- Our profitability and operations could be adversely affected if we are unable to obtain a steady supply of raw materials at competitive prices."

We may be required to record impairment charges in the future.

If business conditions deteriorate, long lived assets need to be reviewed for possible impairment. An impairment loss needs to be recognized to the extent that the carrying amount exceeds the recoverable amount. We recorded impairment loss on property, plant and equipment during the three years ended December 31, 2010, 2011 and 2012. We cannot guarantee that we will not incur increased impairment loss in the future, due to various reasons including, but are not limited to, a sustained decline in our stock price, strategic decisions made in response to changes in economic and competitive conditions, the impact of the economic environment on our customer base or a material adverse change in our relationship with significant customers. If we record significant impairment charges, our results of operations may be materially and adversely affected.

Our operations consume substantial amounts of energy, and 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 the following:

- \* significant increases in electricity costs; or

- \* curtailment of the operation of one or more refineries or smelters due to our inability to extend energy supply contracts upon their expiration.

Cost of electricity is the principal production cost in our primary aluminum operations. Our average cost per kilowatt-hour, or kWh, of electricity increased by 2.4% from 2011 to 2012 primarily due to the electricity price adjustment under state policy. We expect the PRC economy will continue to grow and as a result, we expect demand for and prices of electricity to increase accordingly. 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 and adversely affected.

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Our business and industry may be affected by the development of alternative energy sources and climate change.

Our operations consume substantial amounts of coal. Coal combustion generates significant greenhouse gas and other pollutants, and the effects of climate change resulting from global warming and increased pollution levels may provide incentives for governments to promote or invest in "green" energy technologies such as wind, solar, nuclear and biomass power plants, or to reduce their consumption of conventional energy sources such as coal. A number of governments or governmental bodies have introduced or are contemplating legislative and regulatory changes in response to the potential impacts of climate change. These regulatory mechanisms may impact our operations directly or indirectly through customers or our supply chain. We may have to increase our capital expenditures in order to comply with such revised or new legislation or regulations, and may realize changes to profit or loss arising from increased or decreased demand for our products and indirectly, from changes in costs of goods sold, which may adversely affect our results of operations and financial condition.

In addition, we have invested in coal mining operations. We are affected by the growth of the PRC thermal power industry, which relies on coal as main source of fuel. The PRC thermal power industry may be affected by the development of alternative energy sources, climate change and global environmental factors. In particular, pursuant to China's 12th Five-Year Plan for Environmental Protection, the PRC government plans to continue to encourage the development of alternative energy sources, such as wind power, solar power, biomass and geothermal energy, in the next five years. As such, alternative energy industries may rapidly develop and gradually gain mainstream acceptance in the PRC and the rest of the world. If alternative energy technologies continue to develop and prove suitable for

wide commercial application in the PRC and overseas, demand for conventional energy sources, such as coal, could be reduced, which could have a material and adverse effect on the coal mining industry and, consequently, our business, results of operations and financial condition.

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

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. We cannot assure you that our operations will not suffer from shortages or disruptions in electrical power, any occurrence of which could have a material and adverse impact on our business, financial condition and results of operations.

Our operations consume substantial amounts of coal, and our operations may be adversely affected if we are not able to procure sufficient coal or if coal prices rise significantly.

We rely heavily on coal as our energy and fuel source in our production of alumina. As we increase our alumina refining capacity, our consumption of coal will increase accordingly. If we are not able to obtain the amount of coal needed for our production due to a shortage of coal, constraints on coal transportation or any other reason, we may be forced to reduce our production output or suspend our alumina refining operations, which could materially and adversely affect our financial condition and results of operations. Although we have acquired equity interest in a number of coal mines, we expect to continue to rely substantially on third-party coal suppliers for the supply of coal. In addition, although our average purchase price of thermal coal per unit tonne decreased by 6.9% from 2011 to 2012, we expect the price of coal to increase as the PRC economy continues to grow. 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. In addition, we face increasing competition from international alumina and primary aluminum suppliers as a result of the elimination of tariffs on imports of primary aluminum and alumina into China. We also face increasing competition from domestic and international aluminum fabrication products suppliers. Increasing competition in our product markets may reduce our selling prices or sales volumes, which will 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.

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

We are currently undertaking a number of overseas projects, including the iron ore mining joint venture project in Guinea in West Africa and bauxite mining project in Laos, which require significant capital investment. See "Item 4. Information on the Company - A. 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 investment. For example, in 2007, we entered into a development agreement with the Queensland State Government of Australia ("Queensland State Government") to develop a bauxite and alumina project, the Aurukun Project. However, due to the change in market conditions of global aluminum industries, the Aurukun Project could no longer continue under the original framework. We engaged a series of negotiations with the Queensland State Government, but in June 2011, the Queensland State Government terminated the negotiation. As a result, we had a total impairment charge of RMB651 million of the carrying value of the capitalized development expenditures pertaining to the Aurukun Project in 2010 and 2011. In addition, our overseas business is subject to the risk of political and economic instability associated with these countries.

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

Historically, the price for bauxite, our most important raw material for alumina production, has been volatile. We obtain bauxite for our operations from three major sources, including mines that we own or jointly operate and external suppliers. See "Item 4. Information on the Company - B. 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 May 2012, the Government of Indonesia imposed a ban on the exportation of 14 types of unprocessed minerals, including bauxite, with an exception for mining companies that plan to build local processing facilities. For mining companies with plans to build local processing facilities, the Government of Indonesia imposes a 20% export tariff on the exportation of these 14 types of minerals. We rely on Indonesia as a major source of imported bauxite. In response to the change in Indonesian bauxite export policy, we reduced our procurement of bauxite from Indonesia, which resulted in a decrease in our total supply of imported bauxite. As a result, since May 2012, we have suspended the operations of certain alumina production facilities in our Shandong branch, Henan branch and Zhongzhou branch with an aggregate annual designed production capacity of 170,000 tonnes. In addition, our results of operations are affected by increases in the cost of other raw materials and other key inputs such as energy. If we cannot obtain a steady supply of key raw materials at competitive prices, our financial condition and results of operations could be materially and adversely affected.

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

Our operations require the reliable transportation of raw materials and supplies to our refining, smelting and fabrication sites and finished products to our customers. Our alumina products and aluminum fabrication products are mainly transported by rail or trucks, and our primary aluminum products are delivered to our customers primarily by rail. 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 methods and processes.

A main objective of our research and development is to develop new methods and processes to improve the efficiency of our alumina refineries to 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 and incorporate them into our production could impede our efforts to reduce unit costs and diminish our competitiveness. In 2012, partly due to the decline in the quality of domestically sourced bauxite, our average cost of alumina per tonne increased by approximately RMB152 from that in 2011.



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 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 meet our capital requirements, including the expansion and upgrade of our production capacity, as well as to fund our existing operations. As of December 31, 2012, we had approximately RMB67.9 billion in outstanding short-term bonds and short-term bank borrowings (including the current portion of long-term bank and other borrowings) and RMB36.6 billion in outstanding long and medium-term bonds and long-term bank and other borrowings (excluding the current portion of these borrowings). On February 9, 2012, we issued medium-term bonds in the aggregate principal amount of RMB2 billion with three-year maturity. On October 26, 2012, we issued medium-term bonds in the aggregate principal amount of RMB3 billion with five-year maturity. In 2012, we also issued six tranches of short-term bonds in the aggregate principal amount of RMB16.5 billion, each with one-year maturity. On January 18, 2013, we issued long-term bonds in the aggregate principal amount of RMB3 billion with five-year maturity. On March 14, 2013, we issued short-term bonds in the principal amount of RMB3 billion with one-year maturity. See Note 20 and Note 38 to our audited consolidated financial statements for more detailed information about our notes. As a result, we had net current liabilities as of December 31, 2012. This level of debt could have significant consequences on our operations, including:

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\* making it more difficult for us to fulfill payment and other obligations under our outstanding debt, including repayment of our debt and credit facilities should we be unable to obtain extensions for any such debt or credit facilities before they mature. As of December 31, 2012, we had outstanding long-term borrowings (including long-term loans and borrowings, medium-term notes and long-term bonds, and the current portion of long-term loans and borrowings and medium-term notes) maturing in 2013, 2014, 2015, 2016, 2017 and after 2017 in the

aggregate principal amount of RMB 10.9 billion, RMB10.0 billion, RMB9.8 billion, RMB6.7 billion, RMB6.1 billion and RMB4.1 billion, respectively;

- \* reducing the availability of cash flows 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 of 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 flows in the future or to refinance such debt. We cannot assure you that our business will generate sufficient cash flows 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 flows 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 have incurred losses in the past and may not achieve sustained profitability in the future.

Although we were profitable in 2010 and 2011, we incurred a net loss of approximately RMB8.6 billion in 2012. We may continue to incur losses in the future and we cannot assure you that we will achieve or sustain profitability in the future.

In addition, our borrowing costs and access to the debt capital markets, and thus our liquidity, depend significantly on our public credit ratings. These ratings are assigned by rating agencies, which may reduce or withdraw their ratings or place us on "credit watch", which would have negative implications. A history of net losses may result in a deterioration of our credit ratings, which could increase our borrowing costs and limit our access to the capital markets, which in turn, could reduce our earnings and adversely affect our liquidity.

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

Since 2010, we have acquired equity interest in a number of coal mines and an iron ore mine to diversify our product offering and partially offset our future energy costs, as well as supply a portion of the coal we

consume in our operations. We may continue to acquire equity interest or establish joint ventures in the coal mining or iron ore production business in the future. However, cost savings and other economic benefits expected from our expansion 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 plans in the short term.

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

As of December 31, 2012, our largest shareholder, Chinalco, directly owned 38.56% of our issued share capital and indirectly owned an additional 3.12% of our issued share capital 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.

As we produce air emissions, discharge waste water, and handle hazardous substances at our bauxite mines, alumina refineries, aluminum smelters and aluminum 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 becomes more rigorous. Further, although all of our overseas expansion projects are at the early stages and have not started operation, these projects are subject to foreign environmental laws and regulations. Failure to comply with environmental laws and regulations may trigger 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 materially and adversely affect our business operations.

We are subject to administrative policies and orders relating to China's Energy-Saving and Emission Reduction Goals that could adversely affect our production.

We are subject to administrative energy-saving and emission reduction policies and orders carried out by the central and provincial governments in accordance with China's Energy-Saving and Emission Reduction Goals. In 2010 and 2011, some of our primary aluminum production facilities were subject to power rationing carried out by some provincial governments to fulfill their energy-saving and emission reduction goals. Although power rationing only slightly reduced our primary aluminum production in 2010 and 2011 and the PRC central government has denounced it as an improper means to fulfill the Energy-Saving and Emission Reduction Goals, some or all of our primary aluminum production facilities may be subject to power rationing or other similar policies and orders from time to time in the future, which may adversely affect our production.

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 cause interruptions to our operations or result in property or environmental damage, an increase in operating expenses or loss of revenues. The occurrence of accidents, natural disasters and the resulting consequences may not be covered adequately, or at all, by the insurance policies 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 and adverse effect on our results of operations if such losses or payments are not fully insured.

We are operating a number of mines without valid permits.

The permit to mine bauxite in one of our jointly-operated bauxite mines have expired and lapsed. While we are seeking to renew such expired license, we may be subject to administrative fines for operating mine without a valid license, or we may be ordered to cease our mining operations at such mine until we obtain the renewed license. Accordingly, our failure to renew such expired mining license may adversely affect our mining operations, financial condition and results of operations.

In addition, our investments in the coal mines are subject to PRC government approval. Our coal mining operations require valid licenses and permits issued by the PRC government. Delays or failure in securing necessary PRC government approvals, licenses or permits, as well as any adverse change in government policies may hinder our expansion plans, which may materially and adversely affect our profitability and growth prospects.

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We have not obtained valid titles or land use rights to certain properties or land parcels that we occupy.

We had not obtained valid ownership certificates to certain properties that we occupy. These properties are used primarily for production plants. As of December 31, 2012, the book value of our properties with defective titles represented approximately 12.8% of our net asset value. In addition, we had not obtained land use rights to certain land parcels, which we use primarily for our production plants. As of December 31, 2012, the book value of these land parcels represented approximately 0.8% of our net asset value. We have applied to the appropriate authorities to obtain the relevant ownership certificates. We cannot give any assurance that ownership dispute will not occur or that third parties will not assert any claims against us for compensation in respect of any use of these properties or land parcels.

Our operations may be affected by uncertain mining conditions and we may suffer losses for mining safety incidents.

We currently operate 17 bauxite mines in China. In addition, we have established joint ventures to operate a bauxite mine in Laos and an iron ore mine in Guinea. We have also invested in a number of coal mines in China. Our mining operations are subject to certain risks inherent in underground mining, which may affect the safety of our workforce or cost of producing coal and bauxite, including, without limitation, roof collapses, minewater discharge, ground falls and other mining hazards. Additionally, we are exposed to operational risks associated with industrial or engineering activities, such as maintenance problems or equipment failures. Although we conduct geological assessments on mining conditions and adapt our mining plans to the mining conditions at each mine, we cannot assure you that adverse mining conditions will not endanger our workforce, increase our production costs, reduce our bauxite or coal output or temporarily suspend our operations. The occurrence of any of the foregoing events or conditions could have a material adverse impact on our business and results of operations.

Our mines and operating facilities may be damaged by water, gas, fire or cave-ins due to unstable geological structures. Although we have implemented safety measures at our mining sites, trained our employees on occupational safety and maintained liability insurance for limited property damage for certain of our operations, we cannot assure you that safety incidents will not occur. Any significant accident, business disruption or safety incident could result in substantial uninsured costs and the diversion of our resources, which could materially and adversely affect our business operations and financial condition.

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, which in turn could have a material adverse effect on our business, financial condition and results of operations.

Our H Shares were removed from the Hang Seng Index and may not become a constituent stock of the Hang Seng Index again in the future.

Our H Shares were removed from the Hang Seng Index on February 7, 2013. Being a constituent stock of the Hang Seng Index may attract the interest of tracker funds that maintain investment portfolios that track the performance of the Hang Seng Index. We have no control over the selection of the Hang Seng Index constituent stocks and our H Shares may not become a constituent stock of the Hang Seng Index again in the future. After our H Shares were removed from the Hang Seng Index, tracker funds may cease investing in our H Shares and our share price may decline.

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

The interests of non-controlling shareholders of Jiaozuo Wanfang, whose A Shares are listed on the Shenzhen 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 non-controlling 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 for connected transactions from the non-controlling 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 non-controlling 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:

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- \* 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 the industry 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 those 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. The PRC government 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 increasingly unpredictable following the global financial crisis with increasing pressure on the Renminbi to appreciate. In April 2012, the PRC government took a milestone step in turning the Renminbi into a global currency by doubling the size of its trading band against the U.S. dollar, pushing through a crucial reform that further liberalizes its financial markets. The People's Bank of China allows the Renminbi to rise or fall 1% from a mid-point every day, effective on April 16, 2012, compared with its previous 0.5% limit. Any appreciation of the Renminbi will affect the value of our US dollar-denominated

borrowings and overseas investments, 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 lack of binding precedential 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.

The audit reports included in this annual report are prepared by auditors who are not inspected by the Public Company Accounting Oversight Board and, as such, you are deprived of the benefits of such inspection.

Auditors of companies that are registered with the SEC and traded publicly in the United States, including our independent registered public accounting firms, must be registered with the US Public Company Accounting Oversight Board (United States) (the "PCAOB") and are required by the laws of the United States to undergo regular inspections by the PCAOB to assess their compliance with the laws of the United States and professional standards. Because we have substantial operations within the PRC and the PCAOB is currently unable to conduct inspections of the work of our auditors as they relate to those operations without the approval of the Chinese authorities, our auditors' work related to our operations in China is not currently inspected by the PCAOB.

This lack of PCAOB inspections of audit work performed in China prevents the PCAOB from regularly evaluating audit work of any auditor that was performed in China including that performed by our auditors. As a result, investors may be deprived of the full benefits of PCAOB inspections.

The inability of the PCAOB to conduct inspections of audit work performed in China makes it more difficult to evaluate the effectiveness of our auditors'



audit procedures as compared to auditors in other jurisdictions that are subject to PCAOB inspections on all of their work. Investors may lose confidence in our reported financial information and procedures and the quality of our financial statements.

We may be adversely affected by the outcome of the administrative proceedings brought by the SEC against five accounting firms in China.

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The SEC has recently brought administrative proceedings against five accounting firms in China, alleging that they refused to hand over documents to the SEC for ongoing investigations into certain other China-based companies. We were not and are not subject to any SEC investigations, nor are we involved in the proceedings brought by the SEC against the accounting firms. However, the independent registered public accounting firm that issues the audit reports included in our annual reports filed with the SEC is affiliated to one of the five accounting firms named in the SEC's proceedings and we may be adversely affected by the outcome of the proceedings, along with other U.S.-listed companies audited by these accounting firms. If the SEC prevails in the proceedings, the China-based affiliate of our independent auditors and other four accounting firms in China that were named in the proceedings may be barred from practicing before the SEC and hence unable to continue to be the auditors for, or participate in audits of, China-based companies like ourselves. If none of the China-based auditors are able to continue to be auditors for, or participate in the audits of, China-based companies listed in the U.S., we will not be able to meet the reporting requirements under the Exchange Act, which may ultimately result in our deregistration from the SEC and delisting from NYSE.

#### **ITEM INFORMATION ON THE COMPANY**

##### **4.**

##### **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 and registered office is 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.

Pursuant to a reorganization agreement entered into among Chinalco, Guangxi Investment and Guizhou Development in 2001, substantially all of

Chinalco's alumina and primary aluminum 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.

We are a vertically integrated aluminum producer with operations in bauxite mining, alumina refining, primary aluminum smelting and aluminum fabrication. We also produce ancillary products and services derived from or related to our aluminum operations. In addition, we are engaged in trading of alumina, primary aluminum, aluminum fabrication products, other non-ferrous metal products, coal products and raw and ancillary materials in bulk domestically and internationally. Since 2010, we have expanded our operations into iron ore production and substantially increased our investment in coal mining operations.

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 currently include four subsidiaries mainly engaged in bauxite mining; two integrated alumina and primary aluminum production plants; one integrated alumina, primary aluminum and aluminum fabrication plant; six stand-alone alumina refineries, including our jointly-controlled entity, Guangxi Huayin, and our Research Institute; thirteen stand-alone primary aluminum smelters, including our Research Institute; eight stand-alone aluminum fabrication plants; and one carbon production plant. In addition, as of December 31, 2012, we were constructing two alumina refineries. All of our principal production facilities are operated in accordance with ISO14001 standards.

#### Significant Acquisitions and Joint Ventures

In March 2012, we established Chalco Liupanshui jointly with Liupanshui Hengtaihe Mining Investment Co., Ltd. Chalco Liupanshui is a PRC limited liability company engaging in coal production in Guizhou Province. The registered capital of Chalco Liupanshui is RMB420 million. As of December 31, 2012, we and Liupanshui Hengtaihe Mining Investment Co., Ltd. held 49% and 51%, respectively, of the equity interest in Chalco Liupanshui. We injected RMB75 million in cash as our capital contribution to Chalco Liupanshui in March 2012.

In May 2012, we acquired 45% of the equity interest in Dongdong Coal from Shaanxi Sanqin Energy Co., Ltd. at a total consideration of RMB200 million. We paid such consideration in cash in May 2012. Dongdong Coal is a PRC limited liability company engaging in coal production in Shaanxi Province. The registered capital of Dongdong Coal is RMB95 million.

In May 2012, we acquired 25% of the equity interest in Guizhou Yuneng from Chongqing Wujiang Shiye (Group) Co., Ltd. at a total consideration of

RMB473 million. We paid such consideration in May 2012. Guizhou Yuneng is a PRC limited liability company engaging in coal production in Guizhou Province. The registered capital of Guizhou Yuneng is approximately RMB209.7 million.

On 23 April 2012, we entered into a share sale and purchase agreement with Winsway Resources Holdings Limited ("Winsway Resources") and Mr. Wang Xingchun, chairman and chief executive officer of Winsway Coking Coal Holdings Limited ("Winsway") and controlling shareholder of Winsway, beneficially owning approximately 48.64% of the total issued share capital of Winsway. Pursuant to the agreement, we agreed to purchase and Winsway Resources agreed to sell 1,128,186,410 ordinary shares of Winsway legally and beneficially held by Winsway Resources, representing 29.9% of the issued share capital of Winsway, at a total cash consideration of HK\$2,391,755,189.20, representing HK\$2.12 per share to be acquired. In addition, pursuant to the agreement, Mr. Wang Xingchun agreed unconditionally and irrevocably to guarantee all obligations of Winsway Resources under the share sale and purchase agreement. The principal business of Winsway includes procurement, transportation, storage, processing and marketing of coking coal. Winsway is listed on the Main Board of Hong Kong Stock Exchange. Completion of the acquisition was conditional upon the fulfillment or waiver of a number of conditions set out in the share sale and purchase agreement on or before September 30, 2012 (or such other date as agreed by the parties), including obtaining of all required regulatory approvals. The acquisition was approved by our shareholders at the 2011 annual general meeting held on June 29, 2012. As we were unable to obtain all the necessary approvals from relevant PRC and overseas government and regulatory authorities by September 30, 2012, the parties agreed on September 28, 2012 to terminate the share sale and purchase agreement and the acquisition of 29.9% of the equity interest in Winsway contemplated thereunder.

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On August 11, 2012 and August 13, 2012, we entered into an equity transfer agreements with each of China Zhongtou Trust Co., Ltd. and Bank of China Group Investment Limited for the acquisition of an aggregate of 35.3% of the equity interest in China Aluminum Ningxia for a total consideration of approximately RMB674.9 million and an equivalent amount in HK dollars of approximately RMB1,347.7 million calculated on the benchmark exchange rate for HK dollars to RMB as announced by the PBOC on the payment date. On December 14, 2012, we submitted a bid in response to an open tender of Huadian Power International Corporation Limited for its 23.66% of the equity interest in China Aluminum Ningxia announced on November 30, 2012. We won the bid on December 28, 2012 and entered into an equity transfer agreement with Huadian Power International

Corporation Limited on December 31, 2012 to acquire 23.66% of the equity interest in China Aluminum Ningxia for a total consideration of approximately RMB1,361.5 million. On December 31, 2012, we entered into a capital increase and share subscription agreement with China Aluminum Ningxia and Ningxia State-owned Investment and Operation Limited Liability Company, Beijing Energy Investment (Holding) Co., Ltd. and Ningxia Power Investment Corporation, pursuant to which, China Aluminum Ningxia will increase its registered capital by RMB1,452.66 million and we will subscribe for all such additional registered capital at an aggregate subscription price of RMB2 billion. China Aluminum Ningxia is an integrated power generation company with coal mines located in Ningxia Autonomous Region. Its principal business includes conventional coal-fire power generation and renewable energy generation. We completed the acquisitions and capital contribution in January 2013 and currently hold 70.82% of the equity interest in China Aluminum Ningxia.

#### Construction Projects

As of the date of this annual report, we have undertaken a number of facility expansion projects in China. See "- D. Property, Plants and Equipment - Our Expansion."

#### Overseas Development

On July 29, 2010, we entered into a joint development agreement with Rio Tinto and Rio Tinto Iron Ore Atlantic Limited, an affiliate of Rio Tinto, for the development and operation of the Simandou Project, a premium open-pit iron ore mine located in Guinea, West Africa. This agreement provides that we (via our subsidiary) would acquire 47% of the equity interest in a joint venture company to be incorporated by Rio Tinto for an earn-in payment of US\$1.35 billion, and Rio Tinto would transfer its entire 95% of the equity interest in its project company for the Simandou Project, Simfer S.A., to the joint venture company. On April 22, 2011, Rio Tinto Mining & Exploration Limited, a wholly-owned subsidiary of Rio Tinto, Simfer S.A. and the Government of Guinea entered into a settlement agreement, which, amongst other things, provided that the Government of Guinea would be entitled to acquire up to 35% of the equity interest in Simfer S.A. On November 28, 2011, we, through Chalco Hong Kong, established Chalco Iron Ore under the laws of Hong Kong with the China-Africa Development Fund and three leading PRC enterprises in the steel, port building and railway construction industries to serve as an investment vehicle for investing in the Simandou Project. We, through Chalco Hong Kong, hold 65% and the other investors collectively hold 35% of the equity interest in Chalco Iron Ore. Following the approvals of the relevant PRC authorities in March and April 2012, Chalco Hong Kong contributed approximately US\$878 million to Chalco Iron Ore, representing 65% of the US\$1.35 billion earn-in to be paid by Chalco Iron Ore to Simfer Jersey Limited, the joint venture company incorporated by Rio Tinto under the laws of Jersey to implement the joint development agreement, as amended. On April 24, 2012, Chalco Iron Ore

paid in full the total earn-in payment of US\$1.35 billion to Rio Tinto and acquired its 47% equity interest in Simfer Jersey Limited. Simfer Jersey Limited currently holds 95% of the equity interest in Simfer S.A., with the remaining 5% being held by International Finance Corporation. In addition, during the period from May 2012 to end of the 2012, Chalco Iron Ore injected US\$480 million in the form of capital contribution based on its proportion of equity interest to Simfer Jersey Limited for the development and operation of the Simandou Project pursuant to the joint development agreement, as amended. Meanwhile, the other shareholder of Simfer Jersey Limited also injected the capital contribution based on its proportion of equity interest to Simfer Jersey Limited during the same period. As of the date of this annual report, the Simandou Project was in the exploration stage and preparation for development.

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On April 2, 2012, we announced the offer to acquire up to (but not more than) 60%, but not less than 56% of the issued and outstanding common shares of SouthGobi, a limited liability company incorporated in Canada and listed on Toronto Stock Exchange and Hong Kong Stock Exchange, by way of a partial offer. SouthGobi is an integrated coal mining, development and exploration company with metallurgical and thermal coal mines in Mongolia's South Gobi region. The offer was conditioned upon the fulfillment and/or waiver of conditions of the offer as set out in the lock-up agreement and was made for a cash consideration of C\$8.48 for each common share, with a total consideration of C\$925.28 million for 60% of the common shares of SouthGobi. We intended to fund the cash required to effect the offer from our internal funds, external financing through bank borrowings, or a combination of both. In connection with the offer, we entered into a lock-up agreement with Turquoise Hill Resources Ltd. (formerly Ivanhoe Mining Ltd.), pursuant to which Turquoise Hill Resources Ltd. has agreed, among others, to tender to the offer all of the common shares held or subsequently acquired by it during the offer period, which were expected to amount to an aggregate of approximately 104,807,155 common shares or 57.6% of the total common shares of SouthGobi. On March 27, 2012, we entered into consultancy agreements with nine key senior executives and officers of SouthGobi to retain their services for a certain period after we become a shareholder of SouthGobi. We also entered into a cooperation agreement with SouthGobi on March 27, 2012, pursuant to which we agreed to provide certain support services to SouthGobi and its subsidiaries after we become a shareholder of SouthGobi, including an off-take arrangement to purchase SouthGobi's coal output and assistance with the power supply for SouthGobi's operations. Subject to the fulfillment and/or waiver of conditions set out in the lock-up agreement, we expected to formally commence the offer no later than July 5, 2012. On April 16, 2012, the Mineral Resources Authority of Mongolia announced a request to suspend exploration and mining activity on certain licenses

owned by SouthGobi Sands LLC, a wholly-owned division of SouthGobi. On June 29, 2012, the transaction was approved by our shareholders at the 2011 annual general meeting. On July 3, 2012, we announced an agreed 30-day extension in time for us to commence the offer. On August 2, 2012, we announced another agreed 30-day extension in time for us to commence the offer, which was to expire on September 4, 2012. On September 3, 2012, Turquoise Hill Resources Ltd. and we agreed to terminate the lock-up agreement and the proportional takeover transaction contemplated thereunder.

#### Proposed non-public Offering of A Shares

On March 8, 2012, our Board resolved to issue up to 1.25 billion A Shares in the PRC. The A Share issue plans previously proposed by our Board on June 30, 2009 and January 30, 2011 and approved by our shareholders at the extraordinary general meeting, A Share class meeting and H Share class meeting held on August 24, 2009 and on April 14, 2011, respectively, ceased. Pursuant to the new issue plan approved by our Board on March 8, 2012, we will issue up to 1.25 billion A Shares, with a nominal value of RMB1.00 each, by way of private placement for expected proceeds of not exceeding RMB8 billion. We will issue the A Shares to no more than ten specific target subscribers within six months from obtaining the approval of the CSRC. The issue price of A Shares to be offered will be not less than 90% of the average trading price of our A Shares in twenty trading days immediately preceding the pricing determination date. We intend to apply proceeds from this private placement to finance Chalco Xing Xian alumina project, Chalco Zhongzhou Ore-dressing Bayer Process expansion construction project and to supplement working capital. The issue plan was approved by the SASAC on April 5, 2012 and by our shareholders at the extraordinary general meeting, A Share class meeting and H Share class meeting held on May 4, 2012. On August 24, 2012, our Board resolved to adjust the issue plan by proposing, among others, to increase the number of A Shares to be issued to up to 1.45 billion A Shares. The adjusted issue plan was approved by the SASAC and our shareholders at an extraordinary general meeting, A Share class meeting and the H Share class meeting on October 12, 2012 and by the CSRC on December 7, 2012. On March 14, 2013, we obtained the approval from the CSRC on our proposed non-public offering of A Shares under such adjusted issue plan, with effective period of six months after the approval date. As of the date of this annual report, the Company has not issued any A Shares under the issue plan.

On June 29, 2012, our shareholders at the 2011 annual general meeting passed a special resolution, which is valid until the earliest of (i) the end of 12 months from the date of passage, (ii) the conclusion of our next annual general meeting or (iii) the date on which the authority set out in this resolution is revoked or varied by a special resolution at a general meeting. The resolution authorizes 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 the largest producer of alumina, primary aluminum and aluminum fabrication products in China 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. Our aluminum operations span the aluminum market value and industry chain from bauxite mining to aluminum fabrication. Bauxite 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 relatively small amount of alumina chemical products (alumina hydrate and alumina-based industrial chemical products), carbon products (carbon anodes and cathodes) and gallium. We are also engaged in the trading of alumina, primary aluminum, aluminum fabrication products, other non-ferrous metal products, coal products and raw and ancillary materials in bulk both manufactured by us and sourced from external suppliers domestically and abroad. Accordingly, we organize and manage our operations in four business segments: alumina segment, primary aluminum segment, aluminum fabrication segment and trading segment. After elimination of inter-segment sales, revenues attributable to our alumina, primary aluminum, aluminum fabrication and trading segments accounted for approximately 2.5%, 21.7%, 5.6% and 70.1%, respectively, of our total revenues in 2012. The remainder of our revenues were derived from research and development activities and other products and services.

Our alumina segment includes the mining and purchasing of bauxite and other raw materials, and 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 93.8% of the total production volume for this segment in 2012. 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 telecommunication

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 74.5% of our total production volume of primary aluminum in 2012. 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 internally produce substantially all the carbon products used at our smelters and sell our remaining carbon products to external customers.

Our aluminum fabrication segment includes the production and sale of aluminum fabrication products, including casts, planks, strips, screens, extrusions, ingots and profiles, 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 trading segment includes sales of alumina, primary aluminum, aluminum fabrication products, other non-ferrous metal products, coal products and raw and ancillary materials in bulk both manufactured by us and sourced from external suppliers domestically and abroad. We established our trading business as a separate segment in July 2010 as a result of the implementation of our operational structural exercise.

Since 2010, we have expanded our operations to iron ore production to diversify our product offering. In addition, we believe our investments in coal mining operations will partially offset the effect of the increase in the cost of energy and enable us to secure a portion of our coal supply. See "- Supplemental Raw Materials, Electricity and Fuel - Alumina."

#### Our Production Capacity

Our annual alumina production capacity increased from approximately 14.8 million tonnes as of December 31, 2011 to approximately 15.5 million tonnes as of December 31, 2012. Our annual production capacity for primary aluminum and aluminum fabrication products as of December 31, 2012 was approximately 4.3 million tonnes and 1.7 million tonnes, respectively, the same as those as of December 31, 2011. The following table sets forth the production capacity of each of our principal plants by business segment as of the indicated date:



As of December 31, 2012

Plant	Aluminum		
	Alumina	Primary Aluminum	Fabrication Products
(in thousand tonnes)			
(1)			
Guangxi branch	2,210.0	139.5	-
Zhongzhou branch	2,980.0	-	-
Qinghai branch	-	367.0	-
Shanxi branch	2,747.0	-	-
Guizhou branch	1,200.0	403.7	-
Henan branch	2,410.0	56.0	-
Shandong branch	1,770.0	55.0	10.0
Zunyi Alumina	800.0	-	-
Chongqing branch	800.0	-	-
Shanxi Huaze	-	350.0	-
Lanzhou branch	-	388.0	-
Shanxi Huasheng	-	220.0	-
Fushun Aluminum	-	330.0	-
Jiaozuo Wanfang <sup>(2)</sup>	-	412.0	-
Zunyi Aluminum	-	235.0	-
Shandong Huayu	-	200.0	-
Gansu Hualu	-	230.0	-
Baotou Aluminum	-	388.0	-
Guangxi Huayin <sup>(3)</sup>	530.0	-	-
Research Institute	20.0	18.0	-
Liancheng branch	-	523.0	-
Longmen Aluminum	-	17.0	-
Northwest Aluminum	-	-	135.0
Chalco Qingdao	-	-	120.0
Chalco Southwest Aluminum	-	-	350.0
Chalco Southwest Aluminum Cold Rolling	-	-	250.0
Chalco Ruimin	-	-	370.0
Henan Aluminum	-	-	355.0
Huaxi Aluminum	-	-	22.0

Chalco Nanhai	-	-	110.0
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Total	15,467.0	4,322.2	1,722.0
	<hr/>	<hr/>	<hr/>

- (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) As of December 31, 2012, we had de facto control over Jiaozuo Wanfang although we held only 24.002% of its equity interest. As it was a consolidated subsidiary as of December 31, 2012, the indicated production capacity represents Jiaozuo Wanfang's entire production capacity.
- (3) As of December 31, 2012, we held 33% of the equity interest in Guangxi Huayin as its second largest equity holder. The indicated production capacity represents our pro rata share of Guangxi Huayin's production capacity.

In 2012, we produced approximately 12.4 million tonnes of alumina, 4.2 million tonnes of primary aluminum and 622,900 tonnes of aluminum fabrication products. Our production of alumina, primary aluminum and aluminum fabrication products represented approximately 25.0%, 16.0% and 5.0%, respectively, of the total output in China in 2012.

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,		
	2010	2011	2012
	<hr/>	<hr/>	<hr/>
	(in thousand tonnes, except Gallium)		
Alumina segment			
Alumina	10,131.4	11,667.0 <sup>(2)</sup>	12,436.0 <sup>(2)</sup>
Alumina chemical products	1,173.7	1,192.0	1,312.0
Gallium (in tonnes)	20.2	35.9	39.2

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Primary aluminum segment			
Primary aluminum <sup>(1)</sup>	3,835.1	3,915.0	4,219.0
Carbon	1,812.0	1,906.0	1,957.2
Aluminum fabrication			
Aluminum fabrication products	588.0	662.0	622.9

- 
- (1) Including ingots and other primary aluminum products.
- (2) As of December 31, 2012, we held 33% of the equity interest in Guangxi Huayin as its second largest equity holder. The indicated production volume of alumina in 2011 and 2012 includes our pro rata share of Guangxi Huayin's production volume, which was not included in 2010.

## Production Process

### Alumina

Alumina is refined from bauxite, an aluminum-bearing ore, 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 Bayer process, the Bayer-sintering series process, the Bayer-sintering combined 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 Bayer-sintering combined process is suitable for refining low alumina-to-silica ratio bauxite. We have developed and improved these processes to increase our refining yield. When we refine alumina using the Bayer process, we produce gallium as a by-product, which undergoes further processing before sale. In the process of refining alumina, we also produce a relatively small amount of alumina chemical products (alumina hydrate and alumina-based industrial chemical products).

### 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 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 smelters use pre-bake anode reduction pot-lines. 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 state environmental protection agencies.

#### Aluminum Fabrication Products

Aluminum fabrication products are formed from primary aluminum. Our aluminum fabrication plants, Chalco Qingdao and Chalco Nanhai, also use recycled aluminum materials to produce aluminum fabrication products. The major categories of aluminum fabrication products that we produce include casts, planks, strips, screens, extrusions, ingots and profiles.

#### Production Facilities

##### Alumina

We currently operate nine alumina refineries and one research institute with a total designed annual production capacity of approximately 15.5 million tonnes as of December 31, 2012. Three of our refineries are integrated with primary aluminum smelters. In 2012, we produced approximately 12.4 million tonnes of alumina, approximately 1.3 million tonnes of alumina chemical products and approximately 39.2 tonnes of gallium. The overall utilization rate for our refineries decreased from 94.2% in 2011 to 84.6% in 2012, primarily because we have suspended the operations of certain alumina production facilities in our Shandong branch, Henan branch and Zhongzhou branch with an aggregate annual designed production capacity of 170,000 tonnes since May 2012 as we reduced our importation of bauxite from Indonesia in response to the change in Indonesian bauxite export policy. In 2012, we supplied approximately 6.9 million tonnes, or 55.7% 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 2012 were sold by alumina refineries directly to external customers or internally to Chalco Trading for subsequent external trading. Our Shanxi branch and Henan branch completed their respective remoulding and upgrading projects in 2012, which increased our total annual alumina

production capacity by 690,000 tonnes. We expect our Chalco Xing Xian alumina project to be completed in 2013 and increase our annual alumina production capacity by 800,000 tonnes.

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

	As of December 31, 2012 For the Year Ended December 31, 2012				
	Annual Production Capacity (1)	Alumina Production Output	Alumina Chemical Products Output	Utilization Rate (2)	Production Process
(in thousand tonnes, except percentages)					
Shanxi branch	2,747.0	1,924.0	14.0	100%	Bayer-sintering Combined
Henan branch	2,410.0	1,928.0	125.0	74.3%	Bayer-sintering Combined
Shandong branch	1,770.0	1,512.0	748.0	68.1%	Sintering and Bayer
Guizhou branch	1,200.0	1,019.0	29.0	100%	Bayer-sintering Combined
Zhongzhou branch	2,980.0	1,901.0	208.0	73.8%	Sintering and Bayer
Guangxi branch	2,210.0	2,413.0	165.0	100%	Bayer
Zunyi Alumina	800.0	851.0	-	100%	Bayer
Chongqing branch	800.0	386.0	3.0	50.0%	Bayer-sintering Series
Guangxi Huayin <sup>(3)</sup>	530.0	502.0	-	100%	Bayer
Research Institute <sup>(4)</sup>	20.0	-	20.0	-	Bayer

Total	15,467.0	12,436.0	1,312.0	84.6%
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </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 rate in 2012 is calculated by dividing our utilized production capacity by our total designed production capacity in 2012. Before 2011, we calculated capacity utilization rates by dividing 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 by production capacity of a particular plant.
  - (3) Guangxi Huayin's designed production capacity and production volume represents our pro rata share of this jointly-controlled entity.
  - (4) The alumina chemical products produced at our Research Institute are sold commercially, and such sales are included in our total revenues.

#### Primary Aluminum

We operate 16 primary aluminum smelters 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 4.3 million tonnes as of December 31, 2012. Three of our smelters are integrated with alumina refineries and do not need to source alumina externally.

In 2012, we produced approximately 4.2 million tonnes of primary aluminum and the average utilization rate for our smelters was 98.7% for the year. In 2012, Fushun Aluminum completed its remoulding and upgrading project, which increased our total annual primary aluminum production capacity by 90,000 tonnes. The annual primary aluminum production capacity of Liancheng branch decreased by 90,000 tonnes because we ceased the operation of some obsolete primary aluminum production facilities in December 2012. In addition, we ceased the operation of our obsolete primary aluminum production facilities of Henan branch in January 2013, which reduced our annual primary aluminum production capacity by 56,000 tonnes.

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:

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Plant	As of December 31, 2012 For the Year Ended December 31, 2012			
	Annual Production Capacity (1)	Aluminum Output (2)	Utilization Rate	Smelting Equipment
	(in thousand tonnes, except percentages)			
Baotou Aluminum	388.0	400.0	100%	200Ka, 240Ka and 400Ka pre-bake
Fushun Aluminum	330.0	263.0	95.7%	200Ka and 350Ka pre-bake
Gansu Hualu	230.0	220.0	99.5%	160Ka and 210Ka pre-bake
Guangxi branch	139.5	110.0	81.4%	160Ka and 320Ka pre-bake
Guizhou branch	403.7	403.0	93.4%	160Ka, 186Ka and 230Ka pre-bake
Henan branch <sup>(3)</sup>	56.0	-	-	85Ka pre-bake
Jiaozuo Wanfang	412.0	451.0	99.6%	280Ka pre-bake
Lanzhou branch	388.0	415.0	98.3%	200Ka and 350Ka pre-bake
Qinghai branch	367.0	387.0	97.7%	160Ka and 200Ka pre-bake

Research Institute <sup>(4)</sup>	18.0	4.0	-	150Ka and 300Ka pre-bake
Shandong Huayu	200.0	219.0	100%	240Ka pre-bake
Shandong branch	55.0	53.0	100%	200Ka pre-bake
Shanxi Huasheng	220.0	216.0	100%	300Ka pre-bake
Shanxi Huaze	350.0	349.0	99.8%	300Ka pre-bake
Zunyi Aluminum	235.0	234.0	99.3%	200Ka, 350Ka pre-bake
Liancheng branch	523.0	495.0	99.5%	200Ka and 500Ka pre-bake
Longmen Aluminum	17.0	-	-	75Ka pre-bake
	<hr/>	<hr/>	<hr/>	
Total	4,332.2 (5)	4,219.0	98.7%	
	<hr/>	<hr/>	<hr/>	

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- (1) Production capacity takes into account designed capacity, downtime for ordinary maintenance and repairs and subsequent capacity modifications.
- (2) Capacity utilization rate in 2012 is calculated by dividing our utilized production capacity by our total designed production capacity in 2012. Before 2011, we calculated capacity utilization rates by dividing the production output by production capacity.
- (3) We ceased the operation of our obsolete primary aluminum production facilities of Henan branch in January 2013.
- (4) The primary aluminum produced at our Research Institute is sold commercially, and such sales are included in our total revenues.
- (5) Not including the aluminum alloy business of Pingguo Aluminum.

#### Aluminum Fabrication Products

We currently operate nine aluminum fabrication plants in China, among which, five plants were acquired in 2008. Our annual aluminum fabrication production capacity was approximately 1.7 million tonnes as of December



31, 2012. In 2012, we produced approximately 622,900 tonnes of aluminum fabrication products and the average utilization rate of our aluminum fabrication plants was approximately 36.2%.

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:

Plant	As of December 31, 2012 For the Year Ended December 31, 2012			
	Aluminum Annual Fabrication Production Capacity (1)	Product Output (2)	Utilization Rate	Principal Products
	(in thousand tonnes, except percentages)			
Northwest Aluminum	135.0	34.2	25.3%	extrusions, planks, strips and screens
Chalco Ruimin	370.0	173.8	47.0%	planks, strips and screens
Huaxi Aluminum	22.0	14.3	65.0%	strips and screens
Chalco Southwest Aluminum	350.0	212.8	60.8%	strips
Chalco Southwest Aluminum Cold Rolling	250.0	62.5	25.0%	planks and strips
Henan Aluminum	355.0	83.8	23.6%	planks, strips and screens
Shandong branch	10.0	7.9	79.0%	profiles
Chalco Qingdao <sup>(3)</sup>	120.0	7.3	6.6%	casts, ingots
Chalco Nanhai <sup>(3)</sup>	110.0	26.3	23.9%	casts

Total	1,722.0	622.9	36.2%
	<hr/>	<hr/>	<hr/>

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- (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) Chalco Qingdao and Chalco Nanhai use recycled aluminum materials to produce aluminum fabrication products, while our other aluminum fabrication plants primarily use ingots and other primary aluminum products to produce aluminum fabrication products.

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## 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. 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 zonary 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.

#### Economic Significance.

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 2.4 tonnes of bauxite to produce one tonne of alumina in 2012. We used approximately 24.2 million tonnes, 27.7 million tonnes and 29.8 million tonnes of bauxite in our alumina production in 2010, 2011 and 2012, respectively. The production of our own mines reached approximately 17.3 million tonnes in 2012, representing an increase of approximately 27.2% from 2011. Our jointly-operated mine did not produce bauxite in 2012, compared with approximately 4,300 tonnes of output in 2011. We purchase bauxite from a number of suppliers and do not depend on any supplier for our bauxite requirements. In 2012, bauxite secured from other suppliers accounted for approximately 49.2% of our total bauxite supply, primarily because our demand for bauxite exceeded the production of our own mines and our joint-operated mines. We had 17 own mines as of December 31, 2012 and we continue to explore new bauxite reserves to replenish our reserves.

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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,					
	2010		2011		2012	
	Percentage of Bauxite Supply	Percentage of Bauxite Supply	Percentage of Bauxite Supply	Percentage of Bauxite Supply	Percentage of Bauxite Supply	Percentage of Bauxite Supply
	(%)	(%)	(%)	(%)	(%)	(%)
	(in thousand tonnes, except percentages)					
Own mines	12,729.9	49.4	13,564.6	48.8	17,262.0	50.8
Jointly-operated mines	40.0	0.2	4.3	-	-	-
Other suppliers	13,005.0	50.4	14,209.5	51.2	16,689.0	49.2
Total	25,774.9	100.0	27,778.4	100.0	33,951.0	100.0

## Own Mines.

As of December 31, 2012, we owned and operated 17 mines that had approximately 246.1 million tonnes of aggregate bauxite reserves. As none of our mines produces bauxite for external sales, we have full access to the bauxite produced by our own mines. For the three years ended December 31, 2010, 2011 and 2012, we extracted approximately 12.7 million tonnes, 13.6 million tonnes and 17.3 million tonnes, respectively, of bauxite from our own mines. In order to retain 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 km<sup>2</sup> 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, 2010, 2011 and 2012, 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 aluminum refineries, as well as certain modifying factors that are dependent on reserve quality.

Each of our own 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, 2012:

Mine	Location	Nature of	Mining	Permit	Present	Capacity	Bauxite
		Ownership	Method	Renewal	Condition/ Current State of Exploration		Production
		(1)		(1)		(2)	
						(in thousand tonnes)	(in thousand tonnes)
Pingguo mine	Guangxi Zhuang Autonomous Zone	100% owned and operated by Chalco	Open pit	January 2011 - April 2036	Fully developed and operational	4,950.0	6,180.0

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Guizhou mine <sup>(3)</sup>	Guizhou Province	100% owned and operated by Chalco	Open pit / underground	October 2004 - December 2038	Fully developed and operational	1,400.0	810.0
Zunyi mine	Guizhou Province	100% owned and operated by Chalco	Open pit/ underground	December 2008 - May 2021	Two stopes are currently under development	600.0	630.0
Xiaoyi mine	Shanxi Province	100% owned and operated by Chalco	Open pit	September 2001 - September 2031	Fully developed and operational	3,180.0	3,794.6
Shanxi Other Mines	Shanxi Province	100% owned and operated by Chalco	Open pit/ underground	November 2010 - July 2016	Fully developed and operational or under construction <sup>(6)</sup>	1,050.0	1,005.4
Mianchi mine	Henan Province	100% owned and operated by Chalco	Open pit / underground	October 2001 - October 2031	Three stopes are currently under development	200.0	266.0
Luoyang mine	Henan Province	100% owned and operated by Chalco	Open pit/ underground	October 2001 - October 2031	Fully developed and operational	750.0	579.8
Xiaoguan mine <sup>(4)</sup>	Henan Province	100% owned and operated by Chalco	Open pit / underground	October 2001 - October 2031	Fully developed and operational	720.0	1,066.4
Gongyi mine <sup>(4)</sup>	Henan Province	100% owned and operated by Chalco	Open pit / underground	January 2008 - April 2029	Fully developed and operational	420.0	502.4
Dengfeng mine <sup>(4)</sup>	Henan Province	100% owned and operated by Chalco	Open pit / underground	January 2008 - June 2019	Fully developed and operational	210.0	-
Sanmenxia mine	Henan Province	100% owned and operated by Chalco	Underground	April 2005 - January 2026	Under construction	80.0	0.8

Xuchang mine <sup>(5)</sup>

Henan Province

100% owned and

Open pit /

August 2010 -

Fully developed and operational

220.0

144.3

operated by Chalco

underground

January 2016

Jiaozuo mine

Henan Province

100% owned and

Open pit/

September 2008 -

Fully developed and operational

42.0

312.1

operated by Chalco

underground

February 2022

Pingdingshan mine	
Henan province	
100% owned and	
Open pit /	
February 2008 -	
Fully developed and operational	208.0
	1,033.6
operated by Chalco	
underground	
September 2021	
Yangquan mine	
Shanxi Province	
100% owned and	
Open pit	
September 2001-	
Fully developed and operational	400.0
	250.0
operated by Chalco	
September 2031	



Nanchuan mine

Chongqing

100% owned and

Underground

December 2010 -

Fully developed and operational

1,650.0

690.0

Municipality

operated by Chalco

December 2022

- (1) All conditions to retain our properties or leases have been fulfilled as of December 31, 2012. 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 approximately 16.1 million tonnes of bauxite as of December 31, 2012.
- (3) Including Guizhou No. 1 mine and Guizhou No. 2 mine.
- (4) Xiaoguan mine was divided into three mines, namely, Xiaoguan mine, Gongyi mine and Dengfeng mine in 2011.
- (5) Yuzhong mine was renamed Xuchang mine in 2009.
- (6) Three mining areas of Shanxi Other Mines are under construction, four mining areas are fully developed and operational and one mining area

ceased production in 2008.

We are required to obtain mining rights permits to conduct mining activities. 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 for a mine. 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 mining rights permit 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 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 for 50-year terms 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, 2012:

Total

Average Grade (%)

Mine	Area (km <sup>2</sup> )	Reserves <sup>(1)(2)</sup> (in million tonnes)	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Ratio of Average A/S <sup>(3)</sup>
Pingguo mine	186.19	85.64	54.62	4.97	11.00
Guizhou No. 1 mine	6.40	2.02	65.49	11.71	5.60
Guizhou No. 2 mine	28.52	15.23	62.43	9.40	6.64
Zunyi mine	11.25	3.83	58.85	8.60	6.85
Xiaoyi mine	10.21	20.12	63.47	12.96	4.90
Shanxi Other Mines	37.47	15.65	61.52	10.73	5.73
Mianchi mine	11.19	2.49	62.99	12.34	5.10

Luoyang mine	9.68	4.93	60.67	9.56	6.35
Xiaoguan mine <sup>(4)</sup>	56.10	22.30	63.75	14.89	4.28
Gongyi mine <sup>(4)</sup>	8.21	3.16	64.10	13.80	4.65
Dengfeng mine <sup>(4)</sup>	11.12	0.43	60.01	8.80	6.82
Sanmenxia mine	15.68	29.27	64.95	11.02	5.89
Xuchang mine	10.92	0.23	61.87	16.57	3.73
Jiaozuo mine	17.45	1.04	58.56	13.54	4.32
Pingdingshan mine	32.39	3.42	62.62	12.97	4.83
Yangquan mine	4.13	3.74	60.42	12.74	4.74
Nanchuan mine	20.96	32.62	61.05	13.62	4.48
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Total (average)	477.87	246.12	59.89	9.70	6.17
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
By reserve type					
Proven reserve		127.22	60.52	10.17	5.95
Probable reserve		118.90	59.22	9.20	6.44
		<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Total (average) reserves		246.12	59.89	9.70	6.17
		<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>

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- (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.

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- (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<sub>2</sub>O<sub>3</sub> to the average grade of SiO<sub>2</sub> of the reserves.
- (4) Xiaoguan mine was divided into three mines, namely, Xiaoguan mine, Gongyi mine and Dengfeng mine in 2011.

We have implemented a safety control program to achieve the targets set in our internal guidelines for safety and risk control management and to maintain compliance with the National Mining Safety Law and related rules and regulations in China. Our safety control program combines close supervision and routine inspection of mining conditions with continual implementation of safety measures and procedures at our own bauxite mines and safety training for our mining personnel. In 2012, we extracted approximately 17.3 million tonnes of bauxite from our own mines and did not experience any production accidents that involved serious work injuries or death.

#### Jointly-Operated Mines.

To optimize our resources and reduce costs, we currently manage our jointly-operated mines by contracting with local companies for their mining services to operate mines owned by us. 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. In the years ended December 31, 2010, 2011 and 2012, our jointly-operated mines produced 40,000 tonnes, 4,300 tonnes and nil of bauxite, respectively.

The number of our jointly-operated mines in China decreased from three as of December 31, 2011 to two as of December 31, 2012 because in 2012, Xinzhuang mine became a mining area of Yangquan mine, one of our own mines. Each of our jointly-operated mines is accessible by motor vehicles via public roads, highways or both. Our jointly-operated mines are powered by diesel fuel 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, 2012:

Mine	Province	Name of Joint Operator	Mining Method	Permit Renewal	Present Condition/ Current State of Exploration	Current Status
				(2)		
Dayu mine	Shanxi	n/a <sup>(1)</sup>	Open pit	December 2009 <sup>(3)</sup>	under development	The previous mining rights holder is in the process of transferring the mining rights to us and we will become the sole owner of the mine and are conducting research on the development plan of the mine.
Xiataohua mine	Shanxi	n/a <sup>(1)</sup>	Open pit	June 2013	exploration is finished	The previous mining rights holder is in the process of transferring the

mining rights to us and we will become the sole owner of the mine and are conducting research on the development plan of the mine. We are searching for operators for future development.

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- (1) We have decided to cooperate with other parties to undertake the mining operations in these mines. However, as of December 31, 2012, we had not confirmed any party as our partner.
  - (2) All conditions to retain jointly-owned properties or jointly-held leases have been fulfilled as of December 31, 2012.
  - (3) We are in the process of restructuring the operations of Dayu mine and we expect to resume the operations of Dayu mine by the end of 2013, which will become a mining area of one of our own mines. We plan to renew the mining permit after such restructuring.

The following table sets forth the specific details of our jointly-operated mines as of December 31, 2012:

Mine	Area (km <sup>2</sup> ) (1)(2)	Total		Average Grade		Ratio of Average A/S (3)
		Reserves	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>		
		(in million tonnes)				
Dayu mine	0.99	0.76	65.63	10.98	5.98	
Xiataohua mine	2.50	7.59	59.40	13.75	4.32	

<b>Total (average)</b>	<b>3.49</b>	<b>8.35</b>	<b>59.97</b>	<b>13.50</b>	<b>4.44</b>
By reserve type					
Proven reserve		7.25	59.40	13.75	4.32
Probable reserve		1.10	63.71	11.83	5.38
		<hr/>	<hr/>	<hr/>	<hr/>
Total (average) reserves		8.35	59.97	13.50	4.44
		<hr/>	<hr/>	<hr/>	<hr/>

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- (1) Our reserves take into consideration mining dilution and loss factors, which generally vary from 5% to 10% and are 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<sub>2</sub>O<sub>3</sub> to the average grade of SiO<sub>2</sub> of the reserves.

#### 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 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 portion of bauxite overseas. Bauxite secured from other suppliers accounted for 49.2% of our total bauxite supply in 2012.

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#### Bauxite Procurement.

The corporate management 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.

#### Alumina-to-Silica Ratio.

The production method for alumina refining is determined by the mineral composition of the bauxite, 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 approximately 3.7:1 to 14.2:1.

#### 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 operational arrangements with respect to our jointly-operated mines; and
- \* the market conditions relating to purchases from small independent mines.

The average purchase price of bauxite per tonne from our joint operations and other suppliers in 2010, 2011 and 2012 was approximately RMB386.7, RMB353.6 and RMB309.0, respectively. The average cost of bauxite from our own mines per tonne in 2010, 2011 and 2012 was approximately RMB202.4, RMB176.0 and RMB207.0, respectively. Our jointly-operated mines did not produce bauxite in 2012.

We purchase a substantial amount of bauxite to protect the resources at the mines that we have already acquired despite our unutilized capacity at these mines. Additionally, to fully utilize the 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 flexibility and the inclusion of lower grade bauxite to optimize the use of bauxite deposits available to us. We do not use our historical average purchase prices for 2010, 2011 and 2012, or any other historical index to estimate our bauxite reserves.

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

	Year Ended December 31,		
	2010	2011	2012
	(RMB in thousands)		
Capital Expenditures			
Infrastructure construction	417,235.9	157,000.0	335,440.0
Facility upgrade	135,321.3	56,000.0	-
Total	552,557.2	213,000.0	335,440.0

#### Primary Aluminum

An average of approximately 1.9 tonnes of alumina and 13,929 kWh of electricity were required to produce one tonne of primary aluminum in 2012. Alumina and electricity, the two principal components of costs in the smelting process, accounted for approximately 35.4% and 43.0%, respectively, of our unit primary aluminum production costs in 2012. 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. In 2012, our smelters consumed approximately 8.1 million tonnes of alumina to produce approximately 4.2 million tonnes 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 primary aluminum plants that do not have integrated alumina refining operations onsite obtain alumina internally from our alumina refineries located elsewhere or externally on the market.

#### Aluminum Fabrication Products

The main raw material for our aluminum fabrication operations is primary aluminum. 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.

#### 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 refineries and purchase our remaining electric power 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. Power costs for our various alumina refineries vary accordingly.

Large quantities of coal is used as a reducing agent and fuel to produce steam and gas in the alumina refining process. As of the date of this annual report, we held minority interests in a number of coal mining enterprises, including Shanxi Jiexiu, Qinghai Energy, Zhaogu Coal, Xuehugou Coal Industry Co., Ltd., Datong Coal Group Huasheng Wanjie Coal Co., Ltd., Dongdong Coal, Hejin Dujiagou Coal Industry Co., Ltd., Chalco Liupanshui, Huozhou Coal Group Xingshengyuan Coal Co., Ltd. and Guizhou Yuneng. We hold 70% of the equity interest in Gansu Huayang, which holds mining rights for coal deposits in the Luochuan mining area, Gansu Province.

All of the coal mining enterprises in which we directly or indirectly have equity interest are currently in the trial production or commercial production stage, except:

- \* Panlong mine, one of the coal mines of Chalco Liupanshui, a joint venture company in which we hold 49% of the equity interest;
- \* Huozhou Coal Group Xingshengyuan Coal Co., Ltd., a joint venture company in which Shanxi Huasheng holds 43.03% of the equity interest;
- \* Guizhou Yuneng, a joint venture company in which we hold 25% of the equity interest; and
- \* Gansu Huayang.

Gansu Huayang is currently under exploration. Panlong mine, Huozhou Coal Group Xingshengyuan Coal Co., Ltd. and Guizhou Yuneng are under development. We also entered into a mining rights transfer agreement to acquire the mining rights for coal deposits in the Laodonghe mining area, Guizhou Province. By investing in coal mining enterprises and acquiring mining rights for coal deposits, we plan to partially offset our future energy costs, and secure a portion of the coal we consume in our operations.

Alkali is used as a supplemental material in alumina refining. The sintering process and the Bayer-sintering combined process require soda ash while caustic soda is used in the Bayer process. Our alumina refineries use heavy oil, natural gas and coal gas as fuel to refine alumina. There is no governmental regulation of the prices of coal, alkali or fuel. We purchase these raw materials from external 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.

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## Primary Aluminum

Smelting primary aluminum requires a substantial and continuous supply of electricity. In 2012, we consumed 58.7 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 - A. Operating Results - Overview - Factors Affecting Our Results of Operations - Manufacturing Costs."

We generate electricity at three of our smelters and purchase our remaining electric power requirement from regional power grids or directly from power generation enterprises. Except for two 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, but 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 2012. The average electricity cost of our smelters was RMB0.4115/kWh in 2012.

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. Most of our carbon cathodes are supplied by our Guizhou branch, which operates our only carbon cathode production facility and sells carbon cathodes to external smelters in China.

#### Sales and Marketing

We coordinate substantially all of our sales and marketing activities of our self-produced alumina products and some of our sales and marketing activities of our self-produced primary aluminum products through Chalco Trading. Our subsidiaries and branches sell substantially all of our self-produced aluminum fabrication products and some of our self-produced primary aluminum products directly to external customers. Our alumina refineries sell our self-produced alumina chemical products directly to external customers or indirectly through Chalco Trading for subsequent external trading. For all of our self-produced products that are sold either through Chalco Trading for subsequent external sale or directly to external customers, our subsidiaries and branches play an important role in providing after-sales services and strengthening our presence in the marketplace. Since late 2009, we also have been engaged substantially in the trading of non-ferrous metal products including alumina, primary aluminum, copper, zinc and lead as well as coal products that we source from third-party suppliers through Chalco Trading.

#### Alumina

We sell our self-produced alumina to customers primarily through Chalco Trading, giving priority to customers with whom we have long-standing relationships and who have established a strong credit history, after reserving sufficient alumina for our forecasted primary aluminum production. In 2012,

we supplied approximately 6.9 million tonnes of alumina produced at our refineries to our own smelters, which represented approximately 55.7% of our total alumina production, and sold the remainder to our customers. In addition, we also procure and sell outsourced alumina under long-term agreements or on the spot market through Chalco Trading. We sold approximately 3.2 million tonnes of outsourced alumina in 2012.

The sales prices of alumina that our alumina refineries sell internally to Chalco Trading are determined at a percentage of the average three-month primary aluminum futures prices on the SHFE in the past calendar month. Chalco Trading coordinates the external sales of our alumina products. In the fourth quarter of each year, Chalco Trading hosts an annual national sales conference for our primary aluminum smelter customers and alumina suppliers with the presence of the representatives from our branches with alumina operations. At the sales conference, Chalco Trading enters into most of our external sales contracts for alumina.

Chalco Trading sells our self-produced alumina and alumina sourced from third-party suppliers to smelters throughout China. All of our major customers in the past three years have been domestic smelters. In the case of alumina sourced from third-party suppliers, we may procure alumina under long-term supply agreements or on the spot market. Our long-term supply agreement for the procurement of alumina normally sets forth the quantity of alumina to be procured by us in each month with the price for each monthly delivery to be determined through negotiations in the month before delivery. We are normally required to pay the full price of the outsourced alumina before each delivery.

We sell most of our self-produced alumina and a portion of the outsourced alumina under long-term sales agreements with terms ranging from one year to five years. Our long-term sales agreement for alumina normally sets forth the quantity of alumina to be sold by us in each year or month with the price for each monthly delivery to be determined at a percentage of the average three-month primary aluminum futures prices on the SHFE in the calendar month before delivery. Our customer is normally required to pay for its procurement before each delivery. As a result, fluctuations of primary aluminum prices on the SHFE affect alumina prices under our long-term sales agreements.

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Chalco Trading sells the rest of our self-produced and outsourced alumina products on the spot market. We set, and adjust as necessary, reference sales prices for the self-produced alumina products. In 2012, our highest and lowest reference spot price of domestic alumina was RMB2,750 per tonne

and RMB2,480 per tonne, respectively. We set the price for the external sales of alumina products by reference to alumina prices at reference markets and taking into account the following considerations:

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

We sell the rest of the outsourced alumina on the spot market at prices determined through negotiations with our customers, taking into consideration factors including our procurement prices and the prevailing market conditions.

#### Primary Aluminum

Our primary aluminum manufacturing subsidiaries and branches sell a portion of our primary aluminum output directly to external customers. Our primary aluminum manufacturing subsidiaries and branches also sell a portion of our primary aluminum output internally to Chalco Trading at prices based on the futures prices of primary aluminum on SHFE. Chalco Trading then coordinates the external sales of primary aluminum. We consume the remaining primary aluminum output at our own aluminum fabrication plants. Our subsidiaries and branches including Chalco Trading sell our self-produced primary aluminum products to external customers through the following three channels:

- \* Contract sales. Most of our primary aluminum sales are made pursuant to contracts entered into directly with our long-standing customers. Terms of the sales contracts for primary aluminum are typically one year. We price our primary aluminum products based on the SHFE futures prices.
- \* Sales on the SHFE. As part of our effort to manage market risk, we sell a portion of our primary aluminum products on the SHFE through futures contracts with terms ranging from one month to twelve months to hedge against declines in primary aluminum prices.

- \* Sales on the spot market. We also sell our primary aluminum products on the spot market at the reference prices we set and adjust as necessary.

In addition, we also procure and sell outsourced primary aluminum on the spot market or through short-term futures and options transactions. We sold approximately 2.2 million tonnes of outsourced primary aluminum in 2012.

We hold an annual national primary aluminum sales conference through Chalco Trading with the presence of representatives from our subsidiaries and branches in the fourth quarter of each year to procure sales and plan production for the following year.

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 Liaoning and Heilongjiang Provinces).

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We sell substantially all of our self-produced and outsourced 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 2012 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.

We establish pricing guidelines for Chalco Trading to conduct external domestic sales of our self-produced primary aluminum products, taking into account three main factors: the primary aluminum spot prices and futures price on the SHFE; our production costs and expected profit margins; and

supply and demand. We determine our sales prices of the outsourced primary aluminum through negotiations with our customers, taking into consideration factors including our procurement prices and the prevailing market conditions. As part of our efforts to coordinate and centralize sales, we also set minimum prices for primary aluminum products that are sold directly to external consumers by our subsidiaries and branches with respect to each region in China where our primary aluminum is sold. These minimum prices are determined by reference to the SHFE spot price for primary aluminum. The smelter filling a particular order from a external customer 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. In 2012, our aluminum fabrication subsidiaries and branches sold substantially all of our aluminum fabrication products directly to external customers. In 2012, we sold approximately 586,900 tonnes of self-produced aluminum fabrication products.

In 2012, we derived more than 80% of our aluminum fabrication products revenues from sales in China. 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. Our alumina refineries sell our alumina chemical products directly to external customers or indirectly to external customers through Chalco Trading for subsequent external trading.

We sell most of our alumina chemical products and gallium in China. Prices for our alumina chemical products and gallium are determined through negotiations with our customers, taking into consideration the market conditions. Our total sales of gallium in 2010, 2011 and 2012 amounted to approximately RMB67.0 million, RMB118.0 million and RMB56.8 million, respectively.

#### Trading of Outsourced Non-ferrous Metal Products and Other Materials

Since late 2009, we have been substantially engaged in the trading of alumina and primary aluminum sourced from third-party suppliers. Please see "- Alumina" and "- Primary Aluminum" for more details. We also sell other non-ferrous metal products such as copper, zinc and lead as well as coal products that we procure from our third-party suppliers to external customers on the spot market or under long-term sales agreements. In 2012, we sold approximately 519,400 tonnes of outsourced copper, zinc and lead and approximately 5.2 million tonnes of outsourced coal products. In addition, we also sell outsourced raw and ancillary materials in bulk to customers such as steel manufacturers and copper processing companies on the spot market.

Chalco Trading has a team with trading expertise to conduct research on the markets of non-ferrous metal products and other materials. From time to time, we may enter into futures and options transactions to hedge against price fluctuations in the non-ferrous metal product market.

### Delivery

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

Most of our primary aluminum products are transported 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 subsidiaries (often with warehousing capacity leased from third parties) in major cities in eastern and southern China to facilitate and coordinate deliveries.

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

### Principal Facilities

Our principal facilities include 28 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 Guangxi Zhuang Autonomous Region in southwestern China, an area rich in bauxite reserves. The Guangxi branch obtains 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 exclusively uses the Bayer process. With technology and production equipment imported from Europe, the 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. Guangxi branch had an annual alumina production capacity of approximately 2,210,000 tonnes as of December 31, 2012. In 2012, the Guangxi branch produced approximately 2,413,000 tonnes of alumina, along with approximately 165,000 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 advanced 160Ka and 320Ka pre-bake reduction pot-lines developed by us in its smelting operations. As of December 31, 2012, our Guangxi branch's annual primary aluminum production capacity was approximately 139,500 tonnes and it produced approximately 110,000 tonnes of primary aluminum in 2012.

#### Guizhou Branch

The Guizhou branch commenced its 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. Our alumina refinery at this branch uses the Bayer-sintering combined process to refine bauxite supplied from our own mines as well as external suppliers into alumina. Bauxite from our own mines is delivered by trucks and train. The majority of the alumina produced at the Guizhou branch is used in the smelting operations at the same plant and the remainder is sold to third-party smelters. Our Guizhou branch uses 160Ka, 186Ka and 230Ka pre-bake reduction pot-lines in its primary aluminum production. As a result of technological innovations and overhauls since its inception, our Guizhou smelter is among the most technologically advanced smelters in China. As of December 31, 2012, our Guizhou branch had an annual alumina production capacity of approximately 1,200,000 tonnes and an

annual primary aluminum production capacity of approximately 403,700 tonnes. In 2012, our Guizhou branch produced approximately 1,019,000 tonnes of alumina, 29,000 tonnes of alumina chemical products and 403,000 tonnes of primary aluminum.

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 seven of our primary aluminum smelters and our Research Institute. Its carbon cathodes are also sold to external customers throughout China.

#### Henan Branch

The Henan branch commenced its alumina refining operation in 1966 and primary aluminum smelting operation in 1967 in Henan Province, a province rich in bauxite reserves. Bauxite is delivered to our Henan branch via railway and highway from the following mines: Xiaoguan mine, Gongyi mine and Dengfeng 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 Bayer-sintering combined process. We also have an 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 external customers. After the completion of its expansion project in 2012, Henan branch's annual alumina production capacity reached approximately 2,410,000 tonnes as of December 31, 2012. In 2012, our Henan branch produced approximately 1,928,000 tonnes of alumina and 125,000 tonnes of alumina chemical products. Henan branch currently has the largest power generation capacity among our alumina refineries.

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In January 2013, we ceased the operation of the obsolete primary aluminum production facilities of Henan branch. In 2012, our Henan branch did not produce any primary aluminum.

#### Shandong Branch

The Shandong branch commenced operations in 1954 and has the capacity to produce alumina, primary aluminum and aluminum fabrication products. Bauxite is delivered to our Shandong branch via railway and highway from the Yangquan mine in Yangquan, Shanxi Province. Its alumina refinery was China's first production facility for alumina. It produces the majority of its alumina through the sintering process and Bayer 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 in Henan and Shanxi Provinces. Its alumina output is first used to satisfy its primary aluminum production, and the remainder is sold to our other smelters as well as external customers. Shandong branch had an annual alumina production capacity of approximately 1,770,000 tonnes as of December 31, 2012. It produced approximately 1,512,000 tonnes of alumina in 2012.

In addition, our Shandong branch produces substantial amounts of alumina chemical products and produced approximately 748,000 tonnes of alumina chemical products in 2012. 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.

As of December 31, 2012, our Shandong branch's annual primary aluminum production capacity was approximately 55,000 tonnes and it produced approximately 53,000 tonnes of primary aluminum in 2012.

Our Shandong branch also uses its self-produced primary aluminum to produce aluminum fabrication products. As of December 31, 2012, our Shandong branch had an annual aluminum fabrication production capacity of 10,000 tonnes and it produced approximately 7,929 tonnes of aluminum fabrication products in 2012.

#### Qinghai Branch

Located in Qinghai Province, our Qinghai branch is a stand-alone primary aluminum production facility. This branch commenced operations in 1987 and is one of the most technologically advanced primary aluminum smelters in China. It operates 160Ka and 200Ka automated pre-bake anode reduction pot-lines that were developed domestically. It 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. The Qinghai branch produced approximately 387,000 tonnes of primary aluminum in 2012, slightly exceeding its designed annual production capacity of approximately 367,000 tonnes as of December 31, 2012.

#### 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 the Xiaoyi mine in Shanxi Province. Our Shanxi branch is a stand-alone alumina plant. After the completion of its expansion project in 2012, our Shanxi branch's annual alumina production capacity reached approximately 2,747,000 tonnes as of December 31, 2012. Our Shanxi branch produced approximately 1,924,000 tonnes of alumina and 14,000 tonnes of alumina chemical products in 2012.

Our Shanxi branch's production facilities are primarily imported. Shanxi branch relies on bauxite from our own mines as well as external suppliers. It is in the proximity of large coal mines and substantial water resources and currently has the second largest power generation capacity among our alumina refineries.

#### Zhongzhou Branch

Located in Henan Province, our Zhongzhou branch is a stand-alone alumina plant, located near abundant bauxite, coal and water supplies. 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 and Bayer process. Our Zhongzhou branch obtains bauxite supplies from Henan Province and Shanxi Province.

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Our Zhongzhou branch had an annual alumina production capacity of approximately 2,980,000 tonnes as of December 31, 2012. Our Zhongzhou branch produced approximately 1,901,000 tonnes of alumina and approximately 208,000 tonnes of alumina chemical products in 2012.

#### Zunyi Alumina

Zunyi Alumina is located in Zunyi, Guizhou Province. In April 2006, we entered into a joint venture agreement with Guizhou Wujiang Hydroelectric Co., Ltd, to establish a joint venture company, Zunyi Alumina. We held 73.28% of the equity interests in Zunyi Alumina as of December 31, 2012. Zunyi Alumina completed the construction of alumina production facilities and commenced operations in 2010. It had an annual alumina production capacity of approximately 800,000 tonnes as of December 31, 2012. Zunyi Alumina produced approximately 851,000 tonnes of alumina in 2012.

### Chongqing Branch

Our Chongqing branch is located in Chongqing. Chongqing branch completed the construction of alumina production facilities in 2010 and its annual alumina production capacity was approximately 800,000 tonnes as of December 31, 2012. Chongqing branch produced approximately 386,000 tonnes of alumina and 3,000 tonnes of alumina chemical products in 2012.

### 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 and 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 a designed annual primary aluminum production capacity of approximately 388,000 tonnes as of December 31, 2012. It produced approximately 415,000 tonnes of primary aluminum in 2012.

### 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 thus became its largest shareholder. In 2010, we partially disposed our equity interest in Jiaozuo Wanfang. As of December 31, 2012, we held 24.002% equity interest of Jiaozuo Wanfang. Jiaozuo Wanfang has been our subsidiary since 2008 when we established the de facto control over it. Jiaozuo Wanfang had an annual primary aluminum production capacity of approximately 412,000 tonnes as of December 31, 2012 and produced approximately 451,000 tonnes of primary aluminum in 2011.

### 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. Shanxi Huaze's designed annual production capacity of primary aluminum was approximately 350,000 tonnes as of December 31, 2012 and it produced approximately 349,000 tonnes of primary aluminum in 2012. 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 Shanxi Guan Lv Company Limited to establish a joint venture company, Shanxi Huasheng. Shanxi Huasheng commenced operations in March 2006 and had a designed annual production capacity of primary aluminum of approximately 220,000 tonnes as of December 31, 2012. In 2012, Shanxi Huasheng produced approximately 216,000 tonnes of primary aluminum. We currently hold 51% of the equity interest in Shanxi Huasheng.

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#### 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 62.1% of the equity interest in Zunyi Aluminum. Zunyi Aluminum's annual primary aluminum production capacity was approximately 235,000 tonnes as of December 31, 2012 and it produced approximately 234,000 tonnes of primary aluminum in 2012.

#### 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. After the completion of its expansion project in 2012, Fushun Aluminum's annual primary aluminum production capacity reached approximately 330,000 tonnes as of December 31, 2012. Fushun Aluminum produced approximately 263,000 tonnes of primary aluminum in 2012.

#### 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. We currently hold 55% of the equity interest in Shandong Huayu. Shandong Huayu had an annual primary aluminum production

capacity of approximately 200,000 tonnes as of December 31, 2012. Shandong Huayu also has supporting facilities and coal-fired generators. In 2012, Shandong Huayu produced approximately 219,000 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. Gansu Hualu had an annual primary aluminum production capacity of approximately 230,000 tonnes as of December 31, 2012 and it produced approximately 220,000 tonnes of primary aluminum in 2012.

#### 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 a designed annual production capacity of approximately 388,000 tonnes as of December 31, 2012. In 2012, it produced approximately 400,000 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 turned it into our Liancheng branch which specializes in producing primary aluminum. Liancheng branch had an annual primary aluminum production capacity of approximately 523,000 tonnes as of December 31, 2012. It produced approximately 495,000 tonnes of primary aluminum in 2011.

#### Longmen Aluminum

Located in Shanxi Province, Longmen Aluminum is established in 1991. We hold 55% of its equity interests. It specializes in producing primary aluminum. As of December 31, 2012, Longmen Aluminum had an annual primary aluminum production capacity of approximately 17,000 tonnes and it did not produce any primary aluminum in 2012.

### Chalco Qingdao

Located in Qingdao, Shandong Province, Chalco Qingdao specializes in using recycled aluminum materials to produce aluminum fabrication products. As of December 31, 2012, Chalco Qingdao had an annual alumina fabrication production capacity of approximately 120,000 tonnes and produced approximately 7,300 tonnes of aluminum fabrication products in 2012.

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### Northwest Aluminum

Northwest Aluminum is situated in Lanzhou City in Gansu Province and is an aluminum fabrication plant. It was part of Lanzhou Aluminum before July 2007 which we acquired through share exchange in April 2007. Lanzhou Aluminum's A shares were listed on Shanghai Stock Exchange until April 24, 2007 when we acquired it through share exchange. In July 2007, Lanzhou Aluminum was divided into two wholly-owned entities: Lanzhou branch and Northwest Aluminum. Northwest Aluminum had an annual aluminum fabrication production capacity of approximately 135,000 tonnes as of December 31, 2012 and it produced approximately 34,206 tonnes of aluminum fabrication products in 2012.

### Chalco Ruimin

Located in Fujian, Chalco Ruimin commenced production in 1996 and specializes in aluminum fabrication. In late May 2008, we purchased 75% of the equity interest of Chalco Ruimin from Chinalco on the China Beijing Equity Exchange. Chalco Ruimin completed a RMB2.87 billion expansion plan in 2010. Chalco Ruimin had an annual aluminum fabrication capacity of approximately 370,000 tonnes as of December 31, 2012. Chalco Ruimin produced approximately 173,814 tonnes of aluminum fabrication products in 2012. We currently hold 93.30% of the equity interest in Chalco Ruimin.

### Huaxi Aluminum

Located in Chengdu, Sichuan Province, Huaxi Aluminum commenced production in 1997 and specializes in aluminum fabrication. 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, 2012, Huaxi Aluminum had an annual aluminum fabrication production capacity of approximately 22,000 tonnes and it produced approximately 14,328



tonnes of aluminum fabrication products in 2012.

#### 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, 2012, Chalco Southwest Aluminum had an annual aluminum fabrication production capacity of approximately 350,000 tonnes and produced approximately 212,819 tonnes of aluminum fabrication products in 2012.

#### Chalco Southwest Aluminum Cold Rolling

Established in March 2006 and located in Chongqing, Chalco Southwest Aluminum Cold Rolling specializes in rolling aluminum and aluminum alloy processing, development of high precision aluminum strip production technology and import and export activities on goods and technology. On May 30, 2008, we acquired 100% of the equity interests of Chalco Southwest Aluminum Cold Rolling from Chinalco. In 2010, we completed the construction of production facilities of Chalco Southwest Aluminum Cold Rolling. As of December 31, 2012, Chalco Southwest Aluminum Cold Rolling had an annual aluminum fabrication production capacity of approximately 250,000 tonnes. It produced approximately 62,493 tonnes of aluminum fabrication products in 2012.

#### 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, 2012, Henan Aluminum had an annual aluminum fabrication production capacity of approximately 355,000 tonnes and produced approximately 83,839 tonnes of aluminum fabrication products in 2012. 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. Chalco Nanhai commenced its commercial operation in 2011 and had an annual aluminum fabrication production capacity of approximately 110,000 tonnes as of December 31, 2012. It produced approximately 26,292 tonnes of aluminum fabrication products in 2012.

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## 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

### Competition from Domestic Competitors

#### Alumina

As 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, 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 have established a high entry barrier for new alumina producers in China.

### Primary Aluminum

We derived all of our primary aluminum revenues from domestic sales in 2012. Our competitors include other domestic and international primary aluminum producers that conduct sales in China. In 2012, our primary aluminum production represented approximately 16.0% of total domestic production in China.

There are over 60 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, six primary aluminum producers in China (including Chalco) have annual production capacities of one million tonnes or more, which represent approximately 53% of the total primary aluminum production capacity in China. 10 primary aluminum producers in China (including Chalco) have annual production capacity of 800,000 tonnes or more, which represent approximately 65% of the total primary aluminum production capacity in China. The PRC government encourages consolidation in the Chinese primary aluminum industry to create larger, 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 supplies, which give them a competitive advantage over small domestic smelters. Moreover, according to the Entrance Conditions, effective from 2007, new aluminum projects for expanding production capacity must be approved by the relevant department of the State Council of China. As of the date of the annual report, the relevant department of the State Council of China is not expected to approve any new aluminum projects except those environmental protection upgrade projects and expired equipment exchange projects planned by the PRC government.

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

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- \* Scale of production. With 16 primary aluminum smelters 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. Our Liancheng and Lanzhou branches are among the most technologically advanced primary aluminum smelting facilities in China. In addition, our technological support and research and development capabilities are superior to 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 are able to assure 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 LME.

#### Aluminum Fabrication Products

We derived more than 80% of our aluminum fabrication products revenues from sales in China in 2012. Our competitors include other domestic and international producers of aluminum fabrication products that sell aluminum fabrication products in China. The aluminum fabrication market in China is highly fragmented. There are more than 2,000 aluminum fabrication producers in China with an aggregate annual capacity of approximately 33.0 million tonnes as of the end of 2012. In 2012, the aluminum fabrication producers in China produced approximately 30.7 million tonnes of aluminum fabrication products. We are the largest producer of aluminum fabrication products in China and our major competitors are largely medium- and small-scale regional producers of aluminum fabrication products. We believe we have advantages over such competitors in scale of production, production technologies, research and development, variety of product offerings and experienced workforce.

## Competition from International Competitors

The tariff rate for alumina and primary aluminum imports was eliminated on January 1, 2008 and August 1, 2007, respectively. In 2012, China imported approximately 5.0 million tonnes of alumina, representing approximately a 163.2% increase from 2011. China had net import of approximately 392,900 tonnes of primary aluminum in 2012, which represented a 174.6% increase from 2011. Competition from international suppliers of alumina and primary aluminum is expected to increase. Such competitors are likely to be large international companies. Some competitors may also consider establishing joint venture companies with local producers in China to gain access to the resources in China and to lower transportation costs. However, we expect to continue benefiting from certain PRC governmental policies that promote the growth of large domestic smelters.

International suppliers used to be dominant in certain types of advanced aluminum fabrication products in China. Since 2007, the import of aluminum fabrication products has been slightly decreasing. However, as we began to produce some types of these advanced aluminum fabrication products, including aluminum CTP plates, precision aluminum tubes and some other types of aluminum strips, plates and screens used in electronic industry, to our customers in China, we expect the competition from these international suppliers will increase. We aim to provide high quality products at competitive prices to our customers.

## 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. In 2012, we completed 114 technological projects, including 11 technology development projects, 10 industrialization, promotion and application of advanced technologies projects and 98 basic application projects. In addition, we filed a total of 173 patent applications in 2012.

As of December 31, 2012, we owned 1,836 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, 2012, we owned 37 trademarks, each of which had a term of 10 years.

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, the duration of which 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 the 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. On February 6, 2010, the State Council of China issued "Notice on Further Strengthening the Elimination of Obsolete Production Capacities", which recommends all pre-bake reduction pot-lines below 100 Ka be closed by the end of 2011. Some of our primary aluminum utilities with a total capacity of 437,000 tonnes were shut down in compliance with this notice in 2011.

The pollutants discharged from our alumina refining process include red mud, waste water and gas emissions and particulates. Our primary aluminum production process generates fluorides, pitch fume and particulates. It is illegal to release these pollutants untreated, or those after treatment but still not complying with discharge limits, the discharge of these pollutants must comply with national and local discharge limits.

Each of our alumina refineries, primary aluminum smelters and other production plants 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 were granted ISO14001 accreditations issued by China Quality Certification Center and the International Certification Network in 2004. In 2012, we passed the review and the accreditations were renewed.

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 135,700 tonnes of standard coal in 2012. We have incorporated clean technology and processes into our operations

with a view to promoting the concept of "zero emission" plants. Since 2009, we have achieved our target of zero industrial waste water emission.

Our total expenditures for maintaining compliance with environmental laws and regulations were RMB1,151.0 million, RMB1,524.6 million and RMB1,073.7 million for the years ended December 31, 2010, 2011 and 2012, respectively. We believe that our operations are substantially in compliance with currently applicable national and provincial environmental regulations.

#### Insurance

We maintain insurance coverage for our property, plant and equipment, in particular 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 strikes. However, there are certain types of losses, such as losses from war, acts of terrorism and natural disasters, 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 RMB79.5 million, RMB75.9 million and RMB58.8 million in insurance premiums in 2010, 2011 and 2012, respectively.

#### Seasonality

Our business is not subject to seasonality.

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#### 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 China, which has the authority to grant land use licenses and mining right 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 such as those to finance capital projects, are subject to approval by the CSRC and/or 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. Offering of corporate bonds in the PRC by a listed PRC-incorporated company is subject to approval from the CSRC, while offering of enterprise bonds in the PRC by other enterprises is subject to approval from the People's Bank of China or the NDRC and/or other relevant authorities. Offering of bonds by a PRC-incorporated company outside the PRC is subject to approval from the NDRC and/or the State Administration of Foreign Exchange. For all overseas financing activities by an enterprise or company incorporated in the PRC, the issuer must register with and obtain prior approval from the NDRC and 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

"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 of RMB500 million or above, for which the approval from the competent authority under the State Council of China is required. In addition, all new bauxite projects applying for approval 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 competent authority under the State Council of China. Any alumina project which consumes domestic bauxite must have an annual production capacity of 800,000 tonnes or above and service duration of bauxite mines must exceed 30 years. Any alumina projects which consumes imported bauxite must have an annual production capacity of 600,000 tonnes or above and have reliable bauxite supply. Raw materials supplied under long-term purchase agreements with terms of over five years must exceed 60% of the total raw material demand; and (iii) all primary aluminum projects for expanding production capacity must be approved by the competent authority under the State Council of China. In near future, approval will only be granted to environmental protection upgrade projects and those projects under state plan to replace out-of-date equipment. All update or replacement project must have reliable alumina supply, power supply 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 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.

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The Electric Power Law of China and related rules and regulations govern construction, generation, supply and consumption of electric power. 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 "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. In May 2010, Chinese government issued "Notice of Eliminating Preferential Electricity Rate for High Energy Consuming Enterprises and Related Matters", which further eliminated the preferential

electricity price arrangement enjoyed by Chinese primary aluminum enterprises.

#### Regulations Concerning Imports and Exports of Alumina and Primary Aluminum

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

#### Environmental Protection Laws and Regulations

The Ministry of Environmental Protection of China is responsible for supervision and administration 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 each enterprise 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 concluded 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, waste water, waste residue, dust or other waste materials. Any entity that discharges pollution must register with the relevant environmental protection authority.

Penalties for breaches of the Environmental Protection Law include warning, payment of damages and imposition of fines. 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 or to cease operations and may be fined. Criminal liability may be imposed for a material violation of environmental laws and regulations that causes any significant loss of property or personal injuries or death.

#### 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, the relevant administrative authorities, which are responsible for supervision and inspection of mining exploitation in their jurisdiction, will issue a exploration permit or mining permit. The holders of mining rights are required to file with the relevant administrative authorities annually.

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 fulfill 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.

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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 us were granted tax concessions including preferential tax rates of 15%. 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 as of December 31, 2012:

Company	Percentage of ownership interest attribution to the Company	Principal activities
Baotou Aluminum Co., Limited	100%	Manufacture and distribution of primary aluminum, aluminum alloy and related fabrication products and carbon products
Chalco Hong Kong Ltd. <sup>(1)</sup>	100%	Overseas investments and alumina import and export activities
Chalco Ruimin Co., Limited	93.30%	Manufacture of aluminum, magnesium and related alloy products; export activities
Chalco Southwest Aluminum Co., Limited	60%	Manufacture and distribution of metal materials (excluding precious metals); sales of general machinery and equipment
Chalco Southwest Aluminum Cold Rolling Co., Limited	100%	Rolling aluminum and aluminum alloy processing; development of high precision aluminum strip production technology; import and export activities on goods and technology
Chalco Zunyi Alumina Co., Ltd.	73.28% <sup>(2)</sup>	Manufacture and distribution of alumina
China Aluminum International Trading Co., Ltd.	100%	Import and export activities
China Mining Co., Ltd.	100%	

		Manufacture, acquisition and distribution of bauxite mines, limestone ore, aluminum magnesium ore and related 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
Chalco Henan Aluminum Co., Limited	90.03%	Manufacture and distribution of aluminum and alloy related products
Jiaozuo Wanfang Aluminum Manufacturing Co., Ltd	24.002% <sup>(3)</sup>	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 and electricity generation and supply
Zunyi Aluminum Co., Ltd.	62.10%	Manufacture and distribution of primary aluminum
Shanxi Huaxing Alumina Co., Ltd.	100%	Manufacture and distribution of alumina
Gansu Huayang Mining Development Company Limited	70%	Manufacture and distribution of coal and other mineral products
Chalco Energy Co., Ltd.	100%	Thermoelectric supply and investment management
Chalco Iron Ore Holding Ltd.	65%	Overseas investment

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

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(2) In August 2012, we injected RMB165 million in cash into Zunyi Alumina. As a result, our equity interest in Zunyi Alumina increased

from 67% to 73.28%.

- (3) In October 2010, we disposed of a total of 5% equity interest of Jiaozuo Wanfang in an open market at market quoted price of the shares. Total cash proceeds less commission and other direct selling costs amounted to approximately RMB480 million. As a result of the disposal, our equity interest in Jiaozuo Wanfang decreased from 29% to 24.002%, but we remained the single largest shareholder and retained the rights to nominate five of the six non-independent directors as of December 31, 2011 and 2012. The balance of equity holdings in Jiaozuo Wanfang is dispersed and the other shareholders have not organized their interests and cannot easily organize themselves in such a way that they exercise more votes than the minority shareholder. In additions, all resolutions proposed by us in the past five years were approved. The directors are of the view that we had de facto control over Jiaozuo Wanfang as of December 31, 2011 and 2012.

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#### D. PROPERTY, PLANTS AND EQUIPMENT

##### Mines

##### Bauxite Mines

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

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

On March 30, 2011, Chalco Hong Kong entered into a joint venture agreement with Laos Service Co., Ltd. to acquire 60% of the equity interest in Laos Mineral Services Co., Ltd. for the development and operation of a bauxite mine and other mineral resources in Laos. As of the date of this annual report, the bauxite mine is at the exploration stage and neither proven nor probable reserves have been established.

##### Modernization and Physical Condition, Equipment, Infrastructure and Other Facilities

We have modern facilities at our mines in China, which were designed by professional PRC mine design institutes and adhere to international standards. Our mines are either open pit or underground. Our mines generally have mining offices and transportation facilities that have access to local roads and highways. In addition, we utilize advanced heavy equipment such as bulldozers and scrapers.

#### Source of Power and Water

All of our mining facilities in China are connected to the local or regional electric power grids. In addition, our mining facilities are connected to reliable water sources, all of which were sufficient for the requirements of each individual mine.

#### Coal Mines

We acquired 70% of the equity interest in Gansu Huayang in March 2011, which holds mining rights for coal deposits in the Luochuan mining area, Gansu Province. Luochuan mine is an underground mine and is currently under exploration. As of the date of this annual report, neither proven nor probable reserves have been established.

On May 16, 2011, We entered into a mining rights transfer agreement to acquire the mining rights for coal deposits in the Laodonghe mining area, Guizhou Province, with the previous mining rights holder. As of the date of this annual report, the previous mining rights holder is still in the process of transferring the mining rights to us. We have completed the exploration of Laodonghe mine. Laodonghe mine is an underground mine and has a designed annual production capacity of non-caking coal of 300,000 tonnes. As of the date of this annual report, neither proven nor probable reserves have been established.

#### Land

Chinalco leases to us 457 pieces or parcels of land, located in eight provinces, covering an aggregate area of approximately 63.2 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:

- \* 445 pieces of allocated land with an area of approximately 61.9 million square meters. Chinalco has obtained authorization from the relevant administrative authorities to manage and lease the land use rights for such land; and
- \* 12 pieces of land with an area of approximately 1.3 million square meters. Chinalco has paid the land premiums and obtained 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, Hai Dian 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 its remaining buildings and properties for its 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 62,189 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 had obtained proper land and building title certificates for all of the buildings it leases to us by the end of 2004. On March 28, 2005, we entered into a tenancy agreement with China Aluminum Development Company Limited, a wholly-owned subsidiary of Chinalco, for leasing the office premises at 12th to 16th floors and 18th to 31st floors of No. 62 North Xizhimen Street, Hai Dian 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 leased under such tenancy agreement was increased to 30,188.0 square meters. On October 10, 2010, we entered into a supplemental tenancy agreement with China Aluminum Development Company Limited, pursuant to which, the aggregate gross floor area we lease under the tenancy agreement was reduced to 26,036.3 square meters. On October 15, 2011, we renewed the tenancy agreement to extend it for another two years, pursuant to which, the aggregate gross floor area we lease under the tenancy agreement was further reduced to 23,551 square meters.

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For environmental issues in relation to the utilization of our assets, please refer to "- Environmental Protection."

#### Our Expansion

In 2013, we plan to expand our annual production capacity for alumina and bauxite by approximately 800,000 tonnes and 990,000 tonnes, respectively. Our expansion projects in 2013 primarily include:

- \* Chalco Xing Xian alumina project: This project is expected to be completed in 2013, and we expect the completion of this project to increase our annual production capacity for alumina and bauxite by approximately 800,000 tonnes and 990,000 tonnes, respectively. We expect to invest a total amount of approximately RMB4.6 billion in this project and we had invested approximately RMB2.4 billion as of December 31, 2012. We used internal resources to fund this project.
  
- \* Baotou Aluminum captive power plant project: This project is expected to be completed in 2014, with an electricity production capacity of approximately 3.9 kWh. We expect to invest a total amount of approximately RMB2.7 billion in this project and we had invested approximately RMB482 million as of December 31, 2012. We used internal resources to fund this project.

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

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The following discussion and analysis should be read in conjunction with our audited consolidated 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 - D. Risk Factors."

A. OPERATING RESULTS

Overview

We are the largest producer of alumina, primary aluminum and aluminum fabrication products in China. We are engaged principally in alumina refining, primary aluminum smelting, aluminum fabricating and trading of non-ferrous metal products, coal products and other products. We organize and manage our operations according to the following key segments:

- \* Alumina segment, which consists of the mining and purchasing of bauxite and other raw materials, and 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 93.8% of the total production volume for this segment in 2012. 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 telecommunication industries.

- \* Primary aluminum segment, which consists of 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 74.5% of our total production volume for this segment in 2012. 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 internally produce substantially all the carbon products used at our smelters and sell our remaining carbon products to external customers.
- \* Aluminum fabrication segment, which consists of the production and sale of aluminum fabrication products, including casts, planks, strips, screens, extrusions, ingots and profiles, 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.

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- \* Trading segment, which consists of sales of alumina, primary aluminum, aluminum fabrication products, other non-ferrous metal, coal products and raw and ancillary materials in bulk both manufactured by us and sourced from external suppliers domestically and abroad. We established our trading business as a separate segment in July 2010, as a result of the implementation of our operational structural exercise.
  - \* Corporate and other operating segments, which mainly include management of headquarters, research and development 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 consolidated financial statements.

#### Property, Plant and Equipment- recoverable amount

Each asset or cash generating unit is evaluated every reporting period to determine whether there are any indications of impairment. If any such indication exists, an estimate of recoverable amount is performed and an impairment loss recognized to the extent that the carrying amount exceeds the recoverable amount. The recoverable amount of an asset or cash generating group of assets is measured at the higher of fair value less costs to sell and value in use.

Fair value is determined as the amount that would be obtained from the sale of the asset in an arm's length transaction between knowledgeable and willing parties and is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, and its eventual disposal.

Value in use is also generally determined as the present value of the estimated future cash flows, but only those expected to arise from the continued use of the asset in its present form and its eventual disposal. Present values are determined using a risk-adjusted pre-tax discount rate appropriate to the risks inherent in the asset. Future cash flows estimates are based on expected production and sales volumes, commodity prices (considering current and historical prices, price trends and related factors) and operating costs. This policy requires management to make these estimates and assumptions which are subject to risk and uncertainty; hence there is a possibility that changes in circumstances will alter these projections, which may impact the recoverable amount of the assets. In such circumstances, some or all of the carrying value of the assets may be impaired and the impairment would be charged against profit or loss.

#### Property, plant and equipment and intangible assets - estimated useful lives and residual values

Our management determines the estimated useful lives and residual values (if applicable) and consequently related depreciation/amortization charges for our property, plant and equipment and intangible assets. These estimates are based on the historical experience of the actual useful lives of property, plant and equipment of similar nature and functions, or based on value-in-use calculations or market valuations according to the estimated periods that we intend to derive future economic benefits from the use of intangible assets. Our management will increase the depreciation/amortization charge where useful lives are less than previously estimated lives, and it will write-off or write-down technically obsolete or non-strategic assets that have been abandoned or sold.

Actual economic lives may differ from estimated useful lives; and actual

residual values may differ from estimated residual values. Periodic review could result in a change in depreciable lives and residual values and therefore depreciation/amortization expense in future periods.

#### Goodwill - recoverable amount

Goodwill is allocated to our operating segments as it represents the lowest level at which the goodwill is monitored for internal management purposes and is tested for impairment annually based on a formal estimate of the recoverable amount prepared by our management. The recoverable amount is estimated as the value in use of the operating segment. Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment apply to goodwill.

#### Estimated impairment of trade and other receivables and inventories

A provision for impairment of trade and other receivables is established when there is objective evidence that we will not be able to collect all amounts due according to the original terms of the receivables. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or financial reorganization, and default or delinquency in payments are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. Cash flows relating to trade and other receivables are discounted if the effect of discounting is material. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognized in the consolidated statements of comprehensive income. When a trade and other receivable is uncollectible, it is written-off against the allowance account for trade and other receivables. Subsequent recoveries of amounts previously written-off are recognized as income in profit or loss. The impairment is subject to our management's assessment as of the end of the reporting period, and hence, the provision amount is subject to uncertainty.

Our management tests whether inventory suffered any impairment based on estimates of the net realizable value of the inventory. For different types of inventories, it requires the exercise of accounting estimates on selling price, costs of conversion, selling expenses and related tax expense to calculate their net realizable value. For inventories held for executed sales contracts, our management estimates the net realizable value based on the contractual price; for other inventories, our management estimates the realizable future price based on the actual prices during the period from the balance sheet date

to the date these financial statements were approved for issuance by our Board, taking into account the nature and balance of inventories and future estimated price trends. For raw materials and work-in-progress, our management has established a model in estimating the net realized value at which the inventories can be realized in the normal course of business after considering our manufacturing cycles, production capacity and forecasts, estimated future conversion costs and selling prices. The management also takes into account the price or cost fluctuations and other related matters occurring after the end of the reporting period which reflect conditions that existed as of the end of the reporting period.

It is reasonably possible that if there is a significant change in circumstances including our business and the external environment, outcomes within the next financial year may be significantly affected.

#### Income Tax

We estimate our 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 we are entitled in each location or jurisdiction in which we operate. There are many transactions and calculations for which the ultimate tax determination is uncertain during the ordinary course of business. We recognize 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 tax assets, we have assessed the likelihood that the deferred tax assets could be recovered based on our forecast of future taxable profits and also tax planning opportunities available to us. Major deferred tax assets relate to deductible tax losses and provision for impairment of assets and accruals of expenses not yet deductible for tax purposes. Due to the effects of these temporary differences on income tax, we recorded deferred tax assets of approximately RMB2,261 million as of December 31, 2012, compared with approximately RMB1,628 million as of December 31, 2011. Deferred tax assets are recognized based on our estimates and assumptions that they will be recovered from taxable income arising from continuing operations in the foreseeable future.

We believe we have recorded adequate current tax provision and deferred income taxes based on the prevailing tax rules and regulations and our 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 our results or financial position.

## Going concern

As set out in Note 2.1 to the consolidated financial statements, our ability to continue operations depends on obtaining the necessary financing borrowings and continued operations to generate sufficient cash flows to meet our liabilities as they fall due. In the event we are unable to obtain adequate funding, there is uncertainty as to whether we will be able to continue as a going concern. The consolidated financial statements do not include any adjustments related to the carrying values and classifications of assets and liabilities that would be necessary should we be unable to continue as a going concern.

## New IFRS Pronouncements

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

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## Factors Affecting Our Results of Operations

We believe that the following factors which impact our various revenue and expense items (as described below) have had, and will continue to have, a significant effect on the development of our business, financial position and results of operation.

### Economic Condition of China and the World

As the major aluminum product market is globalized, the demand for and prices of our products are highly correlated with the general economic condition of China and the world and the performance of the major aluminum and related product markets. In recent years, China's economy has experienced rapid growth despite the negative effect of the recent global financial crisis beginning in the second half of 2008. The growth of China's economy has led to increased demand in major aluminum product market, which in turn resulted in increased demand for our products. In 2012, China's GDP grew at 7.8%. However, despite the growth in China's economy, global economic depression, excessive supply over demand in the aluminum industry and fierce competition among aluminum producers remained unchanged in 2012. As a result, demand for our products in both domestic and global market only increased slightly.

The global output of alumina in 2012 was approximately 93.5 million tonnes, representing an increase of 3.1% from 2011. The global alumina

consumption in 2012 reached approximately 92.0 million tonnes, representing an increase of 2.9% from 2011. In 2012, the domestic output of alumina products reached approximately 41.7 million tonnes, representing an increase of 7.5% from 2011 and the domestic consumption for alumina was approximately 40.2 million tonnes, representing an increase of 3.0% from 2011. In 2012, alumina imported into the PRC amounted to approximately 5.0 million tonnes, representing a decrease of 163.2% from 2011.

The global output of primary aluminum in 2012 reached approximately 47.1 million tonnes, representing an increase of 3.2% from 2011. The global consumption of primary aluminum in 2012 reached approximately 46.6 million tonnes, representing an increase of 3.3% from 2011. In 2012, the domestic output of primary aluminum was approximately 21.3 million tonnes, representing an increase of 9.2% from 2011 and the domestic consumption of primary aluminum was approximately 21.5 million tonnes, representing an increase of 10.2% from 2011.

In addition, as China's economy continued to grow at a steady speed in 2012, the prices of various raw materials and energy cost also increased in China, which in turn increased our cost and decreased in our profitability and ultimately resulted in an adverse impact on our result of operations. For the year ended December 31, 2012, we incurred a gross loss of RMB323.8 million, compared with the gross profit of RMB7,763.1 million we had for the year ended December 31, 2011.

#### Mix and Pricing of Our Products

We are engaged principally in alumina refining, primary aluminum smelting, aluminum fabrication products manufacturing and sales of these products and trading of non-ferrous metal products and other products. We sell most of our self-produced products through Chalco Trading, taking into account the relevant LME and SHFE prices. In 2012, revenues generated from alumina, primary aluminum, aluminum fabrication products and trading segments (after elimination of inter-segment sales) accounted for 2.5%, 21.7%, 5.6% and 70.1%, respectively, of our consolidated total revenues after elimination of inter-segment sales. We apply different policies to price different products. For information on our pricing of different products, please see the section headed "Item 4. Information of the Company - B. Business Overview - Sales and Marketing."

The sales prices of alumina that our alumina refineries sell internally to Chalco Trading are determined at a percentage of the average primary aluminum futures prices on the SHFE for the past three months. Chalco Trading coordinates the external sales of our alumina products. In 2012, excessive supply over demand in the international and domestic market resulted in a continual drop in alumina prices. In 2012, the spot price of alumina in the international market reached a high of approximately



US\$333 per tonne and bottomed out at approximately US\$303 per tonne, and the average spot price of alumina in the international market was approximately US\$319 per tonne, representing a decrease of 22.8% from 2011. The spot price of alumina in the domestic market reached a high of RMB2,750 per tonne and bottomed out at RMB2,480 per tonne, and the average spot price of alumina in the domestic market was approximately RMB2,648 per tonne, representing a decrease of 5.0% from 2011. Our average selling price of alumina decreased by 6.3% from RMB2,863 per tonne in 2011 to RMB2,681 per tonne in 2012.

Like most primary aluminum producers in China, we price our primary aluminum products by reference to the 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. In 2012, under the influence of global economic depression and deterioration of Euro debt crisis, international primary aluminum prices remained at low levels throughout the year. Domestic primary aluminum prices, impacted by continued increase in supply and China's downward adjustment to economic expectation, also continued to decrease in 2012. The average three-month aluminum futures prices at LME decreased by 14.9% from US\$2,410 per tonne in 2011 to US\$2,051 per tonne in 2012. The average three-month aluminum futures prices at SHFE decreased by 6.5% from RMB16,893 per tonne in 2011 to RMB15,795 per tonne in 2012. Our average selling price of primary aluminum decrease by 7.2% from RMB16,911 per tonne in 2011 to RMB15,694 per tonne in 2012.

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### ***Price Volatility of Non-ferrous Metal and Coal Products.***

Since late 2009, as a result of the implementation of our operational structural adjustment, we have been engaged substantially in the trading of outsourced non-ferrous metal products to increase our profit. In 2012, we began to engage in the trading of significant amount of outsourced coal products to diversify our product portfolio. Although the profit margin of sales of outsourced products is typically lower than that of our self-produced products, we generated substantial revenues and profit from trading of outsourced products in 2012 due to our significant trading volumes. In 2012, the gross profit margin of our external sales of products purchased from external sources in our trading segment was approximately 1.1%, compared with approximately 0.7% for our external sales of self-produced products in our trading segment. Our revenue and gross profit generated from external sales of products purchased from external sources in 2012 was approximately RMB66,589.3 million and RMB698.3 million, respectively,

representing approximately 63.6% and 73.1%, respectively, of total revenue and gross profit from external sales in our trading segment. From time to time, we may enter into futures and option transactions in addition to the simple buy-low-sell-high trading model to hedge against price fluctuations in non-ferrous metal and coal products market. However, short-term price volatility of these products remains a key factor affecting our operation result, as we need to make the correct prediction of the price trends of these products on the markets to ensure substantial revenues through large trading volume. If the market price trend does not match our prediction, we may be forced to sell trading products at low prices or to purchase trading products at high prices, which may adversely affect gross margins and profitability.

#### Manufacturing Costs.

Our cost of revenues consists primarily of the costs of the raw materials, overhead cost and the electric power cost which is our principal energy cost. As China's economy continued to grow at a steady speed in 2012, the prices of various raw materials and energy cost also increased in China, which in turn increased our cost and ultimately resulted in a decrease in our profitability.

Our principal raw material is bauxite. For the years ended December 31, 2010, 2011 and 2012, bauxite produced by us accounted for 49.4%, 48.8% and 50.8% of our total bauxite used in the production of alumina. The unit cost of bauxite produced by us is generally lower than the unit cost of bauxite procured from external suppliers. However, unit cost of bauxite produced by us may exceed the unit cost of outsourced bauxite if the domestic and global bauxite prices decrease. To mitigate such risk, we also purchase a substantial amount of bauxite from external suppliers. This practice allows us flexibility to control our production cost. We also apply this practice to our primary aluminum manufacturing. In 2012, partly due to the decline in the quality of domestically sourced bauxite, our average cost of alumina per tonne increased by approximately RMB152 from that in 2011.

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. In 2012, we continued to focus on lowering the production costs through using the technology to reduce raw materials consumption. In 2012, we decreased our costs by decreasing our consumption of materials in our production through improving technology and internal management. However, the phasing out of obsolete capacity and centralized retirement of fixed assets expanded our nonrecurring loss to a

certain extent.

Primary aluminum is one of our major aluminum products and is produced by smelting operations. Smelting operations require a substantial and continuous supply of electricity. Electricity cost is the most significant component of our primary aluminum production cost and accounted for approximately 43.0% of our unit production cost for primary aluminum in 2012. 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 were eliminated in 2009. In 2012, Jiaozuo Wanfang received reductions on electricity prices. In addition, some of our branches were entitled to electricity prices subsidies in 2012. Our average annual electricity price increased by 5.7% from 2010 to 2011 and further by 4.7% from 2011 to 2012.

#### Availability and Costs of Financing

We require a significant amount of capital to fund our operations. For example, we need substantial amount of funds for expanding our operations, purchasing and maintaining equipment and procuring commodities. We have in the past funded our capital expenditures primarily with bank loans and issuance of medium-term notes and bonds and long-term bonds. The availability of financing is subject to various factors, including our credit history and PRC Government's policy on credit markets. Over the years, we have maintained good relationships with the commercial banks in China, which enables us to access bank financing at relatively low costs. However, in recent years, the PRC government has tightened its monetary policies to control inflation, including increasing interest rates on bank loans and deposits and tightening the money supply. Such stricter lending policies may, among other things, affect our ability to obtain financing and may in turn adversely affect our operating results.

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Our finance costs increased by 43.2% from 2011 to 2012, primarily due to our structural adjustment and strategic transformation, which expanded the size of interest-bearing debts. The increase in our finance costs was also caused by the increase in the interest rates of our bank and other loans. If we are unable to secure sufficient external funding when required, we may not be able to fund our working capital requirements and necessary capital expenditures, which could adversely affect our business, financial

performance and prospects.

In addition, our borrowing costs and access to debt financing depend significantly on our credit ratings. These ratings, including long term corporate credit ratings and financing bond credit ratings, are assigned by rating agencies, which may lower or withdraw their ratings. Any change in our credit ratings or average interest rate could have negative implications, which may increase our finance costs and affect our financial results.

## Regulatory Environment

The central and local governments in PRC continues to exercise a substantial degree of control and influence over the aluminum and other non-ferrous metal product industry in China and shape the structure and development of the industry through the imposition of industry policies governing major project approvals, preferential tax treatment and safety, environmental and quality regulations, including but not limited to the "Aluminum Industry Development Policy", "Notice on Guiding Opinions for Accelerating Aluminum Industrial Restructuring", "Environmental Protection Guide for Developing Cyclic Economy in Aluminum Industry", "Notice of the State Council of China on Further Strengthening the Elimination of Obsolete Production Capacities" and "Non-ferrous Metals Industry Restructuring and Revitalization Planning", etc. Certain existing laws and regulations involve barriers to entry, production quotas, setting, amending or abolishing import tariffs and limitations and duties on the export of aluminum and certain non-ferrous metals and related products. If PRC government changes its current policies or the interpretation of those 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.

## Selected Statement of Operation Items

### Revenue

We generate revenue primarily from sales of alumina, primary aluminum, aluminum fabrication products and other non-ferrous metal products and coal products. Historically, Chalco Trading mainly generated revenue by selling self-produced products procured from our alumina, primary aluminum and aluminum fabrication plants. As a result of the implementation of our operational structural adjustment exercise, we established our trading business as a new business segment in 2010. In connection with the significant increase of trading revenue, we refined our existing accounting system to separately capture sales of self-produced products and products sourced from external suppliers within the trading segment in 2011 and 2012. However, similar analysis for 2010 is not available as such information was not captured prior to 2011.

## Cost of Sales

Our cost of sales consists primarily of purchase of inventories in relation to trading activities, the cost of the raw materials, the electric power cost which is our principal energy cost and the fixed cost. For the years ended December 31, 2010, 2011 and 2012, our cost of sales was RMB113,349.9 million, RMB138,111.4 million and RMB149,802.6 million, and accounted for 93.7%, 94.7% and 100.2% of the total consolidated revenues, respectively.

## Operating Expenses

### Selling and Distribution Expenses.

Our selling and distribution expenses consist primarily of transportation and loading expenses, packaging expense and, to a lesser extent, port expenses, employee benefit expenses for employees in selling and distribution department, warehouse and other storage fees, depreciation of non-production property, plant and equipment, sales commissions and other handling fees, marketing and advertising expenses, and others. Selling and distribution expenses accounted for 31.1%, 33.1% and 38.0% of our total operating expenses for the years ended December 31, 2010, 2011 and 2012, respectively.

### General and Administrative Expenses.

Our general and administrative expenses consist primarily of employee benefit expenses for directors and officers and employees in administrative department, travelling and entertainment, taxes other than income tax expense, depreciation of non-production property, plant and equipment, operating lease rental expenses and, to a lesser extent, utilities and office supplies, amortization of land use rights and leasehold land, insurance expense, pollutants discharge fees, repairs and maintenance, legal and other professional fees, auditors' remuneration, amortization of intangible assets, and others. General and administrative expenses accounted for 51.8%, 56.8% and 57.8% of our total operating expenses for the years ended December 31, 2010, 2011 and 2012, respectively. Employee benefit expenses, including salaries and bonus, housing fund, staff welfare and other expenses, employment expense in relation to early retirement schemes, and retirement benefit cost-defined contribution schemes, comprise the largest component of our general and administrative expenses, accounting for 32.0%, 29.3% and 30.3% of our total general and administrative expenses for the years ended December 31, 2010, 2011 and 2012, respectively. Our taxes other than income tax expense, consisting primarily of land use tax, property tax and stamp duty, comprise the second largest component of our general and administrative expenses, accounting for 23.4%, 23.9% and 19.5% of our total general and administrative expenses for the years ended

2010, 2011 and 2012, respectively.

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#### Research and Development Expenses.

Our research and development expenses accounted for 3.2%, 4.4% and 3.8% of our total operating expenses for the years ended December 31, 2010, 2011 and 2012, respectively.

#### Impairment loss on property, plant and equipment.

Our impairment loss on property, plant and equipment accounted for 13.9%, 5.7% and 0.4% of our total operating expenses for the years ended December 31, 2010, 2011 and 2012, respectively.

#### Other Income

Our other income represents government grants, which were primarily research subsidies and grants on environmental protection projects and electricity price subsidies from government.

#### Other Gains/(Losses), net

Our other gains, net consist primarily of gain on acquisition of the investment in an associate and realized gain on future, forward and option contracts. Our other losses, net consist primarily of loss on disposal of property, plant and equipment, realized loss on future, forward and option contracts, and others.

#### Finance Income

Our finance income consists primarily of interest income from banks. For the years ended December 31, 2010, 2011 and 2012, our finance income was RMB91.1 million, RMB138.8 million and RMB314.2 million, and accounted for 0.1%, 0.1% and 0.2% of the total consolidated revenues, respectively.

#### Finance Costs

Our financing costs consist primarily 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 regulates the interest rates for commercial loans charged by state-owned banks from time to time as part of the PRC government's efforts to regulate the PRC economy. In 2012, we incurred interest expense (net of capitalized interest) of RMB4,921.7 million on our borrowings.

#### Share of Profits of Jointly Controlled Entities

Our share of profits of jointly controlled entities is the profits attributable to us from our jointly controlled entities, based on our equity interests in such jointly controlled entities. A jointly controlled entity is a joint venture that is subject to joint control, resulting in none of the participating parties having unilateral control over its economic activity.

#### Share of Profits of Associates

Our share of profits of associates is the profits attributable to us from our associates, based on our equity interests in such associates. An associate is an entity over which we have significant influence but not control, in which we generally hold between 20% and 50% of the voting rights.

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#### Consolidated Results of Operations

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

Year Ended December 31,

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2010

2011

2012

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RMB

(%)

RMB

(%)

RMB

US\$

(%)

(in millions, except percentages)

Revenue

120,994.8

100.0

145,874.4

100.0

149,478.8

23,993.0

100.0

Cost of sales

(113,349.9)

(93.7)

(138,111.4)

(94.7)

(149,802.6)



(24,045.0)

(100.2)

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Gross profit/(loss)

7,644.9

6.3

7,763.1

5.3

(323.8)

(52.0)

(0.2)

Selling and distribution expenses

(1,537.3)

(1.3)

(1,622.8)

(1.1)

(1,967.9)

(315.9)

(1.3)

General and administrative expenses

(2,623.8)

(2.2)

(2,779.4)

(1.9)

(2,993.0)

(480.4)

(2.0)

Research and development expenses

(164.2)

(0.1)

(218.0)

(0.1)

(198.9)

(31.9)

(0.2)

Impairment loss on property,

plant and equipment

(701.8)

(0.6)

(279.8)

(0.2)

(19.9)

130

	(3.2)
	-
Other income	
	328.9
	0.3
	185.5
	0.1
	744.5
	119.5
	0.5
Other gains/(losses), net	
	491.0
	0.4
	538.0
	0.4
	(25.5)
	(4.1)
	-

Operating profit/(loss)

3,401.7

2.8

3,586.6

2.5

(4,784.5)

(768.0)

(3.2)

Finance income

91.1

0.1

138.8

0.1

314.2

50.4

0.2

Finance costs

(2,586.3)

(2.2)

(3,432.4)

(2.3)

(4,913.6)

(788.6)

(3.3)

132

Share of profits of jointly

controlled entities

233.8

0.2

122.3

0.0

37.0

5.9

-

Share of profits of associates

240.1

0.2

402.7

0.3

254.8

40.9

0.2

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Profit/(loss) before income tax

1,380.4

1.1

818.0

0.6

(9,092.1)

(1,459.4)

(6.1)

Income tax (expense)/benefit

(411.3)

(0.3)

(127.5)

(0.1)

448.5

72.0

0.3

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Profit/(loss) for the year

969.1

0.8

134

690.5  
 0.5  
 (8,643.6)  
 (1,387.4)  
 (5.8)

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No customer individually accounted for more than 10% of our total sales or any of our segment sales for the year ended December 31, 2012. Sales to Chinalco and its subsidiaries, jointly-controlled entities, associates and other related parties accounted for approximately 9.0%, 7.4% and 4.9% of consolidated revenues for the years ended December 31, 2010, 2011 and 2012, respectively. For information on related party transactions, see "Item 7 - Major Shareholders and Related Party Transactions - B. Related Party Transactions" and Note 35 to our audited consolidated financial statements.

Year Ended December 31, 2012 Compared with Year Ended December 31, 2011

Revenue

Our revenue increased by 2.5% from RMB145,874.4 million for the year ended December 31, 2011 to RMB149,478.8 million for the year ended December 31, 2012, primarily due to the increase in our trading volume, partially offset by the decrease in the selling prices of our major products. In 2012, under the influence of global economic depression and deterioration of Euro debt crisis, international alumina and aluminum product prices remained at low levels throughout the year. Domestic alumina and aluminum product prices, impacted by continued increase in supply and China's downward adjustment to economic expectation, also continued to decrease in 2012. Our average selling price of alumina decreased by 6.3% from RMB2,863 per tonne in 2011 to RMB2,681 per tonne in 2012. Our average selling price of primary aluminum decrease by 7.2% from RMB16,911 per tonne in 2011 to RMB15,694 per tonne in 2012.

Cost of Sales

Our cost of sales increased by 8.5% from RMB138,111.4 million for the year ended December 31, 2011 to RMB149,802.6 million for the year ended December 31, 2012, primarily due to the increases in our trading volume and increase in costs of alumina and electricity used in our primary aluminum production. In 2012, partly due to the decline in the quality of domestically sourced bauxite, our average cost of alumina per tonne increased by approximately RMB152 from that in 2011. In addition, our average annual electricity price increased by 4.7% from 2011 to 2012.

#### Selling and Distribution Expenses

Our selling and distribution expenses increased by 21.3% from RMB1,622.8 million for the year ended December 31, 2011 to RMB1,967.9 million for the year ended December 31, 2012, primarily due to an increase in transportation and storage expenses as a result of an increase in trading volume of aluminum products and coal products.

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#### General and Administrative Expenses

Our general and administrative expenses increased by 7.7% from RMB2,779.4 million for the year ended December 31, 2011 to RMB2,993.0 million for the year ended December 31, 2012, primarily due to an increase in the management expenses upon the completion of our construction in progress and the consultation fees paid for our acquisitions and mergers.

#### Research and Development Expenses

Our research and development expenses decreased by 8.8% from RMB218.0 million for the year ended December 31, 2011 to RMB198.9 million for the year ended December 31, 2012.

#### Impairment Loss on Property, Plant and Equipment

Our impairment loss on property, plant and equipment decreased by 92.9% from RMB279.8 million for the year ended December 31, 2011 to RMB19.9 million for the year ended December 31, 2012, primarily because we recognized impairment charge of RMB278 million on Aurukun Project in 2011, whereas we did not recognize such impairment loss in 2012. See Note 7 to our audited consolidated financial statements for detailed information.



#### Other Income

Other income increased significantly from RMB185.5 million for the year ended December 31, 2011 to RMB744.5 million for the year ended December 31, 2012, primarily due to the increase in government grants on electricity price subsidies from government of RMB559.0 million.

#### Other Gains/(Losses), Net

Our net other gains were RMB538.0 million for the year ended December 31, 2011, whereas we recognized net other losses of RMB25.5 million for the year ended December 31, 2012, primarily due to losses realized on future, forward and option contracts and disposal of property, plant and equipment, partially offset by the gain we recognized on acquisition of the investment in an associate.

#### Operating Profit/(Loss)

As a result of the foregoing, our operating profit was RMB3,586.6 million for the year ended December 31, 2011, whereas we had an operating loss of RMB4,784.5 million for the year ended December 31, 2012.

#### Finance Income

Our finance income increased significantly from RMB138.8 million for the year ended December 31, 2011 to RMB314.2 million for the year ended December 31, 2012, due to an increase in the average balance of time deposits and entrusted loans.

#### Finance Costs

Our finance costs increased by 43.2% from RMB3,432.4 million for the year ended December 31, 2011 to RMB4,913.6 million for the year ended December 31, 2012, primarily due to an increase in our interest-bearing indebtedness and an increase in the interest rate of our bank and other borrowings.

#### Share of profits of jointly controlled entities

Our share of profits of jointly controlled entities decreased by 69.7% from RMB122.3 million for the year ended December 31, 2011 to RMB37.0 million for the year ended December 31, 2012, primarily due to a decrease in the profit of Guangxi Huayin.

#### Share of profits of associates

Our share of profits of associates decreased by 36.7% from RMB402.7 million for the year ended December 31, 2011 to RMB254.8 million for the year ended December 31, 2012, primarily due to a decrease in the profit of Zhaogu Coal.

#### Income Tax

Our income tax expense was RMB127.5 million for the year ended December 31, 2011, whereas we had income tax benefit of RMB448.5 million for the year ended December 31, 2012. For the years ended December 31, 2011 and 2012, our weighted average effective rates were 15.59% and 4.93%. The decrease in the weighted average effective rate is mainly due to fluctuations in the profitability of certain subsidiaries and branches, the existence of tax losses for which no deferred income tax assets were recognised and the written off of deferred tax assets on tax losses for certain subsidiaries because the utilization of the relevant tax losses carried over is not probable for the reasonable foreseeable future due to changes of markets condition and operating environment in 2012 and for the near future.

#### Results of Operations

As a result of the foregoing, our net profit was RMB690.5 million for the year ended December 31, 2011, whereas we had net loss of RMB8,643.6 million for the year ended December 31, 2012.

Year Ended December 31, 2011 Compared with Year Ended December 31, 2010

#### Revenue

Our revenue increased by 20.6% from RMB120,994.8 million for the year ended December 31, 2010 to RMB145,874.4 million for the year ended December 31, 2011, primarily due to the increase in the sales of our major products and the trading volumes. The aggregate external sales of our self-produced products made directly by our alumina, primary aluminum and aluminum fabrication segments increased by 19.4% from RMB38,870.9 million for the year ended December 31, 2010 to RMB46,399.9 million for the year ended December 31, 2011 and our revenue generated from trading segment increased by 21.2% from RMB81,982.2 million for the year ended December 31, 2010 to RMB99,324.1 million for the year ended December

31, 2011, reflecting the increased demand for these products as a result of the continued recovery of the PRC and global economy.

#### Cost of Sales

Our cost of sales increased by 21.8% from RMB113,349.9 million for the year ended December 31, 2010 to RMB138,111.4 million for the year ended December 31, 2011, primarily due to the increases in our sales and trading volume. Our purchase of inventories in relation to trading activities increased by 24.3% from RMB50,843.1 million for the year ended December 31, 2010 to RMB63,216.5 million for the year ended December 31, 2011, primarily due to the increase in our trading volume. The raw materials and consumables used increased by 45.8% from RMB27,042.8 million for the year ended December 31, 2010 to RMB39,424.4 million for the year ended December 31, 2011, primarily due to the increase in the prices of raw materials. The power and utilities cost increased by 12.2% from RMB19,622.1 million for the year ended December 31, 2010 to RMB22,018.4 million for the year ended December 31, 2011, primarily due to the increase in the prices of fuels and power. Our gross profit margin decreased from 6.3% for the year ended December 31, 2010 to 5.3% for the year ended December 31, 2011, primarily because the prices of raw materials and power utilities increased faster than the average selling prices of our products. It is also due to the growth of our trading segment, which generally had a lower gross margin than our overall gross margin.

#### Selling and Distribution Expenses

Our selling and distribution expenses increased by 3.1% from RMB1,573.3 million for the year ended December 31, 2010 to RMB1,622.8 million for the year ended December 31, 2011, primarily due to an increase in the external sales of our major products.

#### General and Administrative Expenses

Our general and administrative expenses increased by 5.9% from RMB2,623.8 million for the year ended December 31, 2010 to RMB2,779.4 million for the year ended December 31, 2011, primarily due to the net effect of an increase in fees and expenses as a result of establishment and acquisition of new subsidiaries in 2011, partially offset by a decrease in non-fixed expenses such as employee benefit expenses and insurance expenses as a result of our efforts to reduce costs and enhance efficiency.

#### Research and Development Expenses

Our research and development expenses increased by 32.8% from RMB164.2 million for the year ended December 31, 2010 to RMB218.0 million for the year ended December 31, 2011, reflecting our increased

research and development efforts.

#### Impairment loss on Property, Plant and Equipment

Our impairment loss on property, plant and equipment decreased by 60.1% from RMB701.8 million for the year ended December 31, 2010 to RMB279.8 million for the year ended December 31, 2011, primarily because we discontinued the use of certain production equipment and reduced the carrying amount of these pieces of equipment to our estimated net proceeds, or recoverable amount, from their disposal in 2010, whereas we did not have such impairment loss in 2011. In addition, we had a partial write-off of the expenditure on Aurukun Project of RMB373 million, and in 2011, we recognized an additional impairment charge of RMB278 million on Aurukun Project. See Note 7(b) to our audited consolidated financial statements for detailed information.

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#### Other Income

Other income decreased by 43.6% from RMB328.9 million for the year ended December 31, 2010 to RMB185.5 million for the year ended December 31, 2011, primarily due to the decrease in government grants on research and development of RMB94.9 million and the one-off government reward of RMB68.0 million for our contribution to the local economic development in 2010.

#### Other Gains, Net

Our net other gains increased by 9.6% from RMB491.0 million for the year ended December 31, 2010 to RMB538.0 million for the year ended December 31, 2011, primarily due to an increase in realized gain on futures, forward and option contracts of RMB244.5 million, partly offset by a decrease in gain on disposal of available-for-sale investments.

#### Operating Profit

As a result of the foregoing, our operating profit increased by 5.4% from RMB3,401.7 million for the year ended December 31, 2010 to RMB3,586.6 million for the year ended December 31, 2011.

#### Finance Income

Our finance income increased from RMB91.1 million for the year ended December 31, 2010 to RMB138.8 million for the year ended December 31, 2011, due to an increase in the average balance of deposits and entrusted loans.

#### Finance Costs

Our finance cost increased by 32.71% from RMB2,586.3 million for the year ended December 31, 2010 to RMB3,432.4 million for the year ended December 31, 2011, primarily due to the increase in our interest-bearing indebtedness and the increases in the PBOC's benchmark interest rates, which resulted in an increase in our weighted average annual interest rate. Our weighted average annual interest rate of long-term bank and other loans increased from 5.25% for the year ended December 31, 2010 to 5.62% for the year ended December 31, 2011.

#### Share of profits of jointly controlled entities

Our share of profits of jointly controlled entities decreased by 47.7% from RMB233.8 million for the year ended December 31, 2010 to RMB122.3 million for the year ended December 31, 2011, primarily due to a decrease of RMB106.9 million in the profits of Guangxi Huayin. The share of profits of jointly controlled entities accounted for 14.9% of our profit before income tax in 2011, as compared with 16.9% in 2010.

#### Share of profits of associates

Our share of profits of associates increased by 67.8% from RMB240.0 million for the year ended December 31, 2010 to RMB402.7 million for the year ended December 31, 2011, primarily due to an increase in the profits of our associate engaged in coal production, Zhaogu Coal. The share of profits of associates accounted for 49.2% of our profit before income tax in 2011, as compared with 17.4% in 2010.

#### Income Tax

Our income tax expense decreased by 69.0% from RMB411.3 million for the year ended December 31, 2010 to RMB127.5 million for the year ended December 31, 2011, primarily due to the significant decrease in our profit before tax by approximately 40.7% from RMB1,380 million for 2010 to RMB818 million for 2011, which led to a corresponding decrease in income tax expense. This was partially reduced by the increase of deferred income tax assets arising from the changes in applicable income tax rate for certain branches and subsidiaries. In 2011, the applicable tax rate of certain branches and subsidiaries situated in the Western region of China changed from 15% to 25% upon expiration of the relevant preferential tax rate entitlement. Upon the relevant new requirements and conditions pertaining

to the preferential tax rate entitlement, which was enacted in July 2011, these branches and subsidiaries were not qualified. Accordingly, they are subject to the normal corporate tax rate of 25%. As a consequence, the recognized deferred tax assets increased by approximately RMB115 million.

### Results of Operations

As a result of the foregoing, our net profit decreased by 28.7% from RMB969.1 million for the year ended December 31, 2010 to RMB690.5 million for the year ended December 31, 2011.

### Discussion of Segment Operations

We account for our operations on a segmental basis, that is, separately prepare the accounting for our alumina, primary aluminum, aluminum fabrication and trading segments as well as other segment operations. Unless otherwise indicated, also included in these segments are other revenue derived from activities such as supplying electricity, gas, heat and water to our affiliates, selling scrap and other materials and providing services including transportation and research and development to third parties. For additional information relating to our business segments and segment presentation, see Note 5 to our audited consolidated financial statements.

The following table sets forth a breakdown of our revenues 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,	

2010

2011

2012

2012

2012

2012


RMB

RMB

RMB

US\$

%

%

(in millions, except percentages)

Revenue

Alumina:

External sales

2,148.3

3,060.8

3,677.0

143

	590.2
	1.7
	2.5
Inter-segment sales	
	24,689.6
	28,066.3
	28,168.9
	4,521.4
	13.0
	<hr/>
	<hr/>
	<hr/>
	<hr/>
	<hr/>
Total	
	26,837.9
	31,127.1
	31,845.9
	5,111.6
	14.7
	<hr/>
	<hr/>
	<hr/>
	<hr/>
	<hr/>
Primary aluminum:	



External sales

26,407.3

31,887.9

32,454.9

5,209.4

14.9

21.7

Inter-segment sales

26,847.7

26,091.8

25,581.4

4,106.1

11.8

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Total

53,255.0

57,979.7

58,036.3

9,315.5

26.7

145

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Aluminum fabrication:

External sales

10,351.3

11,451.2

8,307.4

1,333.4

3.8

5.6

Inter-segment sales

150.7

343.6

1,259.9

202.2

0.6

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Total

10,466.0  
 11,794.8  
 9,567.3  
 1,535.6  
 4.4

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Trading

External sales

81,982.2  
 99,324.1  
 104,773.4  
 16,817.3  
 48.3  
 70.1

Inter-segment sales

8,159.2  
 9,848.3  
 12,521.6  
 2,009.9  
 5.8

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Total

90,141.4

109,172.4

117,295.0

18,827.2

54.1

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Corporate and others

External sales

141.7

150.4

266.1

42.7

0.1

0.1

Inter-segment sales

	48.6
	25.6
	41.7
	6.7
	-
	190.3
	176.0
	307.8
	49.4
	0.1
	180,890.6
	210,250.0
	217,052.3

Total

Total Revenue before

inter-segment eliminations

34,839.3

100.0

Eliminations of inter-segment sales

(59,895.8)

(64,375.6)

(67,573.5)

(10,846.3)

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Consolidated total revenue

120,994.8

145,874.4

149,478.8

23,993.0

100.0

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

Year Ended December 31,

	2010	2011	2012	2012

RMB

RMB

RMB

US\$

(in millions)

Alumina:

Revenue	26,837.9	31,127.1	31,845.9	5,111.6
Cost and expenses <sup>(1)</sup>	(25,760.8)	(30,775.2)	(35,590.8)	(5,712.7)
Segment results <sup>(2)</sup>	1,077.1	351.9	(3,744.9)	(601.1)

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Primary aluminum:				
Revenue	53,255.0	57,979.7	58,036.3	9,315.5
Cost and expenses <sup>(1)</sup>	(52,896.2)	(57,074.2)	(61,121.0)	(9,810.6)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Segment results <sup>(2)</sup>	358.8	905.5	(3,084.7)	(495.1)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Aluminium Fabrication:				
Revenue	10,466.0	11,794.8	9,567.3	1,535.6
Cost and expenses <sup>(1)</sup>	(10,789.6)	(12,130.7)	(10,953.2)	(1,758.1)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Segment results <sup>(2)</sup>	(323.6)	(335.9)	(1,385.9)	(222.5)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Trading				
Revenue	90,141.4	109,172.4	117,295.0	18,827.2
Cost and expenses <sup>(1)</sup>	(89,280.8)	(108,501.8)	(116,857.4)	(18,756.9)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Segment results <sup>(2)</sup>	860.6	670.6	437.6	70.3
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Corporate and others:				
Revenue	190.3	176.0	307.8	49.4
Cost and expenses <sup>(1)</sup>	(680.6)	(1,227.5)	(1,757.2)	(282.0)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Segment results <sup>(2)</sup>	(490.3)	(1,051.5)	(1,449.4)	(232.6)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Elimination <sup>(3)</sup>	(102.2)	277.4	135.2	21.7
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Total profit/(loss) before income tax	1,380.4	818.0	(9,092.1)	(1,459.4)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>



- (1) Consist of cost of sales, operating expenses, other income, other gains, finance income, finance costs and others attributable to each segment.
- (2) Segment results refer to profit/(loss) before income tax.
- (3) Elimination refers to the aggregate inter-segment eliminations of segment results of each segment.

Year Ended December 31, 2012 Compared with Year Ended December 31, 2011

#### Alumina Segment

##### Revenue.

Total revenue generated by the alumina segment increased by 2.3% from RMB31,127.1 million for the year ended December 31, 2011 to RMB31,845.9 million for the year ended December 31, 2012, primarily due to an increase in the sales volume of alumina, partially offset by a decrease in the average selling price. Our sales volume of alumina increased by 8.5% from 2011 to 2012. Our average selling price of alumina decreased by 6.3% from RMB2,863 per tonne in 2011 to RMB2,681 per tonne in 2012.

Revenue from external sales of alumina segment increased by 20.1% from RMB3,060.8 million for the year ended December 31, 2011 to RMB3,677.0 million for the year ended December 31, 2012, primarily due to an increase in the external sales volume of alumina, partially offset by a decrease in the average external selling price of alumina.

Revenue from inter-segment sales of alumina segment remained stable from RMB28,066.3 million for the year ended December 31, 2011 to RMB28,168.9 million for the year ended December 31, 2012.

##### Cost and expenses.

The total cost and expenses for our alumina segment increased by 15.6% from RMB30,775.2 million for the year ended December 31, 2011 to RMB35,590.8 million for the year ended December 31, 2012, primarily due to an increase in sales volume of alumina manufactured by us.

##### Segment results.

We had segment loss of RMB3,744.9 million for the year ended December 31, 2012, whereas we had segment profit of RMB351.9 million for the year ended December 31, 2011.

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## Primary Aluminum Segment

### Revenue.

Total revenue generated by the primary aluminum segment increased slightly from RMB57,979.7 million for the year ended December 31, 2011 to RMB58,036.3 million for the year ended December 31, 2012, primarily due to an increase in the sales volume of primary aluminum, partially offset by a decrease in the average selling price. Our sales volume of primary aluminum increased by 9.3% from 3,843,000 tonnes for the year ended December 31, 2011 to 4,201,000 tonnes for the year ended December 31, 2012. Our average selling price of primary aluminum decrease by 7.2% from RMB16,911 per tonne in 2011 to RMB15,694 per tonne in 2012.

Revenue from external sales of the primary aluminum segment increased by 1.8% from RMB31,887.9 million for the year ended December 31, 2011 to RMB32,454.9 million for the year ended December 31, 2012, primarily due to an increase in external sales volume of primary aluminum manufactured by us.

Revenue from inter-segment sales of primary aluminum segment decreased by 2.0% from RMB26,091.8 million for the year ended December 31, 2011 to RMB25,581.4 million for the year ended December 31, 2012, primarily due to a decrease in the selling price and sales volume of primary aluminum manufactured by us through our trading segment.

### Cost and expenses.

The total cost and expenses for our primary aluminum segment increased by 7.1% from RMB57,074.2 million for the year ended December 31, 2011 to RMB61,121.0 million for the year ended December 31, 2012, primarily due to the increases in the prices of raw materials, the electric power cost and sales volume of primary aluminum manufactured by us.

### Segment results.

Segment profit for our primary aluminum segment was RMB905.5 million for the year ended December 31, 2011, whereas we had segment loss of RMB3,084.7 million for the year ended December 31, 2012. Included in this segment loss was share of profits of associates, which decreased by 38.9% from RMB390.4 million in 2011 to RMB238.7 million in 2012, primarily due to a decrease in the profit of Zhaogu Coal.

## Aluminum Fabrication Segment

### Revenue.

Total revenue generated by the aluminum fabrication segment decreased by 18.9% from RMB11,794.8 million for the year ended December 31, 2011 to RMB9,567.3 million for the year ended December 31, 2012, primarily due to a decrease in sales volume of various aluminum fabrication products manufactured by us as a result of a decrease in demand.

Revenue from external sales of the aluminum fabrication segment decreased by 27.5% from RMB11,451.2 million for the year ended December 31, 2011 to RMB8,307.4 million for the year ended December 31, 2012, primarily due to a decrease in the sales volume of aluminum fabrication products directly sold by the aluminum fabrication plants.

Revenue from inter-segment sales of aluminum fabrication increased significantly from RMB343.6 million for the year ended December 31, 2011 to RMB1,259.9 million for year ended December 31, 2012, primarily due to a significant increase in the sales volume of self-produced aluminum fabrication products through our trading segment.

### Cost and expenses.

The total cost and expenses for our aluminum fabrication segment decreased by 9.7% from RMB12,130.7 million for the year ended December 31, 2011 to RMB10,953.2 million for the year ended December 31, 2012, primarily due to the decrease in the sales volume of aluminum fabrication products manufactured by us.

### Segment results.

Segment loss for our aluminum fabrication segment increased significantly from RMB335.9 million for the year ended December 31, 2011 to RMB1,385.9 million for the year ended December 31, 2012.

## Trading Segment

### Revenue.

Total revenue generated by the trading segment increased by 7.4% from RMB109,172.4 million for the year ended December 31, 2011 to RMB117,295.0 million for the year ended December 31, 2012, primarily due to an increase in volumes of major aluminum and other non-ferrous metal and coal products procured and sold through our trading segment.

Revenue from external sales of the trading segment increased by 5.5% from RMB99,324.1 million for the year ended December 31, 2011 to RMB104,773.4 million for the year ended December 31, 2012. Revenue from external sales of trading segment for the year ended December 31, 2012 included RMB38,184.1 million of external sales of products produced by us and sold through the trading segment and RMB66,589.3 million of external sales of commodities including alumina, primary aluminum, carbon products, aluminum fabrication products, coal products and non-ferrous metal products purchased from external sources.

Revenue from internal sales of the trading segment increased by 27.1% from RMB9,848.3 million for the year ended December 31, 2011 to RMB12,521.6 million for the year ended December 31, 2012. Revenue from internal sales of trading segment for the year ended December 31, 2012 included RMB1,531.0 million of internal sales of products purchased from our internal sources and RMB10,990.6 million of internal sales of products purchased from our external sources.

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Cost and expenses.

The total cost and expenses for our trading segment increased by 7.7% from RMB108,501.8 million for the year ended December 31, 2011 to RMB116,857.4 million for the year ended December 31, 2011, primarily due to the increase in volumes of major aluminum and other non-ferrous metal and coal products procured and sold through our trading segment.

Segment results.

Segment profit for our trading segment decreased by 34.8% from RMB670.6 million for the year ended December 31, 2011 to RMB437.6 million for the year ended December 31, 2012.

Corporate and other operating segment

Revenue.

Revenue from the headquarters and other operating segments increased by 74.9% from RMB176.0 million for the year ended December 31, 2011 to RMB307.8 million for the year ended December 31, 2012.

Segment loss.

Segment loss for our corporate and other operating segment increased by 37.8% from RMB1,051.5 million for the year ended December 31, 2011 to RMB1,449.4 million for the year ended December 31, 2012, primarily due to an increase in finance costs as a result of the increase in our interest-bearing indebtedness and an increase in our interest rate.

Year Ended December 31, 2011 Compared with Year Ended December 31, 2010

#### Alumina Segment

##### Revenue.

Total revenue generated by the alumina segment increased by 16.0% from RMB26,837.9 million for the year ended December 31, 2010 to RMB31,127.1 million for the year ended December 31, 2011, primarily due to increases in the average selling price and the sales volume of alumina manufactured by us. Our average selling price and sales volume of alumina increased by 5.0% and 11.7%, respectively, from the year ended December 31, 2010 to the year ended December 31, 2011, primarily due to an increase in demand.

Revenue from external sales of alumina segment increased by 42.5% from RMB2,148.3 million for the year ended December 31, 2010 to RMB3,060.8 million for the year ended December 31, 2011, primarily due to an increase in the average selling price and an increase in the external sales volume of the alumina products as a result of increased demand.

Revenue from inter-segment sales of alumina segment increased by 13.7% from RMB24,689.6 million for the year ended December 31, 2010 to RMB28,066.3 million for the year ended December 31, 2011, primarily due to an increase in the average selling price and an increase in the sales volume of alumina from our alumina segment to the trading segment.

##### Cost and expenses.

The total cost and expenses for our alumina segment increased by 19.5% from RMB25,760.8 million for the year ended December 31, 2010 to RMB30,775.2 million for the year ended December 31, 2011, primarily due to the increase in the prices of raw materials and sales volume of alumina manufactured by us.

##### Segment results.

Segment profit for alumina segment decreased by 67.3% from RMB1,077.1 million for the year ended December 31, 2010 to RMB351.9 million for the year ended December 31, 2011.

## Primary Aluminum Segment

### Revenue.

Total revenue generated by the primary aluminum segment increased by 8.9% from RMB53,255.0 million for the year ended December 31, 2010 to RMB57,979.7 million for the year ended December 31, 2011, primarily due to an increase in the average selling price of primary aluminum manufactured by us. Our average selling price of primary aluminum increased by 6.9% from the year ended December 31, 2010 to the year ended December 31, 2011, primarily due to an increase in demand. Our sales volume of primary aluminum increased slightly by 0.6% from 3,821,000 tonnes for the year ended December 31, 2010 to 3,843,000 tonnes for the year ended December 31, 2011.

Revenue from external sales of the primary aluminum segment increased by 20.8% from RMB26,407.3 million for the year ended December 31, 2010 to RMB31,887.9 million for the year ended December 31, 2011, primarily due to the increase in the average selling price and external sales volume of primary aluminum manufactured by us. Our sales volume to external customers increased by 10.8% from 2010 to 2011.

Revenue from inter-segment sales of primary aluminum segment decreased by 2.8% from RMB26,847.7 million for the year ended December 31, 2010 to RMB26,091.8 million for the year ended December 31, 2011, primarily due to a decrease in the sales volume of primary aluminum manufactured by us through our trading segment.

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### Cost and expenses.

The total cost and expenses for our primary aluminum segment increased by 7.9% from RMB52,896.2 million for the year ended December 31, 2010 to RMB57,074.2 million for the year ended December 31, 2011, primarily due to the increase in the prices of raw materials, the electric power cost and sales volume of primary aluminum manufactured by us.

### Segment results.

Segment profit for our primary aluminum segment increased by 152.4% from RMB358.8 million for the year ended December 31, 2010 to RMB905.5 million for the year ended December 31, 2011. Included in this segment profit was share of profit of associates of RMB390 million,

primarily due to an increase in the profits of Qinghai Province Energy Development (Group) Co., Ltd and Zhaogu Coal, our associates engaged in coal production.

#### Aluminum Fabrication Segment

##### Revenue.

Total revenue generated by the aluminum fabrication segment increased by 12.7% from RMB10,466.0 million for the year ended December 31, 2010 to RMB11,794.8 million for the year ended December 31 2011, primarily due to an increase in the selling prices and sales volume of various aluminum fabrication products manufactured by us.

Revenue from external sales of the aluminum fabrication segment increased by 11.0% from RMB10,315.3 million for the year ended December 31, 2010 to RMB11,451.2 million for the year ended December 31, 2011, primarily due to the increase in the selling prices of various aluminum fabrication products and the sales volume of aluminum fabrication products directly sold by the aluminum fabrication plants as a result of increased market demand.

Revenue from inter-segment sales of aluminum fabrication increased by 128.0% from RMB150.7 million for year ended December 31, 2010 to RMB343.6 million for the year ended December 31, 2011, primarily due to a significant increase in the sales volume of self-produced aluminum fabrication products through our trading segment.

##### Cost and expenses.

The total cost and expenses for our aluminum fabrication segment increased by 12.4% from RMB10,789.6 million for the year ended December 31, 2010 to RMB12,130.7 million for the year ended December 31, 2011, primarily due to the increase in the prices of raw materials and sales volume of aluminum fabrication products manufactured by us.

##### Segment Results.

Segment loss for our aluminum fabrication segment increased by 3.8% from RMB323.6 million for the year ended December 31, 2010 to RMB335.9 million for the year ended December 31, 2011.

#### Trading Segment

##### Revenue.

Total revenue generated by the trading segment increased by 21.1% from RMB90,141.4 million for the year ended December 31, 2010 to RMB109,172.4 million for the year ended December 31, 2011, primarily due to an increase in the average selling price and sales volume of self-produced alumina and primary aluminum through our trading segment, and an increase in trading volume of non-ferrous metal products sourced from external suppliers.

Revenue from internal sales of the trading segment increased by 20.7% from RMB8,159.2 million for the year ended December 31, 2010 to RMB9,848.3 million for the year ended December 31, 2011. Revenue from internal sales of trading segment for the year ended December 31, 2011 included RMB406 million of internal sales of products purchased from our internal sources and RMB9,442 million of internal sales of products purchased from our external sources.

Revenue from external sales of the trading segment increased by 21.2% from RMB81,982.2 million for the year ended December 31, 2010 to RMB99,324.1 million for the year ended December 31, 2011. Revenue from external sales of trading segment for the year ended December 31, 2011 included RMB35,916 million of external sales of products produced by us and sold through the trading segment and RMB63,408 million of external sales of commodities including alumina, primary aluminum, carbon products, aluminum fabrication products, coal and non-ferrous metal products, purchased from external sources.

Cost and expenses.

The total cost and expenses for our trading segment increased 21.5% from RMB89,280.8 million for the year ended December 31, 2010 to RMB108,501.8 million for the year ended December 31, 2011, primarily due to the increase in the prices and volumes of major aluminum and other non-ferrous metal products procured and sold through our trading segment.

Segment results.

Segment profit for our trading segment decreased by 22.1% from RMB860.6 million for the year ended December 31, 2010 to RMB670.6 million for the year ended December 31, 2011.

Corporate and other operating segment

Revenue.

Revenue from the headquarters and other operating segments decreased by 7.4% from RMB190.3 million for the year ended December 31, 2010 to RMB176.0 million for the year ended December 31, 2011.



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Segment loss.

Segment loss for our corporate and other operating segment increased by 114.5% from RMB490.3 million for the year ended December 31, 2010 to RMB1,051.5 million for the year ended December 31, 2011, primarily due to an increase of RMB530 million in finance costs as a result of the increase in our interest-bearing indebtedness and the increases in the PBOC's benchmark interest rates, which resulted in an increase in our weighted average annual interest rate. Our weighted average annual interest rate of long-term bank and other loans increased from 5.25% for the year ended December 31, 2010 to 5.62% for the year ended December 31, 2011.

## B. LIQUIDITY AND CAPITAL RESOURCES

Historically, our primary sources of funding have been cash generated from operating activities, prepayments and deposits from customers, bank and other loans and proceeds from equity or notes and bonds 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.

As of December 31, 2012, our current assets amounted to RMB49,016.0 million, representing a decrease of 1.9% from RMB49,969.7 million as of December 31, 2011, primarily due to a decrease in trade and notes receivable and cash and cash equivalents. As of December 31, 2012, our trade and notes receivable amounted to RMB2,615.9 million, representing a decrease of 53.6% from RMB5,631.8 million as of December 31, 2011. As of December 31, 2012, our restricted cash and time deposit and cash and cash equivalents balance amounted to RMB10,191.6 million, representing an decrease of 12.5% from RMB11,644.7 million as of December 31, 2011, primarily due to a decrease in cash and cash equivalents.

As of December 31, 2012, our current liabilities amounted to RMB83,853.4 million, representing an increase of 34.5% from RMB62,360.4 million as of December 31, 2011. Our current liabilities increased primarily due to the increase in the short-term interest bearing loans and borrowings in the amount of RMB21,177.4 million during the period.

As of December 31, 2012, our current liabilities exceeded our current assets by approximately RMB34,837.4 million and our net current liabilities amounted to RMB34,837.4 million, representing a significant increase from RMB12,390.7 million as of December 31, 2011. As of December 31, 2012,

our current ratio (current assets/current liabilities) was 0.58, compared with 0.80 as of December 31, 2011. Our quick ratio ((current assets - inventories)/current liabilities) was 0.28 as of December 31, 2012, compared with 0.41 as of December 31, 2011.

The Board has considered our available sources of funds as follows:

- \* Our expected net cash inflow from operating activities in 2013;
- \* As of December 31, 2012, we had total banking facilities of approximately RMB161,761 million, of which RMB64,819 million had been utilized and unutilized banking facilities amounted to RMB96,942 million as of December 31, 2012, among which, banking facilities of approximately RMB54,859 million will be subject to renewal during the next 12 months from January 1, 2013. Our directors are confident that all banking facilities could be renewed upon their expiration based on our past experience with banks and our good credit standing; and
- \* Other available sources of financing from banks and other financial institutions based on our good credit history.

The Board believes that we have adequate resources to continue in operational existence for the foreseeable future not less than 12 months from the date these financial statements were approved. The Board therefore continues to adopt the going concern basis in preparing these financial statements.

#### Cash Flows and Working Capital

The following table sets forth a condensed summary of our statement of cash flows for the periods indicated:

	Year Ended December 31,			
	2010	2011	2012	2012
	RMB	RMB	RMB	US\$
	(in millions)			
Net cash flows generated from operating activities	7,103.9	2,489.8	1,122.4	180.2
Net cash flows used in investing activities	(8,260.3)	(9,714.5)	(23,153.1)	(3,716.3)
Net cash flows generated from financing activities	2,717.5	8,842.4	20,428.9	3,279.0

	_____	_____	_____	_____
Net increase/ (decrease) in cash and cash equivalents	1,561.1	1,617.7	(1,601.8)	(257.1)
	_____	_____	_____	_____

### Net Cash Flows Generated from Operating Activities

For the year ended December 31, 2012, we had a cash inflows before changes in working capital but after adjustments for non-cash items and non-operating cash outflows of RMB1,862.8 million and net cash generated from operating activities of RMB1,122.4 million. Net cash flows generated from operating activities consisted primarily of interest expense of RMB4,913.6 million, depreciation of property, plant and equipment of RMB6,141.0 million, loss before income tax of RMB9,092.1 million, an outflow of RMB569.1 million for changes in working capital and income tax of RMB171.3 million. The outflows from changes in working capital consisted primarily of (i) increase in inventories of RMB1,472.1 million, (ii) decrease in trade and notes payable of RMB1,342.1 million and (iii) increase in other current assets of RMB921.4 million, partially offset by decrease in trade and notes receivable of RMB3,015.9 million.

For the year ended December 31, 2011, we had a cash inflow before changes in working capital but after adjustments for non-cash items and non-operating cash outflows of RMB9,326.0 million and net cash generated from operating activities of RMB2,489.8 million. Net cash flows generated from operating activities consisted primarily of our profit before tax of RMB818.0 million, an outflow of RMB6,558.7 million for changes in working capital and income tax of RMB277.5 million. The outflows from changes in working capital consisted primarily of (i) increase in trade and notes receivable of RMB3,474.2 million, primarily due to our increased sales, (ii) increase in inventories of RMB2,353.2 million, and (iii) increase in other current assets of RMB2,089.8 million, partially offset by increase in trade and notes payable of RMB2,025.0 million.

For the year ended December 31, 2010, we had a cash inflow before changes in working capital but after adjustments for non-cash items and non-operating cash outflows of RMB9,763.2 million and net cash generated from operating activities of RMB7,103.9 million. Net cash flows generated from operating activities consisted primarily of an outflow of RMB2,358.9 million for changes in working capital, our profit before tax of RMB1,380.4 million and income tax of RMB300.5 million. The outflow from changes in working capital consisted primarily of (i) increase in inventories of

RMB1,356.8 million and (ii) increase in other current assets of RMB515.6 million, partially offset by decrease in other non-current assets of RMB72.8 million and increase in trade and notes payable of RMB53.1 million.

#### Net Cash Flows Used in Investing Activities

Net cash flows used in investing activities increased significantly from RMB9,714.5 million for the year ended December 31, 2011 to RMB23,153.1 million for the year ended December 31, 2012, primarily due to the increase of cash outflows related to investments in jointly controlled entities and associates and purchases of property, plant and equipment. Our net cash used in investing activities for the year ended December 31, 2012 consisted primarily of investments in jointly controlled entities and associate of RMB13,406.8 million and purchase of property, plant and equipment of RMB9,148.5 million.

Net cash flows used in investing activities increased by 17.6% from RMB8,260.3 million for the year ended December 31, 2010 to RMB9,714.5 million for the year ended December 31, 2011, primarily due to the increase of cash outflows related to purchases of property, plant and equipment, and the decrease in proceeds from disposal of a subsidiary. Our net cash used in investing activities for the year ended December 31, 2011 consisted primarily of (i) purchase of property, plant and equipment of RMB8,552.7 million, (ii) investment in associates of RMB817.0 million and (iii) deposit for investment projects of RMB536.7, partially offset by (i) net proceeds from settlement of futures and option contracts of RMB550.9 million and (ii) government grants/subsidies received of RMB392.3 million.

Net cash flows used in investing activities decreased by 12.8% from RMB9,477.2 million for the year ended December 31, 2009 to RMB8,260.3 million for the year ended December 31, 2010, primarily due to the increase of cash inflows related to investments and government grants received, and the decrease in purchases of property, plant and equipment. Our net cash used in investing activities for the year ended December 31, 2010 consisted primarily of (i) purchase of property, plant and equipment of RMB8,325.9 million and (ii) deposit for investment projects of RMB849.8 million and (iii) capital injection to associates of RMB748.7 million.

#### Net Cash Flows Generated from Financing Activities

Net cash flows generated from financing activities increased significantly from RMB8,842.4 million for the year ended December 31, 2011 to RMB20,428.9 million for the year ended December 31, 2012, primarily due to the increase in the drawdown of short-term and long-term loans and issuance of short-term bonds and medium-term notes during the year. Our net cash generated from financing activities for the year ended December 31, 2012 consisted primarily of drawdown of short-term and long-term loans of RMB74,346.5 million and issuance of short-term bonds and medium-term

notes of RMB29,468.1 million, partially offset by repayments of short-term and long-term loans of RMB63,925.1 million and repayments of short-term bonds and medium-term notes of RMB18,000.0 million.

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Net cash flows generated from financing activities increased significantly from RMB2,717.5 million for the year ended December 31, 2010 to RMB8,842.4 million for the year ended December 31, 2011, primarily due to the increase in the drawdown of short-term and long-term loans during the year. Our net cash generated from financing activities for the year ended December 31, 2011 consisted primarily of drawdown of short-term and long-term loans of RMB56,477.6 million, partially offset by repayments of short-term and long-term loans of RMB45,378.1 million.

Net cash flows generated from financing activities increased from RMB1,576.7 million for the year ended December 31, 2009 to RMB2,717.5 million for the year ended December 31, 2010, primarily due to the increase of external debt financing during the year. Our net cash generated from financing activities for the year ended December 31, 2010 consisted primarily of drawdown of short-term and long-term loans of RMB34,141.5million, partially offset by repayments of short-term and long-term loans of RMB41,195.1 million.

#### Loans and Borrowings

During the past years, we engaged in debt financing to fund our operations and business expansion. As of December 31, 2012, our gearing ratio (net debts/total capital as defined in Note 3.3 to our audited consolidated financial statements) was approximately 72% as compared with approximately 63% as of December 31, 2011.

Our net borrowings were as follows as of December 31, 2011 and 2012:

As of December 31,		
2011	2012	2012
RMB	RMB	US\$

(in millions)

Short-term loans and borrowings			
Short-term bank and other loans	32,322.7	40,313.2	6,470.7
Short-term bonds	10,250.6	16,670.0	2,675.7
Current portion of medium-term notes	-	4,986.0	800.3
Current portion of long-term bank and other loans	4,164.5	5,946.0	954.4
	<hr/>	<hr/>	<hr/>
Sub-total	46,737.8	67,915.2	10,901.1
	<hr/>	<hr/>	<hr/>
Long-term loans and borrowings			
Long-term bank and other loans	23,430.5	25,856.7	4,150.3
Medium-term notes and bonds and long-term bonds	16,702.5	21,710.9	3,484.8
Less:			
Current portion of medium-term notes	-	(4,986.0)	(800.3)
Current portion of long-term bank and other loans	(4,164.5)	(5,946.0)	(954.4)
	<hr/>	<hr/>	<hr/>
Sub-total	35,968.5	36,635.6	5,880.4
	<hr/>	<hr/>	<hr/>
Total borrowings	82,706.3	104,550.8	16,781.5
	<hr/>	<hr/>	<hr/>
Less: Bank balances and cash	(11,644.7)	(10,191.6)	(1,635.9)
	<hr/>	<hr/>	<hr/>
Net	71,061.6	94,359.2	15,145.6
	<hr/>	<hr/>	<hr/>

## Bank and Other Loans

The weighted average annual interest rate of short-term bank and other

loans for the year end December 31, 2012 was 5.85%. Our short-term bank and other loans will mature within one year.

The weighted average annual interest rate of long-term bank and other loans for the years ended December 31, 2012 was 5.54%. The following table sets forth the aggregate maturities of our outstanding long-term bank and other loans as of December 31, 2012:

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	As of December 31, 2012	
	RMB	US\$
	(in millions)	
Within 1 year	5,946.0	954.4
Between 1 and 2 years	8,049.0	1,292.0
Between 2 and 5 years	7,771.1	1,247.3
Over five years	4,090.6	656.6
	<hr/>	<hr/>
Total	25,856.7	4,150.3
	<hr/>	<hr/>

As of December 31, 2012, we had secured loans of RMB900.5 million (including long-term and short-term loans) and we, on a stand-alone basis, provided guarantees in respect of RMB4,703.2 million of long-term loans for our subsidiaries. As of December 31, 2012, Chinalco guaranteed RMB972.0 million of our long-term bank loans and RMB600.0 million of our short-term bank loans.

As of December 31, 2012, we had foreign currency denominated loans with principal amount of RMB40 million in Japanese Yen and RMB7,421 million in U.S. dollars.

#### Notes and Bonds

The following table sets forth the face value, maturity, effective interest rate and outstanding amount of our outstanding long-term bonds and medium-term notes as of December 31, 2012:

	Face value /maturity	Effective interest rate	December 31, 2012
			(RMB in thousand)
2007 long-term bonds	2,000,000/2017	4.64%	1,989,245
2008 medium-term notes	5,000,000/2013	4.92%	4,986,037
2010 medium-term notes	1,000,000/2015	4.34%	992,007
2010 medium-term notes	1,000,000/2015	4.20%	991,822
2011 medium-term notes <sup>(1)</sup>	5,000,000/2016	6.03%	4,984,110
2011 Jiaozuo Wanfang medium-term notes	800,000/2016	6.85%	797,361
2011 medium-term bonds	2,000,000/2014	6.36%	1,994,435
2012 medium-term bonds	2,000,000/2015	5.13%	1,993,350
2012 medium-term bonds	3,000,000/2017	5.77%	2,982,535
			21,710,902
Total			21,710,902

- ( The medium-term notes were issued at a fixed annual coupon rate of 5.86% with a five year term. Pursuant to the terms of the bonds, the
- 1) holders of the bonds have an option to negotiate and adjust the fixed coupon rate according to market conditions or to request repayment of some or all outstanding balances at the end of the third anniversary from issuance of the notes.

The following table sets forth face value, maturity, effective interest rate and outstanding amount of our outstanding short-term bonds as of December 31, 2012:

	Face value /maturity	Effective interest rate	December 31, 2012
			(RMB in thousand)
2012 short-term bonds	5,000,000/2013	3.89%	5,074,762
2012 short-term bonds	2,000,000/2013	4.60%	2,013,115
2012 short-term bonds	4,000,000/2013	4.28%	4,050,486
2012 short-term bonds	2,000,000/2013	4.56%	2,022,444



2012 short-term bonds	1,500,000/2013	4.60%	1,507,956
2012 short-term bonds	2,000,000/2013	4.76%	2,001,205
Total			16,669,968

### Restriction on Cash Dividends

Our PRC subsidiaries are required to set aside a certain amount of their retained profits each year, if any, to fund certain statutory reserves and these reserves may not be distributed as cash dividends. In addition, when our subsidiaries incur debts on their own behalf, the instruments governing the debt may restrict their ability to pay dividends or make other distributions to us. Our directors are of the view that we will continue to be able to meet our borrowing payment obligations as they fall due from cash generated from our operating activities.

### Capital Expenditures and Capital Commitments

The following table sets forth our capital expenditures by operating segment for the years ended 2010, 2011 and 2012, and the capital expenditures of each segment as a percentage of our total capital expenditures for the periods indicated:

	Year Ended December 31					
	2010		2011		2012	
	RMB	%	RMB	%	RMB	%
	(in millions, except percentages)					
Alumina	4,360.9	48.4	2,619.0	23.9	4,243.3	44.1
Primary aluminum	3,502.2	38.8	4,539.2	41.5	4,604.8	47.8
Aluminum fabrication	1059.0	11.7	2,881.1	26.3	483.5	5.0
Trading	15.1	0.2	9.5	0.1	48.5	0.5
	79.6	0.9	896.8	8.2	246.1	2.6

Corporate and  
others

	_____	_____	_____	_____	_____	_____
Total	9,016.8	100.0	10,945.6	100.0	9,626.2	100.0
	_____	_____	_____	_____	_____	_____

In 2012, we spent approximately RMB9,626 million of our capital expenditures primarily on investments in energy saving and consumption reduction, environmental protection, resource acquisition and scientific research, which mainly included the thermal power project of Jiaozuo Wanfang, the Baotou Aluminum power plant and the alumina project of Shanxi Huaxing in Xing County.

Our capital expansion plan for 2013 requires a total of approximately RMB18.8 billion in capital expenditures for technology upgrading and infrastructure construction. We expect to increase our annual production capacity of alumina by approximately 1.0 million tonnes by the end of 2013. In addition, we continually evaluate potential acquisition and joint venture projects for opportunities that are in our and our shareholders' interests.

As of December 31, 2012, our capital commitment for investment in property, plant and equipment amounted to RMB40,975.6 million, of which those contracted but not provided for amounted to RMB8,415.5 million and those authorized but not contracted for amounted to RMB32,560.1 million.

As of December 31, 2012, our commitment under operating leases amounted to RMB22,610.4 million, of which amount payable within one year was RMB705.3 million, amount payable from two to five years was RMB2,784.1 million and amount payable after five years was RMB19,120.9 million.

As of December 31, 2012, our commitments to make capital contribution to our associates, jointly controlled activities and available-for-sale financial investment amounted to RMB3,596.1 million. We will contribute RMB3,435.7 million to our two associates, namely, China Aluminum Ningxia and Huozhou Coal Group Xingshengyuan Coal Co., Ltd. for acquisition of equity interests and coal business expansion. We will also contribute RMB130.8 million to one jointly controlled entity, namely, Chalco Liupanshui for coal business expansion.

We expect to use primarily operating cash flow in meeting such commitments with the shortfall to be satisfied by proceeds of bank loans, short-term and long-term bonds and medium-term notes.

## C. RESEARCH AND DEVELOPMENT

Our department of science and technology management coordinates the research and development efforts undertaken at our Research Institute and technology centers at our plants. The Research Institute, the only organization in China dedicated to aluminum smelting research, is responsible for the research and development of technologies for our operations. The technology centers at our plants focus on providing engineering solutions and applying our developed technologies. Each of the plants also conducts operational testing and pilot experimentation relating to various research and development topics. Although we collaborate with universities and other research institutions in China on some of our projects, we generally do not outsource our research and development.

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Our total expenditure for research and development was approximately RMB164.2 million, RMB218.0 million and RMB198.9 million for 2010, 2011 and 2012, respectively.

**D. TREND INFORMATION**

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the period from January 1, 2012 to December 31, 2012 that are reasonably likely to have a material adverse effect on our revenue, profitability, liquidity or capital resources, or that caused the disclosed financial information to be not necessarily indicative of future operating results or financial conditions.

**E. OFF-BALANCE-SHEET ARRANGEMENTS**

There are no material off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenue or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

**F. TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS**

The following table summarizes our contractual obligations and commercial commitments for the periods indicated as of December 31, 2012:

Payment due by period

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	Total	2013	2014-2015	2016-2017	Thereafter
	(RMB in millions)				
Long-term debts	25,856.7	5,946.0	13,829.3	1,990.8	4,090.6
Long-term bonds	2,000.0	-	-	2,000.0	-
Medium-term notes	19,800.0	5,000.0	6,000.0	8,800.0	-
Interest payments	6,932.5	1,788.8	3,163.6	1,074.3	905.8
Operating leases	22,610.4	705.3	1,395.4	1,387.8	19,121.9
Capital commitments	8,415.5	8,415.5	-	-	-
Commitments for capital contribution	3,596.1	3,596.1	-	-	-
Total	89,211.2	25,451.7	24,388.3	15,252.9	24,118.3

**G. Safe Harbor**

See "Forward-Looking Statements" at the beginning of this annual report.

**ITEM DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES****6.****A. DIRECTORS AND SENIOR MANAGEMENT**

## Directors

The fourth session of our Board currently consists of nine directors, including three executive directors, three non-executive directors and three independent non-executive directors. In accordance with our Articles of Association, our affairs are managed by our Board. The business address of each of our directors is No. 62 North Xizhimen Street, Hai Dian District, Beijing, People's Republic of China, 100082.

We follow our home country practice in relation to the composition of our Board in reliance on the exemption provided under Section 303A.00 of the NYSE Corporate Governance Rules available to foreign private issuers. Our home country practice does not require a majority of directors of a listed company to be independent directors. As such, the majority of our directors are not independent within the meaning of NYSE Corporate Governance Rules.

The table and discussion below set forth information concerning our directors who served on our Board during the year ended December 31, 2012.

Name	Age	Positions with the Company
Executive Directors		
Xiong Weiping	56	Chairman of the Board and Chief Executive Officer
Luo Jianchuan	49	Director and President

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Liu Caiming <sup>(1)</sup>	50	Director, Senior Vice President and Chief Financial Officer
Liu Xiangmin	50	Director and Senior Vice President
Non-executive Directors		
Lv Youqing	49	Non-executive Director
Shi Chungui	72	Non-executive Director
Independent Non-executive Directors		
Zhang Zhuoyuan	79	Independent Director
Wang Mengkui	74	Independent Director
Zhu Demiao	48	Independent Director

- (1) On March 8, 2013, Mr. Liu Caiming resigned from the positions as the senior vice president, chief financial officer and a member of the executive committee of the Company. As Mr. Liu Caiming no longer assumed any administrative function with the Company, he has been re-designated from an executive director to a non-executive director with the same term of the current session of the Board.

#### Executive Directors

#### Xiong Weiping,

aged 56, serves as the chairman of the Board, our chief executive officer and the general manager of Chinalco. Mr. Xiong served on our Board from 2001 to 2006 and was re-appointed to the Board in 2009. Mr. Xiong holds a doctorate degree of engineering from Central South University of Industry

where he studied mining engineering. He completed his post-doctoral research in economics at the Guanghua School of Management at Peking University where he is a professor and a Ph.D tutor. He has received grants from the State Council of China and was recognized as the "Middle-Aged and Young Expert with Outstanding Contributions to the Nation" by the former Ministry of Personnel of the PRC. He was previously the deputy secretary of Hunan Provincial Communist Youth League, a member of standing committee of the All China Youth Federation, president of Hunan Youth Union Committee and standing vice-chancellor and dean of the Faculty of Management and professor and Ph.D. tutor at the Central South University of Industry. Mr. Xiong previously served as the vice president of China Copper, Lead & Zinc Group Corporation, a vice president of Chinalco, an executive director, senior vice president and president of Chalco and the vice chairman and general manager of China National Travel Service (HK) Group Corporation (China Travel Service (Holdings) Hong Kong Limited).

Luo Jianchuan,

aged 49, serves as an executive director on our Board, chairman of the development planning committee, vice chairman of the executive committee, and our president. He has been employed by us since 2001. Mr. Luo holds a bachelor's degree in mining from Kunming University of Science and Technology and a doctorate degree from Central South University, and he is a professor-grade senior engineer. He has long engaged in corporate management of non-ferrous metals and thus has extensive professional experience and strong management skills in those fields. Mr. Luo previously served as an engineer of the Lead and Zinc Bureau of China Non-ferrous Metals Industry Corporation, manager of Haikou Nanxin Industry & Commerce Corporation, assistant to general manager of Jinpeng Mining Development Corporation, deputy general manager and general manager of Beijing Xinquan Tech-trading Corporation, assistant to general manager of China Non-ferrous Metals Industry Trading Group Corporation, deputy chief of the Trading Division of China Copper, Lead & Zinc Group Corporation, general manager of China Aluminum International Trading Corporation Limited, general manager of the Operations and Sales Division, vice president and senior vice president of us.

Liu Caiming,

aged 50, currently serves as a non-executive director on our Board. On March 8, 2013, Mr. Liu resigned as the senior vice president, chief financial officer and a member of the executive committee of the Company and was re-designated from an executive director to a non-executive director with the same term of the current session of the Board. Graduated from the School of Economics at Fudan University, Mr. Liu is a doctoral candidate, senior accountant and certified public accountant in the PRC. He joined Chinalco in January 2007. He had served as deputy head and head of the Finance Department of China Non-ferrous Metals Foreign-Engineering Corporation, deputy general manager of China Non-ferrous Metals Construction Group Limited, deputy general manager of China Non-ferrous Construction Group

Limited, director and deputy general manager of China Non-ferrous Metal Industry's Foreign Engineering and Construction Co., Ltd., deputy general manager of China Non-ferrous Metals Mining and Construction (Group) Co., Ltd., deputy general manager of Chinalco, chairman of Yunnan Copper Industry (Group) Co., Ltd., chairman of Chinalco Shanghai Copper Co., Ltd., executive director of Chinalco Kunming Copper Co., Ltd., as well as director and president of China Copper Co., Ltd. Mr. Liu also has acted as the titular deputy head of Department of Finance of Yunnan Province, a director of State-owned Assets Supervision and Administration Commission of Yunnan Provincial People's Government and an assistant to the governor of Yunnan Province.

Liu Xiangmin,

aged 50, serves as an executive director on our Board and our senior vice president and has been employed by us since 2001. Mr. Liu holds a doctorate degree from Central South University of Industry where he studied non-ferrous metal science and is a professor-grade senior engineer. Mr. Liu previously served as deputy head and head of the Alumina branch of Zhongzhou Aluminum Plant, deputy head of Zhongzhou Aluminum Plant, general manager of our Zhongzhou branch and president of the Company.

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#### Non-Executive Directors

Lv Youqing,

age 49, serves as a non-executive director on our Board and the deputy general manager of Chinalco. He has been with us since June 2010. He graduated as a postgraduate from the Political Studies Institute, Social Science Faculty of Sichuan Province in 1989. He then obtained a Ph.D. degree from School of Economics, Sichuan University and is a professor-grade senior engineer. Mr. Lv accumulated substantial experience in management from his long-term research of national policies and involvement in enterprise management. He previously served as deputy mayor of Nanchong Municipal Government, a member of standing committee and deputy party secretary of Luzhou's Municipal Party Committee. He also served as a member of the party group and deputy general manager of Chinalco.

Shi Chungui,

aged 72, serves as a non-executive director on our Board and has been with us since 2005. He holds a bachelor's degree in accounting from Northeast

University of Finance and Economics. Mr. Shi is a senior economist with extensive experience in finance, government and corporate management. Mr. Shi was previously the vice director of Commerce Bureau of Qinhuangdao City, Hebei Province, deputy mayor and the standing deputy mayor of Qinhuangdao City, Hebei Province, president of Hebei Branch of China Construction Bank, president of Beijing Branch of China Construction Bank, deputy president of the head office of China Construction Bank and deputy president of China Cinda Asset Management Corporation, vice chairman of Tianjin Pipe Co. , Ltd. and vice chairman of China Investment Society. Mr. Shi is currently an independent director of Intime Department Store (Group) Company Limited and China National Materials Company Limited.

#### Independent Non-Executive Directors

Zhang Zhuoyuan,

aged 79, has served as an independent non-executive director on the Board since 2007. Mr. Zhang graduated from the Faculty of Economics of Zhongnan University of Economics. Mr. Zhang previously served as the director and researcher of the Institute of Finance, Trade and Economics of Chinese Academy of Social Sciences, chief editor of the Finance & Trade Economics, a director, researcher and Ph.D tutor at the Institute of Industrial Economics of Chinese Academy of Social Sciences and a director, researcher and Ph.D tutor of the Institute of Economics of the Chinese Academy of Social Sciences, and chief editor of Economics Research Journal. Mr. Zhang is a member of the ninth and tenth sessions of the National Committee of the Chinese People's Political Consultative Conference, a consultant of each of China Price Association and the Chinese Society for Urban Studies and a director of Chinese Society for Cost Studies and honorary director of Foundation of Sun Ye Fang Economics and Science. Mr. Zhang is also a committee member of the academic section of the Chinese Academy of Social Sciences and a researcher at the Institute of Economics of the Chinese Academy of Social Sciences.

Wang Mengkui,

aged 74, has served as an independent non-executive director on the Board since 2008. Mr. Wang graduated from the School of Economics, Peking University. He is an economist engaged in long-term analysis of economic theory and policy and is currently a professor and advisor of doctor candidates of Peking University. He has published many articles on economic theory and related topics and served in the "Red Flag" magazine and the First Ministry of Machine Building Industry. Mr. Wang previously served as a vice head and researcher of the economic team of the research office of the Secretariat of the Communist Party of China Central Committee, a commission member of the State Development and Planning Commission, executive vice director of economic research center of the State Development and Planning Commission, the vice director and director



of the research office of the State Council of China and the center director of the Development Research Center of the State Council of China. Mr. Wang also served as a member of the Tenth Standing Committee of National People's Congress and vice director of Financial and Economic Affairs Committee of National People's Congress. He is also a professor and Ph.D tutor of Peking University. He is currently the chairman of the China Development Research Foundation and a committee member of the National Social Security Fund of the PRC.

Zhu Demiao,

aged 48, has served as an independent non-executive director and Chairman of the audit committee of the Board since 2008. Mr. Zhu holds a MBA degree from the University of Chicago Graduate School of Business, a master's degree in economics from the Research Institute for Fiscal Science at the Ministry of Finance of the PRC and a bachelor's degree in economics from Hebei Geological Institute. Mr. Zhu is one of the early Certified Public Accountants in the PRC. Mr. Zhu previously worked in the Ministry of Finance and in the investment analysis department of FMC Corporation. He also served as the head of China Business in the Equity Capital Market Department and Investment Bank Department of Credit Suisse First Boston, a managing director and member of the executive committee of the Asia-Pacific region of JP Morgan Chase & Co. and chairman of operating committee of the Greater China Region of JP Morgan Chase & Co. Mr. Zhu once served as the managing director and senior consultant of Oaktree Capital (Hong Kong) Ltd. Mr. Zhu is currently an independent director of WSP Holding Limited and a member of the Advisory Board of Business School at the University of Chicago.

#### Supervisors

Our supervisors are elected to represent our employees and shareholders and serve a term of three years or until the election of their respective successors, whichever is earlier. Our supervisors are Mr. Ao Hong, Mr. Yuan Li and Mr. Zhang Zhankui who were elected at the 2009 annual general meeting held on June 22, 2010 with a term of office expiring at the conclusion of the annual general meeting for the year 2012.

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The table and discussion below set forth certain information concerning our supervisors.

Name	Age	Positions with the Company
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Ao Hong	51	Chairman of Supervisor Committee
Yuan Li	54	Supervisor (employee representative), General Manager of Corporate Culture Department of the Company
Zhang Zhankui	54	Supervisor

Ao Hong,

aged 51, is currently a vice president of Chinalco and has served as a supervisor of us since 2006. Mr. Ao holds a bachelor's degree from Kunming University of Science and Technology where he studied metallurgy. He also holds a master's degree from Central South University and is a professor-grade senior engineer. Mr. Ao previously worked as an engineer, senior engineer and served as head of general office and vice chairman at the Beijing General Research Institute for Non-ferrous Metals ("GRINM"), the chairman of GRINM Semiconductor Materials Co., Ltd., Guorui Electronic Materials Co., Ltd., Beijing Guojing Infrared Optical Technology Co., Ltd., Guowei Silver Anticorrosive Materials Company and Guo Jing Micro-electronic Holdings Ltd. in Hong Kong, respectively.

Yuan Li,

aged 54, serves as our employee representative supervisor and a general manager of our Corporate Culture Department. Mr. Yuan has been employed by us since 2001. He is an engineer with extensive administrative and management experience. He previously served as a manager of the General Management Office and the deputy head of the Department of Research and Investigation of China Non-ferrous Metals Industry Corporation, the head of the Department of Research and Investigation, the head of the Secretariat, an assistant inspector of the State Bureau of Non-ferrous Metals Industry, the deputy head of the Department of Political Affairs and the head of the community union working department of Chinalco.

Zhang Zhankui,

aged 54, is the head of the Finance Department of Chinalco and has served us since 2001. Mr. Zhang is a postgraduate researcher in economic management and a senior accountant. Mr. Zhang had formerly served as head of the finance division and then the audit division of China General Design Institute for Non-ferrous Metals, a deputy general manager of Beijing Enfei Tech-industry Group, the head of the accounting division of the finance department and the deputy head of the finance department of China Copper Lead & Zinc Group Corporation, the officer-in-charge of asset and finance at our listing office and the head of the capital division of our finance department and the manager of the general division of our finance department and the deputy head of the finance department of Chinalco.

## Senior Management

The table and discussion below set forth certain information concerning other member of senior management.

Name	Age	Positions with the Company
Ding Haiyan <sup>(1)</sup>	54	Vice President
Xie Weizhi <sup>(2)</sup>	48	Vice President and Chief Financial Officer
Jiang Yinggang	49	Vice President
Xie Hong	54	Vice President
Qiao Guiling	44	Vice President
Liu Qiang	49	Secretary to the Board

(1) On March 8, 2013, Mr. Ding Haiyan resigned as the vice president and member of the executive committee of the Company.

(2) On March 8, 2013, Mr. Liu Caiming resigned as the senior vice president, chief financial officer and a member of the executive committee of the Company and the Board, as recommended by the our nomination committee, appointed Mr. Xie Weizhi as the vice president, chief financial officer and member of the executive committee of the Company.

## Ding Haiyan,

aged 54, served as vice president of us until March 8, 2013. Mr. Ding had been employed by us since 2001. Mr. Ding holds a master's degree from Beijing Economics University where he studied labor economics and he is a senior economist with extensive experience in labor, wages, insurance, enterprise mergers and acquisitions and capital operation. He has served as head of the labor wage division of the human resource department of China Non-ferrous Metals Industry Corporation, the deputy director of the Bureau of Labor and Insurance, deputy director-general of the enterprise reform department of the State Bureau of Non-ferrous Metals Industry, the head manager of the department of asset operation of Chinalco, deputy head of our Listing Office and an assistant to general manager of Chinalco. He also served as an executive director and the secretary on our Board.

## Xie Weizhi,

aged 48, has served as our vice president and chief financial officer since March 8, 2013. Mr. Xie served as a non-executive director of Chinalco

Mining Corporation International and a director of Chinalco Finance Co., Ltd. Mr. Xie is a senior accountant, graduated from the Guanghua School of Management, Peking University with a master's degree in business administration. Mr. Xie joined us in February 2011. He previously served as the deputy chief and chief of the accounting division of the finance department and the deputy manager of the finance department of China Offshore Oil Nanhai West Corporation, deputy general manager and general manager of the finance department, and general manager of the treasury department of China National Offshore Oil Corporation, general manager of CNOOC Finance Corporation Limited, and the president of China National Association of Finance Companies. Mr. Xie has been engaged in financial management of large state-owned enterprises for many years and has substantial experience in finance and business management.

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Jiang Yinggang,

aged 49, has served as a vice president of us since 2007 and has been employed by us since 2001. Mr. Jiang holds a master's degree from the Central South University of Industry where he studied metallurgy of non-ferrous metals. Mr. Jiang is a professor-grade senior engineer. He has served as deputy head and then the head of the corporate management department of Qinghai Aluminum Plant, head of the Qinghai aluminum smelter, deputy general manager and general manager of Qinghai Aluminum Company Limited and general manager of our Qinghai branch.

Xie Hong,

aged 54, serves as vice president of us and has been employed by us since 2001. Mr. Xie is an outstanding senior engineer who graduated from Central South University of Technology with a major in ore dressing. He has long engaged in strategic planning and project construction management, and has extensive experience in strategic planning, project management and investment management. Mr. Xie has previously served as the cadre, director of the Design Division at Infrastructure Department, deputy division head and division head of the Project Division at Investment and Operation Department of China Nonferrous Metals Industry Corporation, the deputy director-general of the Planning and Development Department of the State Bureau of Non-ferrous Metals Industry, person-in-charge of the (Coordinated) Planning and Development Department of Aluminum Corporation of China, director of the Planning and Development Department of Aluminum Corporation of China and the general manager of Investment Management Department, member of the Executive Committee and assistant to President of the Company.

Qiao Guiling,

aged 44, serves as vice president of us. Ms. Qiao holds a master's degree in engineering from Jiaozuo Mining Institute where she studied mechanical engineering and she is a senior engineer with extensive experience in management. Ms. Qiao has served as the deputy director of Jiaozuo City Cryolite Factory, deputy director of the Economic and Trade Commission of Jiaozuo City Zhongzhan District, general manager of Zhongzhan Taishun Co., Ltd., factory director of a Kaolinite plant in Jiaozuo City, general manager of Henan Zhongzhou Holding Group Co., Ltd., vice mayor of the People's Government of Wen County, chairman and general manager of Jiaozuo Wanfang Aluminum Manufacturing Co., Ltd., chairman of Jiaozuo Wanfang Group Co., Ltd. and the general manager of Henan Branch of the Company.

Liu Qiang,

aged 49, is the secretary to the Board and has been employed by us since 2001. Ms. Liu holds a master's degree in English literature (minor in translation) from Beijing International Studies University. Ms. Liu studied finance, financial management and business administration at the University of Foreign Business and Economics in Beijing and received trainings on finance and financial management in Hong Kong. She previously worked in the finance department of Hong Kong Oriental Xinyuan (Holdings) Company Limited and served as the manager of the finance department of the Australian branch of China National Non-Ferrous Metals Import and Export Corporation. She has formerly served as manager of the aluminum department of China National Non-Ferrous Metals Import and Export Corporation, a senior market analyst for the Aluminum Industry in China National Non-Ferrous Metals Trading Group and China National Metals and Minerals Import and Export Corporation as well as the deputy manager of the import and export division of China Aluminum International Trading Corporation Limited.

## B. COMPENSATION

### Executive Compensation

Executive directors are entitled to a director's fee, performance bonuses and welfare benefits provided under the relevant PRC laws and regulations. Non-executive directors are entitled only to a director's fees. The aggregate amount of cash compensation paid by us to our directors in 2012 for services performed in connection with their respective capacities above was approximately RMB2.9 million. The aggregate amount of cash compensation paid by us to our senior management who are not members of our Board in 2012 was approximately RMB2.4 million, respectively. Our executive directors and supervisors who are employees also receive compensation in the form of housing allowances, other allowances and benefits and contributions to their pension plans. Directors receive fees for

their services. None of the service contracts of our directors provide benefits to our directors upon their termination.

Details of the emoluments paid to our directors and supervisors during the year ended December 31, 2012 are as follows:

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Name of Director or Supervisor	Discretionary				Total
	Fees	Salary	Bonus	Pension	
	RMB	RMB	RMB	RMB	RMB
<i>(in thousands)</i>					
Executive Directors					
Xiong Weiping	-	545.0	-	33.0	578.0
Luo Jianchuan	-	496.0	-	33.0	529.0
Liu Caiming <sup>(1)</sup>	-	493.0	-	33.0	526.0
Liu Xiangmin	-	493.0	-	33.0	526.0
Non-Executive Directors					
Shi Chungui	150.0	-	-	-	150.0
Lv Youqing	-	-	-	-	-
Independent Non-Executive Directors					
Zhang Zhuoyuan	194.0	-	-	-	194.0
Wang Mengkui	194.0	-	-	-	194.0
Zhu Demiao	194.0	-	-	-	194.0
	<u>732.0</u>	<u>2,027.0</u>	<u>-</u>	<u>132.0</u>	<u>2,891.0</u>
Supervisors					
Ao Hong	-	-	-	-	-
Yuan Li	-	383.0	-	33.0	416.0
Zhang Zhankui	-	-	-	-	-

	-	383.0	-	33.0	416.0
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Total	732.0	2,410.0	-	165.0	3,307.0
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>

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- (1) On March 8, 2013, Mr. Liu Caiming resigned as the senior vice president, chief financial officer and a member of the executive committee of the Company. As Mr. Liu Caiming no longer assumed any administrative function with the Company, he has been re-designated from an executive director to a non-executive director with the same term of the current session of the Board.

#### Senior Management Incentive System

In order to better provide incentives for our senior management and improve our shareholders' value, we adopted a special compensation system for our senior management designed to align our senior management's financial interests with our operating performance. Under this system, the senior management's compensation consists of the following components:

- \* basic salaries;
- \* performance bonuses;
- \* welfare benefits; and
- \* incentive bonuses.

#### C. BOARD PRACTICES

##### Board of Directors

All of our directors and supervisors serve a term of three years or until such later date as their successors are elected or appointed. Directors and supervisors may serve consecutive terms. Each of our directors and supervisors has entered into a service contract with us, none of which can be terminated by us within one year without payment of compensation (other than statutory compensation). There were no arrangements providing for benefits upon termination of our directors, supervisors or other senior management personnel. One of the supervisors is an employee representative appointed by our employees and the rest are appointed by the

shareholders. The following table sets forth the number of years our directors and supervisors have held their positions and the expiration of their current term.

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Name	Held Position Since	Expiration of Term
Xiong Weiping	May 26, 2009	June 30, 2013
Luo Jianchuan	June 7, 2004	June 30, 2013
Liu Caiming	May 31, 2011	June 30, 2013
Liu Xiangmin	May 18, 2007	June 30, 2013
Lv Youqing	June 22, 2010	June 30, 2013
Shi Chungui	June 9, 2005	June 30, 2013
Zhang Zhuoyuan	May 18, 2007	June 30, 2013
Wang Mengkui	May 9, 2008	June 30, 2013
Zhu Demiao	May 9, 2008	June 30, 2013
Ao Hong	October 13, 2006	June 30, 2013
Yuan Li	August 16, 2001	June 30, 2013
Zhang Zhankui	October 13, 2006	June 30, 2013

#### Audit Committee

Our audit committee consists of three independent non-executive directors, namely, Mr. Zhu Demiao, Mr. Zhang Zhuoyuan and Mr. Wang Mengkui. Mr. Zhu Demiao is chairman of the audit committee.

Our audit committee satisfies the requirements of Rule 10A-3 of the Exchange Act and NYSE Rule 303A.06 relating to audit committees, including the requirements relating to independence of the audit committee members. The primary duties of our audit committee as set out in the committee charter are to review our annual and interim financial reports, review and approve the selection of and remuneration paid to our independent auditors, approve audit and audit-related services, approve related party transactions, supervise our internal financial reporting, including our internal controls and disclosure controls and procedures, supervise our internal and external auditors and review management policies.

#### Remuneration Committee



Our remuneration committee consists of three independent non-executive directors, namely, Mr. Zhu Demiao, Mr. Wang Mengkui and Mr. Zhang Zhuoyuan and one non-executive director, namely, Mr. Lv Youqing. Mr. Zhang Zhuoyuan serves as the chairman of the remuneration committee.

The primary duties of our remuneration committee as set out in the committee charter include reviewing compensation policies and performance appraisals with respect to the directors and senior management. In 2012, the remuneration committee convened at one meeting, to consider and approve remuneration and performance appraisal standards for 2012 and the renewal of directors and officers liability insurance for years 2012 to 2013 for our directors, supervisors and other senior management members.

We follow our home country practice in relation to the composition of our remuneration committee in reliance on the exemption provided under NYSE Corporate Governance Rule 303A.00 available to foreign private issuers. Our home country practice does not require us to establish a remuneration committee which must be composed entirely of independent directors.

#### Nomination Committee

Our nomination committee consists of two executive directors, namely Mr. Xiong Weiping and Mr. Luo Jianchuan and three independent non-executive directors, namely Mr. Zhang Zhuoyuan, Mr. Wang Mengkui and Mr. Zhu Demiao. Mr. Xiong Weiping serves as the chairman of the nomination committee.

The primary duties of our nomination committee as set out in the committee charter include reviewing and recommending candidates for independent directors and members of the Board committees, approving the terms of the directors' service contracts and overseeing the appointment and removal of senior executives.

We follow our home country practice in relation to the composition of our nomination committee in reliance on the exemption provided under NYSE Corporate Governance Rule 303A.00 available to foreign private issuers. Our home country practice does not require us to establish a nomination committee which must be composed entirely of independent directors.

#### Development and Planning Committee

Our development and planning committee consists of two executive directors, namely Mr. Luo Jianchuan, and Mr. Liu Xiangmin with Mr. Luo Jianchuan serving as chairman of the committee. In accordance with the committee charter, the committee reviews and assesses our strategic plans for development, fiscal budgeting, investment, business operations and

investments returns.

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#### Disclosure Committee

Our disclosure committee consists of the chief executive officer, the chief financial officer and other senior management members with the chief executive officer serving as the chairman of the committee. This committee implements our disclosure controls and procedures and reviews information disclosed to ensure accurate, open and timely disclosure. All information (including annual and interim results) to be disclosed is subject to the approval of the disclosure committee. For the disclosure of financial statements and related information, the chief financial officer will ensure that our results and financial position will be reflected on a true and fair basis in accordance with the relevant accounting principles and requirements.

#### Occupational Health and Safety and Environmental Committee

Our occupational health and safety and environmental committee consists of one executive director, namely Mr. Liu Xiangmin and one non-executive director, namely Mr. Lv Youqing. Mr. Lv Youqing serves as the chairman of the committee. This committee considers our annual planning on health, environmental protection and safety, supervises our implementation of the planning on health, environmental protection and safety initiatives, inquires into serious incidents and inspecting and supervising over the handling of such incidents and makes recommendations to the Board on major decisions on health, environmental protection and safety.

#### Supervisory Committee

Our supervisory committee consists of three supervisors, with one supervisor being elected from the staff as a representative of the employees. Our current supervisory committee was appointed at the annual general meeting held on June 22, 2010, and Mr. Ao Hong and Mr. Zhang Zhankui have been re-elected as chairman of the supervisory committee and a supervisor, respectively. In the election of employee representatives held in the same month, Mr. Yuan Li was re-elected as the employee representative supervisor of the fourth session of the supervisory committee.

Supervisors attend board meetings as non-voting members. The supervisory committee is responsible to the shareholders' general meeting and has the following duties and responsibilities:

- \* supervise our handling of our financial matters;
- \* supervise any acts of directors, the general manager, deputy general manager and other senior officers that are in violation of laws, administrative regulations or our Articles of Association;
- \* request directors, the general manager, deputy general manager and other senior officers to rectify their acts that are detrimental to our interests;
- \* verify such financial information as financial reports, business reports and profit distribution plans submitted by the Board to the shareholders' general meeting, and arrange certified public accountants and auditors to verify issues;
- \* propose to convene interim shareholders' general meetings; and
- \* bring lawsuits against directors on behalf of us.

#### D. EMPLOYEES

As of December 31, 2010, 2011 and 2012, we had approximately 108,256, 101,259 and 97,990 employees, respectively. The table below sets forth the number of our employees by function as of the periods indicated:

	As of December 31,					
	2010		2011		2012	
		(%)		(%)		(%)
Function:						
Alumina production	46,117	42.5	45,364	44.8	42,382	43.3
Primary aluminum production	45,869	42.4	38,111	37.6	38,437	39.2
Aluminum fabrication	5,737	5.3	6,210	6.1	6,306	6.4
Mining	4,926	4.6	4,152	4.1	4,018	4.1
Research and development	650	0.6	636	0.6	771	0.8
Sales and marketing	735	0.7	730	0.7	706	0.7

Management and others <sup>(1)</sup>	4,222	3.9	6,056	6.1	5,370	5.5
	_____	_____	_____	_____	_____	_____
<b>Total</b>	<b>108,256</b>	<b>100.0</b>	<b>101,259</b>	<b>100.0</b>	<b>97,990</b>	<b>100.0</b>
	_____	_____	_____	_____	_____	_____

(1) Excluding our management personnel for alumina production, primary aluminum production and aluminum fabrication.

The table below sets forth the number of our employees as of December 31, 2012:

Location	Employees	% of Total
_____	_____	_____
Shandong		
Shandong branch	9,758	10.0
Shandong Huayu	2,011	2.0
Chalco Qingdao	143	0.1
Henan		
Henan branch	10,732	11.0
Zhongzhou branch	6,521	6.7
Research Institute	771	0.8
Jiaozuo Wanfang	3,911	4.0
Henan Aluminum	1,684	1.7
Guizhou		
Guizhou branch	10,178	10.4
Zunyi Aluminum	1,388	1.4
Zunyi Alumina	1,157	1.2
Guangxi		
Guangxi branch	5,084	5.2
Shanxi		

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Shanxi branch	10,640	10.9
Shanxi Huasheng	2,114	2.2
Shanxi Huaze	2,456	2.5
Gansu		
Lanzhou branch	4,153	4.2
Northwest Aluminum	2,768	2.8
Gansu Hualu	1,569	1.6
Liancheng branch	3,438	3.5
Liaoning		
Fushun Aluminum	2,012	2.0
Qinghai		
Qinghai branch	4,784	4.9
Sichuan		
Huaxi Aluminum	463	0.5
Chongqing		
Chongqing branch	1,184	1.2
Chalco Southwest Aluminum Cold Rolling	298	0.3
Chalco Southwest Aluminum	258	0.3
Fujian		
Chalco Ruimin	692	0.7
Inner Mongolia		
Baotou Aluminum	6,316	6.4
Others (including employees of subsidiaries under construction)	1,219	1.2
Headquarters	288	0.3
	<hr/>	<hr/>
Total	97,990	100.0
	<hr/>	<hr/>

We have workers' unions at the plant level that protect employees' rights and welfare benefits, organize educational programs, encourage employee participation in management decisions and mediate disputes between individual employees and us. All employees are union members. We have not experienced any strikes or other labor disturbances that have interfered with our operations, and we believe that we maintain good relationships with our employees.

The remuneration package of our employees includes salary, bonuses and allowances. Employees also receive welfare benefits including medical care, housing subsidies, childcare and education, retirement and other miscellaneous items.

In accordance with applicable PRC regulations, we participate in pension contribution plans organized by provincial and municipal governments, under which each of our plants is required to contribute an amount equal to a specified percentage of its employees' salaries, bonuses and various allowances. The amount of contribution as a percentage of the employees' salary is, on average, approximately 20.0% depending in part on the location of the plant. We have made all required pension contributions up to December 31, 2012. Retirees who retired prior to the date of the reorganization will have their pensions paid out of the pension plans established by the PRC government. We provide to our employees various social welfare benefits through various institutions owned by Chinalco and its other affiliates or through third parties.

#### E. SHARE OWNERSHIP

As of the date of this annual report, none of our directors, supervisors or senior management owns any interest in any shares or options to purchase our shares.

### ITEM MAJOR SHAREHOLDERS AND RELATED PARTY

#### 7. TRANSACTIONS

##### A. MAJOR SHAREHOLDERS

We are a joint stock limited company organized under the laws of the PRC. Our parent company, Chinalco, a state-owned enterprise, beneficially owns 41.68% of our outstanding common shares directly and indirectly through its controlled entities. Chinalco holds a significant portion of our domestic shares in the form of state legal person shares, which do not have voting rights different from our other shares. Chinalco has substantial influence over our management, policies and corporate actions and can exercise all rights as our controlling shareholder subject to the relevant laws, rules and

regulations. Approximately 58.32% of our total outstanding common shares are held by public shareholders, of which 29.16% and 29.16 % are owned by holders of H Shares and A Shares, respectively.

The following table sets forth information regarding ownership of our issued and outstanding capital stock as of December 31, 2012. The table includes all persons who are known by us to own, either as beneficial owners or holders of record, five percent or more of any class of shares.

	As of December 31, 2012		
		% of issued	% of respective
holders of A Shares and H Shares	Number of	share capital	share class
	shares		
	(in millions)	total	
holders of A Shares			
Chinalco <sup>(1)</sup>	5,636.36	41.68	58.83
China Cinda Asset Management Corporation Limited	800.76	5.92	8.36
China Construction Bank Corporation Limited	609.15	4.50	6.36
Other public holders of A Shares	2,534.25	18.74	26.45
Total A Shares	9,580.52	70.84	100.00
holders of H Shares			
Templeton Asset Management Ltd.	1,028.83	7.61	26.09
Morgan Stanley <sup>(2)</sup>	394.96	2.92	10.02
Other H shares holders	2,520.18	18.63	63.89
Total H Shares	3,943.97	29.16	100.00
Total	13,524.49	100.00	

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- (1) Including 5,214,407,195 A Shares held directly by Chinalco, 331,217,795 A Shares held by Baotou Aluminum (Group) Co., Ltd., 79,472,482 A Shares held by Lanzhou Aluminum Factory, 4,119,573 A Shares held by Guiyang Aluminum Magnesium Design and Research Institute and 7,140,254 A Shares held by Shanxi Aluminum Plant. Baotou Aluminum (Group) Co., Ltd., Lanzhou Aluminum Factory, Guiyang Aluminum Magnesium Design and Research Institute and Shanxi Aluminum Plant are controlled by Chinalco.
  - (2) Including 394,957,582 shares held by various corporations controlled by Morgan Stanley.

We are not aware of any arrangement that may at a subsequent date result in a change of control of Chalco.

On April 24, 2007, we issued 1,236,731,739 A Shares by way of share exchange with the other shareholders of Shandong Aluminum and Lanzhou Aluminum, including a subsidiary of Chinalco, to acquire the existing issued shares not held by us. On the same date, China Orient Asset Management Corporation, a PRC state-owned financial enterprise, transferred all of its equity interest in us to Chinalco and ceased to be our shareholder. On December 28, 2007, we issued 637,880,000 A Shares to a subsidiary of Chinalco in exchange for 100% equity in Baotou Aluminum.

To the best of our knowledge, as of December 31, 2012, all of the outstanding ADSs were held by 82 United States holders of record.

As an owner of at least 30% of our issued and outstanding shares, the parent company is deemed a controlling shareholder and therefore may not exercise its voting rights with respect to various matters related to our shares in a manner prejudicial to the interests of our other shareholders. See "Item 10. Additional Information - B. Memorandum and Articles of Association." In accordance with our Articles of Association, each share of our capital stock has one vote and the shares of the same class have the same rights. Other than the foregoing restrictions, the voting rights of our major holders of domestic and H Shares are identical to those of any other holders of the same class of shares. Holders of domestic shares and H Shares are deemed to be shareholders of different classes for some matters, which may affect their respective interests. Other than the foregoing, holders of H Shares and domestic shares are entitled to the same voting rights.



## B. RELATED PARTY TRANSACTIONS

## Connected Transactions under Hong Kong Listing Rules

Under the Listing Rules, transactions between connected persons and us, or connected transactions, generally must be reported to the Hong Kong Stock Exchange, announced to the public and/or approved by shareholders unless the foregoing requirement are waived by the Hong Kong Stock Exchange or exempted under the Listing Rules. Each year our independent non-executive directors must review our non-exempt continuing transactions and confirm that these transactions have been entered into:

- (i) in the ordinary and usual course of our business;
- (ii) the terms of the transactions are fair and reasonable as far as our shareholders are concerned;
- (iii) either on normal commercial terms or, if there are not sufficient comparable transactions to judge whether they are on normal commercial terms, on terms no less favorable to us than terms available to or from (as appropriate) independent third parties; and
- (iv) in accordance with the relevant agreement governing them on terms that are fair and reasonable and in the interests of our shareholders as a whole.

Although the definition of connected transactions is not synonymous with the definition of related party transactions, the concepts are sufficiently similar that the description of our connected transactions would satisfy disclosure requirements under U.S. securities laws.

The following table sets forth the details of our material connected transaction for the year ended December 31, 2012:

Agreement	Nature	Term of the Agreement	Transaction Amount in 2012 (RMB in millions)	Annual Cap for 2012 (RMB in millions)
<hr/>				

Continuing  
Connected

## Transactions

Comprehensive Social and Logistics Services Agreement (Counterparty: Chinalco)	Chinalco provides us with a broad range of social and logistics services including education and schooling, public transportation and property management.	The original agreement was entered into on November 5, 2001 and expired on December 31, 2012. Pursuant to the supplementary agreement entered into in 2012, the term was renewed from January 1, 2013 for a term of three years.	305	970
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General Agreement on Mutual Provision of Production Supplies and Ancillary Services (Counterparty: Chinalco)	We purchase from Chinalco ancillary production supplies and services which include, among other things, various raw materials required in alumina and primary aluminum production, transportation and loading services and production supporting services.	The original agreement was entered into on November 5, 2001 and expired on December 31, 2012. Pursuant to the supplementary agreement entered into in 2012, the term was renewed from January 1, 2013 for a term of three years.	2,331	5,200
	Chinalco purchases from us alumina, primary aluminum, scrap materials, pitch and other similar supplies and supporting services and ancillary services such as electricity supply, gas, heat and water, repair, measurement,		3,429	11,550

quality testing, spare parts, production transportation, steam and other similar services.

Xinan Aluminum Mutual Provision of Products and Services Framework Agreement (Counterparty: Xinan Aluminum)	We purchase from Xinan Aluminum products and services including among other things, aluminum fabrication products, equipment, water, electricity and gas, maintenance and repair services, unloading, transportation and storage services.	The original agreement was entered into on October 20, 2008 and expired on December 31, 2012. Pursuant to the supplementary agreement entered into in 2012, the term was renewed from January 1, 2013 for a term of three years.	3,242	6,300
	Xinan Aluminum purchases from us products including among other things, aluminum alloy sheets or rolls, aluminum fabrication scraps and primary aluminum and aluminum alloy ingots.		5,012	9,000
Mineral Supply Agreement (Counterparty: Chinalco)	Chinalco provides us with bauxite and limestone from several mines that it operates. Chinalco must not provide bauxite and limestone to any third parties before meeting our bauxite and limestone requirements.	The original agreement was entered into on November 5, 2001 and expired on December 31, 2012. Pursuant to the supplementary agreement entered into in 2012, the term was renewed from January 1, 2013 for a term of three years.	35	1,100

Provision of Engineering, Construction and Supervisory Services Agreement (Counterparty: Chinalco)	Chinalco provides us with certain engineering, construction and supervisory services at the state guidance price and, where there is no state guidance price, at market price. Such services are mainly provided by subsidiaries of Chinalco including China Aluminum International Engineering Corporation Limited.	The original agreement was entered into on November 5, 2001 and expired on December 31, 2012. Pursuant to the supplementary agreement entered into in 2012, the term was renewed from January 1, 2013 for a term of three years.	2,321	16,400
Land Use Rights Leasing Agreement (Counterparty: Chinalco)	Chinalco leases 470 parcels of land covering an aggregate area of approximately 61.2 million square meters and spanning across eight provinces in the PRC to us.	The original agreement was entered into on November 5, 2001 for a term of 50 years, expiring on June 30, 2051.	633	1,300
Buildings and Office Buildings Leases (Counterparty: Chinalco)	We lease 59 buildings with an aggregate gross floor area of 62,189 square meters to Chinalco. Chinalco leases 100 buildings with an aggregate gross floor area of 273,637 square meters to us.	The original agreement was entered into on November 5, 2001 for a term of 20 years, expiring on June 30, 2020	64	110

Company Limited, a wholly-owned subsidiary of Chinalco, leases to us an office building with an area of 23,551.43 square meters located at Xizhimen, Beijing, as our headquarters. entered into on October 15, 2011 and expired on December 31, 2012. Pursuant to the supplementary agreement entered into in 2012, the term was renewed from January 1, 2013 for a term of three years.

<p>Framework Agreement for Aluminum Products Fabrication Services (Counterparty: Chinalco)</p>	<p>Shandong Aluminum Company and Qinghai Aluminum Company, wholly-owned subsidiaries of Chinalco, provide alumina fabrication and production services to us.</p>	<p>The original agreement was entered into on February 28, 2011 and expired on December 31, 2012. Pursuant to the supplementary agreement entered into in 2012, the term was renewed from January 1, 2013 for a term of three years.</p>	<p>142</p>	<p>240</p>
<p>Financial Services Agreement (Counterparty: Chinalco Finance)</p>	<p>Chinalco Finance has agreed to provide us with deposit services, credit services and miscellaneous financial services. We have the right to choose the financial institution for financial services and the financial institution for deposit services and loan services as well as the amounts of loans and deposits with reference to our own needs. Chinalco Finance undertakes that the terms for the</p>	<p>The original agreement was entered into on August 26, 2011 and expired on August 25, 2012. Pursuant to the supplementary agreement entered into in 2012, the term was renewed from August 26, 2012 for a term of three years, expiring on August 25, 2015.</p>	<p>2,583 (largest amount of daily deposit during the period from January 1, 2012 to August 25, 2012)</p> <p>2,800 (daily cap of deposit balance during the period from January 1, 2012 to August 25, 2012)</p> <p>5,000 (daily cap of deposit balance during the period from August 26, 2012 to December</p>	<p>1,747 (largest amount of daily deposit balance during the</p>

provision of financial services to us at any time would be no less favorable than those of the same type of financial services provided by Chinalco Finance to Chinalco and other subsidiaries of Chinalco or those of the same type of financial services that may be provided to us by other financial institutions.	period from August 26, 2012 to December 31, 2012) 50 (for the period from August 26, 2012 to December 31, 2012) 2 (other financial services fees for the period from August 26, 2012 to December 31, 2012)
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One-off Connected Transaction

Asset Transfer Agreement (Counterparty: Huatong Charcoal)	We acquired certain fixed assets owned by Huatong Charcoal.	N/A	146	N/A
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We provide the following additional information on material related party transactions during the periods indicated:

(a) significant related party transactions

For the year ended December 31

2010	2011	2012
------	------	------

(RMB in thousands)

Sales of goods and services rendered:  
 Sales of materials and finished goods to:

Chinalco and its subsidiaries	6,069,774	5,607,258	6,805,794
Associates of Chinalco	31,869	11,024	53,599

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Jointly controlled entities	-	7,596	30,117
Associates	-	5,983	9,265
Non-controlling shareholder of a subsidiary and its subsidiaries	4,452,683	4,835,662	-
	<u>          </u>	<u>          </u>	<u>          </u>
	10,554,326	10,467,523	6,898,775
	<u>          </u>	<u>          </u>	<u>          </u>
Provision of utility services to:			
Chinalco and its subsidiaries	332,701	334,370	341,386
Associates of Chinalco	8,156	13,547	21,420
Jointly controlled entities	-	-	1
Non-controlling shareholder of a subsidiary and its subsidiaries	-	453	-
	<u>          </u>	<u>          </u>	<u>          </u>
	340,857	348,370	362,807
	<u>          </u>	<u>          </u>	<u>          </u>
Provision of products processing services to:			
Chinalco and its subsidiaries	-	-	7,431
Non-controlling shareholder of a subsidiary	-	13,969	-
	<u>          </u>	<u>          </u>	<u>          </u>
	-	13,969	7,431
	<u>          </u>	<u>          </u>	<u>          </u>
<b>Purchase of goods and services:</b>			
Purchases of engineering, construction and supervisory services from:			
Chinalco and its subsidiaries	3,503,363	3,259,624	2,321,386
Associates of Chinalco	-	-	11,365
Non-controlling shareholder of a subsidiary and its subsidiaries	5,894	22,681	-
	<u>          </u>	<u>          </u>	<u>          </u>

	3,509,257	3,282,305	2,332,751
	<u>                    </u>	<u>                    </u>	<u>                    </u>
Purchases of key and auxiliary materials and finished goods from:			
Chinalco and its subsidiaries	4,232,369	1,644,429	3,839,222
Associates of Chinalco	323,835	140,624	17,745
Jointly controlled entities	1,321,202	1,499,136	976,141
Associates	1,458	39	2,618
Non-controlling shareholder of a subsidiary and its subsidiaries	2,483,173	2,195,191	-
	<u>                    </u>	<u>                    </u>	<u>                    </u>
	8,362,037	5,479,419	4,835,726
	<u>                    </u>	<u>                    </u>	<u>                    </u>
Provision of social services and logistics services by:			
Chinalco and its subsidiaries	264,049	281,956	306,589
Non-controlling shareholder of a subsidiary and its subsidiaries	475	624	-
	<u>                    </u>	<u>                    </u>	<u>                    </u>
	264,524	282,580	306,589
	<u>                    </u>	<u>                    </u>	<u>                    </u>
Provision of utilities services by:			
Chinalco and its subsidiaries	163,708	123,243	359,599
Associates of Chinalco	7,663	6,869	9,918
Non-controlling shareholder of a subsidiary and its subsidiaries	100,952	145,778	-
	<u>                    </u>	<u>                    </u>	<u>                    </u>
	272,323	275,890	369,517
	<u>                    </u>	<u>                    </u>	<u>                    </u>



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Provision of products processing services by Chinalco and its subsidiaries	137,601	213,553	142,244
	<hr/>	<hr/>	<hr/>
Rental expenses for buildings and land use			
rights charged by Chinalco and its subsidiaries	643,432	665,105	696,874
	<hr/>	<hr/>	<hr/>
Other significant related party transactions:			
Acquisition of non-controlling interest from a fellow subsidiary	-	160,271	-
	<hr/>	<hr/>	<hr/>
Disposal of an available-for-sale financial investment to Chinalco	164,697	-	-
	<hr/>	<hr/>	<hr/>
Acquisition of assets from a fellow subsidiary	-	-	145,915
	<hr/>	<hr/>	<hr/>
Borrowings from a fellow subsidiary	-	500,000	2,350,000
	<hr/>	<hr/>	<hr/>
Interest expense on borrowings from a fellow subsidiary	-	4,009	54,541
	<hr/>	<hr/>	<hr/>
Entrusted loans and other borrowings to:			
Jointly controlled entities	-	605,041	258,900
An associate	-	-	200,000
Chinalco and its subsidiaries	-	-	126,604
A non-controlling shareholder of a subsidiary	-	63,665	-
	<hr/>	<hr/>	<hr/>
	-	668,706	585,504
	<hr/>	<hr/>	<hr/>

Interest income on entrusted loans and other borrowings to:

Jointly controlled entities	-	4,361	51,106
Chinalco and its subsidiaries	-	-	2,327
A non-controlling shareholder of a subsidiary	-	1,140	-
		<u>          </u>	<u>          </u>
	-	5,501	53,433
		<u>          </u>	<u>          </u>

(b) balance with related parties

As of December 31,

<u>          </u>	<u>          </u>
2011	2012
<u>          </u>	<u>          </u>

(RMB in thousands)

Cash and cash equivalents deposited in		
A fellow subsidiary	260,940	1,641,180
	<u>          </u>	<u>          </u>
Trade and notes receivables		
Chinalco and its subsidiaries	506,775	410,775
Associates of Chinalco	656	4,711
Associates	3,900	4,245
Jointly controlled entities	-	5
	<u>          </u>	<u>          </u>
	511,331	419,736
Less: provision for impairment of receivables	(112,461)	(119,280)
	<u>          </u>	<u>          </u>

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Chinalco and its subsidiaries	122,158	60,687
Associates of Chinalco	166	11,440
Associates	15,813	219,305
Jointly controlled entities	325,545	676,246
	<hr/>	<hr/>
	463,682	967,678
Less: provision for impairment of other current assets	(35,907)	(34,915)
	<hr/>	<hr/>
	427,775	932,763
	<hr/>	<hr/>
Other non-current asset		
A jointly controlled entity	300,000	200,000
	<hr/>	<hr/>
Borrowings		
A fellow subsidiary	500,000	900,000
	<hr/>	<hr/>
Trade and notes payables		
Chinalco and its subsidiaries	115,192	213,006
Associates of Chinalco	11	107
Associates	-	2,335
Jointly controlled entities	26,952	3,192
	<hr/>	<hr/>
	142,155	218,640
	<hr/>	<hr/>
Other payables and accrued expenses		
Chinalco and its subsidiaries	1,913,309	1,788,058
Associates of Chinalco	5,746	26,909
Jointly controlled entity	332	332
Associates	4,449	1,043
	<hr/>	<hr/>
	1,923,836	1,816,342
	<hr/>	<hr/>

## (c) compensation of key management personnel

	For the year ended December 31,		
	2010	2011	2012
	(RMB in thousands)		
Fees	870	741	732
Basic salaries, housing fund, other allowances and benefits in kind	3,476	4,093	4,604
Discretionary bonus	1,384	1,616	-
Pension cost-defined contribution schemes	192	250	330
	5,922	6,700	5,666

## Guarantees

We provided guarantees to our related parties to guarantee their loans during the period from January 1, 2012 to March 31, 2013. The outstanding balance of the loans we guaranteed was RMB124.9 million as of March 31, 2013 and the largest amount outstanding of the loans we guaranteed during the period from January 1, 2012 to March 31, 2013 was RMB124.9 million. The interest rates on such loans are 6.55%.

Our related parties also provided guarantees to us to guarantee our loans during the period from January 1, 2012 to March 31, 2013. The outstanding balance of the loans guaranteed by our related parties was RMB1,455.7 million as of March 31, 2013 and the largest amount outstanding of the loans guaranteed by our related parties during the period from January 1, 2012 to March 31, 2013 was RMB3,650.7 million. The interest rates on such loans range from 2.55% to 6.345%.

In 2004, we and Shanxi Aluminum Plant Subbranch, China Construction

Bank, entered into a guarantee contract, pursuant to which the Company provided joint and several liability guarantee for the eight-year loan of RMB1.12 billion made to Shanxi Huaze, a subsidiary controlled by us. The guarantee will expire following two years upon the expiry of the debt performance period under the principal contract. As of March 31, 2013, the outstanding balance of the loan was RMB70.0 million.

On July 29, 2011, we entered into a joint development agreement with Rio Tinto and Rio Tinto Atlantic for the development and operation of the Simandou Project in west Africa. Pursuant to the Joint Development Agreement, Chinalco guarantees to the joint venture the performance by us of all our obligations under the Simandou joint development agreement. We, in consideration of Chinalco's guarantee, granted Chinalco a counter guarantee by way of credit security and with a term of the counter guarantee contemporaneous with performance period of the joint development agreement. Resolutions relating to the provision of counter guarantee for the guarantee provided by Chinalco in respect of the Simandou Project were approved by our Board on October 25, 2011 and by the shareholders at the 2011 annual general meeting on May 31, 2011, respectively.

#### Loans

We provided several entrusted loans to our related parties mainly for the purpose of supplementing working capital during the period from January 1, 2012 to March 31, 2013. The outstanding balance of such entrusted loans was RMB500 million as of March 31, 2013 and the largest amount outstanding of the entrusted loans during the period from January 1, 2012 to March 31, 2013 was RMB700 million. The interest rates on such entrusted loans range from 5.04% to 10%.

Our related party also provided several loans to us mainly for the purpose of supplementing working capital during the period from January 1, 2012 to March 31, 2013. The outstanding balance of such loans was RMB950 million as of March 31, 2013 and the largest amount outstanding of the loans during the period from January 1, 2012 to March 31, 2013 was RMB1,350 million. The interest rates on such loans range from 5.1% to 6%.

## ITEM FINANCIAL INFORMATION

8.

### A. CONSOLIDATED FINANCIAL STATEMENTS

We have appended our consolidated financial statements filed as part of this annual report on Form 20-F.

#### Legal Proceedings

We are not currently a party to any pending legal proceedings which are expected to have a significant effect on our financial position or results of operations, nor are we aware of any proceedings that are pending or threatened which may have a significant effect on our financial position or results of operations. We may from time to time become a party to various legal or administrative proceedings arising in the ordinary course of our business.

#### Dividend Policy

Our Board declares dividends, if any, in Renminbi with respect to H Shares on a per share basis and pays such dividends in HK dollars. Any final dividend for a fiscal year is subject to shareholders' approval. The Bank of New York Mellon, as depositary, converts the HK dollar dividend payments and distributes them to holders of ADSs in U.S. dollars, less expenses of conversion. Under the Company Law of the PRC and our Articles of Association, all of our shareholders have equal rights to dividends and distributions. The holders of the H Shares share proportionately on a per share basis in all dividends and other distributions declared by our Board.

We believe that our dividend policy strikes a balance between two important goals providing our shareholders with a competitive return on investment and assuring sufficient reinvestment of profits to enable us to achieve our strategic objectives. The declaration of dividends is subject to the discretion of our Board, which takes into account the following factors:

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- \* our financial results;
  - \* capital requirements;
  - \* contractual restrictions on the payment of dividends by us to our shareholders or by our subsidiaries to us;
  - \* our shareholders' interests;
  - \* the effect on our creditworthiness;
  - \* general business conditions; and
  - \* other factors our Board may deem relevant.

Pursuant to PRC laws and regulations, dividends may only be distributed after allowance has been made for: (1) recovery of losses, if any and (2) allocations to the statutory surplus reserve. The allocations to the statutory surplus reserve is 10% of our net profit determined in accordance with PRC Generally Accepted Accounting Principles. Our distributable profits for the current fiscal year will be equal to our net profits determined in accordance with IFRS, less allocations to the statutory surplus reserve. See "Item 10. Additional Information - E. Taxation" for a discussion of the tax consequences of receipt of dividends.

## B. SIGNIFICANT CHANGES

Except as disclosed elsewhere in this annual report, we have not experienced any significant changes since the date of our audited consolidated financial statements which is included in this annual report.

## ITEM THE OFFER AND LISTING

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The Shanghai Stock Exchange is the principal trading market for our A Shares, and the Hong Kong Stock Exchange is the principal trading market for our H Shares. The ADSs have been issued by the Bank of New York Mellon, acting as depository bank, and are listed on the New York Stock Exchange under the symbol "ACH" with each ADS representing 25 H Shares.

The following table sets forth, for the periods indicated, the reported high and low closing prices for our shares on the New York Stock Exchange, the Hong Kong Stock Exchange and the Shanghai Stock Exchange:

Calendar Period	NYSE		Hong Kong Stock Exchange		Shanghai Stock Exchange	
	High	Low	High	Low	High	Low
	(US\$ per ADS)		(HK\$ per H Share)		(RMB per A Share)	
2008	52.49	7.22	16.50	1.90	44.74	5.90
2009	32.79	9.91	10.36	3.15	20.83	6.15
2010	34.27	18.03	10.66	5.66	15.78	8.42
2011	25.88	10.34	7.98	3.20	12.36	6.23
First Quarter	25.88	22.71	7.98	7.00	12.20	9.63
Second Quarter	24.89	19.70	7.80	6.22	12.36	9.72
Third Quarter	22.05	10.41	6.83	3.35	11.33	8.08
Fourth Quarter	15.29	10.34	4.90	3.20	8.71	6.23

2012	13.88	9.22	4.45	2.86	7.89	4.55
First Quarter	13.88	10.77	4.45	3.22	7.67	6.11
Second Quarter	12.75	9.84	3.93	3.04	7.89	6.16
Third Quarter	11.14	9.22	3.47	2.86	6.35	4.72
Fourth Quarter	11.91	10.05	3.67	3.12	5.38	4.55
October	11.74	10.05	3.67	3.12	5.20	4.76
November	11.27	10.29	3.54	3.21	5.20	4.55
December	11.91	10.39	3.63	3.21	5.38	4.55
2013						
First Quarter	13.29	9.52	4.21	2.95	5.37	4.11
January	13.29	11.93	4.21	3.55	5.32	5.04
February	12.17	10.57	3.76	3.26	5.37	4.80
March	10.68	9.52	3.35	2.95	4.90	4.11
April (through April 24, 2013)	9.92	8.95	3.12	2.77	4.47	4.02

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Note: Effective October 2006, our ADS ratio was changed from one ADS representing 100 H Shares to one ADS representing 25 H Shares.

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ITEM 10. ADDITIONAL INFORMATION

A. SHARE CAPITAL

Not applicable.

B. MEMORANDUM AND ARTICLES OF ASSOCIATION

A copy of the English translation of our Articles of Association was filed with the SEC as an exhibit to the registration statement on Form F-1 (Registration No. 333-14068) under the Securities Act in connection with a global offering of our H Shares and American depositary shares on December 5, 2001. We filed a copy of the English translation of our Articles of Association as of December 31, 2011 as an exhibit to our annual report on Form 20-F/A filed on October 9, 2012. Since December 31, 2011, our Articles of Association underwent the following amendments:



\* Our Articles of Association were amended and approved at the annual general shareholders' meeting held on June 29, 2012 to adopt the "Rules of Procedures for the Board of Directors of Aluminum Corporation of China Limited" and "Rules of Procedures for the Supervisory Committee of Aluminum Corporation of China Limited" as Appendix to our Articles of Association.

\* Our Articles of Association were amended and approved at the extraordinary general shareholders' meeting held on October 12, 2012 to revise our profit distribution policies. The revised Articles 189, 194 and 195 and the newly added Articles 196 and 197 read:

\* Article 189

"The basic principles of profit distribution policy of the Company are as follows:

- (1) taking full account of return to investors and distributing dividend to Shareholders per annum in proportion to the distributable dividend realized for the year concerned;
- (2) maintaining the continuity and stability of the Company's dividend distribution policy, while at the same time take care of the interest of the Company in the long term, the interest of the Shareholders as a whole, as well as the sustainable development of the Company;
- (3) giving priority to dividend distribution in cash."

\* Article 194

"Dividend distribution policies of the Company are to be specified as follows:

- (1) dividend shall be distributed in the following manner: the Company may distribute dividends in cash, in shares or in a combination of both cash and shares. Subject to conditions, interim profit distribution may be made by the Company;
- (2) specific circumstances for and proportions of cash dividend of the Company: save in exceptional circumstances, if the Company's profit for the year and its cumulative undistributed profit are positive, the Company may distribute dividend in cash and the profit to be distributed in cash per annum will not be less than 10% of the distributable profit realized for that year, or that the total profit to be distributed in cash in the past three years will not

be less than 30% of the average annual distributable profit realized in the past three years;

The exceptional circumstances refer to the following:

- i. where the auditing firm issues a non-standard unqualified audit report on the financial report of the Company for the year; and
- ii. where the Company has major investment plan or significant cash expenditure (fund raising projects excepted).

(3) Conditions for distributing dividends in shares by the Company:

where the Company's business is in a sound condition, and the Board considers that the stock price of the Company does not reflect its share capital size and distributing dividend in shares will be favourable to all Shareholders of the Company as a whole, provided that the above conditions of cash dividend are fully met, the Company may propose dividend distribution in shares;

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- (4) Upon occurrence of any illegal appropriation of the Company's funds by Shareholders, the Company shall deduct the cash bonus to be paid to such Shareholders to make up for the funds appropriated by such Shareholders."

\* Article 195

"Procedures for considering the profit distribution plan of the Company:

- (1) The profit distribution plan of the Company shall be drawn up by the management before being submitted to the Board and the supervisory committee of the Company for consideration. The Board shall thoroughly discuss the rationality of the profit distribution plan and form a specific resolution before submitting it to the general meeting for consideration. In considering the profit distribution plan, the Company shall make Internet voting accessible to Shareholders.
- (2) Where the Company does not distribute cash dividend by reason of the exceptional circumstances in Article 194 above, the Board

shall explain the specific reasons for not distributing cash dividends, the exact purpose for the retained profit and the estimated investment return, and upon the independent Directors having expressed their opinions thereon, submit such proposal to the general meeting for consideration, and disclose the same in the media designated by the Company."

\* Article 196

"Implementation of the profit distribution plan of the Company:

After the profit distribution plan has been resolved at a general meeting, the Board shall complete dividend (or share) distribution within two months after the holding of such meeting."

\* Article 197

"Alteration of the Company's profit distribution policy:

In case of force majeure events such as war, natural disasters, or changes to the Company's external operational environment resulting in material impact on its production and operation, or relatively significant changes to the Company's operational position, the Company may adjust its profit distribution policy.

The Board shall conduct specific discussion over adjustment to the Company's profit distribution policy, provide detailed reasons for such adjustment, form a written report to be considered by independent Directors, and then submit to the general meeting for approval by way of a special resolution. In considering alterations to the profit distribution policy, the Company shall make Internet voting accessible to Shareholders."

See Exhibit 1.1 for the full text of our Articles of Association.

The following are summaries of material provisions of our Articles of Association insofar as they relate to the material terms of our shares.

#### Our objects and purposes

Our Articles of Association as amended from time to time are filed with the Hong Kong Companies Registrar. Our business scope can be found in Article 13 of our Articles of Association, as amended at the shareholders' general meeting held on February 28, 2011.

#### Directors' power to vote on matters in which he or she has an interest

Under Article 169, a director shall not vote in any resolution of the board of directors for approving any contract, transaction or arrangement in which such director or any of his associates (as defined in the applicable rules governing the listing of securities amended from time to time) is materially interested, and shall not be either counted into the quorum of the meeting. Unless the interested director has disclosed his or her interest to the board of directors in accordance with the Article 169 and the contract, transaction or arrangement has been approved by the board of directors at a meeting in which the interested director is not counted in the quorum and has refrained from voting, a contract, transaction or arrangement in which such director is materially interested is voidable at the instance of our Company except as against a bona fide party thereto acting without notice of the breach of duty by such director.

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#### Borrowing powers

Subject to compliance with applicable laws and regulations of the PRC, we have the power to raise and borrow money which power includes (without limitation) the issuance of debentures and the charging or mortgaging of part or whole of our business or properties and other rights permitted. The Articles of Association do not contain any specific provision in respect of the manner in which borrowing powers may be exercised by the directors nor do they contain any specific provision in respect of the manner in which such powers may be varied, other than (a) provisions which give the directors the power to formulate proposals for the issuance of debentures by us; (b) Article 86(2) provides that the issuance of bond must be approved by the shareholders in a general meeting by way of a special resolution; and (c) Article 108(4) provides that the directors have the power to formulate our annual final financial budgets and final accounts which shall be passed by over half of the directors.

#### Age limit for retirement

There is no provision pertaining to the retirement of directors pursuant to an age limit requirement in our Articles of Association.

#### Directors' qualifying shares

Under Article 103, the directors are not required to hold any qualifying shares.

#### Dividend rights

Article 54(1) provides that holders of our common shares have the right to receive dividends and distribution of profits in other forms, in proportion to the number of shares held. Under Article 48, when we convoke a general shareholders' meeting, allocate dividends, liquidates or perform other activities that require the verification of equity rights, the Board or the general meeting convener must specify a date as the equity rights determination date. The shareholders registered in the shareholder roster after closing as at the equity rights determination date are the Company's shareholders entitled to appropriate rights and interests.

#### Voting rights

Article 54(2) provides that holders of our ordinary shares have the right to lawfully request, convene, chair, attend in person or appoint a proxy to attend and vote at general meetings of shareholders in respect of the number of shares held.

#### Rights to share profits

Article 60(7) provides that a plan for profit distribution and a plan for making up for losses formulated by the Board in accordance with Article 108(6) must be approved by way of the shareholders' general meeting.

#### Rights to share surplus in the event of liquidation

Article 54(6) provides that the shareholders have the right to participate in the distribution of our surplus assets in proportion to the number of shares held in the event of the termination or liquidation of us.

#### Redemption provisions; sinking fund provisions and liability to further capital calls

Article 29 provides that we may repurchase issued shares in accordance with the procedures provided in the Articles of Association and with the approvals from the relevant governing authorities of PRC under the following circumstances: (1) cancellation of shares for the purpose of reducing our capital; (2) amalgamation with other company which owns our shares; (3) granting bonus shares to our employees; (4) shareholders disagreeing with our general meeting's resolution on merger or division and requiring us to acquire the shares in their possession; (5) other purposes permitted by law and administrative regulations.

No securities issued by us are redeemable, entitled to a sinking fund or subject to liability for further capital calls.

Actions necessary to change the rights of holders of our shares or holders of a class of shares

Under Article 86(5), revision of any rights of class shareholders, e.g., rights to dividends, share profits or surplus in the event of liquidation or voting rights, requires a special resolution of the shareholders' general meeting. Under Article 79, a special resolution must be passed by votes representing more than two-thirds of the voting rights represented by the shareholders (including proxies) present at the meeting.

The rights attached to any class of shares may be varied or abrogated only with the sanction of a special resolution passed at the shareholders' general meeting and by holders of shares of the affected class passed at a separate general meeting of the class convened in accordance with the Article 97 to Article 101 respectively. The circumstances which are deemed to be a variation or abrogation of the class rights are set forth under Article 96. Except for the circumstances under Article 88 (1), (9) and (10), shareholders of the affected class, whether or not otherwise having the right to vote at shareholders' general meetings, have the right to vote at class meetings but Interested Shareholders (as defined under Article 97) are not entitled to vote at class meetings.

Resolutions of a class meeting shall be passed by two-thirds or more of the shares with voting rights held by the class shareholders who, according to Article 97, are entitled to vote at that class meeting. Written notice must be given to all shareholders who are registered as holders of that class in the register of shareholders 45 days before the date of the class meeting. Such notice must contain the matters to be considered at such meeting, the date and the place of meeting. Those shareholders of the class who intend to attend send the written reply to us 20 days before the class meeting.

The proceedings of a class meetings shall be conducted as nearly as possible as that of a shareholders' general meetings. The provisions in the Articles of Association relating to the proceedings of shareholders' general meetings shall apply to class meetings.

The special procedures for approval by a class of shareholders do not apply where we issue, upon the approval by special resolution of shareholders in general meeting, either separately or concurrently once every 12 months, not more than 20% of each of our existing issued Domestic-Invested Shares and

Overseas- Listed Foreign-Invested Shares (as defined under Article 18).

Provisions discriminating against any existing or prospective shareholder as a result of owning a substantial number of shares

Chinalco, as our controlling shareholder, shall not exercise its voting rights in a manner prejudicial to the interest of all or some part of the shareholders when making decision on the following matters:

- \* to relieve a director or supervisor of his duty to act honestly in our best interest;
- \* to approve the expropriation by a director or supervisor (for his own benefit or for the benefit of another), our assets, in any manner, including but not limited to an opportunity beneficial to us; or
- \* to approve the expropriation by a director or supervisor (for his own benefit or for the benefit of another ) the individual rights of other shareholders, including but not limited to rights to distributions and voting rights save and except our restructuring, submitted for approval by the shareholders in general meeting in accordance with the Articles of Association.

Conditions governing the manner in which annual general meetings and extraordinary general meetings of shareholders are convoked

Shareholders' general meetings can be held as annual general meetings or extraordinary general meetings. Annual general meetings are held once a year within six months after the end of the preceding fiscal year.

The Board is required to convene an extraordinary general meeting within two months of the occurrence of any of the following circumstances:

- (1) the number of directors falls below the number required by the PRC Company Law or two-thirds of the number required by the Articles of Association;
- (2) our unrecovered losses amount to one-third of the total amount of its paid-in-capital;
- (3) upon the request of shareholder(s) holding 10 percent or more of our shares for more than ninety consecutive days (the number of shares held shall be the figures as of the date of the written request from shareholder); and

- (4) whenever the Board deems necessary or the supervisory committee proposes to convene the same.

We shall, within 45 days (inclusive of date of meeting) before the date of meeting, send written notices of the shareholders' general meeting and inform all registered shareholders of the matters to be considered at the meeting and the date and venue of the meeting. Those shareholders who intend to attend the meeting shall send the written reply to the Company 20 days before the meeting.

Motions put forward at the general meeting shall be specific and shall relate to the matters to be considered at a shareholders' general meeting. Motion raised at a general meeting shall satisfy the following requirements:

- (1) be free of conflicts with the provision of laws, administrative regulations and Articles of Association, and fall within our business scope and the terms of the reference of the shareholders' general meeting;
- (2) have definite topics to discuss and specific matters to resolve; and
- (3) be submitted in writing or served to the convener.

#### Limitations on the rights to own securities

Under Article 18, the shares issued to domestic investors and denominated in Renminbi are Domestic-Invested Shares whereas the shares issued to overseas investors and denominated in foreign currency are Foreign-Invested Shares. Under Article 17, our Domestic-Invested Shares can be held only by PRC shareholders and our Foreign-Invested Shares, such as H Shares and ADSs can be held only by foreign shareholders and other shareholders from regions of Hong Kong, Macau and Taiwan.

#### Provisions having an effect of delaying, deferring or preventing a change in control

Under Article 111, decisions in respect of market development, merger and acquisition, and investment in a new field, where the consideration to be paid or the assets to be acquired exceed 10% of our total assets, the Board is required to engage relevant professional consultants to provide professional opinions, which shall serve as the key reference for the decision of the Board concerning such investment, merger or acquisition.



Under Article 86(3), division, merger, dissolution and liquidation of us and material acquisitions and disposals by us must be approved by a special resolution at a shareholders' general meeting.

There are no provisions under the Articles of Association pertaining to the ownership threshold above which shareholder ownership must be disclosed.

Conditions governing changes in registered capital

Under Article 108(7), any proposal for the increase or decrease of our registered capital must be formulated by the Board. Article 86(1) further provides that any increase or reduction in share capital requires adoption of a special resolution at a shareholders' general meeting.

#### C. MATERIAL CONTRACTS

For the two years immediately preceding the date of this annual report, we have not entered into any additional material contracts other than in the ordinary course of business and other than those described in "Item 4. Information on the Company - History and Development of the Company" and "Item 7. - Major Shareholders and Related Party Transactions - B. Related Party Transactions."

#### D. EXCHANGE CONTROLS

The existing foreign exchange regulations have significantly reduced government foreign exchange controls for transactions under the current account, including trade and service related foreign exchange transactions and payment of dividends. We may undertake current account foreign exchange transactions without prior approval from the State Administration of Foreign Exchange by producing commercial documents evidencing such transactions, provided that they are processed through Chinese banks licensed to engage in foreign exchange transactions. The PRC government has stated publicly that it intends to make the Renminbi freely convertible in the future. However, we cannot predict whether the PRC government will continue its existing foreign exchange policy and when the PRC government will allow free conversion of Renminbi to foreign currency.

Foreign exchange transactions under the capital account, including principal payments in respect of foreign currency-denominated obligations, continue to be subject to significant foreign exchange controls and require the approval of the State Administration of Foreign Exchange. These limitations could affect our ability to obtain foreign exchange through debt or equity financing, or to obtain foreign exchange for capital expenditures.

Since 1994, the conversion of Renminbi into HK and U.S. dollars has been based on rates set by the People's Bank of China, which are set daily based on the previous day's PRC interbank foreign exchange market rate and current exchange rates on the world financial markets. From 1994 to July 20, 2005, the official exchange rate for the conversion of Renminbi to U.S. dollars was generally stable. On July 21, 2005, the PRC government introduced a managed floating exchange rate system to allow the value of the Renminbi to fluctuate within a regulated band based on market supply and demand and by reference to a basket of currencies. Since then, the PRC government has made, and may in the future make, further adjustments to the exchange rate system. In April 2012, the PRC government took a milestone step in turning the Renminbi into a global currency by doubling the size of its trading band against the U.S. dollar, pushing through a crucial reform that further liberalizes its financial markets. The PBOC allows the Renminbi to rise or fall 1% from a mid-point every day, effective April 16, 2012, compared with its previous 0.5% limit. The People's Bank of China announces the closing price of a foreign currency traded against the Renminbi in the inter-bank foreign exchange market after the closing of the market on each working day, and makes it the central parity for the trading against the Renminbi on the following working day. Fluctuations in exchange rates may adversely affect the value, translated or converted into U.S. dollars or HK dollars, of our net assets, earnings and any declared dividends. We cannot give any assurance that any future movements in the exchange rate of the Renminbi against the U.S. dollar and other foreign currencies will not adversely affect our results of operations and financial condition.

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## E. TAXATION

### PRC Taxation

The following summary of the material PRC and United States federal income tax provisions relating to the ownership and disposition of H Shares or ADSs held by the investor as capital assets is based upon laws and relevant interpretations thereof in effect as of the date of this annual report, all of which are subject to change, and does not constitute legal or tax advice. This summary does not deal with all possible tax consequences relating to an investment in our common shares, such as the tax consequences under state, local and other tax laws.

### Dividends Paid to Individual Investors

According to the PRC Individual Income Tax Law, as amended, dividends paid by Chinese companies to a domestic individual are ordinarily subject to a PRC withholding tax levied at a flat rate of 20%. For a foreign individual who is not a resident of China, the receipt of dividends from a company in China is normally subject to a withholding tax of 20% unless specifically exempted by the tax authority of the State Council of China or reduced by an applicable tax treaty. The PRC State Administration of Taxation issued the Notice on the Issues Concerning the Collection and Administration of Individual Income Tax Following the Repeal of Circular 45, under which Hong Kong residents will generally be subject to a dividend withholding tax of 10% pursuant to the arrangement for the avoidance of double taxation signed between the PRC and Hong Kong.

#### Dividends Paid to Non-PRC Enterprises

According to the Enterprise Income Tax Law and its implementation rules, which became effective on January 1, 2008, dividends derived from the revenues accumulated from January 1, 2008 and are paid by Chinese companies to non-resident enterprises, which are established under the laws of non-PRC jurisdictions and have no establishment or residence in China or whose dividends from China do not relate to their establishment or residence in China, are ordinarily subject to a Chinese withholding tax levied at a flat rate of 10% unless exempted or reduced pursuant to an applicable double-taxation treaty or other exemptions. Dividends paid by PRC companies to resident enterprises, including enterprises established under the laws of non-PRC jurisdictions but whose "de facto management body" is located in the PRC, are not subject to any PRC withholding tax, unless the dividends are derived from the publicly traded shares which have been held continuously by the resident enterprises for less than twelve months. Before the effectiveness of the Enterprise Income Tax Law and its implementation rules, a foreign enterprise with no permanent establishment in China receiving dividends paid with respect to a Chinese company's Overseas Shares was temporarily not subject to the 10% withholding tax according to the Tax Notice. This exemption has been abolished by the Enterprise Income Tax Law and its implementation rules. However, the withholding tax rate could be reduced under an applicable double-taxation treaty.

#### Tax Treaties

Non-PRC shareholders who are residents or citizens of a country that has entered into a double-taxation treaty with China may be entitled to a reduction in the amount of tax withheld, if any, imposed on the payment of dividends. China currently has such treaties with a number of countries, including:

- \* the United States;

- \* Australia;
- \* Canada;
- \* France;

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- \* Germany;
  - \* Japan;
  - \* Malaysia;
  - \* Singapore;
  - \* the United Kingdom; and
  - \* the Netherlands.

Under each one of such treaties, the rate of withholding tax imposed by China's taxation authorities is generally reduced. For example, under the double taxation treaty between China and the United States, China may tax dividends paid by us to an eligible U.S. holder up to a maximum of 10% of the gross amount received by such person. Under the treaty, an eligible U.S. holder is a person who, by reason of domicile, residence, place or head office, place of incorporation or any other criterion of similar nature is subject to taxation in the United States, as applicable under the treaty's "treaty shopping provisions".

#### Capital Gains

According to the Enterprise Income Tax Law and its implementation rules, which became effective on January 1, 2008, capital gains realized by foreign enterprises, which are established under the laws of non-PRC jurisdictions and have no establishment or residence in China or whose capital gains from China do not relate to their establishment or residence in China, are ordinarily subject to capital gains tax at the rate of 10%. The capital gains realized by resident enterprises, including enterprises established under the laws of non-PRC jurisdictions but whose "de facto management body" is located in the PRC, upon the sales of overseas-listed shares are subject to the PRC enterprise income tax. Before the effectiveness of the Enterprise

Income Tax Law, gains realized by foreign enterprises that are holders of Overseas Shares of a PRC company excluding the shares held through their PRC domestic establishment or residences were, temporarily, exempted from the withholding tax according to the Tax Notice. However, the effectiveness of such exemption granted by the Tax Notice becomes uncertain in light of the provisions under the Enterprise Income Tax Law and its implementation rules. With respect to individual holders of H Shares, the Provisions for Implementation of Individual Income Tax Law of China, as amended, or the Provisions, stipulated that income tax on gains realized on the sale of equity shares shall be regulated in separate rules to be drafted by the Ministry of Finance. However, no income tax on gains realized on the sale of equity shares has been collected. Gains on the sale of shares by individuals were temporarily exempted from individual income tax pursuant to notices issued jointly by the Ministry of Finance and the PRC State Administration of Taxation dated March 30, 1998. According to the Tax Notice, individual holders of Overseas Shares, such as H Shares, are temporarily not subject to capital gains tax.

#### Additional China Tax Considerations

Under the Provisional Regulations of the PRC Concerning the Stamp Duty, a stamp duty is not imposed by China on the transfer of shares, such as the H Shares or ADSs, of Chinese publicly traded companies that take place outside of China.

#### United States Federal Income Taxation

Each potential investor is strongly urged to consult its own tax advisor to determine the particular United States federal, state, local, treaty and foreign tax consequences of acquiring, owning or disposing of the H Shares or ADSs.

The following summary describes the principal United States federal income tax consequences of purchasing, owning and disposing of the H Shares or ADSs. This summary only applies to U.S. holders, as defined below, who hold the H Shares or ADSs as capital assets within the meaning of Section 1221 of the Internal Revenue Code of 1986 as amended (the "Code"). This discussion does not address all of the tax consequences relating to the purchase, ownership and disposition of the H Shares or ADSs, and does not take into account U.S. holders who may be subject to special rules including:

- \* financial institutions;
- \* insurance companies;
- \* tax-exempt organizations;

- \* real estate investment trusts;
- \* regulated investment companies;
- \* grantor trusts;;
- \* persons that have a functional currency other than the U.S. dollar;
- \* persons that will own H Shares or ADSs through partnerships or other pass-through entities;
- \* persons who own 10% or more, by vote, of our equity for U.S. federal income tax purposes;

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- \* dealer or traders in securities or currencies;
  - \* certain former citizens or long-term residents of the United States;
  - \* persons that will hold the H Shares or ADSs as a position in a "straddle" or as part of a "hedging", or "conversion" or other risk reduction transaction for U.S. federal income tax purposes;
  - \* persons who receive the H Shares or ADSs as compensation for services;
  - \* "dual resident" corporations;
  - \* persons that generally mark their securities to market for United States federal income tax purposes; or
  - \* persons who are residents of the People's Republic of China or who are subject to Hong Kong profits tax.

Moreover, this description does not address United States federal estate, gift or alternative minimum taxes or any state or local tax consequences of the acquisition, ownership and disposition of the H Shares or ADSs. Each U.S. holder should consult its tax advisor with respect to the U.S. federal, state, local and foreign tax consequences of acquiring, owning and disposing of H Shares or ADSs.

This discussion is based on the Code, its legislative history, final, temporary and proposed United States Treasury regulations promulgated thereunder, published rulings and court decisions as in effect on the date hereof, all of which are subject to change, or changes in interpretation, possibly with retroactive effect. In addition, this discussion is based in part upon representations of the depository and the assumption that each obligation in the deposit agreement and any related agreements will be performed according to its terms.

You are a "U.S. holder" if you are a beneficial owner of H Shares or ADSs and, for U.S. federal income tax purposes are:

- \* an individual citizen or resident of the United States;
- \* a corporation, or other entity treated as a corporation for United States federal income tax purposes, created or organized under the laws of the United States or any political subdivision thereof;
- \* an entity created or organized in or under the laws of any other jurisdiction if treated as a domestic corporation pursuant to U.S. federal income tax laws;
- \* an estate the income of which is subject to United States federal income tax without regard to its source; or
- \* a trust:
  - \* subject to the primary supervision of a United States court and the control of one or more United States persons; or
  - \* that has validly elected to be treated as a United States person under applicable United States Treasury Regulations; or
  - \* a trust in existence on August 20, 1996, and treated as a domestic trust (as defined in applicable Treasury Regulations) prior to such date, and that has elected to continue to be treated as a domestic trust.

If a partnership (including any entity treated as a partnership for United States federal tax purposes) holds H Shares or ADSs, the tax treatment of the partnership and a partner in such partnership will generally depend upon the status of the partner and the activities of the partnership. If an investor is a partner in a partnership that holds H Shares or ADSs, such investor should consult its tax advisor.

In general, if you hold ADRs evidencing H Shares, you will be treated as the owner of the H Shares represented by the ADSs. Exchanges of H Shares for ADRs, and ADRs for H Shares, generally will not be subject to United States federal income tax.

INVESTORS SHOULD CONSULT THEIR TAX ADVISORS AS TO THE PARTICULAR TAX CONSIDERATIONS APPLICABLE TO THEM RELATING TO THE PURCHASE, OWNERSHIP AND DISPOSITION OF THE H SHARES OR ADSs, INCLUDING THE APPLICABILITY OF U.S. FEDERAL, STATE AND LOCAL TAX LAWS OR NON-U.S. TAX LAWS, ANY CHANGES IN APPLICABLE TAX LAWS AND ANY PENDING OR PROPOSED LEGISLATION OR REGULATIONS.

#### Distributions on the H Shares or ADSs

Subject to the discussions below under "- Passive Foreign Investment Company", the gross amount of any distribution (without reduction for any PRC tax withheld) we make on the H Shares or ADSs will be includible in income as dividend income when the distribution is actually or constructively received by you. Because we do not calculate earnings and profits in accordance with U.S. tax principles, all distributions by us to U.S. holders will generally be treated as dividends. Any dividend will not be eligible for the dividends-received deduction allowed to certain United States corporations in respect of dividends received from United States corporations. The amount of any distribution of property other than cash will be the fair market value of such property on the date of such distribution.

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The U.S. dollar amount of dividends received by an individual, trust or estate will be subject to taxation at a maximum rate of 20% if the dividends are "qualified dividends." Dividends paid on H Shares or ADSs will be treated as qualified dividends if (a) certain holding period requirements are satisfied, (b) either (i) we are eligible for the benefits of a comprehensive income tax treaty with the United States that the Internal Revenue Service, or IRS, has approved for the purposes of the qualified dividend rules, or (ii) the dividends are with respect to ADSs readily tradable on a U.S. securities market, and (c) provided that we are not, in the year prior to the year in which the dividend was paid, and are not, in the year in which the dividend is paid, a passive foreign investment company, or PFIC. The Agreement Between the Government of the United States of America and the Government of the People's Republic of China for the Avoidance of Double Taxation and the Prevention of Tax Evasion with Respect to Taxes on Income PFIC rules (the "Treaty") has been approved for the purposes of the qualified dividend rules. We are considered a qualified foreign corporation



with respect to the ADSs because our ADSs are listed on the New York Stock Exchange. Finally, based on our audited financial statements and relevant market data, we believe that we did not satisfy the definition for PFIC status for U.S. federal income tax purposes with respect to our 2012 taxable year. In addition, based on our audited financial statements and our current expectations regarding the value and nature of our assets, the sources and nature of our income, and relevant market data, we do not anticipate becoming a PFIC for our 2013 taxable year or any future year. However, our status in the current year and future years will depend on our income and assets (which for this purpose depends in part on the market value of the H Shares or ADSs) in those years. See the discussion below under "- Passive Foreign Investment Company." Relevant U.S. holders should consult their tax advisors regarding whether such dividends will qualify for the reduced rates provided by the "qualified dividend" rules.

If we make a distribution paid in HK dollars, you will be considered to receive the U.S. dollar value of the distribution determined at the spot HK dollar/U.S. dollar rate on the date such distribution is received actually or constructively by you, regardless of whether you convert the distribution into U.S. dollars. Any gain or loss resulting from currency exchange fluctuations during the period from the date the dividend payment is includible in your income to the date you convert the distribution into U.S. dollars will be treated as ordinary income or loss from U.S. sources.

Dividends paid by us generally will constitute income from sources outside the United States for U.S. foreign tax credit limitation purposes and will be categorized as "passive income" or, in the case of certain U.S. holders as "general category income" for U.S. foreign tax credit purposes. We may be required to withhold PRC income tax on dividends paid to U.S. holders on the H Shares or ADSs. Subject to various limitations, any PRC tax withheld from distributions in accordance with the Treaty will be deductible or creditable against your United States federal income tax liability.

You may not be able to claim a foreign tax credit (and instead may qualify to claim a deduction) for non-United States taxes imposed on dividends paid on the H Shares or ADSs if you (i) have held the H Shares or ADSs for less than a specified minimum period during which you are not protected from risk of loss with respect to such shares, or (ii) are obligated to make payments related to the dividends (for example, pursuant to a short sale). The rules relating to the U.S. foreign tax credit are complex. U.S. holders should consult their own tax advisors regarding the effect of these rules in their particular circumstance.

#### Sale, Exchange or Other Disposition

Subject to the discussions below under "- Passive Foreign Investment Company", upon a sale, exchange or other disposition of the H Shares or ADSs, you will generally recognize capital gain or loss for United States

federal income tax purposes in an amount equal to the difference between the U.S. dollar value of the amount realized and your tax basis, determined in U.S. dollars, in such H Shares or ADSs. The rules relating to the U.S. foreign tax credit are complex. U.S. holders should consult their own tax advisors regarding the effect of these rules in their particular circumstance. Any gain or loss will generally be United States source gain or loss for foreign tax credit limitation purposes and as a result of the U.S. foreign tax credit limitation, foreign taxes, if any, imposed upon capital gains in respect of H Shares or ADSs may not be currently creditable. Under that Treaty, if any PRC tax was to be imposed on any gain from the disposition of H Shares or ADSs, the gain may be treated as PRC-source income. U.S. holders are urged to consult their tax advisors regarding the tax consequences if a foreign withholding tax is imposed on a disposition of H Shares or ADSs, including the availability of the foreign tax credit under their particular circumstances.

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If you are paid in a currency other than U.S. dollars, any gain or loss resulting from currency exchange fluctuations during the period from the date of the payment resulting from sale, exchange or other disposition is made to the date you convert the payment into U.S. dollars will be treated as United States source ordinary income or loss.

#### Passive Foreign Investment Company

A non-U.S. corporation is a PFIC for any taxable year in which, after applying relevant look-through rules with respect to the income and assets of subsidiaries:

- \* 75% or more of its gross income consists of passive income, such as dividends, interest, rents, royalties, and gains from the sale of assets that give rise to such income; or
- \* 50% or more of the average quarterly value of its assets consists of assets that produce, or are held for the production of, passive income.

Passive income does not include rents and royalties derived from the active conduct of a trade or business. If the stock of a non-U.S. corporation is publicly traded for the taxable year, the asset test is applied using the fair market value of the assets for purposes of measuring such corporation's assets. If we own at least 25% (by value) of the stock of another corporation, we will be treated, for purposes of the PFIC tests, as owning our proportionate share of the other corporation's assets and receiving our proportionate share of the other corporation's income for purposes of the

PFIC income and asset tests.

Based on the composition of our assets and income and the current expectations regarding the price of the H Shares and ADSs, we believe that we should not be treated as a PFIC for U.S. federal income tax purposes with respect to our 2013 taxable year and we do not intend or anticipate becoming a PFIC for any future taxable year. However, the determination of PFIC status is a factual determination that must be made annually at the close of each taxable year and therefore, there can be no certainty as to our status in this regard until the close of the current or any future taxable year. Changes in the nature of our income or assets or a decrease in the trading price of the H Shares or ADSs may cause us to be considered a PFIC in the current or any subsequent year. If we were a PFIC in any year during a U.S. holder's holding period for the H Shares or ADSs, we would ordinarily continue to be treated as a PFIC for each subsequent year during which the U.S. holder owned the H Shares or ADSs.

If we were a PFIC in any taxable year that you held the H Shares or ADSs, you generally would be subject to special rule" with respect to "excess distributions" made by us on the H Shares or ADSs and with respect to gain from your disposition of the H Shares or ADSs. An "excess distribution" generally is defined as the excess of the distributions you receive with respect to the H Shares or ADSs in any taxable year over 125% of the average annual distributions you have received from us during the shorter of the three preceding years, or your holding period for the H Shares or ADSs. Generally, you would be required to allocate any excess distribution or gain from the disposition of the H Shares or ADSs ratably over your holding period for the H Shares or ADSs. The portion of the excess distribution or gain allocated to a prior taxable year, other than a year prior to the first year in which we became a PFIC, would be taxed at the highest United States federal income tax rate on ordinary income in effect for such taxable year, and you would be subject to an interest charge on the resulting tax liability, determined as if the tax liability had been due with respect to such particular taxable years. The portion of the excess distribution or gain that is not allocated to prior taxable years, together with the portion allocated to the years prior to the first year in which we became a PFIC, would be included in your gross income for the taxable year of the excess distribution or disposition and taxed as ordinary income.

These adverse tax consequences may be mitigated if the U.S. holder is eligible to and does elect to annually mark-to-market the H Shares or ADSs. If a U.S. holder makes a mark-to-market election, such holder will generally include as ordinary income the excess, if any, of the fair market value of the H Shares or ADSs at the end of each taxable year over their adjusted basis, and will be permitted an ordinary loss in respect of the excess, if any, of the adjusted basis of the H Shares or ADSs over their fair market value at the end of the taxable year (but only to the extent of the net amount of previously included in income as a result of the mark-to-market election). Any gain recognized on the sale or other disposition of the H Shares or

ADSs will be treated as ordinary income. The mark-to-market election is available only for "marketable stock," which is stock that is traded in other than de minimis quantities on at least 15 days during each calendar quarter on a qualified exchange or other market, as defined in the applicable Treasury regulations. The H Shares or ADSs may qualify as "marketable stock" because the ADSs are listed on the New York Stock Exchange.

A U.S. holder's adjusted tax basis in the H Shares or ADSs will be increased by the amount of any income inclusion and decreased by the amount of any deductions under the mark-to-market rules. If a U.S. holder makes a mark-to-market election it will be effective for the taxable year for which the election is made and all subsequent taxable years unless the H Shares or ADSs are no longer regularly traded on a qualified exchange or the IRS consents to the revocation of the election. U.S. holders are urged to consult their tax advisors about the availability of the mark-to-market election, and whether making the election would be advisable in their particular circumstances.

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Alternatively, a timely election to treat us as a qualified electing fund could be made to avoid the foregoing rules with respect to excess distributions and dispositions. You should be aware, however, that if we become a PFIC, we do not intend to satisfy the record keeping requirements that would permit you to make a qualified electing fund election.

If you own the H Shares or ADSs during any year that we are a PFIC, you must file IRS Form 8621. The reduced tax rate for dividend income, as discussed above under "- Distributions on the H Shares or ADSs," is not applicable to a dividend paid by us if we are a PFIC for either the taxable year in which the dividend is paid or the preceding year. We encourage you to consult your own tax advisor concerning the United States federal income tax consequences of holding the H Shares or ADSs that would arise if we were considered a PFIC.

#### Backup Withholding and Information Reporting

In general, information reporting requirements will apply to dividends in respect of the H Shares or ADSs or the proceeds of the sale, exchange, or redemption of the H Shares or ADSs paid within the United States, and in some cases, outside of the United States, other than to various exempt recipients, including corporations. In addition, you may, under some circumstances, be subject to "backup withholding" with respect to dividends paid on the H Shares or ADSs or the proceeds of any sale, exchange or transfer of the H Shares or ADSs, unless you

- \* are a corporation or fall within various other exempt categories, and, when required, demonstrate this fact; or
- \* provide a correct taxpayer identification number on a properly completed IRS Form W-9 or a substitute form, certify that you are exempt from backup withholding and otherwise comply with applicable requirements of the backup withholding rules.

Any amount withheld under the backup withholding rules generally will be creditable against your United States federal income tax liability provided that you furnish the required information to the IRS in a timely manner.

For taxable years beginning after March 18, 2010, legislation requires certain U.S. holders to report information relating to stock of a non-U.S. person owned by the U.S. holder, subject to certain exceptions (including an exception for stock held in custodial accounts maintained by a U.S. financial institution). U.S. holders are urged to consult their tax advisors regarding the effect, if any, of this legislation on their ownership and disposition of the H Shares or ADSs.

### ***3.8% Medicare Contribution Tax***

For taxable years beginning after December 31, 2012, U.S. holders that are individuals, estates or trusts and whose income exceeds certain thresholds generally will be subject to a 3.8% Medicare contribution tax on unearned income, including, among other things, dividends on, and capital gains from the sale or other taxable disposition of, the H Shares or ADSs, subject to certain limitations and exceptions. U.S. holders should consult their own tax advisors regarding the effect, if any, of such tax on their ownership and disposition of our securities.

### **Hong Kong Taxation**

The following discussion summarizes the material Hong Kong tax provisions relating to the ownership of H Shares or ADSs held by you.

#### **Dividends**

Under current Hong Kong Inland Revenue Department practice, no Hong Kong tax is payable by the recipient in respect of dividends paid by us.

#### **Taxation of Capital Gains**

Hong Kong profits tax is currently charged at the rate of 16.5% for corporations and at a maximum rate of 15% for individuals.

No Hong Kong tax is imposed on capital gains arising from the sale of property (such as H Shares) acquired and held as investment assets. However, if a person carries on a business in Hong Kong that includes trading and dealing in securities, and derives trading gains from that or business from Hong Kong sources, Hong Kong profits tax will be payable. Gains from sales of H Shares effected on the Hong Kong Stock Exchange are considered to be from a Hong Kong source for this purpose. The source of gains from off exchange transactions is less clear and, generally, will depend on whether the purchase and sale contracts were negotiated and, in substance, concluded. Tax exemption will apply for certain classes of taxpayers, including non-residents who do not otherwise carry on business in Hong Kong, subject to compliance with various other requirements.

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The Hong Kong tax position with respect to gains from the disposal of ADSs is similar. However, no Hong Kong tax will apply on trading gains arising from the sale of ADSs where the purchase and sale were effected on the NYSE.

#### Hong Kong Stamp Duty

Hong Kong stamp duty is payable by each of the seller and the purchaser for every sold note and every bought note created for every sale and purchase of the H Shares. Stamp duty is charged at the total rate of 0.2% of the value of the H Shares transferred (the buyer and seller each paying half of such stamp duty). In addition, a fixed duty of HK\$5 is currently payable on an instrument of transfer of H Shares. If one of the parties to a sale is a non-resident of Hong Kong and does not pay the required stamp duty, the stamp duty not paid will be assessed on the instrument of transfer (if any), and the transferee will be liable for the full payment of such stamp duty.

If the withdrawal of H Shares when ADSs are surrendered or the issuance of ADSs when H Shares are deposited results in a change of beneficial ownership in the H Shares under Hong Kong law, Hong Kong stamp duty at the rate described above for sale and purchase transaction will apply. The issuance of ADSs for deposited H Shares issued directly to the depositary or for the account of the depositary should not lead to a Hong Kong stamp duty liability. Holders of the ADSs are not liable for the Hong Kong stamp duty on transfers of ADSs outside of Hong Kong so long as the transfers do not result in a change of beneficial interest in the H Shares under Hong Kong law.

## H. DOCUMENTS ON DISPLAY

We are subject to the periodic reporting and other informational requirements of the Exchange Act. Under the Exchange Act, we are required to file reports and other information with the SEC. Specifically, we are required to file an annual report under Form 20-F no later than four months after the close of each of our fiscal years, which is December 31, for fiscal years ended after December 15, 2011. Copies of reports and other information, when so filed, may be inspected without charge and may be obtained at prescribed rates at the SEC's public reference room located at 100 F Street, NE, Washington, D.C. 20549. The public may obtain information regarding the Washington, D.C. Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports and other information regarding registrants that make electronic filings with the SEC using its EDGAR filing system. As a foreign private issuer, we are exempt from the rules under the Exchange Act prescribing the furnishing and content of quarterly reports and proxy statements, and officers, directors and principal shareholders of ours are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act.

## ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to various types of market risks, including credit risk relating to financial assets and changes in foreign exchange rates, interest rates and the prices of alumina and primary aluminum, in the normal course of business.

We borrow short-term, medium-term and long-term funds, including variable rate debts, principally denominated in Renminbi. We hedge a limited amount of our sales through the trade of futures contracts on the SHFE and LME. Our hedging activities are subject to policies approved by our senior management. Substantially all of the financial instruments we hold are for purposes other than trading.

The following discussion, which contains "forward-looking statements" that involve risks and uncertainties, summarize our market-sensitive financial instruments. Such discussions address markets risk only and do not present other risks, which we face in the normal course of business.

### Credit Risk

Credit risk arises from bank balances, other receivables as well as credit exposures of customers, including outstanding receivables and committed transactions. We also provide financial guarantees to certain subsidiaries.

The carrying amounts of these receivables and amounts of financial guarantees represent our maximum exposure to credit risk in relation to our financial assets and guarantees.

We maintain a significant majority of our bank balances and cash in several major state-owned banks in the PRC. The directors are of the opinion that these assets are not exposed to significant credit risk.

With regard to receivables, the marketing department assesses the credit quality of the customers, taking into account their financial positions, past experience and other factors. We perform periodic credit evaluations of our customers and believe that adequate provisions for impairment of receivables have been made in the financial statements. Management does not expect any further losses from non-performance by these counterparties. For the years ended December 31, 2011 and 2012, none of our customers individually accounted for more than 10% of our total revenue. Therefore, we believe that we were not exposed to any significant concentration of credit risk as of December 31, 2011 and 2012.

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In 2011, we entered into an agreement with Shanxi Jiexiu to provide a three year entrusted loan to Shanxi Jiexiu totalling to RMB1,000 million with annual interest rate of 10%. Pursuant to the agreement, the 51% equity interest of Shanxi Jiexiu held by Shanxi Province Jiexiu Luxin Coal Gas Co. Ltd, was pledged as collateral for this entrusted loan. As of March 31, 2013, we provided RMB500 million in the form of entrusted loan to Shanxi Jiexiu. We do not hold any other collateral as security for these receivables.

In June and July 2012, we entered into agreements with Shuicheng Panlong to provide short-term entrusted loans to Shuicheng Panlong totalling to RMB70 million and RMB30 million, respectively. Pursuant to the agreements, the mining right for coal mines of Shuicheng Panlong is pledged as collateral for the entrusted loans.

#### Foreign Exchange Rate Risk

We conduct our business primarily in Renminbi, which is our functional and reporting currency. We convert a portion of our Renminbi revenues into other currencies to meet foreign currency obligations and to pay for imported equipment and materials.

Many foreign currency exchange transactions involving Renminbi, including foreign exchange transactions under our capital account, are subject to



foreign exchange controls and require the approval of the State Administration of Foreign Exchange. Actions taken by the PRC government could cause future exchange rates to vary significantly from current or historical exchange rates. On July 21, 2005, the People's Bank of China announced a reform of its exchange rate system. Under the reform, the RMB is no longer effectively linked to the U.S. dollar but instead is allowed to fluctuate within a narrow and managed band against a basket of foreign currencies, according to market demand and supply conditions. In April 2012, the PRC government took a milestone step in turning the Renminbi into a global currency by doubling the size of its trading band against the U.S. dollar, pushing through a crucial reform that further liberalizes its financial markets. The People's Bank of China allows the Renminbi to rise or fall 1% from a mid-point every day, effective on April 16, 2012, compared with its previous 0.5% limit. 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.

Our bank balances and cash on hand as of December 31, 2012 amounted to RMB9,063.6 million, including Renminbi balances and foreign currency deposits of U.S. dollar, HK dollar, Euro, Australian dollar and Great Britain Pound, which translated into RMB185.8 million, RMB11.9 million, RMB1.0 million, RMB5.0 million and RMB23,000, respectively. Most of our sales are domestic and as such we have a limited amount of foreign currency denominated trade and notes receivable. As of December 31, 2012, we had foreign currency denominated loans with principal amount of RMB40 million in Japanese Yen and RMB7,421 million in U.S. dollars.

As of December 31, 2012, if RMB had appreciated by 5% against US dollar with all other variables held constant, profit for the year would have been approximately RMB205 million higher, mainly as a result of foreign exchange gains on translation of US dollar-denominated borrowings. Profit is more sensitive to fluctuations in the exchange rate between RMB and US dollar in 2012 than 2010 and 2011, mainly due to the increase in US dollar-denominated borrowings.

As the assets and liabilities denominated in foreign currencies other than US dollar are minimal relative to our total assets and liabilities, our directors are of the opinion that we are not exposed to any significant foreign currency risk arising from such foreign currency denominated assets and liabilities as of December 31, 2010, 2011 and 2012.

#### Interest Rate Risk

We are exposed to interest rate risk resulting from fluctuations in interest rates on our debts, primarily on our long-term debt obligations. Our debts consist of fixed and variable rate debt obligations with original maturities ranging from one to ten years. We undertake debt obligations to support general corporate purposes including capital expenditures and working capital needs. Upward fluctuations in interest rates increase the cost of new debts and the interest cost of outstanding variable rate borrowings. We do not currently use any derivative instruments to modify the nature of our debts so as to manage our interest rate risk. Instead, our treasury department closely monitors the market interest rates and maintains proper portfolio of variable rate and fixed rate debts in order to reduce the exposure to any one form of interest rate risk.

As at December 31, 2012, if interest rates had been 100 basis points higher/lower with all other variables maintain constant, our net profit for the year would have been RMB496 million lower/higher, mainly as a result of higher/lower interest expense on fixed rate borrowings.

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Our fair value interest rate risk mainly arises from long-term bonds, medium-term notes and short-term bonds issued at fixed rates. As the fluctuation of comparable interest rates of corporate bonds with similar terms was relatively low, we are not exposed to any significant fair value interest rate risk for our fixed interest rate borrowings held.

#### Commodity Price Risk

We are exposed to fluctuations in the prices of alumina, primary aluminum and aluminum fabrication products. We import a portion of our alumina supply from suppliers outside China. Such purchases are made at market prices. In addition, all our sales of alumina, primary aluminum and aluminum fabrication products are made at market prices. Therefore, fluctuations in the prices of alumina and primary aluminum have a significant effect on our operating performances.

We use mainly futures contracts and option contracts traded on the Shanghai Futures Exchange and London Metal Exchange to hedge against fluctuations in primary aluminum prices. We have policy in place which limits the total quantity of primary aluminum related to these futures and option contracts to 30% of the our annual production or 50% of our committed purchase or sales for our trading business. As of December 31, 2012, the fair value of outstanding future contracts amounting to RMB5.6 million and RMB12.7 million was recognized in financial assets and liabilities at fair value through profit or loss respectively. As of December

31, 2012, there was no options contract outstanding.

The fair value of futures contracts are based on quoted market prices. As of December 31, 2011 and 2012, our position in futures contracts was as follows:

	As of December 31, 2011	As of December 31, 2012
Contract		
		Market
		Unrealized
		Contract
		Market
		Unrealized
		Tonnes
		value
		value
		gain/(loss)
		Maturity
		Tonnes
		value
		value
		gain/(loss)
		Maturity

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(RMB in thousands)

(RMB in thousands)

Futures  
Contracts:  
Primary  
aluminum

-Short

1,825  
29,302  
29,182  
120  
Jan 2012  
13,110  
200,086  
198,662  
1,424  
Jan-Feb

2013

-Long

60,890  
935,633

236



	2012
-Short	-
	-
	-
	-
	-
	7,850
	121,031
	121,013
	18
	Jan-Apr
	2013
Copper	
-Short	2,900
	160,407
	160,544
	(137)
	Feb 2012
	5,325
	238

304,466

305,079

(613)

Jan-Apr

2013

Lead

-Short

-

-

-

-

-

2,550

38,852

38,614

238

Jan-Feb

2013

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Liquidity risk

We monitor rolling forecasts of our liquidity requirements to ensure we have sufficient cash to meet operational needs while maintaining sufficient headroom on our undrawn committed borrowing facilities at all times so that we do not breach borrowing limits or covenants (where applicable) on any of our borrowing facilities. Such forecast takes into consideration of our debt financing plans, covenant compliance, compliance with internal balance sheet ratio targets and, if applicable, external regulatory or legal requirements. Our management also monitors rolling forecasts of our liquidity reserve on the basis of expected cash flows.

As of December 31, 2012, we had total banking facilities of approximately RMB161,761 million, of which RMB64,819 million had been utilized and unutilized banking facilities amounted to RMB96,942 million as of December 31, 2012, among which, banking facilities of approximately RMB54,859 million will be subject to renewal during the next 12 months from January 1, 2013. Our directors are confident that all banking facilities could be renewed upon their expiration based on our past experience with banks and our good credit standing. In addition, as of December 31, 2012, we had credit facilities through our primary aluminum futures agent at LME amounting to US\$94 million, of which approximately US\$1 million has been utilized. The futures agent has the right to adjust the related credit facilities.

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The following table sets forth the maturity profile of our financial liabilities as of December 31, 2012:

	Within 1 year	1 to 2 years	2 to 5 years	Over 5 years	Total
(RMB in thousands)					
Long-term bank and other loans	-	8,049,049	7,771,126	4,090,612	19,910,787
Long-term bonds	-	-	2,000,000	-	2,000,000



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Medium-term notes and bonds	-	2,000,000	12,800,000	-	14,800,000
Bond issuance cost payable	-	6,000	-	-	6,000
Short-term bonds	16,500,000	-	-	-	16,500,000
Short-term bank and other loans	40,313,218	-	-	-	40,313,218
Current portion of medium-term notes	5,000,000	-	-	-	5,000,000
Current portion of long-term bank and other loans	5,945,958	-	-	-	5,945,958
Current portion of long-term payables	8,330	-	-	-	8,330
Current portion of bond issuance cost payable	6,000	-	-	-	6,000
Interest payables for borrowings	1,788,809	1,705,063	2,532,764	905,829	6,932,465
Financial liabilities at fair value through profit or loss	12,662	-	-	-	12,662
Financial liabilities included in other current payables and accrued expenses	6,169,561	-	-	-	6,169,561
Trade and notes payables	7,059,194	-	-	-	7,059,194

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82,803,732

11,760,112

25,103,890

4,996,441

124,664,175

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ITEM DESCRIPTION OF SECURITIES OTHER THAN EQUITY  
12. SECURITIES

A. DEBT SECURITIES

Not applicable.

B. WARRANTS AND RIGHTS

Not applicable.

C. OTHER SECURITIES

Not applicable.

D. AMERICAN DEPOSITARY SHARES

The following table summarizes the fees and charges that a holder of our ADSs may have to pay, directly or indirectly, in connection with the ownership of Chalco's American Depositary Receipts.

Persons depositing or withdrawing For:  
shares must pay:

\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	*	Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property
	*	Cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates

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\$.02 (or less) per ADS	*	Any cash distribution to ADS registered holders
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A fee equivalent to the fee that would be payable if securities distributed to you had been shares and the shares had been deposited for issuance of ADSs	Distribution of securities distributed to holders of deposited securities which are distributed by the depositary to ADS registered holders
\$.02 (or less) per ADS per calendar year	* Depositary services
Registration or transfer fees	* Transfer and registration of shares on our share register to or from the name of the depositary or its agent when you deposit or withdraw shares
Expenses of the depositary	* Cable, telex and facsimile transmissions (when expressly provided in the deposit agreement)  * Converting foreign currency to U.S. dollars
Taxes and other governmental charges the depositary or the custodian have to pay on any ADS or share underlying an ADS, for example, stock transfer taxes, stamp duty or withholding taxes	* As necessary
Any charges incurred by the depositary or its agents for servicing the deposited securities	* As necessary

The Bank of New York Mellon, as depositary, has agreed to reimburse certain reasonable expenses related to our ADR program and incurred by us in connection with the program. From January 1, 2012 to April 1, 2013, we received from the depositary reimbursements of US\$246,714.3, net of withholding tax, for our continuing annual stock exchange listing fees and our expenses incurred in connection with investor relationship programs. In addition, the depositary has agreed to reimburse us annually for our expenses incurred in connection with investor relationship programs in the future.

PART  
II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

None.

ITEM 15. CONTROLS AND PROCEDURES

Our management, with the participation of our principal executive officer and principal financial officer, after evaluating the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15(d)-15(e) of the Exchange Act) as of the end of the period covered by this annual report, have concluded that, as of such date, our disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Our internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of a company's assets, (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of our management and directors, and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the consolidated financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

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Under the supervision of and with the participation of the principal executive officer and principal financial officer, our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2012 based on the framework in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of Treadway Commission. Based on our evaluation under the framework in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of Treadway Commission, our management concluded that, as of December 31, 2012, our internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS.

The effectiveness of our internal controls over financial reporting as of December 31, 2012 has been audited by Ernst & Young, an independent registered public accounting firm, as stated in their report which is included herein.

#### Changes in Internal Control over Financial Reporting

During 2012, there have been no changes in our internal control over financial reporting that occurred during the fiscal year covered by this annual report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

#### ITEM AUDIT COMMITTEE FINANCIAL EXPERT 16A.

Our audit committee members are Mr. Wang Mengkui, Mr. Zhu Demiao and Mr. Zhang Zhuoyuan. Our Board has determined that Mr. Zhu Demiao, the chairman of the audit committee, qualifies as an "audit committee financial expert" as defined in Item 16A of Form 20-F and is the financial expert serving on our audit committee. See "Item 6. Directors, Senior Management and Employees."

#### ITEM CODE OF ETHICS 16B.

We have adopted a code of ethics that applies to our chief executive officer, chief financial officer, other directors, independent non-executive directors, senior management and employees. We have posted our code of ethics on our website: [www.chalco.com.cn](http://www.chalco.com.cn). A hard copy of this code of ethics is available

to investors free of charge upon written request to the address on the cover of this annual report on Form 20-F.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

PricewaterhouseCoopers served as our independent auditor for the fiscal year ended December 31, 2011. On June 30, 2012, we engaged Ernst & Young as our independent auditor for the fiscal year ended December 31, 2012. A description of the fees billed to us by our principal accountants for professional services in each of the last two fiscal years is set forth below:

	Year ended December 31,	
	2011	2012
	(RMB in thousands)	
Audit fee <sup>(1)</sup> and audit-related fees	16,671 <sup>(2)</sup>	24,610 <sup>(3)</sup>
Tax fees <sup>(4)</sup>	-	150

(1) "Audit fee" represents fee obtained from annual audit work.

(2) "Audit-related fees" for the year ended December 31, 2011 represent fees charged by PricewaterhouseCoopers for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements and are not reported under "Audit fees."

(3) "Audit-related fees" for the year ended December 31, 2012 represent aggregate fees charged by Ernst & Young for permissible professional services rendered for mergers and acquisitions due diligence work.

(4) "Tax fees" represent fees charged by our principal accountants for permissible tax advisory services related to planned and completed acquisitions.

Our audit committee pre-approves all audit and audit-related services and tax advisory services performed by our principal accountants, including the services provided by PricewaterhouseCoopers and Ernst & Young for the years ended December 31, 2011 and 2012, respectively.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.

ITEM PURCHASE OF EQUITY SECURITIES BY THE ISSUER AND  
16E. AFFILIATED PURCHASERS

We do not have an equity securities repurchase program and did not repurchase any of our equity securities during the year ended December 31, 2012.

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ITEM CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT  
16F.

(a) Change of Principal Accountant

On March 16, 2012, our Board resolved, as recommended by our audit committee, to propose a change in our independent registered public accounting firm, PricewaterhouseCoopers, after the completion of the audit of the consolidated financial statements for the year ended December 31, 2011, which refers to the close of our forthcoming 2011 annual general meeting, due to the relevant regulations issued by the Ministry of Finance of the PRC and the SASAC in December 2011. According to the relevant regulations, there are restrictions in respect of the number of years of audit services that an accounting firm can continuously provide to a state-owned enterprise and its subsidiaries. As a result, PricewaterhouseCoopers did not offer themselves for re-appointment at the 2011 annual general meeting held on June 29, 2012.

The reports of PricewaterhouseCoopers on our consolidated financial statements for the fiscal years ended December 31, 2010 and 2011 did not contain any adverse opinion or a disclaimer of opinion, nor were such reports qualified or modified as to uncertainty, audit scope, or accounting principles.

During the two fiscal years ended December 31, 2011 and through June 29, 2012, the date of retirement, there were no disagreements with PricewaterhouseCoopers on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure which, if not resolved to the satisfaction of PricewaterhouseCoopers, would have caused them to make reference to the subject matter of the disagreements in their report on the consolidated financial statements for such years.

During the two fiscal years ended December 31, 2011 and through June 29, 2012, there were no "reportable events" (hereinafter defined) requiring disclosure pursuant to Item 16F(a)(1)(v) of Form 20-F. As used herein, the term "reportable event" means any of the items listed in paragraphs (a)(1)(v)(A)-(D) of Item 16F of Form 20-F.

We provided a copy of this disclosure to PricewaterhouseCoopers and requested that PricewaterhouseCoopers furnish a letter addressed to the SEC stating whether they agree with the above statements, and if not, stating the respects in which they do not agree. A copy of the letter from PricewaterhouseCoopers addressed to the SEC, dated April 25, 2013, is filed as Exhibit 15.1.

(b) Engagement of New Principal Accountant

On March 16, 2012, our Board resolved, as recommended by our audit committee, to propose to appoint Ernst & Young as our independent registered public accounting firm, which was approved by our shareholders at our 2011 annual general meeting held on June 29, 2012. We engaged Ernst & Young as our independent registered public accounting firm on June 30, 2012. During the two fiscal years ended December 31, 2011 and through June 30, 2012, neither we nor anyone on our behalf consulted Ernst & Young regarding either (i) the application of accounting principles to a specified transaction, either completed or proposed; or the type of audit opinion that might be rendered on our consolidated financial statements, and we have not obtained any written report or oral advice that Ernst & Young concluded was an important factor considered by us in reaching a decision as to the accounting, auditing or financial reporting issue, or (ii) any matter that was either the subject of a "disagreement", as defined in Item 16F(a)(1)(iv) of Form 20-F and related instructions to Item 16-F of Form 20-F, with Ernst & Young or a "reportable event" as described in Item 16F(a)(1)(v) of Form 20-F.

ITEM CORPORATE GOVERNANCE  
16G.

The NYSE has imposed a series of corporate governance listing standards for companies listed on the NYSE in Section 303A of its listing rules. However, the NYSE provides that listed companies that are foreign private issuers, subject to certain limitations and conditions, are permitted to follow "home country" practice in lieu of the provisions of Section 303A of the NYSE Listed Company Manual. As a foreign issuers listed on the NYSE, we are required to disclose a summary of the significant differences between our domestic corporate governance rules and NYSE corporate governance rules that apply to U.S. domestic issuers.

NYSE Listed Company  
Manual Requirements



on Corporate Governance      Our Practice

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Majority of independent directors	NYSE requires that the board of a listed company must comprise a majority of independent directors. There is no identical corporate governance requirement in the PRC. PRC securities regulatory authorities require that the board of a listed company shall comprise at least one-third of independent directors.	Our Board currently comprises three independent directors and five non-independent directors which is in compliance with the requirement by the PRC securities regulatory authorities.
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Compensation Committee	NYSE requires U.S. domestic issuers to have a compensation committee composed entirely of independent directors. As a foreign private issuer, we are not subject to such requirement.	We have a remuneration committee that consists of three independent directors and one non-executive director.
Nominating Committee	NYSE requires U.S. domestic issuers to have only independent directors on their nominating committees. As a foreign private issuer, we are not subject to such requirement.	We have a nomination committee that consists of two executive directors and three independent directors.
Corporate governance committee	NYSE requires a listed company to establish a corporate governance committee which comprises entirely of independent directors. The corporate governance committee shall be co- established with the nomination committee and have a written charter. The corporate governance	Like most of the other companies incorporated in the PRC, we believe that corporate governance measures are of critical importance and should be implemented by the Board. We accordingly do not separately maintain a corporate governance committee.

committee is responsible (i) for recommending to the board a set of corporate governance guidelines applicable to the corporation; and (ii) supervising the operation of the board and the management. The corporate governance committee shall also be subject to evaluation annually. There is no identical corporate governance requirement in the PRC.

ITEM MINE SAFETY DISCLOSURE  
16H.

As of the date of this annual report, we did not own or operate any mine in the United States. For details of the mining safety control of our bauxite mines in China, see "Item 4. Information on the Company - B. Business Overview - Raw Materials - Alumina - Own Mines."

PART  
III

ITEM FINANCIAL STATEMENTS  
17.

We have elected to provide the financial statements and related information specified in Item 18 in lieu of Item 17.

ITEM FINANCIAL STATEMENTS  
18.

Our consolidated financial statements are included at the end of this annual report on Form 20-F.

ITEM EXHIBITS  
19.

Exhibit Number	Description
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1.1*	English translation of Articles of Association of Aluminum Corporation of China Limited
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- 2.1 Registrant's Specimen American Depositary Receipt  
(incorporated by reference to Exhibit 2.1 of our annual report on Form 20-F/A (file No. 001-15264) filed with the Securities and Exchange Commission on October 9, 2012)
- 2.2 Registrant's Specimen Certificate for H Shares (incorporated by reference to Exhibit 2.2 of our annual report on Form 20-F/A (file No. 001-15264) filed with the Securities and Exchange Commission on October 9, 2012)
- 2.3 Deposit Agreement among the Registrant, The Bank of New York, as depositary, and Owners and Beneficial Owners of the American Depositary Receipts (incorporated by reference to Exhibit 2.3 of our annual report on Form 20-F/A (file No. 001-15264) filed with the Securities and Exchange Commission on October 9, 2012)
- 4.1 English translation of Form of Employment Contract  
(incorporated by reference to Exhibit 4.1 of our annual report on Form 20-F/A (file No. 001-15264) filed with the Securities and Exchange Commission on October 9, 2012)
- 8.1 List of Subsidiaries of Aluminum Corporation of China Limited as of December 31, 2012
- 12.1\* Certification by the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 12.2\* Certification by the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 13.1\* Certification by the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

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- 13.2\* Certification by the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
  - 15.1\* Letter from PricewaterhouseCoopers

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\* Filed with this annual report on Form 20-F.

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SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on this Form 20-F on its behalf.

ALUMINUM CORPORATION OF  
CHINA LIMITED

By: /s/XIONG Weiping  
Name: XIONG Weiping  
Title: Chief Executive Officer  
Date: April 25, 2013

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**ALUMINUM CORPORATION OF CHINA LIMITED AND ITS SUBSIDIARIES**

Consolidated Financial Statements

For the Years Ended December 31, 2010, 2011 and 2012

Together with Reports of Independent Public Accounting Firms

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**INDEX TO THE CONSOLIDATED FINANCIAL STATEMENTS**

ALUMINUM CORPORATION OF CHINA LIMITED

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Report of Independent Registered Public Accounting Firms	F3-F5
Consolidated Statements of Financial Position as of December 31, 2011 and 2012	F6-F7
Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2010, 2011 and 2012	F8-F9
Consolidated Statements of Changes in Equity for the Years Ended December 31, 2010, 2011 and 2012	F10-F12
Consolidated Statements of Cash Flows for the Years Ended December 31, 2010, 2011 and 2012	F13-F14

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**Report of Independent Registered Public Accounting Firm on Consolidated Financial Statements**

To the Board of Directors and Shareholders of Aluminum Corporation of China Limited  
(Incorporated in the People's Republic of China with limited liability)

We have audited the accompanying consolidated statement of financial position of Aluminum Corporation of China Limited and its subsidiaries (the "Group") as of December 31, 2012, and the related consolidated statement of comprehensive income, statement of changes in equity and statement of cash flows for the year ended December 31, 2012. These consolidated financial statements are the responsibility of the Group's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States) and International Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Group at December 31, 2012, and the consolidated results of their operations and their cash flows for the year ended December 31, 2012, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Aluminum Corporation of China Limited's internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated April 25, 2013 expressed an unqualified opinion thereon.

/s/ Ernst & Young

Hong Kong  
April 25, 2013

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## **Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting**

The Board of Directors and Shareholders of Aluminum Corporation of China Limited  
(Incorporated in the People's Republic of China with limited liability)

We have audited Aluminum Corporation of China Limited's internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO criteria"). Aluminum Corporation of China Limited's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying "Management's Report on Internal Control over Financial Reporting". Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Aluminum Corporation of China Limited maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) and International Standards on Auditing, the consolidated statement of financial position of Aluminum

Corporation of China Limited as of December 31, 2012, and the related consolidated statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended and our report dated April 25, 2013 expressed an unqualified opinion thereon.

/s/ Ernst & Young

Hong Kong  
April 25, 2013

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Report of Independent Registered Public Accounting Firm

To the shareholders of Aluminum Corporation of China Limited:

In our opinion, the consolidated statement of financial position as of December 31, 2011 and the related consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for each of two years in the period ended December 31, 2011 present fairly, in all material respects, the financial position of Aluminum Corporation of China Limited and its subsidiaries at December 31, 2011, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2011, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and International Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

By: /s/ PricewaterhouseCoopers

PricewaterhouseCoopers

Hong Kong, April 27, 2012

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**  
As of December 31, 2011 and 2012  
(Amounts expressed in thousands of RMB unless otherwise stated)

	Notes	December 31,	December 31, 2012	
		2011	RMB'000	RMB'000
<b>ASSETS</b>				
Non-current assets				
Intangible assets	6	4,148,770	4,260,018	683,780
Property, plant and equipment	7	93,775,373	96,248,091	15,448,884
Land use rights and leasehold land	8	2,558,312	2,594,208	416,399
Investments in jointly controlled entities	9(a)	1,457,229	1,936,950	310,902
Investments in associates	9(b)	2,492,586	17,211,965	2,762,711
Available-for-sale financial investments	10	44,878	64,500	10,353
Deferred tax assets	11	1,517,339	2,116,986	339,800
Other non-current assets	12	1,169,962	1,568,148	251,704
<b>Total non-current assets</b>		<b>107,164,449</b>	<b>126,000,866</b>	<b>20,224,533</b>
Current assets				
Inventories	14	24,124,379	25,596,476	4,108,518
Trade and notes receivables	15	5,631,765	2,615,862	419,875
Other current assets	16	7,665,985	9,851,418	1,581,262
Financial assets at fair value through profit or loss		5,807	8,983	1,442
Restricted cash and time deposits	17	1,053,435	1,128,015	181,059
Cash and cash equivalents	17	10,591,306	9,063,593	1,454,807



		49,072,677	48,264,347	7,746,963
Assets of a disposal group classified as held for sale	13	897,031	751,669	120,651
<hr/>				
Total current assets		49,969,708	49,016,016	7,867,614
<hr/>				
Total assets		157,134,157	175,016,882	28,092,147
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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**

*(CONTINUED)*

As of December 31, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

		December 31, 2011	December 31, 2012	
	Notes	RMB'000	RMB'000	USD'000
<hr/>				
<b>EQUITY AND LIABILITIES</b>				
<b>EQUITY</b>				
Equity attributable to owners of the parent				
Share capital	18	13,524,488	13,524,488	2,170,830
Other reserves	19	19,714,708	19,930,226	3,199,022
Retained earnings				
- proposed final dividend	33	-	-	-
- others		18,586,803	10,353,049	1,661,779
<hr/>				
		51,825,999	43,807,763	7,031,631
Non-controlling interests		6,328,687	9,963,387	1,599,234
<hr/>				

Total equity		58,154,686	53,771,150	8,630,865
<hr/>				
<b>LIABILITIES</b>				
Non-current liabilities				
Interest bearing loans and borrowings	20	35,968,526	36,635,652	5,880,428
Deferred tax liabilities	11	4,456	-	-
Other non-current liabilities	21	646,091	756,669	121,453
<hr/>				
Total non-current liabilities		36,619,073	37,392,321	6,001,881
<hr/>				
Current liabilities				
Financial liabilities at fair value through profit or loss		2,280	12,662	2,032
Interest bearing loans and borrowings	20	46,737,845	67,915,181	10,901,138
Other payables and accrued expenses	22	7,168,325	8,805,315	1,413,351
Trade and notes payables	23	8,401,310	7,059,194	1,133,079
Income tax payable		50,638	61,059	9,801
<hr/>				
Total current liabilities		62,360,398	83,853,411	13,459,401
<hr/>				
Total liabilities		98,979,471	121,245,732	19,461,282
<hr/>				
Total equity and liabilities		157,134,157	175,016,882	28,092,147
<hr/>				
Net current liabilities		(12,390,690)	(34,837,395)	(5,591,787)
<hr/>				
Total assets less current liabilities		94,773,759	91,163,471	14,632,746
<hr/>				

The accompanying notes are an integral part of these consolidated financial statements.

/s/ Xiong Weiping

/s/ Xie Weizhi

Director

Chief Financial Officer

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**ALUMINUM CORPORATION OF CHINA LIMITED**

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

		2010	2011	2012	
	Notes	RMB'000	RMB'000	RMB'000	USD'000
Revenue	5	120,994,847	145,874,433	149,478,821	23,993,005
Cost of sales	25	(113,349,941)	(138,111,367)	(149,802,658)	(24,044,985)
Gross profit/(loss)		7,644,906	7,763,066	(323,837)	(51,980)
Selling and distribution expenses	26(a)	(1,573,301)	(1,622,788)	(1,967,922)	(315,873)
General and administrative expenses	26(b)	(2,623,740)	(2,779,429)	(2,992,968)	(480,404)
Research and development expenses		(164,235)	(218,026)	(198,946)	(31,933)
Impairment loss on property, plant and equipment	7	(701,781)	(279,750)	(19,903)	(3,195)
Other income	27(a)	328,853	185,501	744,490	119,499
Other gains/(losses), net	27(b)	491,024	538,033	(25,484)	(4,090)

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Operating profit/(loss)		3,401,726	3,586,607	(4,784,570)	(767,976)
Finance income	28	91,109	138,778	314,179	50,429
Finance costs	28	(2,586,293)	(3,432,352)	(4,913,559)	(788,681)
Share of profits of:					
Jointly controlled entities	9(a)	233,784	122,262	37,040	5,945
Associates	9(b)	240,028	402,701	254,848	40,906
<hr/>					
Profit/(loss) before income tax		1,380,354	817,996	(9,092,062)	(1,459,377)
Income tax (expense)/benefit	31	(411,216)	(127,492)	448,479	71,986
<hr/>					
Profit/(loss) for the year		969,138	690,504	(8,643,583)	(1,387,391)
<hr/>					
Attributable to:					
Owners of the parent		778,008	237,974	(8,233,754)	(1,321,609)
Non-controlling interests		191,130	452,530	(409,829)	(65,782)
<hr/>					
		969,138	690,504	(8,643,583)	(1,387,391)
<hr/>					
Other comprehensive (loss)/income, net of tax:					
Reclassification of cumulated fair value changes on available-for-sale financial assets upon disposal		(1,155)	-	-	-
Exchange differences on translation of foreign operations		40,833	(22,041)	18,752	3,010
<hr/>					

Other comprehensive income/(loss) for the year, net of tax	39,678	(22,041)	18,752	3,010
<hr/>				
Total comprehensive income/(loss) for the year	1,008,816	668,463	(8,624,831)	(1,384,381)
<hr/>				

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

	Notes	2010 RMB'000	2011 RMB'000	2012 RMB'000	USD'000
<hr/>					
Total comprehensive income/(loss) for the year attributable to:					
Owners of the parent		818,127	215,933	(8,215,002)	(1,318,599)
Non-controlling interests		190,689	452,530	(409,829)	(65,782)
<hr/>					
		1,008,816	668,463	(8,624,831)	(1,384,381)
<hr/>					

Basic and diluted  
earnings/(loss)  
per share attributable to  
ordinary

equity holders of the  
parent

(expressed in RMB and  
USD per share)

32	RMB0.06	RMB0.02	RMB(0.61)	USD(0.10)
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Details of the dividends payable and proposed for the years ended December 31, 2010, 2011 and 2012 are disclosed in Note 33 to the consolidated financial statements.

The accompanying notes are an integral part of these consolidated financial statements.

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## ALUMINUM CORPORATION OF CHINA LIMITED

### CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

	Attributable to owners of the parent								
	Capital reserves		Other capital reserves	Statutory surplus reserve	Special reserve	Exchange fluctuation reserve	Investment revaluation reserve	Retained earnings	Total
	Share capital (Note 18)	Share premium (Note 18)	(Note 19)	(Note 19)	(Note 19)				
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At January 1, 2010	13,524,488	12,848,885	432,600	5,799,232	56,747	(54,926)	714	17,792,998	50,400,738
Profit for the year	-	-	-	-	-	-	-	778,008	778,008
Other comprehensive income/(loss) for the year:									
Reclassification of cumulated fair value changes on									

available-for-sale financial assets upon disposal - gross	-	-	-	-	-	-	(851)	-	(851)
Reclassification of cumulated fair value changes on available-for-sale financial assets upon disposal - tax effect	-	-	-	-	-	-	137	-	137
Exchange differences on translation of foreign operations	-	-	-	-	-	40,833	-	-	40,833
<hr/>									
Total other comprehensive income/(loss)	-	-	-	-	-	40,833	(714)	-	40,119
<hr/>									
Total comprehensive income/(loss) for the year	-	-	-	-	-	40,833	(714)	778,008	818,127
Release of deferred governmental subsidies	-	-	88,769	-	-	-	-	-	88,769
Acquisition of non-controlling interests	-	(1,366)	-	-	-	-	-	-	(1,366)
Capital injection from non-controlling shareholders of subsidiaries	-	-	-	-	-	-	-	-	-
Partial disposal of interest in a subsidiary ( <i>Note</i> <i>2.4</i> )	-	-	258,335	-	(806)	-	-	-	257,529
Appropriation of									

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statutory surplus reserve	-	-	-	68,325	-	-	-	(68,325)	-
Other appropriation	-	-	-	-	17,431	-	-	-	17,431
Share of reserve of associates	-	-	357	-	(793)	-	-	-	(436)
Dividends relating to 2009	-	-	-	-	-	-	-	-	-
At December 31, 2010	13,524,488	12,847,519	780,061	5,867,557	72,579	(14,093)	-	18,502,681	51,580,792

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY**

(CONTINUED)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

	Attributable to owners of the parent									
	Share capital	Share premium	Other capital reserves	Statutory surplus reserve	Special reserve	Exchange fluctuation reserve	Retained earnings	Total	Non-controlling interests	
	(Note 18)		(Note 19)	(Note 19)	(Note 19)					
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
At January 1, 2011	13,524,488	12,847,519	780,061	5,867,557	72,579	(14,093)	18,502,681	51,580,792	5,606,063	57,110,000
Profit for the year	-	-	-	-	-	-	237,974	237,974	452,530	69,000



Other comprehensive loss for the year:											
Exchange differences on translation of foreign operations	-	-	-	-	-	(22,041)	-	(22,041)	-	(22,041)	-
<b>Total comprehensive (loss)/income for the year</b>	-	-	-	-	-	(22,041)	237,974	215,933	452,530	60,000	60,000
Release of deferred governmental subsidies	-	-	165,716	-	-	-	-	165,716	11,834	11,834	11,834
Acquisition of non-controlling interests	-	(791)	-	-	-	-	-	(791)	(159,480)	(159,480)	(159,480)
Acquisition of assets (Note 6)	-	-	-	-	-	-	-	-	477,197	477,197	477,197
Disposal of a subsidiary	-	-	-	-	-	-	-	-	(659)	(659)	(659)
Other appropriation	-	-	-	-	14,267	-	-	14,267	84	84	84
Share of reserve of associates	-	-	-	-	3,934	-	-	3,934	11,343	11,343	11,343
Dividends relating to 2010	-	-	-	-	-	-	(153,852)	(153,852)	(70,225)	(70,225)	(70,225)
<b>At December 31, 2011</b>	<b>13,524,488</b>	<b>12,846,728</b>	<b>945,777</b>	<b>5,867,557</b>	<b>90,780</b>	<b>(36,134)</b>	<b>18,586,803</b>	<b>51,825,999</b>	<b>6,328,687</b>	<b>58,100,000</b>	<b>58,100,000</b>

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

	Attributable to owners of the parent									
	Capital reserves		Other capital reserves	Statutory surplus reserve	Special reserve	Exchange fluctuation reserve	Retained earnings	Non-controlling interests		
	Share capital	Share premium						Total	interests	
	(Note 18)	(Note 19)	(Note 19)	(Note 19)	(Note 19)					
RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	
At January 1, 2012	13,524,488	12,846,728	945,777	5,867,557	90,780	(36,134)	18,586,803	51,825,999	6,328,687	58,154,686
Loss for the year	-	-	-	-	-	-	(8,233,754)	(8,233,754)	(409,829)	(8,643,583)
Other comprehensive income for the year:										
Exchange differences on translation of foreign operations	-	-	-	-	-	18,752	-	18,752	-	-
Total comprehensive income/(loss)	-	-	-	-	-	18,752	(8,233,754)	(8,215,002)	(409,829)	(8,626,251)
Release of deferred governmental subsidies	-	-	203,299	-	-	-	-	203,299	8,544	9,043
Acquisition of non-controlling interests	-	(7,946)	-	-	-	-	-	(7,946)	7,946	0

Capital injection from										
non-controlling shareholders	-	-	-	-	-	-	-	-	-	4,104,335
Other appropriation	-	-	-	-	(877)	-	-	(877)	-	2,310
Share of reserve of associates	-	-	-	-	2,290	-	-	2,290	-	8,243
Transfer from other capital reserves to share premium	-	258,335	(258,335)	-	-	-	-	-	-	-
Dividends paid by subsidiaries to										
non-controlling shareholders relating to 2011	-	-	-	-	-	-	-	-	-	(86,849)
<hr/>										
At December 31, 2012	13,524,488	13,097,117	890,741	5,867,557	92,193	(17,382)	10,353,049	43,807,763	9,963,387	53,487,000

The accompanying notes are an integral part of these consolidated financial statements.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

		2010	2011	2012	
	Notes	RMB'000	RMB'000	RMB'000	USD'000
Net cash flows from operating activities	34	7,103,859	2,489,756	1,122,352	180,150

Investing activities					
Purchases of intangible assets		(7,099)	(80,244)	(55,356)	(8,885)
Purchases of property, plant and equipment		(8,325,947)	(8,552,718)	(9,148,495)	(1,468,435)
Purchases of land use rights and leasehold land		(2,937)	(107,981)	(1,528)	(245)
Proceeds from disposal of property,					
plant and equipment		233,007	80,421	185,926	29,843
Proceeds from partial disposal of a subsidiary		510,783	-	-	-
Payments of consideration in relation to					
acquisitions of subsidiaries, net of cash acquired		-	(91,460)	-	-
Payment of consideration for acquisition of					
non-controlling interests		-	(85,429)	-	-
Investments in jointly controlled entities	9(a)	(71,325)	(140,000)	(171,564)	(27,538)
Investments in associates	9(b)	(748,650)	(816,965)	(13,406,845)	(2,151,947)
Transformation from a subsidiary to an associate		(23,601)	-	-	-
Investment in an available-for-sale financial investment	10	-	-	(27,400)	(4,398)
Investment income on financial products		-	22,854	26,960	4,327
Proceeds from disposal of available-for-sale financial investments		158,635	256	-	-
Dividends received		-	102,393	112,984	18,135
Interest received		4,879	5,611	49,668	7,972
Decrease in time deposits		47,278	10,000	19,821	3,181
Proceeds from/(payment of) settlement					
of futures, options and forward					
foreign exchange contracts, net		203,237	550,863	(107,616)	(17,274)
Deposit for investment projects	12,16	(849,809)	(536,672)	(300,111)	(48,171)
Loans to related parties	35	-	(363,665)	(585,504)	(93,980)

Refund of deposit for an investment project	269,575	-	-	-
Repayments of loans from related parties	-	-	210,169	33,734
Loan to a third party	-	-	(100,000)	(16,051)
Government grants/subsidies received	385,299	392,344	251,857	40,426
Others	(43,642)	(104,155)	(106,056)	(17,021)
<hr/>				
Net cash flows used in investing activities	(8,260,317)	(9,714,547)	(23,153,090)	(3,716,327)
<hr/>				

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

	2010	2011	2012		
	Notes	RMB'000	RMB'000	RMB'000	USD'000
<hr/>					
Financing activities					
Instalment payment of bonds issuance expenses		(30,000)	(21,000)	(21,000)	(3,371)
Proceeds from issuance of short-term bonds and medium-term notes, net of issuance costs		12,694,000	17,733,500	29,468,136	4,729,962
Repayments of short-term bonds and medium-term notes		-	(15,700,000)	(18,000,000)	(2,889,199)
Drawdown of short-term and long-term loans		34,141,516	56,477,596	74,346,531	11,933,441
Payments of loan deposits		-	-	(365,400)	(58,651)
		(41,195,138)	(45,378,131)	(63,925,148)	(10,260,694)

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Repayments of short-term and long-term loans					
Proceeds from government subsidies		-	-	180,290	28,939
Capital injection from non-controlling interests		203,100	-	4,104,335	658,791
Dividends paid by subsidiaries to non-controlling shareholders		(109,974)	(69,780)	(52,859)	(8,484)
Dividends paid to the equity holders of the Company		-	(153,852)	-	-
Interest paid		(2,985,951)	(4,045,880)	(5,305,932)	(851,661)
<hr/>					
Net cash flows from financing activities		2,717,553	8,842,453	20,428,953	3,279,073
<hr/>					
Net increase/(decrease) in cash and cash equivalents		1,561,095	1,617,662	(1,601,785)	(257,104)
Cash and cash equivalents at beginning of year	17	7,401,410	8,982,710	10,591,306	1,700,022
Net foreign exchange difference		20,205	(9,066)	74,072	11,889
<hr/>					
Cash and cash equivalents at end of year	17	8,982,710	10,591,306	9,063,593	1,454,807
<hr/>					

The accompanying notes are an integral part of these consolidated financial statements.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
For the years ended December 31, 2010, 2011 and 2012  
(Amounts expressed in thousands of RMB unless otherwise stated)

## 1. GENERAL INFORMATION

Aluminum Corporation of China Limited () (the "Company") and its subsidiaries (together the "Group") are principally engaged in the manufacture and distribution of alumina, primary aluminum and aluminum fabricated products. The Group is also engaged in the development of bauxite related resources, the production, fabrication and distribution of bauxite, iron ore, carbon and relevant non-ferrous metal products and the trading of non-ferrous metal products and coal products.

The Company is a joint stock company which is domiciled and was incorporated on September 10, 2001 in the People's Republic of China (the "PRC") with limited liability. The address of its registered office is No. 62 North Xizhimen Street, Haidian District, Beijing, the PRC.

The Company's shares have been listed on the Main Board of the Stock Exchange of Hong Kong Limited and the New York Stock Exchange in 2001. The Company also listed its A shares on the Shanghai Stock Exchange in 2007.

In the opinion of the directors, the ultimate holding company and parent of the Company is Aluminum Corporation of China () ("Chinalco"), a company incorporated and domiciled in the PRC and wholly owned by State-owned Assets Supervision and Administration Commission of the State Council.

## 2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

### 2.1 Basis of preparation

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB"). In addition, these consolidated financial statements also comply with the applicable disclosure requirements of the Hong Kong Companies Ordinance. The consolidated financial statements have been prepared on a historical cost basis, except for available-for-sale financial investments and financial assets and liabilities at fair value through profit or loss, which have been measured at fair value. Certain property, plant and equipment, intangible assets and investments in subsidiaries were stated at deemed costs. Disposal groups held for sale are stated at the lower of their carrying amounts and fair values less costs to sell as further explained in Note 2.12.

These consolidated financial statements are presented in thousands of Chinese Renminbi ("RMB") unless otherwise stated. Solely for the convenience of the reader, the financial statements as of and for the year ended December 31, 2012 have been translated into United States Dollars ("USD") at the noon buying rate in New York city on December 31, 2012 for cable transfers in RMB by the Federal Reserve Bank of New York of USD1.00 = RMB6.2301. No representation is made that the RMB amounts could have been, or could be, converted into USD at that rate or at any other certain rates on December 31, 2012, or at any other dates.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Group's accounting policies. The areas 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.

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## **ALUMINUM CORPORATION OF CHINA LIMITED**

### **NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

#### **2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

##### **2.1 Basis of preparation**

*(Continued)*

Going concern

As at December 31, 2012, the Group's current liabilities exceeded its current assets by approximately RMB34,837 million (December 31, 2011: RMB12,391 million). The directors of the Company have considered the Group's available sources of funds as follows:



- \* The Group's expected net cash inflows from operating activities in 2013;
- \* Unutilised banking facilities of approximately RMB96,942 million as at December 31, 2012, of which amounts totaling RMB54,859 million will be subject to renewal during the next 12 months. The directors of the Company are confident that these banking facilities could be renewed upon expiration based on the Group's past experience and good credit standing; and
- \* Other available sources of financing from banks and other financial institutions given the Group's credit history.

The directors of the Company believe that the Group has adequate resources to continue operation for the foreseeable future of not less than 12 months from the approval date of these consolidated financial statements. The directors of the Company therefore are of the opinion that it is appropriate to adopt the going concern basis in preparing the consolidated financial statements.

## 2.2 Changes in accounting policies and disclosures

The accounting policies adopted are consistent with those followed in the preparation of the Group's annual financial statements for the year ended December 31, 2011, except for the following amendments to IFRS effective as at January 1, 2012:

- \* *IFRS 1 First-Time Adoption of International Financial Reporting Standards (Amendment) - Severe Hyperinflation and Removal of Fixed Dates for First-Time Adopters*
- \* *IFRS 7 Financial Instruments: Disclosures (Amendment) - Enhanced Derecognition Disclosure Requirements*
- \* *IAS 12 Income Taxes (Amendment) - Deferred Taxes: Recovery of Underlying Assets*

The major impact arising from adoption of the above amendments is described below:

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(CONTINUED)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

## 2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES

(CONTINUED)

### 2.2 Changes in accounting policies and disclosures

(Continued)

*IFRS 1 First-Time Adoption of International Financial Reporting Standards (Amendment) - Severe Hyperinflation and Removal of Fixed Dates for First-Time Adopters*

The IASB provided guidance on how an entity should resume presenting IFRS financial statements when its functional currency ceases to be subject to hyperinflation. The amendments had no impact to the Group.

*IFRS 7 Financial Instruments: Disclosures (Amendment) - Enhanced Derecognition Disclosure Requirements*

The amendments require additional disclosure about financial assets that have been transferred but not derecognised to enable the user of the Group's financial statements to understand the relationship with those assets that have not been derecognised and their associated liabilities. In addition, the amendments require disclosures about the entity's continuing involvement in derecognised assets to enable the users to evaluate the nature of, and risks associated with, such involvement. Additional disclosures in respect of the Group's notes receivable endorsement arrangement has been included in Note 15 to the consolidated financial statements.

*IAS 12 Income Taxes (Amendment) - Deferred Taxes: Recovery of Underlying Assets*

This amendment clarifies the determination of deferred tax on investment property measured at fair value and introduces a rebuttable presumption that that deferred tax on investment property measured using the fair value in IAS 40 should be determined on the basis that its carrying amount will be recovered through sale. It includes the requirement that deferred tax on non-depreciable assets that are measured using the revaluation model in IAS 16 should always be measured on a sale basis. The Group does not have investment property

carrying at fair value for the year ended December 31, 2012. Therefore, the amendment has had no effect on the Group's financial position, performance or its disclosures.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.3 Issued but not yet effective financial reporting standards**

The Group has not applied the following new and revised standards, amendments and interpretations that have been issued but are not yet effective, in these consolidated financial statements:

- \* IAS 1 *Presentation of Items of Other Comprehensive Income - Amendments to IAS 1*<sup>1</sup>
- \* IAS 19 *Employee Benefits (Revised)*<sup>2</sup>
- \* IAS 27 *Separate Financial Statements (as revised in 2011)*<sup>2</sup>
- \* IAS 28 *Investments in Associates and Joint Ventures (as revised in 2011)*<sup>2</sup>
- \* IAS 32 *Offsetting Financial Assets and Financial Liabilities - Amendments to IAS 32*<sup>3</sup>
- \* IFRS 1 *Government Loans - Amendments to IFRS 1*<sup>2</sup>
- \* IFRS 7 *Disclosures - Offsetting Financial Assets and Financial Liabilities - Amendments to IFRS 7*<sup>2</sup>
- \* IFRS 9 *Financial Instruments: Classification and Measurement*<sup>4</sup>
- \* IFRS 10 *Consolidated Financial Statements*<sup>2</sup>
- \* IFRS 10, IFRS 12 and IAS 27 (Revised) *Investment Entities - Amendments to IFRS 10, IFRS 12 and IAS 27 (Revised)*<sup>3</sup>
- \* IFRS 10, IFRS 11 and IFRS 12 *Transition Guidance - Amendments to IFRS 10, IFRS 11 and IFRS 12*<sup>2</sup>
- \* IFRS 11 *Joint Arrangements*<sup>2</sup>
- \* IFRS 12 *Disclosure of Interests in Other Entities*<sup>2</sup>

- \* IFRS 13 *Fair Value Measurement* <sup>2</sup>
- \* IFRIC 20 *Stripping Costs in the Production Phase of a Surface Mine* <sup>2</sup>
- \* Annual Improvements May 2012

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- 1 Effective for annual periods beginning on or after 1 July 2012
- 2 Effective for annual periods beginning on or after 1 January 2013
- 3 Effective for annual periods beginning on or after 1 January 2014
- 4 Effective for annual periods beginning on or after 1 January 2015

Further information about those IFRSs that are expected to be applicable to the Group is as follows:

*IAS 1 Presentation of Items of Other Comprehensive Income - Amendments to IAS 1*

The amendments to IAS 1 change the grouping of items presented in other comprehensive income ("OCI"). Items that could be reclassified (or "recycled") to profit or loss at a future point in time (for example, net gain on hedge of net investment, exchange differences on translation of foreign operations, net movement on cash flow hedges and net loss or gain on available-for-sale financial assets) would be presented separately from items that will never be reclassified (for example, actuarial gains and losses on defined benefit plans and revaluation of land and buildings). The amendments affect presentation only and have no impact on the Group's financial position or performance.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

(CONTINUED)

2.3 Issued but not yet effective financial reporting standards

(Continued)

*IAS 19 Employee Benefits (Revised)*

The IASB has issued numerous amendments to IAS 19. The revised standard introduces significant changes in the accounting for defined benefit pension plans including removing the choice to defer the recognition of actuarial gains and losses. Other changes include modifications to the timing of recognition for termination benefits and disclosures of defined benefit plans. These amendments are not expected to have any impact on the Group's financial position or performance.

*IAS 28 Investments in Associates and Joint Ventures (as revised in 2011)*

As a consequence of the new IFRS 11 *Joint Arrangements*, and IFRS 12 *Disclosure of Interests in Other Entities*, IAS 28 *Investments in Associates*, has been renamed IAS 28 *Investments in Associates and Joint Ventures*, and describes the application of the equity method to investments in joint ventures in addition to associates. These amendments are not expected to have any impact on the Group's financial position or performance.

*IAS 32 Offsetting Financial Assets and Financial Liabilities - Amendments to IAS 32*

These amendments clarify the meaning of "currently has a legally enforceable right to set-off". The amendments also clarify the application of the IAS 32 offsetting criteria to settlement systems (such as central clearing house systems) which apply gross settlement mechanisms that are not simultaneous. These amendments are not expected to impact the Group's financial position or performance.

*IFRS 1 Government Loans - Amendments to IFRS 1*

These amendments require first-time adopters to apply the requirements of IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance*, prospectively to government loans existing at the date of transition to IFRS. Entities may choose to apply the requirements of IFRS 9 (or IAS 39, as applicable) and IAS 20 to government loans retrospectively if the information needed to do so had

been obtained at the time of initially accounting for that loan. The exception would give first-time adopters relief from retrospective measurement of government loans with a below-market rate of interest. The amendments have no impact on the Group.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.3 Issued but not yet effective financial reporting standards**

*(Continued)*

*IFRS 7 Disclosures - Offsetting Financial Assets and Financial Liabilities - Amendments to IFRS 7*

These amendments require an entity to disclose information about rights to set-off and related arrangements (e.g., collateral agreements). The disclosures would provide users with information that is useful in evaluating the effect of netting arrangements on an entity's financial position. The new disclosures are required for all recognised financial instruments that are set off in accordance with IAS 32 *Financial Instruments: Presentation*. The disclosures also apply to recognised financial instruments that are subject to an enforceable master netting arrangement or similar agreement, irrespective of whether they are set off in accordance with IAS 32. These amendments will not impact the Group's financial position or performance.

*IFRS 9 Financial Instruments: Classification and Measurement*

IFRS 9, as issued, reflects the first phase of the IASB's work on the replacement of IAS 39 and applies to classification and measurement of financial assets and financial liabilities as defined in IAS 39. The standard was initially effective for annual periods beginning on or after 1 January 2013, but *Amendments to IFRS 9 Mandatory Effective Date*

*of IFRS 9 and Transition Disclosures*, issued in December 2011, moved the mandatory effective date to 1 January 2015. In subsequent phases, the IASB will address hedge accounting and impairment of financial assets. The adoption of the first phase of IFRS 9 will have an effect on the classification and measurement of the Group's financial assets, but will not have an impact on classification and measurements of financial liabilities. The Group will quantify the effect in conjunction with the other phases, when the final standard including all phases is issued.

*IFRS 10 Consolidated Financial Statements, IAS 27 Separate Financial Statements*

IFRS 10 replaces the portion of IAS 27 *Consolidated and Separate Financial Statements* that addresses the accounting for consolidated financial statements. It also addresses the issues raised in SIC 12 *Consolidation - Special Purpose Entities*.

IFRS 10 establishes a single control model that applies to all entities including special purpose entities. The changes introduced by IFRS 10 will require management to exercise significant judgment to determine which entities are controlled and therefore are required to be consolidated by a parent, compared with the requirements that were in IAS 27. Management is finalizing its analysis of this new standard and our preliminary assessment is that it is not expected to have a material impact on the Group's financial statements.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.3 Issued but not yet effective financial reporting standards**

*(Continued)*

*IFRS 11 Joint Arrangements*

IFRS 11 replaces IAS 31 *Interests in Joint Ventures* and SIC 13 *Jointly controlled Entities - Non-monetary Contributions by Venturers*. IFRS 11 removes the option to account for jointly controlled entities (JCEs) using proportionate consolidation. Instead, JCEs that meet the definition of a joint venture must be accounted for using the equity method. Application of this new standard will not have impact on the financial position of the Group because the Group's jointly controlled entities are accounted for using equity method of accounting.

*IFRS 12 Disclosure of Interests in Other Entities*

IFRS 12 includes all of the disclosures that were previously in IAS 27 related to consolidated financial statements, as well as all of the disclosures that were previously included in IAS 31 and IAS 28. These disclosures relate to an entity's interests in subsidiaries, joint arrangements, associates and structured entities. A number of new disclosures are also required, but this standard has no impact on the Group's financial position or performance.

*IFRS 10, IFRS 12 and IAS 27 (Revised) Investment Entities - Amendments to IFRS 10, IFRS 12 and IAS 27 (Revised)*

The amendments to IFRS 10 were issued in October 2012. The amendments apply to a particular class of business that qualifies as an investment entity. The term "investment entity" refers to an entity whose business purpose is to invest funds solely for returns from capital appreciation, investment income or both. The amendments provide an exception to the consolidation requirements in IFRS 10 and require investment entities to measure particular subsidiaries at fair value through profit or loss, rather than consolidate them. The amendments also set out disclosure requirements for investment entities. The Group expects that these amendments will not have any financial impact on the Group as the Company is not an investment entity as defined in IFRS 10.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
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*(CONTINUED)*

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2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES

*(CONTINUED)*

2.3 Issued but not yet effective financial reporting standards

*(Continued)*

*IFRS 10, IFRS 11 and IFRS 12 Transition Guidance - Amendments to IFRS 10, IFRS 11 and IFRS 12*

In June 2012, the International Accounting Standards Board issued amendments to IFRS 10, IFRS 11 and IFRS 12 which clarify the transition guidance in IFRS 10, IFRS 11 and IFRS 12 and provide further relief from full retrospective application of these standards, limiting the requirement to provide adjusted comparative information to only the preceding comparative period. The amendments clarify that retrospective adjustments are only required if the consolidation conclusion as to which entities are controlled by the Group is different between IFRS 10 and IAS 27 or SIC 12 at the beginning of the annual period in which IFRS 10 is applied for the first time. Furthermore, for disclosures related to unconsolidated structured entities, the amendments will remove the requirement to present comparative information for periods before IFRS 12 is first applied. These amendments will not impact the Group's financial position or performance.

*IFRS 13 Fair Value Measurement*

IFRS 13 establishes a single source of guidance under IFRS for all fair value measurements. IFRS 13 does not change when an entity is required to use fair value, but rather provides guidance on how to measure fair value under IFRS when fair value is required or permitted. The Group is currently assessing the impact that this standard will have on the financial position and performance, but based on the preliminary analyses, no material impact is expected.

*IFRIC 20 Stripping Costs in the Production Phase of a Surface Mine*

This interpretation applies to waste removal (stripping) costs incurred in surface mining activity, during the production phase of the mine. The interpretation addresses the accounting for the benefit from the stripping activity. The Group is currently assessing the impact of this interpretation on the financial statements.

Annual Improvements May 2012

These improvements will not have an impact on the Group, but include:

*IFRS 1 First-time Adoption of International Financial Reporting Standards*

This improvement clarifies that an entity that ceased applying IFRS in the past and chooses, or is required, to apply IFRS, has the option to re-apply IFRS 1. If IFRS 1 is not re-applied, an entity must retrospectively restate its financial statements as if it had never ceased applying IFRS.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
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*(CONTINUED)*

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.3 Issued but not yet effective financial reporting standards**

*(Continued)*

Annual Improvements May 2012 *(Continued)*

*IAS 1 Presentation of Financial Statements*

This improvement clarifies the difference between voluntary additional comparative information and the minimum required comparative information. Generally, the minimum required comparative information is the previous period.

*IAS 16 Property Plant and Equipment*

This improvement clarifies that major spare parts and servicing equipment that meet the definition of property, plant and equipment are

not inventory.

*IAS 32 Financial Instruments: Presentation*

This improvement clarifies that income taxes arising from distributions to equity holders are accounted for in accordance with IAS 12 *Income Taxes*.

*IAS 34 Interim Financial Reporting*

The amendment aligns the disclosure requirements for total segment assets with those for total segment liabilities in interim financial statements. This clarification also ensures that interim disclosures are aligned with annual disclosures.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.4 Consolidation**

The consolidated financial statements comprise the financial statements of the Company and all of its subsidiaries as at December 31, 2012.

- (a) Merger accounting for business combinations under common control

The consolidated financial statements incorporate the financial statements of the combining entities or businesses in which the common control combination occurs as if they had been combined from the date when the combining entities or businesses first came under the control of the controlling party.

The net assets of the combining entities or businesses are combined using the existing book values from the controlling parties' perspective. No amount is recognised in consideration for goodwill or excess of the acquirers' interest in the net fair value of the acquiree's identifiable assets, liabilities and contingent liabilities over cost at the time of the common control combination, to the extent of the continuation of the controlling party's interest.

The consolidated statement of comprehensive income includes the results of each of the combining entities or businesses from the earliest date presented or since the date when the combining entities or businesses first came under common control, where this is shorter, regardless of the date of the common control combination.

Transaction costs, including professional fees, registration fees, costs of furnishing information to shareholders, costs or losses incurred in combining operations of the previously separate businesses etc., incurred in relation to the common control combination that is to be accounted for by using merger accounting are recognised as expenses in the period in which they are incurred.

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## **ALUMINUM CORPORATION OF CHINA LIMITED**

### **NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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#### **2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

##### **2.4 Consolidation**

*(Continued)*

###### **(b) Acquisition method of accounting for other business combinations**

The acquisition method of accounting is used to account for the acquisition of subsidiaries by the Group, other than common control combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities

incurred to the former owners of the acquiree and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the Group recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the recognised amounts of acquiree's identifiable net assets. The excess of the consideration transferred, the amount recognised for non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired in the case of a bargain purchase, the difference is recognised directly in profit or loss.

If the business combination is achieved in stages, the previously held equity interest is remeasured at its acquisition date fair value and any resulting gain or loss is recognised in profit or loss.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

2.4 Consolidation

*(Continued)*

(c) Subsidiaries

Subsidiaries are all entities over which the Group has the power to govern the financial and operating policies generally accompanying

a shareholding of more than one half of the voting rights. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Group controls another entity. The Group also assesses existence of control where it does not have more than 50% of the voting power but is able to govern the financial and operating policies by virtue of de-facto control. De-facto control may arise in circumstances where the size of the Group's voting rights relative to the size and dispersion of holdings of other shareholders gives the Group the power to govern the financial and operating policies.

Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are de-consolidated from the date that control ceases.

Inter-company transactions, balances, income and expenses on transactions between group companies are eliminated. Profits and losses resulting from inter-company transactions that are recognised in assets are also eliminated. Accounting policies of subsidiaries have been changed where necessary in the consolidated financial statements to ensure consistency with the policies adopted by the Group.

The following is a list of principle subsidiaries:

Name	Place of establishment and operation	Legal status	Registered and fully paid capital	Business nature and scope of operations	Effective equity interest held	
					2011	2012

Directly held:

Baotou Aluminum Co., Ltd.

("Baotou Aluminum")

Mainland

Limited liability

Registered capital

Manufacture and distribution of primary

()

of China

company

500,000 Paid-in

aluminum, aluminum alloy and

100%

100%

(Note (i))

capital 650,000

related fabricated products

and carbon products

Chalco Ruimin Co., Ltd.

Mainland

Limited liability

1,593,887

Manufacture of aluminum, magnesium

93.30%

93.30%

()

of China

company

and related alloy products,

export activities

Chalco Southwest Aluminum

Mainland

Limited liability

540,000

Manufacture and distribution of

60%

60%

Co., Ltd.

of China

company



metal materials (excluding

)

precious metals), sales of general

machinery and equipment

Chalco Southwest Aluminum

Mainland

Limited liability

624,190

Rolling aluminum and aluminum alloy

100%

100%

Cold Rolling Co., Ltd.

of China

company

processing, development of high

(

precision aluminum strip production

)

technology, import and export

activities on goods and technology

Chalco Henan Aluminum Co., Ltd.

Mainland

Limited liability

1,132,460

Manufacture and distribution of

90.03%

90.03%

()

of China

company

aluminum and alloy related products

China Aluminum International

Mainland

Limited liability

1,500,000

Import and export activities

100%

290

100%

Trading Co., Ltd.

of China

company

()

Shanxi Huasheng Aluminum

Mainland

Limited liability

1,000,000

Manufacture and distribution of primary

51%

51%

Co., Ltd. ("Shanxi Huasheng")

of China

company

aluminum, aluminum alloy and

()

carbon-related products

Shanxi Huaze Aluminum and

Mainland

Limited liability

1,500,000

Manufacture and distribution of primary

60%

60%

Power Co., Ltd.

of China

company

aluminum and anode carbon

()

products and electricity generation

and supply

Fushun Aluminum Co., Ltd.

Mainland

Limited liability

1,140,000

Aluminum smelting, manufacture and

100%

292

100%

()  
of China  
company

distribution of nonferrous metals

Zunyi Aluminum Co., Ltd.

Mainland

Limited liability

802,620

Manufacture and distribution

62.10%

62.10%

()  
of China  
company

of primary aluminum

Chalco Zunyi Alumina Co., Ltd.

Mainland

Limited liability

1,400,000

Manufacture and distribution

67%

73.28%

("Zunyi Alumina")

of China

company

of alumina

(

)

*(Note (ii))*

Shandong Huayu Aluminum and

Mainland

Limited liability

1,627,697

Manufacture and distribution of

55%

55%

Power Co., Ltd.

of China

company

primary aluminum

()

Gansu Hualu Aluminum Co., Ltd.

Mainland

Limited liability

529,240

Manufacture and distribution of

51%

51%

()

of China

company

primary aluminum

Chalco Hong Kong Ltd.

Hong Kong

Limited liability

HKD849,940,471

Overseas investments and alumina

100%

295

100%

()

company

import and export activities

Chalco Mining Co., Ltd.

Mainland

Limited liability

700,000

Manufacture, acquisition and

100%

100%

()

of China

company

distribution of bauxite mines,

limestone ore, aluminum

magnesium ore and related



nonferrous metal products

Jiaozuo Wanfang Aluminum

Mainland

Limited liability

480,176

Aluminum smelting, manufacture

24.002%

24.002%

Manufacturing Co., Ltd.

of China

company

and distribution of nonferrous

("Jiaozuo Wanfang") (*Note (iii)*)

metals

()

Shanxi Huaxing Alumina Co., Ltd.

Mainland

Limited liability

947,952

297

Manufacture and distribution of

100%

100%

()

of China

company

alumina

Gansu Huayang Mining

Mainland

Limited liability

16,670

Manufacture and distribution of

70%

70%

Development Co., Ltd.

of China

company

coal and other mineral products

("Huayang Mining")

(

)

*(Note (iv))*

Chalco Energy Co., Ltd.

Mainland

Limited liability

539,993

Thermoelectricity supply and

100%

100%

()

of China

company

investment management

Indirectly held:

Chalco Iron Ore Holding Ltd.

Hong Kong

Limited liability

HKD2,000

Overseas investment

65%

65%

()

company

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The English names of subsidiaries represent the best effort by the management of the Group in translating their Chinese names as they do not have any official English names.

Notes:

- (i) In June 2012, the Company injected cash amounting to RMB150 million into Baotou Aluminum.
- (ii) In August 2012, the Company injected cash amounting to RMB165 million into Zunyi Alumina. Therefore, the Group's equity interest in Zunyi Alumina increased from 67% to 73.28%.
- (iii) In October 2010, the Company disposed a total of 5% equity interest of Jiaozuo Wanfang in an open market at market quoted prices of the shares. As a result of the disposal, the Company's equity interest in Jiaozuo Wanfang decreased from 29% to 24.002%, but the Company remained the single largest shareholder and its rights to nominate 5 out of the 6 non-independent directors remained unchanged as at December 31, 2011 and 2012. The equity holdings in Jiaozuo Wanfang are dispersed and other shareholders have not organised and cannot easily organised their holdings in such way that they could exercise more voting power than the minority shareholder. In addition, all shareholders' resolutions proposed by the Company in the past 5 years were approved. Therefore the directors of the

Company are of the view that the Company has de facto control over Jiaozuo Wanfang.

- (iv) In December 2012, the Company injected cash amounting to RMB358 million into Huayang Mining for the first payment of acquiring mining rights in Zhengning County in Gansu Province.
- (v) During the year ended December 31, 2012, apart from the capital injection as set out in notes (i), (ii) and (iv), the Company injected cash amounting to RMB5,275 million (2011: RMB1,979 million) to other subsidiaries of the Company.

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## **ALUMINUM CORPORATION OF CHINA LIMITED**

### **NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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(Amounts expressed in thousands of RMB unless otherwise stated)

#### **2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

##### **2.4 Consolidation *(Continued)***

- (d) Changes in ownership interests in subsidiaries without change of control

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions - that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

- (e) Jointly controlled entities and associates

A jointly controlled entity is the result of contractual arrangements whereby the Group and other parties undertake an economic activity which is subject to joint control and none of the participating parties

has unilateral control over the economic activity.

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights.

Investments in jointly controlled entities/associates are accounted for using the equity method of accounting. Under the equity method, the investment is initially recognised at cost, and the carrying amount is increased or decreased to recognise the investor's share of the profit or loss of the investee after the date of acquisition. The Group's investments in jointly controlled entities/associates include goodwill identified on acquisition.

If the ownership interest in a jointly controlled entity/associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income are reclassified to profit and loss where appropriate.

The Group's share of its jointly controlled entities'/associates' post-acquisition profit or loss is recognised in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognised in other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When the Group's share of losses in a jointly controlled entity/associate equals or exceeds its interest in the jointly controlled entity/associate, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the jointly controlled entity/associate.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING  
POLICIES**

*(CONTINUED)*

2.4 Consolidation (*Continued*)

(e) Jointly controlled entities and associates

(*Continued*)

The Group determines at each reporting date whether there is any objective evidence that the investments in the jointly controlled entities and associates are impaired. If investment in jointly controlled entity/associate is impaired, the Group calculates the amount of impairment as the difference between the recoverable amount of the jointly controlled entity/associate and its carrying value and recognises the amount adjacent to "share of profits and losses of jointly controlled entities" and "share of profits and losses of associates" in profit or loss.

Profits and losses resulting from upstream and downstream transactions between the Group and its jointly controlled entities/associates are recognised in the Group's financial statements only to the extent of unrelated investors' interests in the jointly controlled entities/associates. Unrealised losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of jointly controlled entities/associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

When the investment in a jointly control entity/associate is classified as held for sale, it is accounted for in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*.

Dilution gains and losses arising in investments in jointly controlled entities/associates are recognised in profit or loss.

(f) Disposal of subsidiaries, jointly controlled entities and associates

When the Group ceases to have control or significant influences, any retained interest in the entity is re-measured to its fair value at the date when control or significant influence is lost, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in other comprehensive income are reclassified to profit or loss.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.5 Segment reporting**

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Executive Committee that makes strategic decisions.

**2.6 Related parties**

A party is considered to be related to the Group if:

- (a) the party is a person or a close member of that person's family and that person
  - (i) has control or joint control over the Group;
  - (ii) has a significant influence over the Group; or
  - (iii) is a member of the key management personnel of the Group or of a parent of the Group;

or

- (b) the party is an entity where any of the following conditions applies
  - (i) the entity and the Group are members of the same group;



- (ii) one entity is an associate or joint venture of the other entity (or of a parent, subsidiary or fellow subsidiary of the other entity);
- (iii) the entity and the Group are joint ventures of the same third party;
- (iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity;
- (v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group;
- (vi) the entity is controlled or jointly controlled by a person identified in (a); or
- (vii) a person identified in (a) (i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity).

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.7 Foreign currency translation**

**(a) Functional and presentation currency**

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The consolidated financial statements are presented in RMB, which are the Company's functional currency and the Group's

presentation currency.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in profit or loss.

Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the statement of comprehensive income within "finance costs, net". All other foreign exchange gains and losses are presented in "other gains, net" in profit or loss.

Translation differences on non-monetary financial assets and liabilities such as equities held at fair value through profit or loss are recognised in profit or loss as part of the fair value gain or loss.

(c) Group companies

The results and financial positions of all the Group entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- (i) assets and liabilities in each statement of financial position presented are translated at the closing rates at the end of the reporting period;
- (ii) income and expenses in each statement of comprehensive income are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rates at the dates of the transactions); and
- (iii) all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate. Exchange differences arising are recognised in other comprehensive income.

**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING  
 POLICIES**

*(CONTINUED)*

**2.8 Property, plant and equipment (including construction in progress)**

Property, plant and equipment are stated at historical cost less accumulated depreciation and accumulated impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of any replaced parts is derecognised. All other repairs and maintenance are charged to profit or loss during the financial period in which they are incurred.

Depreciation on property, plant and equipment except for the machinery used in the aluminum fabrication segment, is calculated using the straight-line method to allocate their costs over their estimated useful lives down to their residual values, as follows:

Buildings	10 - 45 years
Machinery	10 - 30 years
Transportation facilities	10 years
Office and other equipment	4 - 5 years

The assets' depreciation method, residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amounts of the assets and are recognised within "other gains, net" in profit or loss.

Construction in progress ("CIP") represents buildings under construction, and plant and equipment pending for installation, and is stated at cost less accumulated impairment losses. Cost comprises construction expenditures, other expenditures necessary for the purpose of preparing the CIP for its intended use and those borrowing costs incurred before the assets are ready for their intended use that are eligible for capitalisation. CIP is transferred to property, plant and equipment when the CIP is ready for its intended use.

#### Changes in accounting estimate

In July 2010, the Group has reassessed and adjusted the useful lives of certain property, plant and equipment based on the past experience. A summary of the changes in the estimated useful lives of different asset groups is as follows:

	<b>Effect of useful lives</b>
Buildings	Increased 2 - 8 years
Machinery	
- device tools, electricity distribution line and gas	Decreased 2 - 4 years
- others	Increased 0 - 2 years
Office and other equipment	Increased 0 - 2 years

The effect of this change in accounting estimate was recognized prospectively from July 1, 2010 onward. As a result of this change, depreciation expense for the year ended December 31, 2010 and the net carrying value of property, plant and equipment as of December 31, 2010 are lowered and higher by approximately RMB384 million and RMB384 million, respectively. Annual depreciation expense is expected to be lowered by approximately RMB838 million in next year.

Since July 1, 2012, the Group has reassessed and adjusted the depreciation method of machinery used in the aluminum fabrication segment. The effect of this change in accounting estimate was recognised prospectively from July 1, 2012. As a result of this change, depreciation expense for the year ended December 31, 2012 and the net carrying value of property, plant and equipment as at December 31, 2012 is decreased and increased by approximately RMB94.3 million and RMB94.3 million, respectively. Annual depreciation expense is

expected to be decreased by approximately RMB121.5 million in next year.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.9 Intangible assets**

**(a) Goodwill**

Goodwill arises on the acquisition of subsidiaries, associates and jointly controlled entities and represents the excess of the consideration transferred over the fair value of the Group's share of the net identifiable assets of the acquiree at the date of acquisition.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash-generating units, or groups of cash-generating units, that is expected to benefit from the synergies of the combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. Goodwill is monitored at the operating segment level.

Goodwill impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs to sell. Any impairment is recognised immediately as an expense and is not subsequently reversed.

**(b) Mining rights and mineral exploration rights**

Mining rights are initially recorded at cost which includes payments of consideration for extraction rights, exploration and other direct costs. Amortisation is provided on a straight-line basis according to the shorter of the expiration date of the mining certificate or the mineable period of natural resources. Estimated useful lives of the majority of the mining rights range from 3 to 30 years. Mineral exploration rights are initially recorded at the cost of the acquisition and adopt the same method as the one for the mining rights to amortise since the exploration rights convert to the mining rights and begin to produce.

(c) Computer software

Acquired computer software licenses are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortised over their estimated useful lives, which do not exceed 10 years. Costs associated with maintaining computer software programmes are recognised as an expense as incurred.

(d) Periodic review of the useful life and amortisation method

For intangible assets with finite useful life, the estimated useful life and amortisation method are reviewed annually at the end of each reporting period and adjusted when necessary.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.10 Research and development costs**

Research and development expenditures are classified as research expenditures and development expenditures according to the nature of the expenditures and whether there is significant uncertainty of

development activities transforming to assets.

Research expenditures are recognised in current period profit or loss. Development expenditures are recognised as assets when all of the following criteria are met:

- (i) it is technically feasible to complete the asset so that it will be available for use or sale;
- (ii) management intends to complete the asset and intends and has the ability to use or sell it;
- (iii) it can be demonstrated that the asset will generate probable future economic benefits;
- (iv) there are adequate technical, financial and other resources to complete the development of the asset and management has the ability to use or sell the asset; and
- (v) the expenditure attributable to the asset during its development phase can be reliably measured.

Development expenditures that do not meet the criteria above are recorded in current period profit or loss as incurred. Development expenditures that have been recorded in profit or loss in previous periods will be not recognised as assets in subsequent periods. Capitalised development expenditures are included in property, plant and equipment and intangible assets as appropriate according to their natures.

## 2.11 Impairment of non-financial assets

Assets that have an indefinite useful life, for example goodwill or intangible assets not ready to use, are not subject to amortisation and are tested annually for impairment. Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

2.12 Non-current assets held for sale

Non-current assets are classified as assets held for sale when their carrying amount is to be recovered principally through a sales transaction and the sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

2.13 Financial assets

(a) Classification

The Group classifies its financial assets in the following categories: financial assets at fair value through profit or loss, loans and receivables and available-for-sale investments. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition.

(i) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are financial assets held for trading. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term. Derivatives are also categorised as held for trading unless they are designated as hedges. Assets in this category are classified as current assets if they are expected to be settled within 12 months; otherwise, they are classified as non-current.

(ii) Loans and receivables



Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for those with maturities greater than 12 months after the end of reporting period, which are classified as non-current assets. Loans and receivables are classified as trade and other receivables in the statement of financial position (Note 2.17).

(iii) Available-for-sale financial investments

Available-for-sale financial investments are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless the investment matures or management intends to dispose of it within 12 months after the end of the reporting period.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

2.13 Financial assets

*(Continued)*

(b) Recognition and measurement

Regular purchases and sales of financial assets are recognised on the trade-date - the date on which the Group commits to purchase or sell the asset. Investments are initially recognised at fair value plus transaction costs for all financial assets not carried at fair value through profit or loss. Financial assets carried at fair value through profit or loss are initially recognised at fair value and transaction costs are expensed in profit or loss. Financial assets are

derecognised when the rights to receive cash flows from the investments have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership. Available-for-sale investments and financial assets at fair value through profit or loss are subsequently carried at fair value. Loans and receivables are subsequently carried at amortised cost using the effective interest method.

Gains or losses arising from changes in the fair value of the "financial assets at fair value through profit or loss" category are presented in profit or loss within "other gains, net", in the period in which they arise. Dividend income from financial assets at fair value through profit or loss is recognised in profit or loss as part of other income when the Group's right to receive payments is established.

Changes in the fair value of monetary and non-monetary securities classified as available-for-sale investments are recognised in other comprehensive income.

When securities classified as available-for-sale investments are sold or impaired, the accumulated fair value adjustments recognised in equity are included in profit or loss as "other gains, net".

Interest on available-for-sale securities calculated using the effective interest method is recognised in profit or loss as part of other income. Dividends on available-for-sale equity instruments are recognised in profit or loss as "other income" when the Group's right to receive payments is established.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

2.13 Financial assets

*(Continued)*

(c) Derecognition of financial assets

A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is derecognised when:

- \* the rights to receive cash flows from the asset have expired; or
  
- \* the Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a "pass-through" arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a "pass-through" arrangement, it evaluates if and to what extent it has retained the risk and rewards of ownership of the asset. When it has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the asset is recognised to the extent of the Group's continuing involvement in the asset. In that case, the Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

(d) Impairment of financial assets

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets are impaired. In the case of equity investments classified as available-for-sale investments, a significant or prolonged decline in the fair value of the security below its cost is considered as an indicator that the securities are impaired. If any such evidence exists for available-for-sale investments, the cumulative loss - measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognised in profit or loss - is removed from equity and recognised in profit or loss. Impairment losses

recognised in profit or loss on equity instruments are not reversed through profit or loss.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

2.14 Financial liabilities

(a) Initial recognition and measurement

Financial liabilities within the scope of IAS 39 are classified as financial liabilities at fair value through profit or loss, loans and borrowings, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. The Group determines the classification of its financial liabilities at initial recognition.

All financial liabilities are recognised initially at fair value plus, in the case of loans and borrowings, directly attributable transaction costs.

The Group's financial liabilities include financial liabilities at fair value through profit or loss and loans and borrowings.

(b) Subsequent measurement

The subsequent measurement of financial liabilities depends on their classification as follows:

Loans and borrowings

After initial recognition, loans and borrowings are subsequently measured at amortised cost, using the effective interest rate method

unless the effect of discounting would be immaterial, in which case they are stated at cost. Gains and losses are recognised in profit or loss when the liabilities are derecognised as well as through the effective interest rate amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the effective interest rate. The effective interest rate amortisation is included in finance costs in profit or loss.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss.

Financial liabilities are classified as held for trading if they are acquired for the purpose of sale in the near term. This category includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by IAS 39. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments. Gains or losses on liabilities held for trading are recognised in profit or loss. The net fair value gain or loss recognised in profit or loss does not include any interest charged on these financial liabilities.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the date of initial recognition and only if the criteria of IAS 39 are satisfied.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

## 2.14 Financial liabilities

*(Continued)*

### (c) Derecognition of financial liabilities

A financial liability is derecognised when the obligation under the liability is discharged or cancelled, or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and a recognition of a new liability, and the difference between the respective carrying amounts is recognised in profit or loss.

## 2.15 Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the statement of financial position when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

## 2.16 Inventories

Inventories comprise raw materials, work-in-progress, finished goods, spare parts and packaging materials and others, and are stated at the lower of cost and net realisable value. Cost is determined using the weighted average method. Work-in-progress and finished goods, comprise materials, direct labor and an appropriate proportion of all production overhead expenditure (based on normal operating capacity). Borrowing costs are excluded.

Provision for impairment of inventory is usually determined by the excess of cost over net realisable value and recorded in profit or loss. Net realisable values are determined based on the estimated selling price less estimated conversion costs, selling expenses and related taxes in the ordinary course of business. Provision for or reversal of impairment of inventory is recognised within "cost of sales" in profit or loss.

## 2.17 Trade and notes receivables and other receivables

Trade and notes receivables and other receivables are amounts due from customers for merchandise sold or services performed in the ordinary

course of business. If collection of these receivables is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets.

Trade and notes receivable and other receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING  
POLICIES**

*(CONTINUED)*

**2.18 Cash and cash equivalents**

Cash and cash equivalents include cash in hand, deposits held at call with banks and other short-term highly liquid investments (including time deposits) with original maturities of three months or less. Bank overdrafts, if any, are shown as borrowings in current liabilities in the statement of financial position.

Time deposits and other cash investments with original maturities of more than three months are excluded from cash and cash equivalents.

**2.19 Government grants**

Government grants are recognised when the Group fulfils the conditions attached to them and there is reasonable assurance that the grant will be received. When the government grant is in the form of monetary asset, it is measured at the actual amount received. When the grant is provided based on a pre-determined rate, it is measured at the fair value of the amount receivable.

Asset-related government grants are recognised as deferred income and are amortised evenly in profit or loss over the useful lives of the related

assets.

Income-related government grants that are used to compensate subsequent related expenses or losses of the Group are recognised as deferred income and recorded in profit or loss when the related expenses or losses are incurred. When the grants used to compensate expenses or losses that were already incurred, they are directly recognised in profit or loss of the current period.

## 2.20 Trade and notes payables and other payables

Trade and notes payable and other payables are mainly obligations to pay for goods, equipment or services that have been acquired in the ordinary course of business from suppliers and service providers. These payables are classified as current liabilities if they are due within one year or less (or in the normal operating cycle of the business if longer).

## 2.21 Employee benefits

Employee benefits mainly include salaries, bonuses, allowances and subsidies, retirement benefit obligations, social insurance and housing funds, labor union fees, employees' education fees and other expenses related to the employees for their services. The Group recognises employee benefits as liabilities during the accounting period when employees rendered the services and allocates the related cost of assets and expenses based on different beneficiaries.

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# **ALUMINUM CORPORATION OF CHINA LIMITED**

## **NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

## **2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

### 2.21 Employee benefits

*(Continued)*



(a) Bonus plans

The expected cost of bonus plan is recognised as a liability when the Group has a present legal or constructive obligation as a result of services rendered by employees and a reliable estimate of the obligation can be made.

(b) Retirement benefit obligations

The Group primarily pays contributions on a monthly basis to participate in various defined contribution retirement benefit plans organised by relevant municipal and provincial governments in the PRC. In 2012, the Group made monthly contributions at the rate of 20% (2011: 20%) of the qualified employees' basic salaries. The municipal and provincial governments undertake to assume the retirement benefit obligations of all existing and future retired employees payable under these plans. The Group has no legal or constructive obligations for further contributions if the fund does not hold sufficient assets to pay all employees the benefit relating to their current and past services.

(c) Other social insurance and housing funds

The Group provides other social insurance and housing funds to the qualified employees in the PRC based on certain percentages of their salaries. These percentages are not to exceed the upper limits of the percentages prescribed by Ministry of Human Resources and Social Security of the PRC. These benefits are paid to social security organisation and the amounts are expensed as incurred. The Group has no legal or constructive obligations for further contributions if the fund does not hold sufficient assets to pay all employees the benefit relating to their current and past services.

(d) Termination benefits and early retirement benefits

Termination and early retirement benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy and/or early retirement in exchange for these benefits. The Group recognises termination and early retirement benefits when it is demonstrably committed to either: terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or providing termination benefits as a result of an offer made to encourage voluntary redundancy and/or early retirement. The specific terms vary among the terminated and early retired employees depending on various

factors including position, length of service and district of the employee concerned. Benefits falling due for more than 12 months after the end of the reporting period are discounted to their present values.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.22 Current and deferred income tax**

The income tax expense for the period comprises current and deferred income tax. Share of income tax expense of jointly controlled entities and associates are included in "share of profits of jointly controlled entities/associates". Income tax expense is recognised in profit or loss except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the tax is also recognised in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period in the countries where the Company and its subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognised using the liability method on temporary differences arising between tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill; the deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the

transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted at the end of the reporting period and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries, jointly controlled entities and associates, except for deferred tax liability where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred taxes assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

**2.23 Revenue recognition**

Revenue is measured at the fair value of the consideration received or receivable for the sales of goods and rendering of services under contracts in the ordinary course of the Group's activities. Revenue is shown net of returns, discounts and value-added tax.

The Group recognises revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the Group and when specific criteria have been met for each of the Group's activities (see descriptions below).

(a) Sales of goods

Revenue from the sales of goods is recognised when the Group has already transferred the significant risks and rewards of ownership of the goods to the buyers, the Group has retained neither continuing managerial involvement nor control over the goods, it is probable that the economic benefits related to the transaction will flow into the Group, and the revenue and related costs incurred can be measured reliably.

If the Group is acting solely as an agent, amounts billed to customers are offset against the relevant costs, and the related revenue is reported on a net basis.

(b) Rendering of services

The Group provides machinery processing, transportation and packaging services to third party customers. These services are recognised in the period when the related services are provided.

2.24 Interest income

Interest income is recognised using the effective interest method. When a loan or receivable is impaired, the Group reduces the carrying amount to its recoverable amount, being the estimated future cash flow discounted at the original effective interest rate of the instrument, and continues unwinding the discount as interest income. Interest income on impaired loans and receivables is recognised using the original effective interest rate.

2.25 Dividend income

Dividend income is recognised when the right to receive payment is established.

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

## 2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES

*(CONTINUED)*

### 2.26 Leases

The determination of whether an arrangement is, or contains, a lease is based on the substance of the arrangement at the inception date. The arrangement is assessed for whether fulfilment of the arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the period of the lease.

The Group leases certain leasehold land. Leasehold land where the Group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the lease's commencement at the lower of the fair value of the leased leasehold land and the present value of the minimum lease payments.

Each lease payment is allocated between the liability and finance charges. The corresponding rental obligations, net of finance charges, are included in other long-term payables. The interest element of the finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases are depreciated over the shorter of the useful life of the assets and the lease term.

### 2.27 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or

sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

## 2.28 Dividend distribution

Dividend distribution to the Company's shareholders is recognised as a liability in the Group's consolidated financial statements in the period in which the dividends are approved by the Company's shareholders.

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## **ALUMINUM CORPORATION OF CHINA LIMITED**

### **NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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## **2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES**

*(CONTINUED)*

### 2.29 Provisions

Provisions for environmental restoration, restructuring costs and legal claims are recognised when: the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount can be reliably estimated. Restructuring provisions comprise lease termination penalties and employee termination payments. Provisions are not recognised for future operating losses.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the

likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

**3.1 Financial risk management**

The Group's activities expose it to a variety of financial risks: market risk (including foreign currency risk, cash flow and fair value interest rate risk and commodity price risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance.

Risk management is carried out by the treasury management department (the "Group Treasury") under policies approved by the Board of Directors of the Company. Group Treasury identifies, evaluates and hedges financial risks through close co-operation with the Group's operating units.

**(a) Market risk**

**(i) Foreign currency risk**

Foreign currency risk primarily arises from certain significant foreign currency deposits and short-term and long-term loans denominated in US Dollar ("USD"), Australian Dollar ("AUD"), Euro ("EUR"), Japanese Yen ("JPY") and Hong Kong Dollar ("HKD"). Related exposures are disclosed in Notes 17 and 20 to

the consolidated financial statements, respectively. The Group Treasury closely monitors the international foreign currency market on the change of exchange rates and takes these into consideration when investing in foreign currency deposits and borrowing loans. As at December 31, 2012, the Group only has significant exposure to USD.

As at December 31, 2012, if RMB had strengthened/weakened by 5% against USD with all other variables held constant, net profit for the year would have been approximately RMB205 million (2010: RMB42 million; 2011: RMB101 million) higher/lower, mainly as a result of foreign exchange gains/losses arising from translation of USD-denominated borrowings. Profit was more sensitive to the fluctuation in RMB/USD exchange rates in 2012 than 2010 and 2011, mainly due to the increase in USD denominated borrowings.

As the assets and liabilities denominated in other foreign currencies other than USD were minimal relative to the total assets and liabilities of the Group, the directors of the Company are of the opinion that the Group was not exposed to any significant foreign currency risk arising from these foreign currency denominated assets and liabilities as at December 31, 2010, 2011 and 2012.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

**3.1 Financial risk management**

*(Continued)*

**(a) Market risk**

*(Continued)*



(ii) Cash flow and fair value interest rate risk

As the Group has no significant interest-bearing assets except for bank deposits (Note 17), the Group's income and operating cash flows are substantially independent of changes in market interest rates.

Most of the bank deposits are maintained in savings and time deposit accounts in the PRC. The interest rates are regulated by the People's Bank of China and the Group Treasury closely monitors the fluctuation on such rates periodically. As the average interest rates applied to the deposits were relatively low, the directors of the Company are of the opinion that the Group was not exposed to any significant interest rate risk for its financial assets held as at December 31, 2010, 2011 and 2012.

The interest rate risk of the Group primarily arises from interest bearing loans. Loans borrowed at floating interest rates expose the Group to cash flow interest rate risk. The exposures to these risks are disclosed separately in Note 20. The Group enters into debt obligations to support general corporate purposes including capital expenditures and working capital needs. The Group Treasury closely monitors market interest rates and maintains a balance between variable rate and fixed rate borrowings in order to reduce the exposures to the interest rate risk described above.

As at December 31, 2012, if interest rates had been 100 basis points (December 31, 2010 and 2011: 100 basis points) higher/lower with all other variables held constant, net profit for the year would have been RMB496 million lower/higher (December 31, 2010: RMB361 million lower/higher, December 31, 2011: RMB376 million lower/higher), respectively mainly as a result of higher/lower interest expense on floating rate borrowings.

The fair value interest rate risk of the Group mainly arises from long-term bonds, medium-term notes and short-term bonds issued at fixed rates. As the fluctuation of comparable interest rates of corporate bonds with similar terms was relatively low, the directors of the Company are of the opinion that the Group is not exposed to any significant fair value interest rate risk for its fixed interest rate borrowings held as at December 31, 2010, 2011 and 2012.

**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

3.1 Financial risk management

*(Continued)*

(a) Market risk

*(Continued)*

(iii) Commodity price risk

The Group uses futures and option contracts to reduce its exposure to fluctuations in the price of primary aluminum. The Group has policy in place which limits the total quantity of primary aluminum related to these futures and option contracts to 30% of the Group's annual production or 50% of the Group's committed purchases or sales of the Group's trading business.

The Group uses mainly futures contracts and options contracts traded on the Shanghai Futures Exchange and London Metal Exchange ("LME") to hedge against fluctuations in primary aluminum prices. As at December 31, 2012, the fair values of outstanding future contracts amounting to RMB5.6 million (December 31, 2011: RMB3.9 million) and RMB12.7 million (December 31, 2011: RMB1.8 million) are recognised in financial assets and financial liabilities at fair value through profit or loss, respectively. As at December 31, 2012, there were no options contracts outstanding. As at December 31, 2011, the fair value of outstanding options contracts amounting to RMB0.5 million were recognised in financial liabilities at fair value through profit or loss.

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*(CONTINUED)*

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**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

3.1 Financial risk management

*(Continued)*

(a) Market risk

*(Continued)*

(iii) Commodity price risk *(Continued)*

A summary of future contracts held as at December 31, 2011 and 2012 is as follows:

	As at December 31, 2011			
	Quantity (expressed in tones)	Contract value	Market value	Contract maturity
Primary aluminum:				
- short position	1,825	29,302	29,182	Jan 2012
- long position	60,890	935,633	938,518	Jan - Jun 2012
Copper:				
- short position	2,900	160,407	160,544	Feb 2012
Zinc:				
- long position	3,900	58,284	57,528	Mar - Apr 2012

As at December 31, 2012

	Quantity (expressed in tones)	Contract value	Market value	Contract maturity
Primary aluminum:				
- short position	13,110	200,086	198,662	Jan - Feb 2013
- long position	81,235	1,221,845	1,213,709	Jan - May 2013
Copper:				
- short position	5,325	304,466	305,079	Jan - Apr 2013
Zinc:				
- short position	7,850	121,031	121,013	Jan - Apr 2013
Lead:				
- short position	2,550	38,852	38,614	Jan - Feb 2013

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT***(CONTINUED)*

## 3.1 Financial risk management

*(Continued)*

## (a) Market risk

*(Continued)*

(iii) Commodity price risk (*Continued*)

As at December 31, 2012, if the commodity futures prices had increased/decreased by 3% (December 31, 2010 and 2011: 3%) and all other variables held constant, profit for the year would have changed by the amounts shown below:

	2010	2011	2012
Primary aluminum	Decrease/increase 202 million	Decrease/increase 87 million	Increase/decrease 167 million
Primary copper	Decrease/increase 39 million	Increase/decrease 4 million	Increase/decrease 12 million
Primary zinc	Decrease/increase 23 million	Decrease/increase 21 million	Decrease/increase 11 million
Primary lead	N/A	Decrease/increase 3 million	Decrease/increase 0.5 million

## (b) Credit risk

Credit risk arises from bank balances, trade and notes receivables, other receivables as well as credit exposures of customers, including outstanding receivables and committed transactions. The Company also provided financial guarantees to certain subsidiaries. The carrying amounts of these receivables and amounts of respective financial guarantees included in Notes 15, 16, 17 and 20 represent the Group's maximum exposure to credit risk in relation to its financial assets and guarantees.

The Group maintains substantially all of its bank balances and cash in several major state-owned banks in the PRC. With strong state support provided to these state-owned banks, the directors of the Company are of the opinion that there is no significant credit risk on such assets being exposed to losses.

With regard to receivables, the marketing department assesses the credit quality of the customers, taking into account their financial positions, past experience and other factors. The Group performs periodic credit evaluations of its customers and believes that adequate provision for impairment of receivables has been made in the consolidated financial statements. Management does not expect any further losses from non-performance by these counterparties. Except for the collateral for some entrusted loans, the Group does

not hold any other collateral as security for these receivables.

During the years ended December 31, 2010, 2011 and 2012, no revenue derived from an individual customer exceeded 10% of the Group's total revenue, and thus, the directors of the Company are of the opinion that the Group was not exposed to any significant concentration of credit risk as at December 31, 2010, 2011 and 2012.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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(Amounts expressed in thousands of RMB unless otherwise stated)

**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

3.1 Financial risk management

*(Continued)*

(c) Liquidity risk

Cash flow forecast is performed in the operating entities of the Group and aggregated by Group Treasury. Group Treasury monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining sufficient headroom on its undrawn committed borrowing facilities at all times so that the Group does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. Such forecast takes into consideration of the Group's debt financing plans, covenant compliance, compliance with internal balance sheet ratio targets and, if applicable, external regulatory or legal requirements, for example, currency restrictions.

As at December 31, 2012, the Group had total banking facilities of approximately RMB161,761 million (December 31, 2011: RMB100,520 million) of which amounts totalling RMB64,819 million have been utilised as at December 31, 2012 (December 31, 2011: RMB57,771 million). Banking facilities of approximately

RMB89,942 million will be subject to renewal during the next 12 months. The directors of the Company are confident that such banking facilities can be renewed upon expiration based on their past experience and good credit standing.

In addition, as at December 31, 2012, the Group had credit facilities through its primary aluminum futures agent at LME amounting to USD94 million (equivalent to RMB590.84 million) (December 31, 2011: USD132.00 million (equivalent to RMB831.72 million)) of which USD1.03 million (equivalent to RMB6.47million) (December 31, 2011: USD1.49 million (equivalent to RMB9.39 million)) has been utilised. The futures agent has the right to adjust the related credit facilities.

Management also monitors rolling forecasts of the Group's liquidity reserve on the basis of expected cash flows.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

**3.1 Financial risk management**

*(Continued)*

**(c) Liquidity risk**

*(Continued)*

The table below analyses the maturity profile of the Group's financial liabilities as at the end of the reporting period. The amounts disclosed in the table are the contractual undiscounted cash flows.

1 to 2 years 2 to 5 years

Total

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	Within 1 year			Over 5 years	
As at December 31, 2011					
Long-term bank and other loans	-	6,288,818	11,641,562	1,335,599	19,265,979
Long-term bonds	-	-	-	2,000,000	2,000,000
Medium-term notes and bonds	-	5,000,000	9,800,000	-	14,800,000
Long-term payables	-	8,330	-	-	8,330
Short-term bonds	10,000,000	-	-	-	10,000,000
Short-term bank and other loans	32,322,794	-	-	-	32,322,794
Current portion of long-term bank and other loans	4,164,474	-	-	-	4,164,474
Current portion of long-term payables	8,380	-	-	-	8,380
Interest payables for borrowings	3,389,656	1,669,552	1,811,723	197,810	7,068,741
Financial liabilities at fair value through profit or loss	2,280	-	-	-	2,280
Financial liabilities included in other payables and accrued expenses	5,553,016	-	-	-	5,553,016
Trade and notes payables	8,401,310	-	-	-	8,401,310
	63,841,910	12,966,700	23,253,285	3,533,409	103,595,304

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*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT***(CONTINUED)*

## 3.1 Financial risk management

*(Continued)*

## (c) Liquidity risk

*(Continued)*

	Within 1 year	1 to 2 years	2 to 5 years	Over 5 years	Total
As at December 31, 2012					
Long-term bank and other loans	-	8,049,049	7,771,126	4,090,612	19,910,787
Long-term bonds	-	-	2,000,000	-	2,000,000
Medium-term notes and bonds	-	2,000,000	12,800,000	-	14,800,000
Bond issuance cost payable	-	6,000	-	-	6,000
Short-term bonds	16,500,000	-	-	-	16,500,000
Short-term bank and other loans	40,313,218	-	-	-	40,313,218
Current portion of medium-term notes	5,000,000	-	-	-	5,000,000
Current portion of long-term bank and other loans	5,945,958	-	-	-	5,945,958
Current portion of long-term payables	8,330	-	-	-	8,330
Current portion of bond issuance cost payable	6,000	-	-	-	6,000
Interest payables for	1,788,809	1,705,063	2,532,764	905,829	6,932,465

borrowings					
Financial liabilities at fair value					
through profit or loss	12,662	-	-	-	12,662
Financial liabilities included in other current					
payables and accrued expenses	6,169,561	-	-	-	6,169,561
Trade and notes payables	7,059,194	-	-	-	7,059,194
	82,803,732	11,760,112	25,103,890	4,996,441	124,664,175

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT***(CONTINUED)***3.2 Financial instruments****(a) Financial instruments by category**

The carrying amounts of each of the categories of financial instruments of the Group as at the end of the reporting period are as follows:

Financial assets

December 31, 2011

Available-

	Financial assets at fair value through profit or loss	Loans and receivables	for-sale financial investments	Total
<b>Current</b>				
Trade and notes receivables	-	5,631,765	-	5,631,765
Financial assets at fair value through profit or loss	5,807	-	-	5,807
Restricted cash and time deposits	-	1,053,435	-	1,053,435
Cash and cash equivalents	-	10,591,306	-	10,591,306
Financial assets include in other current assets	-	1,192,335	-	1,192,335
<b>Subtotal</b>	<b>5,807</b>	<b>18,468,841</b>	<b>-</b>	<b>18,474,648</b>
<b>Non-current</b>				
Available-for-sale financial investments	-	-	44,878	44,878
Entrusted loans	-	300,000	-	300,000
<b>Subtotal</b>	<b>-</b>	<b>300,000</b>	<b>44,878</b>	<b>344,878</b>
<b>Total</b>	<b>5,807</b>	<b>18,768,841</b>	<b>44,878</b>	<b>18,819,526</b>

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT***(CONTINUED)*

## 3.2 Financial instruments

*(Continued)*

## (a) Financial instruments by category

*(Continued)*

## Financial liabilities

	December 31, 2011		
	Financial liabilities at fair value through profit or loss	Financial liabilities at amortised cost	Total
Current			
Financial liabilities at fair value through profit or loss	2,280	-	2,280
Interest bearing loans and borrowings	-	46,737,845	46,737,845
Current portion of long-term payable	-	8,380	8,380
Financial liabilities included in other			
current payables and accrued expenses	-	5,553,016	5,553,016
Trade and notes payables	-	8,401,310	8,401,310

Subtotal	2,280	60,700,551	60,702,831
Non-current			
Long-term payable	-	8,330	8,330
Interest bearing loans and borrowings	-	35,968,526	35,968,526
Subtotal	-	35,976,856	35,976,856
Total	2,280	96,677,407	96,679,687

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT***(CONTINUED)***3.2 Financial instruments***(Continued)***(a) Financial instruments by category***(Continued)*

Financial assets

December 31, 2012

	Financial assets at fair value through profit or loss	Loans and receivables	Available- for-sale financial investments	Total
<b>Current</b>				
Trade and notes receivables	-	2,615,862	-	2,615,862
Financial assets at fair value through profit or loss	8,983	-	-	8,983
Restricted cash and time deposits	-	1,128,015	-	1,128,015
Cash and cash equivalents	-	9,063,593	-	9,063,593
Financial assets included in other current assets	-	2,721,075	-	2,721,075
<b>Subtotal</b>	<b>8,983</b>	<b>15,528,545</b>	<b>-</b>	<b>15,537,528</b>
<b>Non-current</b>				
Available-for-sale financial investments	-	-	64,500	64,500
Entrusted loans	-	200,000	-	200,000
<b>Subtotal</b>	<b>-</b>	<b>200,000</b>	<b>64,500</b>	<b>264,500</b>
<b>Total</b>	<b>8,983</b>	<b>15,728,545</b>	<b>64,500</b>	<b>15,802,028</b>

**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

3.2 Financial instruments

*(Continued)*

(a) Financial instruments by category

*(Continued)*

Financial liabilities

	December 31, 2012		
	Financial liabilities at fair value through profit or loss	Financial liabilities at amortised cost	Total
Current			
Financial liabilities at fair value through profit or loss	12,662	-	12,662
Interest bearing loans and borrowings	-	67,915,181	67,915,181
Current portion of long-term payables	-	8,330	8,330
Current portion of bond issuance cost payable	-	6,000	6,000
	-	548,381	548,381

Interest payables for borrowings			
Financial liabilities included in other			
payables and accrued expenses	-	6,169,561	6,169,561
Trade and notes payables	-	7,059,194	7,059,194
Subtotal	12,662	81,706,647	81,719,309
Non-current			
Bond issuance cost payable	-	6,000	6,000
Interest bearing loans and borrowings	-	36,635,652	36,635,652
Subtotal	-	36,641,652	36,641,652
Total	12,662	118,348,299	118,360,961

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

3.2 Financial instruments

*(Continued)*



## (b) Fair value and fair value hierarchy

The carrying amounts and fair values of the Group's financial instruments are as follows:

	Carrying amounts		Fair values	
	December 31, 2011	December 31, 2012	December 31, 2011	December 31, 2012
Financial assets				
Current				
Trade and notes receivables	5,631,765	2,615,862	5,631,765	2,615,862
Financial assets at fair value				
through profit or loss	5,807	8,983	5,807	8,983
Restricted cash and time deposits	1,053,435	1,128,015	1,053,435	1,128,015
Cash and cash equivalents	10,591,306	9,063,593	10,591,306	9,063,593
Financial assets included in other current assets	1,192,335	2,721,075	1,192,335	2,721,075
Subtotal	18,474,648	15,537,528	18,474,648	15,537,528
Non-current				
Available-for-sale financial investments	44,878	64,500	44,878	64,500
Entrusted loans	300,000	200,000	300,000	200,000
Subtotal	344,878	264,500	344,878	264,500

Total	18,819,526	15,802,028	18,819,526	15,802,028
<hr/>				
Financial liabilities				
Current				
Financial liabilities at fair value				
through profit or loss	2,280	12,662	2,280	12,662
Interest bearing loans and borrowings	46,737,845	67,915,181	46,737,845	67,915,181
Current portion of long-term payables	8,380	8,330	8,380	8,330
Current portion of bond issuance cost payable	-	6,000	-	6,000
Financial liabilities included in				
other payables and accrued expenses	5,553,016	6,717,942	5,553,016	6,717,942
Trade and notes payables	8,401,310	7,059,194	8,401,310	7,059,194
<hr/>				
Subtotal	60,702,831	81,719,309	60,702,831	81,719,309
<hr/>				
Non-current				
Bond issuance cost payable	-	6,000	-	6,000
Long-term payable	8,330	-	8,021	-
Interest bearing loans and borrowings	35,968,526	36,635,652	35,719,707	35,803,123
<hr/>				
Subtotal	35,976,856	36,641,652	35,727,728	35,809,123
<hr/>				
Total	96,679,687	118,360,961	96,430,559	117,528,432
<hr/>				

**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

**3.2 Financial instruments**

*(Continued)*

**(b) Fair value and fair value hierarchy**

*(Continued)*

The fair values of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The following methods and assumptions were used to estimate the fair values:

The fair values of the long-term payable and long-term interest bearing loans and borrowings have been calculated by discounting the expected future cash flows using rates currently available for instruments on similar terms, credit risk and remaining maturities.

Except for the long-term payable and long-term interest bearing loans and borrowings, the fair values of all the other financial assets and liabilities approximate to their carrying amounts due to the short-term maturities of these instruments.

Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair values of financial instruments:

Level 1: Fair value measured based on quoted (unadjusted) prices in active markets for identical assets or liabilities

Level 2: Fair value measured based on valuation techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly

Level 3: Fair value measured based on valuation techniques for which any inputs which have a significant effect on the recorded fair value are not based on observable market data

Assets measured at fair value:

As at December 31, 2011

	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
through profit or loss				
Futures contracts	3,919	-	-	3,919
Forward foreign exchange contracts	-	1,888	-	1,888
	3,919	1,888	-	5,807

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT**

*(CONTINUED)*

**3.2 Financial instruments**

*(Continued)*

## (b) Fair value and fair value hierarchy

*(Continued)*Assets measured at fair value: *(Continued)*

As at December 31, 2012

	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
through profit or loss:				
Futures contracts	5,593	-	-	5,593
Forward foreign exchange contracts	-	3,390	-	3,390
	5,593	3,390	-	8,983

Liabilities measured at fair value:

As at December 31, 2011

	Level 1	Level 2	Level 3	Total
Financial liabilities at fair value				
through profit or loss:				
Futures contracts	1,807	-	-	1,807
European options contracts	-	473	-	473
	1,807	473	-	2,280

As at December 31, 2012

	Level 1	Level 2	Level 3	Total
Financial liabilities at fair value through profit or loss:				
Futures contracts	12,662	-	-	12,662
	12,662	-	-	12,662

During the year, the Group had no transfers of fair value measurements between Level 1 and Level 2 and no transfers into or out of Level 3 (2011: nil).

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**3. FINANCIAL AND CAPITAL RISKS MANAGEMENT***(CONTINUED)***3.3 Capital risk management**

The Group's capital management objectives are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, issue new shares or sell assets to reduce debts.

Consistent with other entities in the industry, the Group monitors capital on the basis of its gearing ratio. This ratio is calculated as net debts divided by total capital. Net debts are calculated as total borrowings and other liabilities (including borrowings, other non-current liabilities, trade and notes payables, other payables and accrued expenses and financial liabilities at fair value through profit or loss, as shown in the consolidated statement of financial position) less restricted cash, time deposits and cash and cash equivalents. Total capital is calculated as equity, as shown in the consolidated statement of financial position, plus net debts less non-controlling interests.

During 2011 and 2012, the change in sales price of the Group's primary products has adversely impacted profitability and net operating cash flows of the Group. The Group has entered into additional bank borrowings in order to ensure sufficient operating cash flows. The gearing ratio as at December 31, 2011 and 2012 is as follows:

	2011	2012
Total borrowings and other liabilities	98,924,377	121,184,673
Less: restricted cash, time deposits and cash and cash equivalents	(11,644,741)	(10,191,608)
Net debts	87,279,636	110,993,065
Total equity	58,154,686	53,771,150
Add: net debts	87,279,636	110,993,065
Less: non-controlling interests	(6,328,687)	(9,963,387)
Total capital attributable to owners of the parent	139,105,635	154,800,828
Gearing ratio	63%	72%

The increase in gearing ratio as at December 31, 2012 is mainly resulted from additional bank borrowings in order to ensure sufficient operating cash flows.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGMENTS**

The preparation of the Group's consolidated financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these judgements, assumptions and estimates could result in outcomes that require a material adjustment to the carrying amounts of assets or liabilities affected in future periods.

**Judgements**

In the process of applying the Group's accounting policies and preparing the Group's consolidated financial statements, management has made the following judgements, apart from those involving estimates, which have the most significant effect on the amounts recognised in the consolidated financial statements.

**(a) Going concern**

As set out in Note 2.1, the ability of the Group to continue operations is dependent upon obtaining the necessary borrowings and generating cash inflows from operating activities in order to generate sufficient cash flows to meet its liabilities as they fall due. In the event the Group is unable to obtain adequate funding, there is uncertainty as to whether the Group will be able to continue as a going concern. The consolidated financial statements do not include any adjustments related to the carrying values and classifications of assets and liabilities that would be necessary should the Group be unable to continue as a going concern.

**Estimates and assumptions**

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and



liabilities within the next financial year, are described below. The Group based its assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

(a) Property, plant and equipment - recoverable amount

In accordance with the Group's accounting policy, each asset or cash-generating unit is evaluated every reporting period to determine whether there are any indications of impairment. If any such indication exists, an estimate of recoverable amount is performed and an impairment loss is recognised to the extent that the carrying amount exceeds the recoverable amount. The recoverable amount of an asset or cash-generating group of assets is measured at the higher of fair value less costs to sell and value in use.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGMENTS**

*(CONTINUED)*

Estimates and assumptions

*(Continued)*

(a) Property, plant and equipment - recoverable amount

*(Continued)*

Fair value is determined as the amount that would be obtained from the sale of the asset in an arm's length transaction between knowledgeable and willing parties and is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, and its eventual disposal.

Value in use is also generally determined as the present value of the estimated future cash flows of those expected to arise from the continued use of the asset in its present form and its eventual disposal. Present values are determined using a risk-adjusted pre-tax discount rate appropriate to the risks inherent in the asset. Future cash flow estimates are based on expected production and sales volumes, commodity prices (considering current and historical prices, price trends and related factors) and operating costs. This policy requires management to make these estimates and assumptions which are subject to risk and uncertainty; hence there is a possibility that changes in circumstances will alter these projections, which may impact the recoverable amounts of the assets. In such circumstances, some or all of the carrying values of the assets may be impaired and the impairment would be charged against profit or loss.

- (b) Property, plant and equipment and intangible assets - estimated useful lives and residual values

The Group's management determines the estimated useful lives and residual values (if applicable) and consequently related depreciation/amortisation charges for its property, plant and equipment and intangible assets. These estimates are based on the historical experience of the actual useful lives of property, plant and equipment of similar nature and functions, or based on value-in-use calculations or market valuations according to the estimated periods that the Group intends to derive future economic benefits from the use of intangible assets. Management will increase the depreciation/amortisation charge where useful lives are less than previously estimated lives, and it will write off or write down technically obsolete or non-strategic assets that have been abandoned or sold.

Actual economic lives may differ from estimated useful lives; and actual residual values may differ from estimated residual values. Periodic review could result in a change in depreciable lives and residual values and therefore depreciation/amortisation expense in future periods.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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#### 4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGMENTS

*(CONTINUED)*

Estimates and assumptions

*(Continued)*

(c) Estimated impairment of trade and other receivables and inventories

A provision for impairment of trade and other receivables is established when there is objective evidence that the Group will not be able to collect all amounts due according to the original terms of the receivables. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or financial reorganisation, and default or delinquency in payments are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. Cash flows relating to trade and other receivables are discounted if the effect of discounting is material. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognised in the consolidated statement of comprehensive income. When a trade and other receivable is uncollectible, it is written-off against the allowance account for trade and other receivables. Subsequent recoveries of amounts previously written-off are recognised as income in profit or loss. The impairment is subject to management's assessment as of the end of the reporting period, and hence, the provision amount is subject to uncertainty.

In accordance with the Group's accounting policy, the Group's management tests whether inventory suffered any impairment based on estimates of the net realisable value of the inventory. For different types of inventories, it requires the exercise of accounting estimates on selling price, costs of conversion, selling expenses and related tax expense to calculate its net realisable value. For inventories held for executed sales contracts, the management estimates the net realisable value based on the contracted price; for other inventories, the management estimates realisable future price based on the actual prices during the period from the end of the reporting period to the date that these consolidated financial statements were approved for issue by the Board of Directors of the Company and takes into account the nature and balance of inventories and future estimated price trends. For raw materials and work-in-progress, the management has established a model in estimating the net realisable value at which the inventories can be realised in the normal course of business after considering the Group's manufacturing cycles, production capacity and forecasts, estimated future conversion costs and selling prices. The management also takes into account the price or cost fluctuations and other related matters occurring after the

end of the reporting period which reflect conditions that existed as of the end of the reporting period.

It is reasonably possible that if there is a significant change in circumstances including the Group's business and the external environment, outcomes within the next financial year would be significantly affected.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**4. SIGNIFICANT ACCOUNTING ESTIMATES AND JUDGMENTS**

*(CONTINUED)*

Estimates and assumptions

*(Continued)*

(d) 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 recognises 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 tax assets, the Group has assessed the likelihood that the deferred tax assets could be recovered. Major deferred tax assets relate to deductible tax losses and provision for impairment of receivables and accruals of expenses not

yet deductible for tax purposes. As at December 31, 2012, the Group has recorded deferred tax assets amounting to approximately RMB2,261 million on these temporary differences (December 31, 2011: approximately RMB1,628 million). Deferred tax assets are recognised based on the Group's estimates and assumptions that they will be recovered from taxable income arising from continuing operations and tax planning 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.

(e) Goodwill - recoverable amount

In accordance with the Group's accounting policy, goodwill is allocated to the Group's operating segments as it represents the lowest level within the Group at which the goodwill is monitored for internal management purposes and is tested for impairment annually by preparing a formal estimate of the recoverable amount. The recoverable amount is estimated as the value in use of the operating segment. Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment also apply to goodwill.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**5. REVENUE AND SEGMENT INFORMATION**

(a) Revenue

Revenue recognised during the year is as follows:

	2010	2011	2012

Sales of goods (net of value-added tax)	118,374,341	142,863,166	146,228,138
Other revenue	2,620,506	3,011,267	3,250,683
	<hr/>	<hr/>	<hr/>
	120,994,847	145,874,433	149,478,821
	<hr/>	<hr/>	<hr/>

Other revenue primarily includes revenue from the sales of scrap and other materials, the supply of electricity, gas, heat and water and the provision of machinery processing, transportation and packaging and other services.

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## ALUMINUM CORPORATION OF CHINA LIMITED

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

#### 5. REVENUE AND SEGMENT INFORMATION

*(CONTINUED)*

##### (b) Segment information

The chief operating decision-maker of the Company has been identified as the Company's Executive Committee. The Executive Committee is responsible for the review of the internal reports in order to allocate resources to operating segments and assess their performance. The Executive Committee considers the business from a product perspective comprising alumina, primary aluminum and aluminum fabrication for the Group's manufacturing business, which are identified as separate reportable operating segments. In addition, the Group's trading business is identified as a separate reportable operating segment. The Group's operating segments also include corporate and other operating activities.

The Executive Committee assesses the performance of operating segments based on profit or loss before income tax in related periods. Unless otherwise stated below, the manner of assessment used by the

Executive Committee is consistent with that applied in these consolidated financial statements. Management has determined the operating segments based on the reports reviewed by the Executive Committee that are used to make strategic decisions.

The alumina segment, which consists of mining and purchasing bauxite and other raw materials, refining bauxite into alumina, and selling alumina both internally to the Group's aluminum plants and externally to customers outside the Group. This segment also includes the production and sale of chemical alumina and metal gallium.

The primary aluminum segment, which consists of procuring alumina and other raw materials, supplemental materials and electricity power, smelting alumina to produce primary aluminum and selling them to the Group's internal aluminum fabrication plants and external customers. This segment also includes the production and sale of carbon products and aluminum alloy and other aluminum products.

The aluminum fabrication segment, which consists of procuring primary aluminum, other raw materials, supplemental materials and electricity power, and further processing primary aluminum for the production and sale to seven main aluminum fabricated products, including casts, planks, screens, extrusions, forges, powder and die castings.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

5. REVENUE AND SEGMENT INFORMATION

*(CONTINUED)*

(b) Segment information

*(Continued)*

The trading segment, which consists of the trading of alumina, primary aluminum, aluminum fabricated products, other non-ferrous metal products, coal products, raw materials and supplemental materials to

internal manufacturing plants and external customers in the PRC. The products are sourced from fellow subsidiaries and international and domestic suppliers of the Group. Sales of products manufactured by the Group's manufacturing business are included in the total revenue of the trading segment and are eliminated from the segment revenue of the respective segments which supplied the products to the trading segment.

Corporate and other operating activities, which mainly include management of corporate, research and development activities.

Prepaid current income tax and deferred tax assets are excluded from segment assets, and income tax payable and deferred tax liabilities are excluded from segment liabilities. All sales among the operating segments were conducted at terms mutually agreed among group companies, and have been eliminated at the consolidated level.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**5. REVENUE AND SEGMENT INFORMATION**

*(CONTINUED)*

(b) Segment information

*(Continued)*

Year ended December 31, 2010

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Corporate

and other

Inter-

360



Primary  
Aluminum  
Trading  
operating  
segment  
  
Alumina  
aluminum  
fabrication  
(Note)  
activities  
elimination  
Total

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Total revenue

26,837,922  
53,255,011  
10,466,016  
90,141,373  
190,326

(59,895,801)

120,994,847

Inter-segment revenue

(24,689,632)

(26,847,748)

(150,676)

(8,159,134)

(48,611)

59,895,801

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Revenue from external customers

2,148,290

26,407,263

10,315,340

81,982,239

141,715

-

120,994,847

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Segment profit/(loss)

1,077,144

358,782

(323,568)

860,637

(490,258)

(102,383)

1,380,354

Income tax expense

(411,216)

---

Profit for the year

969,138

---

Other items:

Finance income

17,572

18,493

4,824

13,210

37,010

-

91,109

Finance costs

(532,291)

(1,307,058)

(309,644)

(90,976)

(346,324)

-

(2,586,293)

Share of profits of jointly

controlled entities

-

-

-

-

364

	233,784
	-
	233,784
Share of profits of associates	-
	230,098
	570
	-
	9,360
	-
	240,028
Amortisation of land use	
rights and leasehold land	
	(27,779)
	(21,123)
	(7,645)
	(8)
	(2,190)
	-
	(58,745)
Depreciation and amortisation excluding the amortisation	

of land use rights and leasehold land

(2,756,616)

(3,075,767)

(362,391)

(3,246)

(100,612)

-

(6,298,632)

Gain/(loss) on disposal of

property, plant and equipment

2,473

26,974

(48)

-

(75)

-

29,324

Impairment of property, plant and equipment

(372,629)

(329,152)

-

-

-

366

	-
	(701,781)
(Provision for)/reversal of	
impairment of inventories	(15,562)
	(18,798)
	86
	-
	-
	-
	(34,274)
Provision for impairment of	
receivables, net of	
bad debts recovered	(20,066)
	(1,157)
	(1,711)
	-
	(4,800)
	-
	(27,734)
	367

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Additions to non-current

assets during the year:

Intangible assets

69,598

19,546

444

1,082

37,183

-

127,853

Land use rights

166,527

117,094

15,840

-

-

-

368



299,461

Property, plant and equipment

4,124,751

3,365,592

1,042,731

14,047

42,374

-

8,589,495

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**5. REVENUE AND SEGMENT INFORMATION**

*(CONTINUED)*

(b) Segment information

*(Continued)*

Year ended December 31, 2011

	Alumina	Primary aluminum	Aluminum fabrication	Trading (Note)	Corporate and other operating activities	Inter-segment elimination	Total
Total revenue	31,127,030	57,979,676	11,794,808	109,172,393	176,078	(64,375,552)	145,874,433
Inter-segment revenue	(28,066,182)	(26,091,820)	(343,608)	(9,848,302)	(25,640)	64,375,552	-

	Sales of self-produced						
	products			35,916,115			
	Sales of products sourced						
	from external suppliers			63,407,976			

Revenue from external customers

3,060,848  
 31,887,856  
 11,451,200  
 99,324,091  
 150,438  
 -  
 145,874,433

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Segment profit/(loss)

351,903

905,474

(335,932)

670,638

(1,051,498)

277,411

817,996

Income tax expense

(127,492)

Profit for the year

690,504

Other items:

Finance income

19,958

24,849

11,976

32,017

371

	49,978
	-
	138,778
Finance costs	
	(720,508)
	(1,322,311)
	(393,680)
	(119,325)
	(876,528)
	-
	(3,432,352)
Share of profits of	
jointly controlled entities	
	-
	-
	-
	-
	122,262
	-
	122,262
Share of profits of associates	
	-
	372

	390,407
	1,995
	-
	10,299
	-
	402,701
Amortisation of land use	
rights and leasehold land	
	(30,979)
	(25,042)
	(7,589)
	(15)
	(2,222)
	-
	(65,847)
Depreciation and amortisation excluding	
the amortisation of land	
use rights and leasehold land	
	(2,449,016)
	(2,554,844)
	(354,107)
	373

	(3,565)
	(95,064)
	-
	(5,456,596)
Gain/(loss) on disposal of property,	
plant and equipment	
	12,165
	2,813
	(132)
	(56)
	(2,769)
	-
	12,021
Impairment of property, plant and equipment	
	(247,997)
	-
	-
	-
	(31,753)
	-
	(279,750)
Change for impairment of inventories	

(82,714)

(116,639)

(26,565)

(40,923)

-

-

(266,841)

(Provision for) /reversal of impairment

of receivables, net of bad debts recovered

41,888

(5)

(8,010)

-

-

-

33,873

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Additions to non-current

assets during the year:

Intangible assets

467,426  
 65,034  
 13,862  
 -  
 787,798  
 -  
 1,334,120

Land use rights

1,397  
 338,680  
 106,504  
 -  
 -  
 -  
 446,581

Property, plant and equipment

2,150,181  
 4,135,453  
 2,760,745  
 9,538  
 109,021  
 376



9,164,938

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**5. REVENUE AND SEGMENT INFORMATION**

*(CONTINUED)*

(b) Segment information

*(Continued)*

Year ended December 31, 2012

	Alumina	Primary aluminum	Aluminum fabrication	Trading (Note)	Corporate and other operating activities	Inter- segment elimination	Total
Total revenue	31,845,900	58,036,325	9,567,246	117,295,058	307,815	(67,573,523)	149,478,821

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Inter-segment revenue (28,168,871) (25,581,383) (1,259,851) (12,521,632) (41,786) 67,573,523 -

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	Sales of self-produced							
	products				38,184,093			
	Sales of products sourced							
	from external suppliers				66,589,333			

Revenue from external customers

3,677,029  
 32,454,942  
 8,307,395  
 104,773,426  
 266,029  
 -  
 149,478,821

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Segment (loss)/profit

(3,744,947)  
 (3,084,684)  
 (1,385,899)  
 437,635  
 (1,449,429)

135,262

(9,092,062)

Income tax benefit

448,479

Loss for the year

(8,643,583)

Other items:

Finance income

27,232

57,796

13,898

95,967

119,286

-

314,179

Finance costs

(898,656)

379

	(1,535,959)
	(659,278)
	(285,803)
	(1,533,863)
	-
	(4,913,559)
Share of profits of jointly	
controlled entities	
	-
	-
	-
	-
	37,040
	-
	37,040
Share of profits/(losses) of associates	
	-
	238,698
	(1,233)
	-
	17,383
	-
	254,848
	380

Amortisation of land use

rights and leasehold land

(40,063)

(26,640)

(7,748)

(101)

-

-

(74,552)

Depreciation and

amortisation excluding

the amortisation of land

use rights and leasehold land

(2,527,909)

(2,668,886)

(388,663)

(4,061)

(106,749)

-

(5,696,268)

381

Loss on disposal of

property, plant and equipment and

land use rights and leasehold land

(231,080)

(222,879)

(789)

(1,036)

(86)

-

(455,870)

Impairment of property, plant and equipment

-

(19,903)

-

-

-

-

(19,903)

Impairment for available-for-sale

financial investments

	-
	(7,778)
	-
	-
	-
	(7,778)
Change for impairment of	
inventories	(552,875)
	(289,397)
	(109,396)
	(80,259)
	-
	-
	(1,031,927)
Reversal of / (provision for)	
impairment of	
receivables, net of bad	
debts recovered	

58,582  
(120,268)  
(32,139)  
8,437  
(1,516)  
-  
(86,904)

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Additions to non-current

assets during the year:

Intangible assets

54,755  
-  
-  
-  
601  
-  
55,356



Land use rights

1,440

88

-

-

-

-

1,528

Property, plant and equipment

4,187,114

4,604,665

483,459

48,523

245,576

-

9,569,337

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Note: In connection with the significant increase of trading revenue, the Group refined its existing accounting system in order to separately capture sales of self-produced products and products sourced from external suppliers within the trading segment in 2011 and 2012. However, similar analysis for 2010 is not available as such information was not captured prior to 2011.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**5. REVENUE AND SEGMENT INFORMATION**

*(CONTINUED)*

(b) Segment information

*(Continued)*

Corporate

and other

Inter-

Primary

Aluminum

operating

segment

Alumina

aluminum

fabrication  
 Trading  
 activities  
 elimination  
 Total

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As at December 31, 2011

Segment assets

61,051,299  
 56,843,300  
 15,749,941  
 12,219,330  
 13,386,026  
 (3,939,370)  
 155,310,526

Unallocated:

Deferred tax assets

1,517,339

Prepaid income tax

306,292

---

Total assets

157,134,157

---

Segment liabilities

30,771,919

31,233,582

11,953,100

9,696,315

19,568,267

(4,298,806)

98,924,377

Unallocated:

Deferred tax liabilities

4,456

388

Income tax payable

50,638

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Total liabilities

98,979,471

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Corporate

and other

Inter-

Primary

Aluminum

operating

segment

Alumina

aluminum

fabrication

Trading  
 activities  
 elimination  
 Total

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As at December 31, 2012

Segment assets

73,674,402  
 56,052,801  
 14,742,449  
 14,170,929  
 23,162,073  
 (9,198,192)  
 172,604,462

Unallocated:

Deferred tax assets

2,116,986

Prepaid income tax

295,434

---

Total assets

175,016,882

---

Segment liabilities

40,217,727

30,396,514

10,795,472

11,361,833

38,277,111

(9,863,984)

121,184,673

Unallocated:

Income tax payable

61,059

391

Total liabilities

121,245,732

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**5. REVENUE AND SEGMENT INFORMATION**

*(CONTINUED)*

(b) Segment information

*(Continued)*

The Group mainly operates in the mainland of China. Geographical information of the operating segments is as follows:

	2010	2011	2012
Segment revenue from external customers			
- Domestic	120,990,827	143,654,408	145,871,544
- Overseas	4,020	2,220,025	3,607,277
	120,994,847	145,874,433	149,478,821



	December 31, 2011	December 31, 2012
Non-current assets (excluding available-for-sale financial investments, entrusted loans and deferred tax assets)		
- Domestic	105,022,848	111,725,252
- Overseas	279,384	11,894,128
	105,302,232	123,619,380

For the year ended December 31, 2012, revenues of approximately RMB24,921 million (2010: RMB28,945 million; 2011: RMB32,609 million) are derived from entities directly or indirectly owned or controlled by the PRC government including Chinalco. These revenues are mainly attributable to the alumina, primary aluminum, aluminum fabrication and trading segments. There was no other individual customer from whom the Group has derived revenue of more than 10% of the Group's revenue during the year ended December 31, 2012.

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## ALUMINUM CORPORATION OF CHINA LIMITED

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(CONTINUED)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

#### 6. INTANGIBLE ASSETS

Goodwill	Mining rights	Mineral exploration rights	Computer software and others	Total

Year ended December  
31, 2011

Opening net book amount	2,362,735	530,396	-	140,744	3,033,875
Transfer to assets of disposal group classified as held for sale	-	(140,849)	-	-	(140,849)
Additions ( <i>Note</i> )	-	227,680	1,081,427	25,013	1,334,120
Disposal	-	(744)	-	(81)	(825)
Amortisation	-	(48,477)	-	(29,074)	(77,551)

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Closing net book amount	2,362,735	568,006	1,081,427	136,602	4,148,770
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As at December 31, 2011

Cost	2,362,735	822,588	1,081,427	241,447	4,508,197
Accumulated amortisation	-	(254,582)	-	(104,845)	(359,427)

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Net book amount	2,362,735	568,006	1,081,427	136,602	4,148,770
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Note: Included in total additions of mineral exploration rights of RMB1,081 million during the year ended December 31, 2011 were acquisitions by way of acquiring the holding companies of the respective rights:

- (a) In March 2011, the Company entered into an investment agreement with Tangshan Jiahua Industrial Co., Ltd. (), a limited company incorporated in the PRC, to acquire 70% equity interest in Gansu Huayang Mining Development Company Limited ("Huayang Mining") (), a limited company incorporated in the PRC. Pursuant to the agreement, the Company agreed to inject into Huayang Mining a total of RMB965 million. At the acquisition date, Huayang Mining was still in pre-development stage and has no significant commercial operations. At the date of acquisition, except for cash and cash equivalents and mineral exploration rights amounting to RMB55 million and RMB409 million, respectively, Huayang Mining did not have any other significant identifiable assets or liabilities. As of the December 31, 2011, the Company has injected into Huayang Mining a total of RMB50 million, and the remaining RMB915 million will be paid in two installments according to the capital expenditure requirement within 5 years.

- (b) In March 2011, the Group, through a wholly-owned subsidiary, entered into an agreement with Laos Service Co. Limited ("Laos Service"), a limited liability company incorporated in Laos, to acquire 60% equity interest in Laos Mineral Services Co., Limited ("Laos Mineral"), a limited liability company incorporated in Laos, at a total consideration of USD18 million (equivalent to RMB115 million), of which, USD3 million will be injected into Laos Mineral as capital contribution. At the date of acquisition, Laos Mineral had no significant business transactions other than the holding of the mineral exploration rights in Laos. As of December 31, 2011, the Group had paid USD15 million (equivalent to RMB96 million) to Laos Service.

Both Huayang Mining's and Laos Mineral's operation do not constitute a business as defined under IFRS 3 (Revised), "Business Combination". Accordingly, the acquisitions are accounted for as purchase of assets.

	Goodwill	Mining rights	Mineral exploration rights	Computer software and others	Total
Year ended December 31, 2012					
Opening net book amount	2,362,735	568,006	1,081,427	136,602	4,148,770
Additions	-	50,405	194	4,757	55,356
Transfer from non-current assets	-	150,811	-	-	150,811
Amortisation	-	(67,601)	-	(26,055)	(93,656)
Reclassification	-	129,029	(129,029)	-	-
Exchange differences	-	-	(1,263)	-	(1,263)
Closing net book amount	2,362,735	830,650	951,329	115,304	4,260,018
As at December 31, 2012					
Cost	2,362,735	1,152,833	951,329	246,204	4,713,101
Accumulated amortisation	-	(322,183)	-	(130,900)	(453,083)
Net book amount	2,362,735	830,650	951,329	115,304	4,260,018

For the years ended December 31, 2010, 2011 and 2012, the amortisation expense of intangible assets recognised in profit or loss are analysed as follows:

	2010	2011	2012
Cost of sales ( <i>Note 25</i> )	52,584	65,189	67,842
General and administrative expenses ( <i>Note 26(b)</i> )	14,993	12,362	25,814
	67,577	77,551	93,656

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(*CONTINUED*)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**6. INTANGIBLE ASSETS**

(*CONTINUED*)

Impairment tests for goodwill

The lowest level within the Group at which goodwill is monitored for internal management purposes is the operating segment level. Therefore, goodwill is allocated to the Group's cash-generating units ("CGUs") and groups of CGUs according to operating segments. A summary of goodwill allocated to each segment is presented below:

	December 31, 2011	December 31, 2012
	Primary Alumina	Primary Alumina
	aluminum	aluminum

Qinghai Branch	-	217,267	-	217,267
Guangxi Branch	189,419	-	189,419	-
Lanzhou Branch	-	1,924,259	-	1,924,259
Jiaozuo Wanfang Power Co., Ltd. ("Wanfang Power")	-	31,790	-	31,790
	189,419	2,173,316	189,419	2,173,316

The recoverable amount of a CGU is determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on financial budgets approved by management covering a 5-year period. Cash flows beyond the 5-year period are extrapolated using the estimated growth rate at 2.5% not exceeding the long-term average growth rate for the businesses in which the CGU operates. Other key assumptions applied in the impairment tests include the expected product price, demand for the products, product costs and related expenses. Management determined that these key assumptions were based on past performance and their expectations on market development. Furthermore, the Group adopts a pre-tax rate of 12.62% (2011: 11.14%) that reflects specific risks related to CGUs and groups of CGUs as discount rates. The assumptions above are used in analysing recoverable amounts of CGUs and groups of CGUs within operating segments.

The directors of the Company are of the view that, based on its assessment, there was no impairment of goodwill as at December 31, 2012 (December 31, 2011: nil).

A one percentage point increase or decrease in the discount rate, with all other variables held constant, would result in a decrease or increase in the recoverable amount of 8.90% and 10.87%, respectively. A one percent increase or decrease in estimated growth, with all other variables held constant, would result in an increase or decrease in the recoverable amount of 8.27% and 5.78%, respectively.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

## 7. PROPERTY, PLANT AND EQUIPMENT

	Buildings	Machinery	Transportation facilities	Office and other equipment	Construction- in-progress	Total
Year ended December 31, 2011						
Opening net book amount	24,024,955	47,111,664	1,417,979	167,265	18,056,809	90,778,672
Currency translation differences	(1,218)	(3)	(33)	(6)	(5,984)	(7,244)
Transfers/reclassifications	3,230,599	7,174,677	118,193	34,662	(10,558,131)	-
Transfer to assets of disposal groups						
classified as held for sale	(89,946)	(29,981)	(1,428)	-	-	(121,355)
Additions	72,365	35,030	13,566	7,688	9,036,289	9,164,938
Disposals	(11,706)	(15,771)	(8,087)	(820)	(2,357)	(38,741)
Depreciation	(1,070,244)	(4,283,850)	(248,409)	(54,654)	-	(5,657,157)
Write-off/impairment loss (Note (b))	(13,003)	(100)	-	-	(330,637)	(343,740)
Closing net book amount	26,141,802	49,991,666	1,291,781	154,135	16,195,989	93,775,373
As at December 31, 2011						
Cost	37,326,219	89,616,972	3,248,927	595,406	16,847,226	147,634,750
Accumulated depreciation and impairment	(11,184,417)	(39,625,306)	(1,957,146)	(441,271)	(651,237)	(53,859,377)
Net book amount	26,141,802	49,991,666	1,291,781	154,135	16,195,989	93,775,373

	Buildings	Machinery	Transportation facilities	Office and other equipment	Construction- in-progress	Total

Year ended December 31,  
2012

Opening net book amount	26,141,802	49,991,666	1,291,781	154,135	16,195,989	93,775,373
Currency translation differences	74	-	(136)	(304)	(7,851)	(8,217)
Transfers/reclassifications	3,588,109	6,840,370	323,787	16,714	(10,768,980)	-
Transfer to land use rights and leasehold land	(45,025)	-	-	-	(227,587)	(272,612)
Additions	8,202	156,531	16,190	5,545	9,382,869	9,569,337
Disposals	(156,459)	(475,108)	(21,262)	(2,100)	-	(654,929)
Depreciation	(1,205,811)	(4,649,853)	(240,096)	(45,198)	-	(6,140,958)
Impairment loss	(1,365)	(16,304)	(201)	(100)	(1,933)	(19,903)
<b>Closing net book amount</b>	<b>28,329,527</b>	<b>51,847,302</b>	<b>1,370,063</b>	<b>128,692</b>	<b>14,572,507</b>	<b>96,248,091</b>
<b>As at December 31, 2012</b>						
Cost	40,422,683	94,610,756	3,474,875	548,633	15,220,878	154,277,825
Accumulated depreciation and impairment	(12,093,156)	(42,763,454)	(2,104,812)	(419,941)	(648,371)	(58,029,734)
<b>Net book amount</b>	<b>28,329,527</b>	<b>51,847,302</b>	<b>1,370,063</b>	<b>128,692</b>	<b>14,572,507</b>	<b>96,248,091</b>

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(CONTINUED)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**7. PROPERTY, PLANT AND EQUIPMENT**

(CONTINUED)

For the years ended December 31, 2010, 2011 and 2012, depreciation expenses recognised in profit or loss are analysed as follows:

	2010	2011	2012
Cost of sales ( <i>Note 25</i> )	6,014,643	5,202,402	4,767,583
General and administrative expenses ( <i>Note 26(b)</i> )	207,075	156,190	162,331
Selling and distribution expenses ( <i>Note 26(a)</i> )	9,337	20,453	31,958
	6,231,055	5,379,045	4,961,872

As at December 31, 2012, the Group was in the process of applying for the ownership certificates of buildings with a net book value of RMB6,890 million (December 31, 2011: RMB4,212 million).

As at December 31, 2012, buildings with a net book value of RMB5 million (December 31, 2011: RMB5 million) is situated in Hong Kong.

For the year ended December 31, 2012, interest expenses of RMB635 million (2010: RMB645 million; 2011: RMB731 million) arising from borrowings attributable to the construction of property, plant and equipment during the year were capitalised at an annual rate of 4.74% to 7.17% (2010: 4.10% to 5.15%; 2011: 4.16% to 6.02%) (Note 28) and were included in "additions" to property, plant and equipment.

As at December 31, 2012, the Group has pledged property, plant and equipment at a net book value amounting to RMB2,243 million (December 31, 2011: RMB1,307 million) for bank and other borrowings as set out in Note 24 to the consolidated financial statements.

#### Impairment test for property, plant and equipment

When any indicators of impairment are identified, property, plant and equipment are reviewed for impairment based on each CGU. The CGU is an individual plant or entity. The carrying value of these individual plants or entities was compared to the recoverable amount of the CGUs, which was based predominantly on value-in-use. Value-in-use calculations use pre-tax cash flow projections based on financial budgets approved by management covering a 5-year period. Cash flows beyond the 5-year period are extrapolated using the estimated growth rates not exceeding the long-term average growth rates for the businesses in which the CGU operates. Other key assumptions applied in the impairment tests include the expected



product price, demand for the products, product cost and related expenses. Management determined that these key assumptions were based on past performance and their expectations on market development. Further, the Group adopts a pre-tax rate of 10.19% (2011: 11.14%) that reflects specific risks related to CGUs and groups of CGUs as discount rates. The assumptions above are used in analysing recoverable amounts of CGUs and groups of CGUs within operating segments.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**7. PROPERTY, PLANT AND EQUIPMENT**

*(CONTINUED)*

Impairment test for property, plant and equipment

*(Continued)*

Where it is considered more likely than not that an individual CGU will be disposed within the near-term rather than continue to be held and operated by the Group, the recoverable amount to be completed is based on the estimated net disposal value of the CGU less cost to disposal rather than by reference to its value-in-use.

For the year ended December 31, 2012, impairment loss for property, plant and equipment of RMB20 million (2010: RMB702 million; 2011: RMB280 million) was recognised in profit or loss, which was determined based on the fair value less costs to sell of the relevant property, plant and equipment.

A one percentage point increase or decrease in the discount rate, with all other variables held constant, would result in a 4.11% and 4.41% decrease or increase in the estimated recoverable amount of property, plant and equipment respectively. A one percent increase or decrease in estimated growth, with all other variables held constant, would result in a 0.84% and 0.81% increase or decrease in the recoverable amount of property, plant and equipment, respectively.

(a)

As a result of the Group's operational structural adjustments exercise from late 2009 through 2010, the Group determined that certain properties, plant and equipment would be retired (including certain constructions in progress would be abandoned) or disposed through a sale transaction. As of December 31, 2010, an impairment loss amounted to RMB329 million represented the difference between the carrying value of these property, plant and equipment of RMB370 million and their estimated recoverable amounts (estimated fair value less costs to sell). There was no such matter for the year ended December 31, 2011.

- (b) For the year end December 31, 2011, impairment loss of RMB280 million was principally related to the exploration and development of bauxite resource in Aurukun, Queensland, Australia (the "Aurukun Project").

On March 23, 2007, the Company entered into a development agreement ("Development Agreement") with the Queensland State Government of Australia for the Aurukun Project. Pursuant to the Development Agreement, the Company would mine the bauxite resources, build and operate a bauxite refinery smelting plant in Queensland, Australia. However, due to adverse changes in the aluminum industry after the financial crisis in 2008, the Aurukun Project had been hindered by various unfavorable factors to the extent that it could not be implemented in accordance with the timetable specified in the Development Agreement. On June 30, 2010, the Development Agreement was automatically terminated upon its expiration date. After the expiration of the Development Agreement, the Company and Queensland State Government agreed to discuss for development of the Aurukun Project. In December 2010, Queensland State Government had offered to the Company a revised development agreement allowing the Company to change the AuruKun Project from a mining plus refinery plant integrated project to a mining plus replacement project (the "December 2010 Offer"). In June 2011, the Queensland State Government withdrew the aforementioned offer and informed the Company that a public bidding process on the Aurukun Project will be commenced (the "June 2011 Withdrawal").

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**7. PROPERTY, PLANT AND EQUIPMENT***(CONTINUED)*

Impairment test for property, plant and equipment

*(Continued)*

In December 2010, as a result of the aforementioned December 2010 Offer, full provision for impairment of RMB373 million was made against the carrying value of the capitalised development costs attributable to the refinery plant of the Aurukun Project. In June 2011, in connection with the aforementioned June 2011 Withdrawal of the offer by the Queensland State Government, a government subsidy amounting to RMB64 million (2010: nil) was released from deferred government subsidies and net off against the carrying value of related assets as there is no further performance obligations required. Thereafter, the remaining carrying value of the expenditure pertaining to the Aurukun Project is fully provided for at December 31, 2011. As a result, an additional impairment charge of RMB278 million was recognized in the statement of comprehensive income for the year ended December 31, 2011 and the carrying value of the Aurukun Project is reduced to nil.

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**ALUMINUM CORPORATION OF CHINA LIMITED****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS***(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**8. LAND USE RIGHTS AND LEASEHOLD LAND**

Details of land use rights and leasehold land are as follows:

	December 31, 2011	December 31, 2012
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Finance leases (a):

In Hong Kong, held on:

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Leases between 10 to 50 years	81,691	97,261
Operating leases (b):		
In the mainland of the PRC, held on:		
Leases less than 10 years	-	27,017
Leases between 10 to 50 years	2,469,604	2,463,185
Leases over 50 years	7,017	6,745
	<u>2,558,312</u>	<u>2,594,208</u>

(a) Finance leases

	2011	2012
As at January 1,		
Cost	95,407	91,677
Accumulated amortisation	(8,126)	(9,986)
	<u>87,281</u>	<u>81,691</u>
Year ended December 31,		
Opening net book amount	87,281	81,691
Reclassification from property, plant and equipment ( <i>Note 7</i> )	-	18,273
Currency translation differences	(3,368)	(32)
Amortisation	(2,222)	(2,671)
	<u>81,691</u>	<u>97,261</u>
Closing net book amount	81,691	97,261
As at December 31,		
Cost	91,677	109,845
Accumulated amortisation	(9,986)	(12,584)

Net book amount	81,691	97,261
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As at December 31, 2012, finance leases represented leasehold land situated in Hong Kong held under leases of 34 years (December 31, 2011: 35 years).

For the year ended December 31, 2010, 2011 and 2012, the amortisation expense of leasehold land was recognised in "general and administrative expenses" in profit or loss.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**8. LAND USE RIGHTS AND LEASEHOLD LAND***(CONTINUED)*

## (b) Operating leases prepayments

	2011	2012
As at January 1,	2,093,665	2,476,621
Additions	446,581	1,528
Reclassification from property, plant and equipment ( <i>Note 7</i> )	-	254,339
Transfer to held-for-sale assets ( <i>Note 13</i> )	-	(129,964)
Transfer to non-current assets	-	(27,946)
Disposals	-	(5,750)
Amortisation	(63,625)	(71,881)
As at December 31,	2,476,621	2,496,947

As at December 31, 2012, the Group was in the process of applying for the certificates of land use rights with carrying amount of RMB416 million (December 31, 2011: RMB484 million).

For the year ended December 31, 2010, 2011 and 2012, the amortisation expense of land use right was recognised in "general and administrative expenses" in profit or loss.

As at December 31, 2012, the Group has pledged land use right at a net book value amounting to RMB69 million (December 31, 2011: RMB123 million) for bank and other borrowings as set out in Note 24 to the consolidated financial statements.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES

(a) Investments in jointly controlled entities

Movements in investments in jointly controlled entities are as follows:

	2011	2012
As at January 1	990,568	1,457,229
Capital injections/acquisitions <i>(Note)</i>	445,041	509,152
Share of profits for the year	122,262	37,040
Cash dividends declared	(100,642)	(66,471)
As at December 31	1,457,229	1,936,950

*Note:* During the year ended December 31, 2012, the capital injections/acquisitions in the jointly controlled entities of the Group amounting to RMB172 million, were paid in cash.

As at December 31, 2011 and 2012, particulars of the jointly controlled entities of the Group, all of which are unlisted, are as follows:

Name	Place of establishment and operation	Legal status	Registered and fully paid capital	Business nature and scope of operations	Effective equity interest held	
					2011	2012
Shanxi Jinxin Aluminum Co., Ltd. ("Jinxin Aluminum") ( (Note (i))	Mainland of China	Limited liability company	20,000	Manufacture and distribution of primary aluminum	50%	50%
Guangxi Huayin Aluminum Co. Ltd. ("Guangxi Huayin") ( (	Mainland of China	Limited liability company	2,441,987	Manufacture and distribution of alumina	33%	33%
Shanxi Jiexiu Xinyugou Coal Co., Ltd. ("Xinyugou Coal") ( ( (Note (ii))	Mainland of China	Limited liability company	200,000	Coal production	34%	34%
Chalco Sapa Aluminum Products	Mainland of China	Limited liability	Registered capital	Manufacture and distribution of	50%	50%

(Chongqing) Co., Ltd.	company	280,000	aluminum fabricated products		
("Chalco Sapa") ( )			Paid-in-capital  226,032		
Chalco Liupanshui Hengtaihe Mining Co., Ltd. ("Hengtaihe Mining") ( ) (Note(iii))	Mainland of China	Limited liability  company	Registered capital  420,000	Coal production	- 49%
			Paid-in-capital 149,370		

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(CONTINUED)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES**

(CONTINUED)

(a) Investments in jointly controlled entities

(Continued)

As at December 31, 2011 and 2012, particulars of the jointly controlled entities of the Group, all of which are unlisted, are as follows:

(Continued)

Place of establishment	Registered
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Name	and operation	Legal status	and fully paid capital	Business nature and scope of operations	Effective equity interest held	
					2011	2012
Jiaozuo Wanfang Water Company ( "Wanfang Water") ( (Note(iv))	Mainland of China	Limited liability company	9,000	Sewage disposal and recycling	-	12%
Shanxi Chengcheng Dongdong Coal Co., Ltd. ("Dongdong Coal") ( ) (Note(v))	Mainland of China	Limited liability company	95,000	Coal production	-	45%
Datong Coal Group Huasheng Wanjie Coal Co.,Ltd. ("Huasheng Wanjie") ( ) (Note(vi))	Mainland of China	Limited liability company	10,000	Coal production	-	49%
Henan Chalco Lichuang Mining Co.,Ltd. ("Chalco Lichuang") ( ) (Note(vii))	Mainland of China	Limited liability company	10,000	Sales of bauxite	-	49%

The English names of jointly controlled entities represent the best effort by the management of the Group in translating their Chinese names as they do not have any official English names.

Notes:

- (i) As at December 31, 2012, the Group's investments in Jinxin Aluminum have been fully written down and the Group does not have obligation to share any additional losses of Jinxin Aluminum.
- (ii) In the first half of 2012, the Company injected additional cash amounting to RMB82 million as capital contribution to Xinyugou Coal. Xinyugou Coal is a company established in the PRC with limited liability and its principal activity is coal production in Shanxi Province of the PRC. As at December 31, 2012, the Company held 34% equity interest in Xinyugou Coal.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES**

*(CONTINUED)*

- (a) Investments in jointly controlled entities

*(Continued)*

Notes: (Continued)

- (iii) In March 2012, the Company, through a wholly owned subsidiary, Guizhou Mining Co., Ltd., and Liupanshui Hengtaihe Mining Investment Co., Ltd. (), jointly established Hengtaihe Mining. Hengtaihe Mining is a company incorporated in the PRC with limited liability and its principal activity is coal production in Guizhou Province of the

PRC. As at December 31, 2012, the Group has injected cash amounting to RMB75 million as capital contribution and held 49% equity interest in Hengtaihe Mining.

- (iv) In June 2012, the Company, through a 24% owned subsidiary, Jiaozuo Wanfang, and Junzheng Trading Co., Ltd. (), jointly established (Wanfang Water). Wanfang Water is a company established in the PRC with limited liability and its principal activity is sewage disposal and recycling in Henan Province of the PRC. As at December 31, 2012, the Group has injected cash amounting to RMB4.5 million and held 50% equity interest in Wanfang Water.
- (v) In May 2012, the Company, through a wholly owned subsidiary, Shanxi Huayu Energy Investment Co., Ltd., acquired 45% equity interest in Dongdong Coal from Shaanxi Sanqin Energy Co., Ltd. () at a total consideration of RMB200 million. As at December 31, 2012, the Group has paid cash consideration amounting to RMB200 million. Dongdong Coal is a company incorporated in the PRC with limited liability and its principal activity is coal production in Shanxi Province of the PRC.
- (vi) In October 2012, the Company, through a wholly owned subsidiary, Shanxi Huayu Energy Investment Co., Ltd., and another investor, Datong Coal Group Hejin Xuanmei Huasheng Investing Co., Ltd. (), established Huasheng Wanjie. As at December 31, 2012, the Group have injected cash amounting to RMB4.9 million and held 49% equity interest in Huasheng Wanjie.
- (vii) In July 2012, the Company, through a wholly-owned subsidiary, Chalco Mining Co., Ltd., and Henan Jinfeng Coal Group Co., Ltd. (), jointly established Chalco Lichuang. Chalco Lichuang is a company established in the PRC with limited liability and its principal activity is sales of bauxite in Henan Province of the PRC. As at December 31, 2012, the Group has injected cash amounting to RMB4.9 million and held 49% equity interest in Chalco Lichuang.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

## 9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES

*(CONTINUED)*

## (a) Investments in jointly controlled entities

*(Continued)*

As at December 31, 2011 and 2012, the Group's share of interests in its jointly controlled entities, based on their management accounts or financial statements, are as follows:

	Assets	Liabilities	Revenue for the year	Profit/(loss) for the year
December 31, 2011				
Jinxin Aluminum	20,324	(20,846)	-	-
Guangxi Huayin	2,646,228	(1,629,451)	1,507,908	126,851
Xinyugou Coal	1,059,713	(660,753)	-	-
Chalco Sapa	115,070	(6,643)	-	(4,589)
December 31, 2012				
Jinxin Aluminum	20,324	(20,846)	-	-
Guangxi Huayin	2,697,045	(1,728,251)	1,104,868	21,849
Xinyugou Coal	1,277,494	(875,604)	-	-
Chalco Sapa	171,860	(67,924)	-	(4,454)
Hengtaihe Mining	156,113	(62,549)	35,263	14,048
Wanfang Water	4,555	(54)	-	-
Dongdong Coal	238,728	(201,179)	-	-
Huasheng Wanjie	301,811	(157,709)	-	(1)
Chalco Lichuang	4,895	-	-	(5)

As at December 31, 2012, the proportionate interests of the Group in jointly controlled entities' capital commitments was RMB335 million (December 31, 2011: RMB180 million).

There were no material contingent liabilities relating to the Group's interests in the jointly controlled entities and the jointly controlled entities themselves.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES**

*(CONTINUED)*

(b) Investments in associates

Movements in investments in associates are as follows:

	2011	2012
As at January 1	1,212,608	2,492,586
Capital injection/acquisitions <i>(Note)</i>	862,000	14,734,767
Share of profits for the year	402,701	254,848
Cash dividends declared	-	(236,152)
Exchange difference	-	(44,617)
Share of change in reserves	15,277	10,533
As at December 31	2,492,586	17,211,965

Note: During the year ended December 31, 2012, the capital injections/acquisitions in the associates of the Group amounting to RMB13,407 million, were paid in cash.

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES***(CONTINUED)***(b) Investments in associates***(Continued)*

As at December 31, 2011 and 2012, particulars of the associates of the Group, all of which are unlisted, are follows:

Name	Place of establishment and operation	Legal status	Registered and fully paid capital	Business nature and scope of operations	Effective equity interest held	
					2011	2012
ABC-CA Fund Management Co., Ltd. ("ABC Fund") ( (Note (i))	Mainland of China	Limited liability company	200,000	Investments	15%	15%
Jiaozuo Coal Group Xinxiang (Zhaogu) Energy Corporation Co., Ltd. ("Zhaogu Coal") ( ) (Note (ii))	Mainland of China	Limited liability company	800,000	Coal production	7.2%	7.2%
Jiaozuo Wanfang	Mainland	Limited	10,000	Sales of	7.2%	7.2%

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Industry Co., Ltd. ("Wanfang Industry") ( (Note (ii))	of China	liability company			construction materials and other goods		
Duofuduo (Fushun) Technology Development Co., Ltd. ("Duofuduo") ( )	Mainland of China	Limited liability company	126,660		Manufacture and distribution of fluoride products	45%	45%
Henan Zhongfu Special Aluminum Co., Ltd. ("Henan Zhongfu") ( )	Mainland of China	Limited liability company	769,000		Manufacture and distribution of aluminum fabricated products	23.41%	23.41%
Qinghai Province Energy Development (Group) Co., Ltd. ("Qinghai Energy") ( (Note (iii))	Mainland of China	Limited liability company	Registered Capital 3,555,000  Paid-in-capital 2,725,000		Coal production	21%	21%
Guizhou Chalco Aluminum Co., Ltd. ("Guizhou Chalco") ( (Note (iv))	Mainland of China	Limited liability company	Registered Capital 320,000  Paid-in-capital 200,000		Manufacture and distribution of aluminum fabricated products	40%	40%

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Guizhou Yuneng Mining Co., Ltd. ("Yuneng Mining") ( (Note(v))	Mainland of China	Limited liability company	209,721	Coal production	- 25%
Simfer Jersey Limited (Note(vi))	Jersey Island	Limited liability company	USD2,938,107,783	Iron ore development in Guinea, West Africa	- 30.55%
Huozhou Coal Group Xingshengyuan Coal Co., Ltd. ( ) ("Xingshengyuan Coal") (Note(vii))	Mainland of China	Limited liability company	50,000	Coal production	- 21.95%
Shanxi Huatuo Alumina Co., Ltd. ("Huatuo Alumina") ( (Note(viii))	Mainland of China	Limited liability company	30,000	Manufacture of aluminum fabricated products	- 10.6%
Ningxia Electric Power Group Co., Ltd. ("Ningfa") ( ) (Note(ix))	Mainland of China	Limited liability company	5,028,800	Thermal power, wind power and solar power generation, coal mining, and power related equipment manufacturing	- 35.54%



**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES**

*(CONTINUED)*

(b) Investments in associates

*(Continued)*

Except for Simfer Jersey Limited, the English names of associates represent the best effort by the management of the Group in translating their Chinese names as they do not have any official English names.

Notes:

- (i) The Company exercises significant influence over ABC Fund through its appointment of a director into the board of directors of ABC Fund.
- (ii) Zhaogu Coal and Wanfang Industry are associated companies of the Group's 24.002% (2011: 24.002%) subsidiary, Jiaozuo Wanfang, in which Jiaozuo Wanfang holds a 30% (2011: 30%) direct equity interest.
- (iii) In March 2011, the Company, Qinghai Province Investment Group Co., Ltd. (), a PRC limited liability company, and other six investors jointly established Qinghai Energy. Qinghai Energy is a PRC limited liability company and its principal activity is coal production in Qinghai Province of the PRC. As of December 31, 2011, the Company has injected cash amounting to RMB755 million and holds 21% equity interest in Qinghai Energy.
- (iv) In June 2011, the Company, Guiyang Industrial Investment (Group) Co., Ltd. () and Shanghai Enyuan Industry Co., Ltd. (), two other PRC limited liability companies, jointly established Guizhou Chalco. Guizhou Chalco is a PRC limited liability company and its principal activity is aluminum fabrication. As of December 31, 2011, the Company has injected cash amounting to RMB35 million and property, plant and equipment amounting to RMB45 million and

holds 40% equity interest in Guizhou Chalco.

In 2012, the Group injected additional capital in cash to Guizhou Chalco amounting to RMB48 million and maintained its 40% equity interest in GuizhouChalco.

- (v) In May 2012, the Company, through a wholly owned subsidiary, Zunyi Mining Co., Ltd., acquired 25% equity interest in Yuneng Mining from Chongqing Wujiang Shiye (Group) Co., Ltd. () at a total consideration of RMB473 million. As at December 31, 2012, the Group has paid cash consideration amounting to RMB473 million. Yuneng Mining is a company established in the PRC with limited liability and its principal activity is coal production in Guizhou Province of the PRC.
  
- (vi) On July 29, 2010, the Company, Rio Tinto plc ("Rio Tinto") and Rio Tinto Iron Ore Atlantic Limited, two limited liability companies incorporated in England, entered into a Joint Development Agreement (the "Agreement") for the development and operation of an open-pit iron ore mine located in Guinea, West Africa (the "Simandou Project"). Pursuant to the Agreement, subject to the approval by the relevant Chinese government authorities, the Company agreed to acquire by stages up to 47% equity interests in a newly set up company, Simfer Jersey Limited, which owns a 95% equity interest of Simandou Project, at a total consideration of USD1.35 billion. On November 28, 2011, the Company, through a wholly owned subsidiary, Chalco Hong Kong Limited, and other three external investors entered into a framework agreement to jointly incorporate a company, namely Chalco Iron Ore Holdings Limited, to invest in the 47% interest in Simfer Jersey Limited. Pursuant to this framework agreement, Chalco Hong Kong Limited holds a 65% equity interest in Chalco Iron Ore Holdings Limited. During the year, the relevant Chinese government authorities had approved the Group's investment in Simfer Jersey Limited. On April 24, 2012, Chalco Iron Ore Holdings Limited paid a total cash consideration of USD1.35 billion (equivalent to approximately RMB8.57 billion) to Simfer Jersey Limited and acquired a 47% equity interest.

As at December 31, 2012, Chalco Iron Ore Holdings Limited have injected additional USD480 million (equivalent to approximately RMB3,075 million) to Simfer Jersey Limited for the development and operation of Simandou Project.

- (vii) In July 2012, the Company, through a 51% owned subsidiary, Shanxi Huasheng, together with Huozhou Coal Power Group Co., Ltd. () and Shanxi Dibao Energy Co., Ltd. () established Xingshengyuan Coal. As at December 31, 2012, the Group have

injected cash amounting to RMB21.5 million and held 43.03% equity interest in Xingshengyuan Coal.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES**

*(CONTINUED)*

(b) Investments in associates

*(Continued)*

Notes: (Continued)

(viii) In November 2012, the Company, through a 51% owned subsidiary, Shanxi Huasheng, together with other two investors, established Huatuo Alumina. The registered capital of Huatuo Alumina is RMB30 million. As at December 31, 2012, Shanxi Huasheng have completed the capital injection by a land use right of land with square of 94.56 mu (63,040 square meters, equivalently) at the cost of RMB6.2 million and held 20.78% equity interest in Huatuo Alumina.

(ix) In August 2012, the Company entered into the Equity Transfer Agreement with China Zhongtuo Trust Co., Ltd. () ("Zhongtuo Trust") to acquire an 11.88% equity interest in Ningfa at a total consideration of RMB674.9 million. This initial investment in Ningfa was accounted for at cost. In December 2012, the Company entered into the Equity Transfer Agreement with Huadian Power International Co., Ltd. () ("Huadian Power") to acquire an additional 23.66% equity interest in Ningfa at a total consideration of RMB1,362 million. As at December 31, 2012, the Company has paid cash amounting to RMB674.9 million to Zhongtuo Trust and RMB544.6 million to Huadian Power, respectively, and held a total of 35.54% equity interest in Ningfa. This additional interest resulted in the Company gaining significant influence over Ningfa. The excess of the fair value of identifiable net assets as at the acquisition date over the consideration transferred amounting to RMB505

million was recognised in other gains in profit or loss for the year ended December 31, 2012 and the investment in associate balance was adjusted correspondingly.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**9. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES/ASSOCIATES***(CONTINUED)*

## (b) Investments in associates

*(Continued)*

As at December 31, 2011 and 2012, the Group's share of interests in its associates, based on their management accounts or financial statements, are as follows:

	Assets	Liabilities	Revenue for the year	Profit/(loss) for the year
<hr/>				
December 31, 2011				
ABC Fund	52,146	(9,148)	33,696	6,536
Zhaogu Coal	1,936,620	(587,575)	1,112,594	391,004
Wanfang Industry	3,348	(1,634)	12	(575)
Duofuduo	60,197	(2,904)	-	(4)
Henan Zhongfu	233,352	(30,847)	434,101	2,513
Qinghai Energy	785,081	(198,679)	153,685	4,362
Guizhou Chalco	80,832	(364)	14,928	468
<hr/>				
December 31, 2012				
ABC Fund	55,371	(10,239)	31,417	4,510
Zhaogu Coal	2,054,815	(684,961)	848,007	243,067

Wanfang Industry	3,036	(1,863)	169	(541)
Duofuduo	59,541	(1,958)	-	289
Henan Zhongfu	283,412	(82,080)	414,916	174
Qinghai Energy	1,146,873	(382,724)	213,419	5,972
Guizhou Chalco	161,662	(22,889)	274	10,278
Yuneng Mining	820,777	(546,407)	8,848	(98)
Simfer Jersey Limited	12,369,542	(772,381)	-	(2,926)
Xingshengyuan Coal	256,676	(235,161)	-	-
Huatu Alumina	6,284	(50)	-	-
Ningfa	9,315,254	(7,908,147)	1,456,011	(3,738)

As at December 31, 2012, the proportionate interests of the Group in associates' capital commitments was RMB1,388 million (December 31, 2011: RMB114 million).

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## ALUMINUM CORPORATION OF CHINA LIMITED

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(CONTINUED)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

#### 10. AVAILABLE-FOR-SALE FINANCIAL INVESTMENTS

	2011	2012
As at January 1	44,878	44,878
Addition ( <i>Note(i)</i> )	-	27,400
Impairment ( <i>Note(ii)</i> )	-	(7,778)
As at December 31	44,878	64,500

As at December 31, 2011 and 2012, all available-for-sale financial investments are unlisted securities in the PRC, which are denominated in RMB (December 31, 2011: all in RMB). The directors of the Company are

of their opinion that as these available-for-sale financial investments do not have a quoted market price in an active market and their fair value cannot be reliably measured, therefore, the available-for-sale financial instruments are stated as cost.

Notes:

- (i) In October 2012, the Company through a wholly owned subsidiary, Inner Mongolia International Trade Co. Ltd. ("IMIT") entered into the Equity Transfer Agreement with Wutelazhong County State-owned Assets Bureau () to acquire 10% equity interest in Inner Mongolia Ganqimaodu Port Service Co. Ltd. () ("Ganqimaodu") at a total consideration of RMB20 million. As at December 31, 2012, IMIT has fully paid the consideration and the Company held 10% equity interest in Ganqimaodu.

In November 2012, the Company through a wholly owned subsidiary, Baotou Aluminum Co. Ltd., together with Inner Mongolia Yilong Holding Co., Ltd. () and Baotou Hedong District Assets Operation Center () to established Baotou Aluminum Jinxi Logistics Co. Ltd. () ("Jinxi Logistics"). As at December 31, 2012, the registered capital and paid-in capital of Jinxi Logistics was RMB200 million and RMB40.8 million. As at December 31, 2012, the Group has injected cash amounting to RMB7.4 million and holds 18.5% equity interest in Jinxi Logistics.

- (ii) Full impairment was made for the Group's investment in Zunyi Alumina Tuoguan Carbon Co, Ltd. ()("Tuoguan"), as Tuoguan suspended operations for the year ended December 31, 2012.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**11. DEFERRED TAX**

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current income tax assets against current income tax liabilities and when the deferred taxes relate to the same tax authority. The analysis of deferred tax assets and deferred tax liabilities is as follows

as at December 31, 2011 and 2012:

	December 31, 2011	December 31, 2012
<hr/>		
Deferred tax assets:		
- Deferred tax assets to be recovered after 12 months or more	1,104,776	1,706,069
- Deferred tax assets to be recovered within 12 months	412,563	410,917
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	1,517,339	2,116,986
<hr/>		
Deferred tax liabilities:		
- Deferred tax liabilities to be settled after 12 months or more	4,216	-
- Deferred tax liabilities to be settled within 12 months	240	-
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	4,456	-
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	1,512,883	2,116,986
<hr/>		

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**11. DEFERRED TAX***(CONTINUED)*

The movements in deferred tax are as follows:

	2011	2012
As at January 1	1,410,781	1,512,883
Disposal of a subsidiary	(821)	-
Exchange realignment	-	(5)
Write-off of deferred tax assets previously recognised ( <i>Note 31</i> )	-	(1,004,272)
Recognition in profit or loss ( <i>Note 31</i> )	102,923	1,608,380
As at December 31	1,512,883	2,116,986

The movements in deferred tax assets and liabilities during the year ended December 31, 2011 and 2012, without taking into consideration the offsetting of balances within the same tax jurisdiction, are as follows:

Movements in deferred tax assets:

	Provision for Impairment of receivables, inventories and property, plant and equipment	Accrued expenses	Tax deduction on purchases of qualified equipment	Tax losses	Unrealised profit at consolidation	Reversal of asset revaluation	Others	Total
As at January 1, 2011	162,926	140,571	60,092	1,013,513	71,577	26,192	61,393	1,536,264
Disposal of a subsidiary	(821)	-	-	-	-	-	-	(821)
Credited/(charged) to profit or loss	53,892	(31,478)	6,800	38,226	(48,669)	(1,101)	75,071	92,741



As at December 31, 2011	215,997	109,093	66,892	1,051,739	22,908	25,091	136,464	1,628,184
Exchange realignment	-	-	-	(5)	-	-	-	(5)
Write-off of deferred tax assets previously recognised	(18,236)	(1,707)	-	(984,329)	-	-	-	(1,004,272)
Credited/(charged) to profit or loss	208,661	(11,884)	(2,700)	1,417,259	23,318	(25,091)	27,036	1,636,599
As at December 31, 2012	406,422	95,502	64,192	1,484,664	46,226	-	163,500	2,260,506

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**11. DEFERRED TAX***(CONTINUED)*

Movements in deferred tax liabilities:

Depreciation

Fair value  
of property,

	Interest
	changes of
	plant and
	capitalisation
	financial assets
	equipment
	Others
	Total
As at January 1, 2011	121,355
	2,576
	-
	1,552
	125,483
Charged/(credited) to profit or loss	(20,827)
	169
	6,185
	4,291
	426

(10,182)

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As at December 31, 2011

100,528

2,745

6,185

5,843

115,301

Charged/(credited) to profit or loss

(10,576)

(1,255)

(338)

40,388

28,219

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As at December 31, 2012

89,952

1,490  
5,847  
46,231  
143,520

As at December 31, 2012, the Group did not recognize the deferred tax liabilities related to the aggregate amount of temporary differences associated with investments in subsidiaries, associates and jointly controlled entities, because the Group can control the reversal timing of these temporary differences, and these temporary differences will not be reversed in the foreseeable future. As at December 31, 2012, the above temporary differences for which deferred tax liabilities have not been recognized were RMB 651 million.

As at December 31, 2012, the Group has not recognised deferred tax assets of RMB2,422 million (December 31, 2011: RMB633 million) in respect of accumulated tax losses amounting to RMB9,686 million (2011: RMB2,532 million) that can be carried forward against future taxable income as it was not considered probable that those assets would be realised. As at December 31, 2011 and 2012, the expiry profile of these tax losses is analysed as follows:

	December 31, 2011	December 31, 2012
Expiring in		
2012	279,094	N/A
2013	397,956	522,489
2014	971,634	4,555,850
2015	451,856	703,696
2016	431,209	726,875
2017	N/A	3,177,095
<b>Total</b>	<b>2,531,749</b>	<b>9,686,005</b>

As at December 31, 2012, deferred tax assets amounting to RMB1,485 million (December 31, 2011: RMB1,052 million) were recognised for tax loss carried forward to the extent that the realisation of the related tax benefit is probable. The recognition of these deferred tax assets are supported by forecast of future taxable profits and also analysis of tax planning opportunities available to the Group.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**12. OTHER NON-CURRENT ASSETS**

	December 31, 2011	December 31, 2012
Advances and deposits paid		
to suppliers	139,866	111,946
Entrusted loans to a related party ( <i>Note (a)</i> <i>and Note 35</i> )	300,000	200,000
Prepayment for investment projects	200,000	342,000
Other prepayments ( <i>Note (b)</i> )	524,229	770,581
Others	5,867	143,621
	1,169,962	1,568,148

Notes:

- (a) In 2011, the Company entered into an agreement ("Agreement") with Xinyugou Coal (Note 9(a)(ii)) to provide three year entrusted loans to Xinyugou Coal totalling RMB1,000 million with annual interest rate of 10%. Pursuant to the Agreement, the 51% equity interest of Xinyugou Coal held by Shanxi Province Jiexiu Luxin Coals Gas Co. Ltd. is

pledged as collateral for these entrusted loans. As at December 31, 2012, RMB500 million (December 31, 2011: RMB300 million) was provided to Xinyugou Coal. As at December 31, 2012, RMB300 million (December 31, 2011: nil) of these entrusted loans to be repaid in 2013 was included in other current assets.

- (b) As at December 31, 2011 and 2012, other prepayments mainly represented prepayment for certain mine development costs and related leases.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**13. ASSETS OF A DISPOSAL GROUP CLASSIFIED AS HELD FOR SALE**

Details of assets of a disposal group classified as held for sale are as follows:

	December 31, 2011	December 31, 2012
Property, plant and equipment	743,060	621,705
Intangible assets	140,849	-
Land use rights	-	129,964
Inventories	13,122	-
	897,031	751,669

In December 2010, the Company through a 90% owned subsidiary, Chalco Henan Aluminum Co., Limited, signed an investment agreement with an independent investor to establish Henan Zhongfu. Chalco Henan Aluminum Co., Limited completed the capital injection in cash amounting to RMB200 million for a 26% equity interest in Henan Zhongfu in 2010. In addition, the

investment agreement stipulated that Chalco Henan Aluminum Co., Limited would transfer certain assets to Henan Zhongfu, and Henan Zhongfu would assume an equivalent amount of liabilities from Chalco Henan Aluminum Co., Limited. Included in December 31, 2011 were certain property, plant and equipment amounting to RMB622 million which were attributable to certain production lines that were intended to be disposed to Henan Zhongfu. In 2012, certain land use rights amounting to RMB130 million were intended to be disposed to Henan Zhongfu. The transfer of above property, plant and equipment and land use rights is expected to be completed in 2013. Chalco Henan Aluminum Co., Limited is part of the aluminum fabrication segment.

As of December 31, 2011, the remaining assets included in "assets of disposal group classified as held for sale" were certain intangibles, property, plant and equipment and inventories amounting to RMB141 million, RMB121 million and RMB13 million, respectively, which will be injected into new joint venture companies that will be established with certain independent investors for the development of certain coal mining business. Pursuant to the relevant agreements, the Company will contribute into these new joint venture companies for an equity interest of 49% in the new joint venture companies. As of December 31, 2012, the above intangibles, property, plant and equipment and inventories had been fully injected into new joint venture companies.

In accordance with the requirements under IFRS 5 *Non-current assets held for sales and discontinued operations*, the above assets are being classified to as "assets of disposal groups classified as held for sale" on the consolidated statement of financial position.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**14. INVENTORIES**

	December 31, 2011	December 31, 2012
Raw materials	9,123,295	9,056,254

Work-in-progress	7,267,916	7,666,925
Finished goods	6,942,236	9,053,349
Spare parts	1,125,293	1,178,117
Packaging materials and others	41,076	49,195
	<hr/>	<hr/>
	24,499,816	27,003,840
Less: provision for impairment of inventories	(375,437)	(1,407,364)
	<hr/>	<hr/>
	24,124,379	25,596,476
	<hr/>	<hr/>

Movements in the provision for impairment of inventories are as follows:

	2011	2012
	<hr/>	<hr/>
As at January 1	108,596	375,437
Provision for impairment of inventories	321,279	1,454,237
Reversal arising from increase in net realisable value	(203)	(58,019)
Reversal upon sales of inventories	(54,235)	(364,291)
	<hr/>	<hr/>
As at December 31	375,437	1,407,364
	<hr/>	<hr/>

As at December 31, 2012, the Group has pledged inventories at a net book value amounting to RMB50 million (December 31, 2011: RMB556 million) for bank and other borrowings as set out in Note 24 to the consolidated financial statements.

**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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## 15. TRADE AND NOTES RECEIVABLES

	December 31, 2011	December 31, 2012
Trade receivables	1,866,554	1,833,475
Less: provision for impairment of receivables	(371,357)	(408,256)
	1,495,197	1,425,219
Notes receivable	4,136,568	1,190,643
	5,631,765	2,615,862

As at December 31, 2012, except for trade and notes receivables of the Group amounting to RMB548 million (December 31, 2011: RMB335 million) and RMB8 million (December 31, 2011: RMB4 million) which were denominated in USD and EUR, respectively, all other trade and notes receivables were denominated in RMB.

Trade receivables are non-interest bearing and are generally on terms of 3 to 12 months. Certain of the Group's sales were on advanced payments or documents against payment. The credit terms for sales to certain subsidiaries of Chinalco are receivable on demand. In some cases, these terms are extended for qualifying long term customers that have met specific credit requirements. As at December 31, 2011 and 2012, the ageing analysis of trade and notes receivables was as follows:

	December 31, 2011	December 31, 2012
Within 1 year	5,383,058	2,209,725
Between 1 and 2 years	180,604	286,111
Between 2 and 3 years	26,537	128,071
Over 3 years	412,923	400,211

	6,003,122	3,024,118
Less: provision for impairment of receivables	(371,357)	(408,256)
	<hr/>	<hr/>
	5,631,765	2,615,862
	<hr/>	<hr/>

The credit quality of trade and notes receivables that are neither past due nor impaired is assessed by reference to the counterparties' default history. As at December 31, 2011 and 2012, there was no history of default for these customers.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
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*(CONTINUED)*

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(Amounts expressed in thousands of RMB unless otherwise stated)

**15. TRADE AND NOTES RECEIVABLES**

*(CONTINUED)*

The balances of trade and notes receivables that were past due but not impaired relate to a number of individual customers for whom there is no recent history of default. Based on past experience, the directors of the Company are of the opinion that no provision for impairment is necessary in respect of these balances as there has not been a significant change in credit quality and the balances are still considered recoverable within 12 months as at December 31, 2012. As of December 31, 2011, trade and notes receivable of RMB117 million were past due but not impaired and of which RMB41 million, RMB36 million, RMB15 million and RMB25 million were aged within one year, between one and two years, between two and three years and over three years, respectively.

As at December 31, 2012, trade and notes receivables of RMB463 million (December 31, 2011: RMB400 million) of the Group were substantially impaired and provision of RMB408 million (December 31, 2011: RMB371 million) was made. The individually impaired receivables mainly relate to customers which are in unexpected difficult economic situations and it was expected that a small portion of these receivables would be recovered. The ageing analysis of these receivables is as follows:

	December 31, 2011	December 31, 2012
Within 1 year	-	28,715
Between 1 and 2 years	-	33,743
Between 2 and 3 years	11,798	20,450
Over 3 years	388,353	380,342
	400,151	463,250

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**15. TRADE AND NOTES RECEIVABLES***(CONTINUED)*

Movements in the provision for impairment of trade and notes receivables  
are as follows:

	2011	2012
As at January 1	401,066	371,357
Provision for impairment	8,966	47,225
Write off	(472)	(779)
Reversal	(38,203)	(9,547)
As at December 31	371,357	408,256

As at 31 December 2012, the Group endorsed certain notes receivables accepted by banks in the PRC (the "Derecognised Notes"), to certain of its suppliers in order to settle the trade payables due to such suppliers with a carrying amount in aggregate of RMB7,811 million. The Derecognised Notes have a maturity from one to six months at the end of the reporting period. In accordance with the Law of Negotiable Instruments in the PRC, the holders of the Derecognised Notes have a right of recourse against the Group if the PRC banks default (the "Continuing Involvement"). In the opinion of the directors of the Company, the Group has transferred substantially all risks and rewards relating to the Derecognised Notes. Accordingly, it has derecognised the full carrying amounts of the Derecognised Notes and the associated trade payables. The maximum exposure to loss from the Group's Continuing Involvement in the Derecognised Notes and the undiscounted cash flows to repurchase these Derecognised Notes equal to their carrying amounts. In the opinion of the directors of the Company, the fair values of the Group's Continuing Involvement in the Derecognised Notes are not significant.

For the years ended December 31, 2010, 2011 and 2012, the Group has not recognised any gain or loss on the date of transfer of the Derecognised Notes. No gains or losses were recognised from the continuing involvement, both during the year or cumulatively.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**16. OTHER CURRENT ASSETS**

	December 31, 2011	December 31, 2012
Advances and deposits paid to suppliers	258,836	603,370
Advances to employees	43,663	74,555
Value-added tax recoverable	2,021,201	2,182,549
Receivable of value-added tax refund	20,310	18,226

Dividends receivable	-	189,638
Receivables from sales of non-core businesses	125,340	192,576
Deposits for investments projects ( <i>Note</i> )	190,372	3,447
Entrusted loans and loans receivables from third parties	345,653	396,472
Entrusted loans and loans receivables from related parties ( <i>Note 35</i> )	305,041	844,041
Electricity subsidy	-	250,580
Others	169,153	520,656
	<hr/>	<hr/>
	3,479,569	5,276,110
Less: provision for impairment of other receivables	(182,286)	(229,131)
	<hr/>	<hr/>
	3,297,283	5,046,979
Prepaid income tax	306,292	295,434
Prepayments to suppliers for purchases	4,062,410	4,509,005
	<hr/>	<hr/>
Total other current assets	7,665,985	9,851,418
	<hr/>	<hr/>

Note: Deposits for investments projects mainly represent deposits paid for the proposed acquisition of certain business and assets related to coal and bauxite mines.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(*CONTINUED*)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**16. OTHER CURRENT ASSETS**

*(CONTINUED)*

As at December 31, 2012, except for other current assets of the Group amounting to RMB39 million (December 31, 2011: RMB71 million), RMB0.8 million (December 31, 2011: RMB0.6 million) and RMB0.2 million (December 31, 2011: RMB0.2 million) which were denominated in USD, HKD and AUD, respectively, all other current assets were denominated in RMB.

As at December 31, 2011 and 2012, the ageing analysis of other current assets is as follows:

	December 31, 2011	December 31, 2012
Within 1 year	3,138,246	4,519,845
Between 1 and 2 years	39,939	421,576
Between 2 and 3 years	93,576	33,711
Over 3 years	207,808	300,978
	3,479,569	5,276,110

The credit quality of other receivables that are neither past due nor impaired is assessed by reference to the counterparties' default history.

The credit quality of other receivables that were past due but not impaired is assessed by reference to the counterparties' default history. Based on past experience, the directors of the Company are of the opinion that no provision for impairment is necessary in respect of these balances as there has not been a significant change in credit quality and the balances are still considered recoverable within one year. As of December 31, 2011, other receivables of RMB43 million were past due but not impaired and of which RMB5 million, RMB9 million, RMB6 million and RMB23 million were aged within one year, between one and two years, between two and three years and over three years, respectively.

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*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**16. OTHER CURRENT ASSETS***(CONTINUED)*

As at December 31, 2012, other receivables of RMB265 million (December 31, 2011: RMB185 million) of the Group were impaired and provisions of RMB229 million (December 31, 2011: RMB182 million) were made. The ageing analysis of these receivables is as follows:

	December 31, 2011	December 31, 2012
Within 1 year	-	71,112
Between 1 and 2 years	-	6,242
Between 2 and 3 years	17	7,914
Over 3 years	185,118	179,318
	185,135	264,586

Movements in the provision for impairment of other receivables are as follows:

	2011	2012
As at January 1	186,553	182,286
Provision for impairment	1,536	50,298
Write off	-	(2,381)
Reversal	(5,803)	(1,072)
As at December 31	182,286	229,131

**ALUMINUM CORPORATION OF CHINA LIMITED**

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**17. CASH AND CASH EQUIVALENTS AND RESTRICTED CASH AND TIME DEPOSITS**

	December 31, 2011	December 31, 2012
Restricted cash	1,013,435	1,107,836
Time deposits	40,000	20,179
Restricted cash and time deposits	1,053,435	1,128,015
Cash and cash equivalents	10,591,306	9,063,593
	11,644,741	10,191,608

As at December 31, 2012, restricted cash mainly represented deposits held for use in environmental restoration or issued letters of credit and notes payable.

As at December 31, 2012, the annual effective interest rate of the above time deposits was 2.86% (December 31, 2011: 1.58%) with average maturity of one year (December 31, 2011: one year).

As at December 31, 2011 and 2012, bank balances and cash on hand of the Group are denominated in the following currencies:

	December 31, 2011	December 31, 2012
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RMB	11,316,826	9,987,902
USD	296,886	185,819
HKD	18,250	11,908
EUR	6,383	999
AUD	6,396	4,957
GBP	-	23
	<hr/>	<hr/>
	11,644,741	10,191,608
	<hr/>	<hr/>

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**18. SHARE CAPITAL**

	December 31, 2011	December 31, 2012
	<hr/>	<hr/>
A shares	9,580,522	9,580,522
H shares	3,943,966	3,943,966
	<hr/>	<hr/>
	13,524,488	13,524,488
	<hr/>	<hr/>

On January 4, 2011, the Trading Moratorium of 5,649,217,045 A shares was uplifted and as of December 31, 2011 and 2012, all shares of the Company were listed tradable shares.

As at December 31, 2011 and 2012, all issued shares are registered and fully paid. Both A shares and H shares rank pari passu to each other.

The Company's authorised ordinary share capital was 13,524,487,892 shares at par value of RMB1.00 per share as at December 31, 2011 and 2012, respectively. There were 13,524,487,892 ordinary shares issued and outstanding as at December 31, 2011 and 2012, respectively.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**19. RESERVES**

(i) Other capital reserves

Other capital reserves mainly represent national debt fund reserve and other government subsidies granted to certain branches and subsidiaries of the Company by the Ministry of Finance of the PRC ("MOF") to support various qualified technical projects of the Group (Note 21(ii)). Pursuant to the relevant MOF documents, these funds were accounted for as a capital injection into the Company after all necessary share increase conditions are satisfied. These funds are mainly regarded as capital reserve before the relevant share increase conditions are met.

(ii) Statutory surplus reserve

Pursuant to the Company Law of the PRC, articles of association and board resolutions of the Company, the Company provides 10% from its net profit for the year determined in accordance with China Accounting Standards for the statutory surplus reserve until the balance of this reserve reaches 50% of the paid-up share capital. Statutory surplus reserve can be used to reduce any losses incurred or to increase share capital of the Company. Statutory surplus reserve balance should not fall below 25% of the registered capital after any such share's issuance.

(iii) Special reserve

Special reserve mainly represents funds set aside for the purpose of certain safety production activities. Pursuant to certain regulations issued by the State Administration of Work Safety of the PRC and other

relevant regulatory bodies, the Group is required to set aside funds mainly for mining of bauxite and coal, coal gas production and construction service activities at prescribed rates. These funds can be used for maintenance and/or improvements of safety of these activities, and are not available for distribution to shareholders.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**20. INTEREST BEARING LOANS AND BORROWINGS**

	December 31, 2011	December 31, 2012
<hr/>		
Long-term loans and borrowings		
Bank and other loans <i>(Note (a))</i>		
- Secured <i>(Note 24)</i>	447,163	-
- Guaranteed <i>(Note (e))</i>	3,723,744	6,286,261
- Unsecured	19,259,546	19,570,484
	<hr/>	<hr/>
	23,430,453	25,856,745
	<hr/>	<hr/>
Medium-term notes and bonds and long-term bonds <i>(Note (b))</i>		
- Guaranteed <i>(Note (e))</i>	1,987,107	1,989,245
- Unsecured	14,715,440	19,721,657
	<hr/>	<hr/>
	16,702,547	21,710,902
	<hr/>	<hr/>
Total long-term loans and borrowings	40,133,000	47,567,647

Current portion of medium-term notes	-	(4,986,037)
Current portion of banks and other loans	(4,164,474)	(5,945,958)
<hr/>		
Non-current portion of long-term loans and borrowings	35,968,526	36,635,652
<hr/>		
Estimated fair value of total long-term loans and borrowings	39,884,181	46,735,118
<hr/>		

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**20. INTEREST BEARING LOANS AND BORROWINGS***(CONTINUED)*

	December 31, 2011	December 31, 2012
<hr/>		
Short-term loans and borrowings		
Bank and other loans <i>(Note (c))</i>		
- Secured <i>(Note 24)</i>	613,000	900,500
- Guaranteed <i>(Note (e))</i>	1,645,045	600,000
- Unsecured	30,064,749	38,812,718
<hr/>		
	32,322,794	40,313,218
Short-term bonds, unsecured <i>(Note (d))</i>	10,250,577	16,669,968

Current portion of medium-term notes	-	4,986,037
Current portion of bank and other loans	4,164,474	5,945,958

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Total short-term borrowings and current portion of long-term loans and borrowings	46,737,845	67,915,181
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As at December 31, 2012, except for loans and borrowings of the Group amounting to RMB40 million (December 31, 2011: RMB47 million), nil (December 31, 2011: RMB6 million) and RMB7,421 million (December 31, 2011: RMB2,628 million) which were denominated in JPY, EUR and USD, respectively, all other loans and borrowings were denominated in RMB.

As at December 31, 2012, interest bearing loans and borrowings of RMB900 million (December 31, 2011: RMB500 million) were due to a subsidiary of Chinalco (Note 35).

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**20. INTEREST BEARING LOANS AND BORROWINGS**

*(CONTINUED)*

Notes:

(a) Long-term bank and other loans

(i) The maturity of long-term bank and other loans of the Group is set out below

Loans from banks and  
other

	financial institutions		Other loans	
	December 31, 2011	December 31, 2012	December 31, 2011	December 31, 2012
Within 1 year	4,152,354	5,939,679	12,120	6,279
Between 1 and 2 years	6,276,588	8,037,242	12,230	11,807
Between 2 and 5 years	11,604,870	7,735,704	36,692	35,422
Over 5 years	1,296,000	4,069,980	39,599	20,632
	23,329,812	25,782,605	100,641	74,140
Wholly repayable within 5 years	19,951,812	21,617,626	21,877	24,877

- (ii) Other loans were provided by local bureaus of the Ministry of Finance to the Group. The weighted average annual interest rate of long-term bank and other loans for the years ended December 31, 2011 and 2012 was 5.62% and 5.54%.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**20. INTEREST BEARING LOANS AND BORROWINGS**

*(CONTINUED)*

Notes: (Continued)

- (b) Medium-term notes and bonds and long-term bonds

Outstanding long-term bonds and medium-term notes of the Group as at December 31, 2011 and 2012 are summarised as follows:

	Face value/ maturity	Effective interest rate	December 31, 2011	December 31, 2012
2007 long-term bonds	2,000,000/2017	4.64%	1,987,107	1,989,245
2008 medium-term notes	5,000,000/2013	4.92%	4,970,489	4,986,037
2010 medium-term notes	1,000,000/2015	4.34%	989,079	992,007
2010 medium-term notes	1,000,000/2015	4.20%	988,900	991,822
2011 medium-term notes (Note)	5,000,000/2016	6.03%	4,979,707	4,984,110
2011 Jiaozuo Wanfang medium-term notes	800,000/2016	6.85%	795,694	797,361
2011 medium-term bonds	2,000,000/2014	6.36%	1,991,571	1,994,435
2012 medium-term bonds	2,000,000/2015	5.13%	-	1,993,350
2012 medium-term bonds	3,000,000/2017	5.77%	-	2,982,535
			16,702,547	21,710,902

Note: The medium-term notes were issued at a fixed annual coupon rate of 5.86% with a five year term. Pursuant to the terms of the bonds, the holders of the bonds have an option to negotiate and adjust the fixed coupon rate according to market conditions or to request repayment of some or all outstanding balances at the end of the third anniversary.

Long-term bonds and medium-term notes and bonds were issued for capital expenditure purposes, operating cash flows and bank loan re-financing.

(c) Short-term bank and other loans

Other loans were entrusted loans provided by state-owned companies to the Group.

The weighted average annual interest rate of short-term bank and other loans for the year end December 31, 2011 and 2012 was 5.59% and

5.85%.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**20. INTEREST BEARING LOANS AND BORROWINGS***(CONTINUED)*

Notes: (Continued)

**(d) Short-term bonds**

Outstanding short-term bonds as at December 31, 2011 and 2012 are summarised as follows:

	Face value/ maturity	Effective interest rate	December 31, 2011	December 31, 2012
2011 short-term bonds	5,000,000/2012	4.63%	5,137,435	-
2011 short-term bonds	5,000,000/2012	5.36%	5,113,142	-
2012 short-term bonds	5,000,000/2013	3.89%	-	5,074,762
2012 short-term bonds	2,000,000/2013	4.60%	-	2,013,115
2012 short-term bonds	4,000,000/2013	4.28%	-	4,050,486
2012 short-term bonds	2,000,000/2013	4.56%	-	2,022,444
2012 short-term bonds	1,500,000/2013	4.60%	-	1,507,956
2012 short-term bonds	2,000,000/2013	4.76%	-	2,001,205
			10,250,577	16,669,968

All the above short-term bonds were issued for working capital.



## (e) Guaranteed interest bearing loans and borrowings

Details of the interest bearing loans and borrowings in which the Group received guarantees are set out as follows:

Guarantors	December 31, 2011	December 31, 2012
<b>Long-term bonds</b>		
Bank of Communications ()	1,987,107	1,989,245
<hr/>		
<b>Long-term loans</b>		
Chinalco	1,419,038	971,988
Luoyang Economic Investment Co., Ltd. () (Note (ii))	90,241	44,140
Lanzhou Aluminum Factory() (Note (i))	31,600	27,000
Yichuan Power Industrial Group Company () (Note (ii))	41,822	24,443
China Nonferrous Metals Processing Technology Co., Ltd. () (Note (iii))	26,469	15,468
Jiaozuo Wanfang	-	500,000
The Company	2,114,574	4,703,222
<hr/>		
	3,723,744	6,286,261
<hr/>		
<b>Short-term loans</b>		
Chinalco	1,330,000	600,000
The Company	315,045	-
Lanzhou Aluminum Factory () (Note (i))	-	-
<hr/>		
	1,645,045	600,000
<hr/>		

**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**20. INTEREST BEARING LOANS AND BORROWINGS**

*(CONTINUED)*

Notes: (Continued)

(e) Guaranteed interest bearing loans and borrowings *(Continued)*

The English names represent the best effort by the management of the Group in translating their Chinese names as they do not have any official English names.

Notes:

- (i) The guarantor is a subsidiary of Chinalco and a shareholder of the Company.
- (ii) The guarantors are non-controlling shareholders of a subsidiary of the Company.
- (iii) The guarantor is a subsidiary of Chinalco.

**21.**

**OTHER NON-CURRENT LIABILITIES**

	December 31, 2011	December 31, 2012
Obligations in relation to early retirement schemes <i>(Note (i))</i>	131,540	93,036
Deferred government grants	345,689	540,654
Deferred government subsidies <i>(Note (ii))</i>	148,532	116,979

Others	20,330	6,000
<hr/>		
	646,091	756,669
<hr/>		

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**21. OTHER NON-CURRENT LIABILITIES***(CONTINUED)*

Notes:

## (i) Obligations in relation to early retirement schemes

During the years ended December 31, 2009 and 2010, certain subsidiaries and branches implemented certain early retirement benefit schemes which allow qualified employees to early retire on a voluntary basis. As at December 31, 2011 and 2012, obligations in relation to retirement benefits under the Group's early retirement schemes included in "other non-current liabilities" are as follows:

	2011	2012
<hr/>		
As at January 1	292,862	201,184
Provision made during the year ( <i>Note 29</i> )	2,772	22,350
Interest costs	4,049	5,244
Utilisation during the year	(98,499)	(78,996)
<hr/>		
As at December 31	201,184	149,782
<hr/>		

Non-current	131,540	93,036
Current ( <i>Note 22</i> )	69,644	56,746
	201,184	149,782

- (ii) Deferred government subsidies represent certain national debt fund reserve and other subsidies granted by governmental units to support various qualified technical projects of the Group. These subsidies are deferred at the time they were received and are released when certain pre-determined conditions are met (*Note 19 (i)*).

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
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*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**22. OTHER PAYABLES AND ACCRUED EXPENSES**

	December 31, 2011	December 31, 2012
Payable for capital expenditures	3,989,663	4,329,562
Sales and other deposits from customers	1,249,198	1,278,746
Accrued interest	363,995	548,381
Taxes other than income taxes payable ( <i>Note</i> )	321,311	391,704
Accrued payroll and bonus	206,886	139,645
Payables withheld as guarantees and deposits	191,925	286,006
Staff welfare payables	161,905	178,799
Dividends payable by subsidiaries to non-controlling shareholders	89,717	123,707
Current portion of obligation in relation to early retirement schemes ( <i>Note 21</i> )	69,644	56,746

Consideration payable for acquisition of non-controlling interest/business	50,582	885,037
Contribution payable for pension insurance	28,315	25,617
Others	445,184	561,365
	<hr/>	<hr/>
	7,168,325	8,805,315
	<hr/>	<hr/>

Note: Taxes other than income taxes payable mainly comprise accruals for value-added tax, resource tax, city construction tax and education surcharge.

As at December 31, 2012, except for other payables and accrued expenses of the Group amounting to RMB0.2 million (December 31, 2011: nil), RMB0.5 million (December 31, 2011: RMB0.2 million), RMB2 million (December 31, 2011: RMB3 million) and RMB0.01 million (December 31, 2011: RMB1 million) which were denominated in HKD, EUR, USD and AUD, respectively, all other payables and accrued expenses were denominated in RMB.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**23. TRADE AND NOTES PAYABLES**

	December 31, 2011	December 31, 2012
Trade payables	6,511,435	4,883,484
Notes payable	1,889,875	2,175,710
	<hr/>	<hr/>
	8,401,310	7,059,194
	<hr/>	<hr/>

As at December 31, 2012, except for trade and notes payables of the Group amounting to RMB188 million (December 31, 2011: RMB16 million), RMB nil (December 31, 2011: RMB2 million), RMB0.03 million (December 31, 2011: nil), and RMB0.01 million (December 31, 2011: nil) which were denominated in USD, EUR, AUD and HKD, respectively, all other trade and notes payable were denominated in RMB.

The ageing analysis of trade and notes payables is as follows:

	December 31, 2011	December 31, 2012
Within 1 year	7,900,950	6,644,395
Between 1 and 2 years	342,504	106,456
Between 2 and 3 years	35,426	170,416
Over 3 years	122,430	137,927
	8,401,310	7,059,194

The trade and notes payables are non-interest bearing and are normally settled within one year.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

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(Amounts expressed in thousands of RMB unless otherwise stated)

**24. PLEDGE OF ASSETS**

The Group has pledged various assets as collateral against certain secured borrowings as set out in Note 20. As at December 31, 2011 and 2012, a summary of these pledged assets is as follows:

December 31,    December 31,

	2011	2012
Property, plant and equipment ( <i>Note 7</i> )	1,307,190	2,242,678
Land use rights ( <i>Note 8</i> )	123,270	69,496
Inventories ( <i>Note 14</i> )	555,715	50,000
	1,986,175	2,362,174

## 25. COST OF SALES

	2010	2011	2012
Purchase of inventories in relation to trading activities	50,843,072	63,216,474	65,426,274
Raw materials and consumables used	27,042,797	39,424,443	46,587,502
Changes in inventories of finished goods and work in progress ( <i>Note 14</i> )	502,066	(2,866,608)	(2,510,122)
Provision for impairment of inventories ( <i>Note</i> ) ( <i>Note 14</i> )	161,584	321,076	1,396,218
Power and utilities	19,622,054	22,018,365	24,802,463
Depreciation of property, plant and equipment ( <i>Note 7</i> )	6,014,643	5,202,402	4,767,583
Employee benefit expenses	4,852,699	5,194,556	5,143,290
Repair and maintenance	607,059	690,007	1,312,561
Amortisation of intangible assets ( <i>Note 6</i> )	52,584	65,189	67,842
Others	3,651,383	4,845,463	2,809,047
	113,349,941	138,111,367	149,802,658

Note: Provision for impairment of inventories includes the accrued of provision for impairment of inventories and the reversal of impairment of inventories due from the increase in net realisable value.

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*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**26. OPERATING EXPENSES**

(a) Selling and distribution expenses

	2010	2011	2012
Transportation and loading expenses	1,090,831	1,075,730	1,327,353
Packaging expenses	180,523	213,311	193,583
Port expenses	59,429	60,369	75,705
Employee benefit expenses	37,799	50,259	57,659
Sales commissions and other handling fees	12,990	16,015	31,363
Warehouse and other storage fees	30,119	28,532	60,099
Marketing and advertising expenses	14,818	15,519	16,048
Depreciation of non-production property, plant and equipment ( <i>Note 7</i> )	9,337	20,453	31,958
Others	137,455	142,600	174,154
	1,573,301	1,622,788	1,967,922

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**26. OPERATING EXPENSES**



*(CONTINUED)*

## (b) General and administrative expenses

	2010	2011	2012
Employee benefit expenses	840,371	815,000	907,145
Taxes other than income tax expense <i>(Note (i))</i>	614,704	665,317	584,301
Travelling and entertainment	141,472	201,231	185,946
Depreciation of non-production property, plant and equipment <i>(Note 7)</i>	207,075	156,190	162,331
Provision / (reversal) for impairment of receivables, net	29,005	(33,504)	86,904
Impairment of available for sale investment <i>(Note 10)</i>	-	-	7,778
Operating lease rental expenses	106,098	137,394	142,771
Legal and other professional fees	23,370	49,360	111,245
Amortisation of land use rights and leasehold land <i>(Note 8)</i>	58,745	65,847	74,552
Utilities and office supplies	82,737	90,496	40,148
Repairs and maintenance expenses	43,911	62,739	42,781
Insurance expense	79,513	75,901	58,783
Pollutants discharge fees	33,985	38,261	35,200
Auditors' remuneration <i>(Note (ii))</i>	25,698	24,245	28,115
Amortisation of intangible assets <i>(Note 6)</i>	14,993	12,362	25,814
Others	322,063	418,590	499,154
	2,623,740	2,779,429	2,992,968

Notes:

- (i) Taxes other than income tax expense mainly comprise land use tax, property tax and stamp duty.

- (ii) During the year ended December 31, 2012, auditors' remuneration include audit services, audit-related services and tax services provided by Ernst & Young firms including Ernst & Young and Ernst & Young Hua Ming LLP amounting to RMB24.76 million, and services provided by other auditors.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**27. OTHER INCOME AND OTHER LOSS/ (GAIN), NET**

## (a) Other income

For the year ended December 31, 2012, other income represented government grants amounting to RMB744 million (2010: RMB329 million; 2011: RMB186 million), which were recognised as income for the year necessary to compensate the costs and the Group's development. There are no unfulfilled conditions or contingencies attached to the grants.

## (b) Other losses/ (gains), net

	2010	2011	2012
Gain on acquisition of the investment in an associate ( <i>Note (i)</i> )	-	-	(504,773)
Realised (gains)/losses on future, forward and			
option contracts, net ( <i>Note (ii)</i> )	(248,799)	(493,325)	127,476
Unrealised (gains)/losses on future, forward and			
option contracts, net ( <i>Note (ii)</i> )	(56,440)	(3,531)	15,858
(Gains)/losses on disposal of property, plant and equipment and leasehold land, net	(29,324)	(12,021)	455,870
	(156,066)	(256)	-

Gain on disposal of available-for-sale  
investments

Others	(395)	(28,900)	(68,947)
	(491,024)	(538,033)	25,484

Notes:

- (i) The excess of the fair value of identifiable net assets as at the acquisition date of Ningfa over the consideration transferred amounting to RMB505 million (Note 9(b) (ix)) was recognised in other gains.
- (ii) None of these futures, forward and options contracts are designated for hedge accounting.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

*(Amounts expressed in thousands of RMB unless otherwise stated)*

**28. FINANCE COSTS, NET**

	2010	2011	2012
Finance income-interest income from banks	(91,109)	(138,778)	(314,179)
Interest expense	3,220,987	4,187,646	5,557,131

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Less: interest expense capitalised in property, plant and equipments ( <i>Note 7</i> )	(645,326)	(730,642)	(635,384)
Interest expense, net of capitalised interest	2,575,661	3,457,004	4,921,747
Exchange losses/(gains), net	10,632	(24,652)	(8,188)
Finance costs	2,586,293	3,432,352	4,913,559
Finance costs, net	2,495,184	3,293,574	4,599,380
Capitalisation rate during the year ( <i>Note 7</i> )	4.10% to 5.15%	4.16% to 6.02%	4.74% to 7.17%

**29. EMPLOYEE BENEFIT EXPENSES**

	2010	2011	2012
Salaries and bonus	4,231,627	4,365,646	4,618,763
Housing fund	339,615	398,393	439,927
Staff welfare and other expenses ( <i>Note</i> )	747,314	834,943	957,847
Employment expense in relation to early retirement schemes ( <i>Note 21</i> )	69,072	2,772	22,350
Retirement benefit costs-defined contribution schemes	695,866	765,645	851,175
	6,083,494	6,367,399	6,890,062

Note: Staff welfare and other expenses include staff welfare, staff union expenses, staff education expenses and unemployment insurance expenses, etc.

Employee benefit expenses include remuneration payables to directors, supervisors and senior management as set out in Note 30.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**30. DIRECTORS', SUPERVISORS' AND SENIOR MANAGEMENT'S  
 REMUNERATION**

(a) Directors' and supervisors' remuneration

The aggregate amounts of remuneration payables to directors and supervisors of the Company during the year are as follows:

	2010	2011	2012
Fees	870	741	732
Basic salaries, housing fund, other allowances and benefits in kind	2,099	2,571	2,410
Discretionary bonus	929	1,137	-
Retirement benefit costs-defined contribution schemes	113	150	165
	4,011	4,599	3,307

The remuneration of each director and supervisor of the Company for the year ended December 31, 2010 is set out below:

Name of directors and supervisors	Fees	Discretionary		Pension	Total
		Salary	Bonus		
<hr/>					

Directors:

Xiong Weiping	-	648	328	29	1,005
Luo Jianchuan	-	556	285	29	870
Chen Jihua (resigned on October 28, 2010)	-	428	151	26	605
Liu Xiangmin	-	467	165	29	661
Shi Chungui	150	-	-	-	150
Lv Youqing (appointed on June 22, 2010)	-	-	-	-	-
Kang Yi (resigned on June 22, 2010)	99	-	-	-	99
Zhang Zhuoyuan	207	-	-	-	207
Zhu Demiao	207	-	-	-	207
Wang Mengkui	207	-	-	-	207
	870	2,099	929	113	4,011
Supervisors:					
Ao Hong	-	-	-	-	-
Yuan Li	-	-	-	-	-
Zhang Zhankui	-	-	-	-	-
	-	-	-	-	-
Total	870	2,099	929	113	4,011

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**30. DIRECTORS', SUPERVISORS' AND SENIOR MANAGEMENT'S  
REMUNERATION**

*(CONTINUED)*

## (a) Directors' and supervisors' remuneration

*(Continued)*

The remuneration of each director and supervisor of the Company for the year ended December 31, 2011 is set out below:

Name of directors and supervisors	Fees	Discretionary			Total
		Salary	Bonus	Pension	
Directors:					
Xiong Weiping	-	626	298	30	954
Luo Jianchuan	-	551	261	30	842
Liu Caiming	-	516	267	30	813
Liu Xiangmin	-	495	220	30	745
Shi Chungui	150	-	-	-	150
Lv Youqing	-	-	-	-	-
Zhang Zhuoyuan	197	-	-	-	197
Zhu Demiao	197	-	-	-	197
Wang Mengkui	197	-	-	-	197
	741	2,188	1,046	120	4,095
Supervisors:					
Ao Hong	-	-	-	-	-
Yuan Li	-	383	91	30	504
Zhang Zhankui	-	-	-	-	-
	-	383	91	30	504
Total	741	2,571	1,137	150	4,599

**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**30. DIRECTORS', SUPERVISORS' AND SENIOR MANAGEMENT'S  
 REMUNERATION**

*(CONTINUED)*

(a) Directors' and supervisors' remuneration

*(Continued)*

The remuneration of each director and supervisor of the Company for the year ended December 31, 2012 is set out below:

Name of directors and supervisors	Fees	Discretionary			Total
		Salary	Bonus	Pension	
Directors:					
Xiong Weiping	-	545	-	33	578
Luo Jianchuan	-	496	-	33	529
Liu Caiming <i>(Note)</i>	-	493	-	33	526
Liu Xiangmin	-	493	-	33	526
Shi Chungui	150	-	-	-	150
Lv Youqing	-	-	-	-	-
Zhang Zhuoyuan	194	-	-	-	194
Zhu Demiao	194	-	-	-	194
Wang Mengkui	194	-	-	-	194
	732	2,027	-	132	2,891



## Supervisors:

Ao Hong	-	-	-	-	-
Yuan Li	-	383	-	33	416
Zhang Zhankui	-	-	-	-	-
	-	383	-	33	416
Total	732	2,410	-	165	3,307

Note: As at March 8, 2013, Mr. Liu Caiming resigned as the senior vice president, Chief Financial Officer and member of the Executive Committee of the Company. Meanwhile Mr. Liu Caiming has been re-designated from an Executive Director to a Non-executive Director.

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*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**30. DIRECTORS', SUPERVISORS' AND SENIOR MANAGEMENT'S  
 REMUNERATION**

*(CONTINUED)*

## (a) Directors' and supervisors' remuneration

*(Continued)*

The remuneration of the directors and supervisors of the Company fell within the following bands:

	Number of individuals		
	2010	2011	2012

Nil to 1,000	12	12	12
1,000 to 1,500	1	-	-

During the year, no options were granted to the directors or the supervisors of the Company (2010 and 2011: nil).

During the year, no emoluments were paid to the directors or the supervisors of the Company (among which included the five highest paid employees) as an inducement to join or upon joining the Company or as compensation for loss of office (2010 and 2011: nil).

No directors or supervisors of the Company waived any remuneration during the respective years.

(b) Five highest paid individuals

During the year ended December 31, 2012, the five highest paid employees of the Group include 4 (2010: 3; 2011: 4) directors whose remunerations are reflected in the analysis presented above. The remuneration payable to the remaining 1 (2010: 2; 2011: 1) individual during the year is as follows:

	2010	2011	2012
Basic salaries, housing fund, other allowances and benefits in kind	935	465	440
Discretionary bonus	330	154	-
Retirement benefit cost-defined contribution plans	52	30	33
	1,317	649	473

The number of the remaining 1 (2010: 2; 2011: 1) individual whose remuneration fell within the following bands is as follows:

Number of employees		
2010	2011	2012

Nil to 1,000	2	1	1
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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**31. INCOME TAX EXPENSE/(BENEFIT)**

	2010	2011	2012
Current income tax expense:			
- PRC enterprise income tax	319,479	230,415	155,629
Deferred income tax expense/(benefit) <i>(Note 11)</i>	91,737	(102,923)	(604,108)
	411,216	127,492	(448,479)

The current PRC enterprise income tax of the Group has been provided at the applicable corporate income tax rate of 25% (2010 and 2011: 25%) on the estimated assessable profit for the year. Certain branches and subsidiaries of the Company located in western regions of the PRC are granted tax concessions including a preferential tax rate of 15% (2010 and 2011: 15%).

In addition, in accordance with the relevant tax rules, the Company and its branches are subject to the applicable effective tax rate, which were changes depending on the profitability and tax rate applicable to each branch and the Company on a combined basis. For the year ended December 31, 2012, the effective tax rate applicable to the Company and its branches on a combined basis was 22.16% (2010: 22.14%; 2011: 22.58%).

The reconciliation between the tax on the Group's profit or loss before tax and the theoretical tax amount that would arise using the weighted average tax rate applicable to profit or loss of the consolidated entities is as follows:

	2010	2011	2012
Profit/(loss) before income tax	1,380,354	817,996	(9,092,062)
Tax expense/(benefit) calculated at standard income tax rate of 25% (2010 and 2011: 25%)	345,089	204,499	(2,273,015)
Tax effects of:			
Preferential income tax rates applicable to certain branches and subsidiaries	(37,288)	(2,449)	191,732
Impact of change in income tax rate	54,252	(115,496)	15,267
Tax losses for which no deferred income tax assets were recognised	110,015	107,802	794,274
Deductible temporary differences for which no deferred income tax assets were recognised	62,017	44,640	38,360
Utilisation of previously unrecognised tax losses and expenses	(48,606)	(8,493)	(2,028)
Tax credit for purchases of qualified equipment	-	(6,799)	-
Tax incentive in relation to deduction limits of certain expenses	(13,267)	(12,459)	(18,759)
Income not subject to tax	(147,484)	(131,484)	(218,581)
Expenses not deductible for tax purposes	86,488	47,731	39,942
Write-off of deferred tax assets previously recognised ( <i>Note 11</i> )	-	-	984,329
Income tax expense/(benefit)	411,216	127,492	(448,479)
Weighted average effective tax rate	29.79%	15.59%	4.93%

**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**31. INCOME TAX EXPENSE/(BENEFIT)**

*(CONTINUED)*

The decrease in the weighted average effective rate in 2011 compared with 2010 is mainly due to fluctuation in profitability of certain subsidiaries and branches and increase in deferred tax assets due to change in tax rate of expiration of preferential tax rate period for certain branches.

The decrease in the weighted average effective rate in 2012 compared with 2011 is mainly due to fluctuation in profitability of certain subsidiaries and branches, the existence of tax losses for which no deferred tax assets were recognised and write-off of deferred tax assets previously recognised in current year.

Share of income tax expense of associates and jointly controlled entities of RMB99 million (2010: RMB77 million; 2011: RMB143 million) and RMB3 million (2010: RMB23 million; 2011: RMB35 million) was included in "share of profits of associates" and "share of profits of jointly controlled entities", respectively.

**32. EARNINGS/(LOSS) PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT**

(a) Basic

Basic earnings/(loss) per share were calculated by dividing the profit/(loss) attributable to owners of the parent by the weighted average number of shares in issue during the year.

2010	2011	2012
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Profit/(loss) attributable to owners of the parent (RMB)	778,008,000	237,974,000	(8,233,754,000)
Weighted average number of ordinary shares in issue	13,524,487,892	13,524,487,892	13,524,487,892
Basic earnings/(loss) per share (RMB)	0.06	0.02	(0.61)

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## (b) Diluted

Diluted earnings/(loss) per share for the years ended December 31, 2010, 2011 and 2012 are the same as the basic earnings/(loss) per share as there were no dilutive potential shares during those years.

## 33. DIVIDENDS

According to the articles of association of the Company, the Company considers the maximum limit of profit appropriation to its shareholders is the lowest of:

- (i) the sum of current period net profit and opening retained earnings in accordance with IFRS,
- (ii) the sum of current period net profit and opening retained earnings in accordance with the PRC Accounting Standards for Business Enterprises, and
- (iii) the amount limited by the Company Law of the PRC.

According to the resolution of annual shareholders' meeting dated June 29, 2012, no dividend would be distributed for the year ended December 31, 2011. Thus, no dividend was paid in 2012 (2010: nil; 2011: RMB 154 million or RMB0.0114 per share).

According to the resolution of the Board of Directors dated March 27, 2013, the directors did not propose any final dividend for the year ended December 31, 2012 (2010: RMB154million, 2011: nil), which is to be approved by the shareholders.

**ALUMINUM CORPORATION OF CHINA LIMITED**

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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## 34. CASH FLOWS GENERATED FROM OPERATING ACTIVITIES

	Notes	2010	2011	2012
Cash flows generated from operating activities				
Profit/(loss) before income tax		1,380,354	817,996	(9,092,062)
Adjustments for:				
Share of profits of jointly controlled entities	9(a)	(233,784)	(122,262)	(37,040)
Share of profits of associates	9(b)	(240,028)	(402,701)	(254,848)
Depreciation of property, plant and equipment	7	5,889,393	5,657,157	6,140,958
(Gain)/loss on disposal of property, plant and equipment and leasehold land	27(b)	(29,324)	(12,021)	455,870
Gain on disposals of available-for-sale financial investments	27(b)	(156,066)	(256)	-
Impairment loss of property, plant and equipment	7	701,781	279,750	19,903
Impairment loss of available-for-sale financial investments	10	-	-	7,778
Amortisation of intangible assets	6	67,577	77,551	93,656
Amortisation of land use rights and leasehold land	8	58,745	65,847	74,552
Amortisation of prepaid expenses		68,385	59,604	75,987
Realised and unrealised (gains)/ losses on futures, options and forward contracts	27(b)	(305,239)	(496,856)	143,334
Gain on acquisition of the investment in an associate	27(b)	-	-	(504,773)
Interest income		(4,879)	(5,611)	(49,668)
Interest expense	28	2,586,293	3,432,352	4,913,559

Others	(19,967)	(24,539)	(124,409)
<hr/>			
	9,763,241	9,326,011	1,862,797
<hr/>			
Changes in working capital:			
Increase in inventories	(1,356,821)	(2,353,204)	(1,472,097)
(Increase)/decrease in trade and notes receivables	(237,764)	(3,474,223)	3,015,903
Increase in other current assets	(515,519)	(2,089,769)	(921,413)
(Increase)/decrease in restricted cash	(97,526)	(550,500)	270,999
Decrease/(increase) in other non-current assets	72,809	161,584	(555,039)
Increase/(decrease) in trade and notes payables	53,100	2,024,968	(1,342,116)
(Decrease)/increase in other payables and accrued expenses	(252,088)	(18,405)	479,154
Decrease in other non-current liabilities	(25,102)	(259,168)	(44,505)
<hr/>			
Cash generated from operations	7,404,330	2,767,294	1,293,683
PRC enterprise income taxes paid	(300,471)	(277,538)	(171,331)
<hr/>			
Net cash generated from operating activities	7,103,859	2,489,756	1,122,352
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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

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**35. SIGNIFICANT RELATED PARTY BALANCES AND TRANSACTIONS**



The Company is controlled by Chinalco, the parent company and a state-owned enterprise established in the PRC. Chinalco itself is controlled by the PRC government, which also owns a significant portion of the productive assets in the PRC. In accordance with IAS 24 (Revised) "Related Party Disclosures", government-related entities and their subsidiaries, directly or indirectly controlled, jointly controlled or significantly influenced by the PRC government are defined as related parties of the Group. On that basis, related parties include Chinalco and its subsidiaries (other than the Group), other government-related entities and their subsidiaries ("other state-owned enterprises"), other entities and corporations over which the Company is able to control or exercise significant influence and key management personnel of the Company and Chinalco as well as their close family members.

Certain related party transaction disclosed here also constitute continuing connected transactions (as defined in Chapter 14A of the Hong Kong Listing Rules) pursuant to the Hong Kong Listing Rules.

For the purposes of the related party transaction disclosures, the directors of the Company believe that meaningful information in respect of related party transactions has been adequately disclosed.

In addition to the related party information and transactions disclosed elsewhere in the consolidated financial statements, the following is a summary of significant related party transactions entered in the ordinary course of business between the Group and its related parties during the year.

(a) Significant related party transactions

	Notes	2010	2011	2012
Sales of goods and services rendered:				
Sales of materials and finished goods to:	(i)			
Chinalco and its subsidiaries		6,069,774	5,607,258	6,805,794
Associates of Chinalco		31,869	11,024	53,599
Jointly controlled entities		-	7,596	30,117
Associates		-	5,983	9,265
Non-controlling shareholder of a subsidiary and its subsidiaries		4,452,683	4,835,662	-

		10,554,326	10,467,523	6,898,775
<hr/>				
Provision of utility services to:	(ii)			
Chinalco and its subsidiaries		332,701	334,370	341,386
Associates of Chinalco		8,156	13,547	21,420
Jointly controlled entities		-	-	1
Non-controlling shareholder of a subsidiary and its subsidiaries		-	453	-
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		340,857	348,370	362,807
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**ALUMINUM CORPORATION OF CHINA LIMITED****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS***(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**35. SIGNIFICANT RELATED PARTY BALANCES AND TRANSACTIONS***(CONTINUED)***(a) Significant related party transactions***(Continued)*

	Notes	2010	2011	2012
<hr/>				
Sales of goods and services rendered:				
<i>(Continued)</i>				
Provision of products processing services to:				
Chinalco and its subsidiaries		-	-	7,431
		-	13,969	-

Non-controlling shareholder of  
a subsidiary

			-	13,969
				7,431

Purchase of goods and services:

Purchases of engineering,  
construction and supervisory  
services from: (iii)

Chinalco and its subsidiaries	3,503,363	3,259,624	2,321,386
Associates of Chinalco	-	-	11,365
Non-controlling shareholder of a subsidiary and its subsidiaries	5,894	22,681	-
	3,509,257	3,282,305	2,332,751

Purchases of key and auxiliary  
materials and finished goods  
from: (iv)

Chinalco and its subsidiaries	4,232,369	1,644,429	3,839,222
Associates of Chinalco	323,835	140,624	17,745
Jointly controlled entities	1,321,202	1,499,136	976,141
Associates	1,458	39	2,618
Non-controlling shareholder of a subsidiary and its subsidiaries	2,483,173	2,195,191	-
	8,362,037	5,479,419	4,835,726

Provision of social services and  
logistics services by: (v)

Chinalco and its subsidiaries	264,049	281,956	306,589
Non-controlling shareholder of a subsidiary and its subsidiaries	475	624	-

		264,524	282,580	306,589
<hr/>				
Provision of utilities services by:	(ii)			
Chinalco and its subsidiaries		163,708	123,243	359,599
Associates of Chinalco		7,663	6,869	9,918
Non-controlling shareholder of a subsidiary and its subsidiaries		100,952	145,778	-
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		272,323	275,890	369,517
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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

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**35. SIGNIFICANT RELATED PARTY BALANCES AND TRANSACTIONS***(CONTINUED)***(a) Significant related party transactions***(Continued)*

	Notes	2010	2011	2012
<hr/>				
Purchase of goods and services:				
<i>(Continued)</i>				
Provision of products processing services				
by Chinalco and its subsidiaries	(i)	137,601	213,553	142,244
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Rental expenses for buildings and land use rights charged by Chinalco and its subsidiaries	(vi)	643,432	665,105	696,874
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Other significant related party  
transactions:

Acquisition of non-controlling interest from a fellow subsidiary		-	160,271	-
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Disposal of an available-for-sale financial investment to Chinalco		164,697	-	-
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Acquisition of assets from a fellow subsidiary		-	-	145,915
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Borrowing from a fellow subsidiary		-	500,000	2,350,000
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Interest expense on borrowing from a fellow subsidiary		-	4,009	54,541
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Entrusted loans and other  
borrowings to:

Jointly controlled entities		-	605,041	258,900
An associate		-	-	200,000
Chinalco and its subsidiaries		-	-	126,604
A non-controlling shareholder of a subsidiary		-	63,665	-

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		-	668,706	585,504
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Interest income on entrusted loans  
and other borrowings to:

Jointly controlled entities	-	4,361	51,106
Chinalco and its subsidiaries	-	-	2,327
A non-controlling shareholder of a subsidiary	-	1,140	-
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	-	5,501	53,433
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During the years ended December 31, 2010, 2011 and 2012, the Group's significant transactions with other state-owned enterprises (excluding Chinalco and its subsidiaries) constituted a large portion of its sales of goods and purchases of raw materials, electricity, property, plant and equipment and services. In addition, substantially all restricted cash, time deposits, cash and cash equivalents and borrowings as at December 31, 2010, 2011 and 2012 and the relevant interest earned or paid during the year were transacted with banks and other financial institutions which are controlled by the PRC government.

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**ALUMINUM CORPORATION OF CHINA LIMITED****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS***(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**35. SIGNIFICANT RELATED PARTY BALANCES AND TRANSACTIONS***(CONTINUED)***(a) Significant related party transactions***(Continued)*

All transactions with related parties are conducted at prices and terms mutually agreed by the parties involved, which are determined as follows:

- (i) Sales of materials and finished goods comprised sales of alumina, primary aluminium, copper and scrap materials. Transactions entered are covered by general agreements on mutual provision of

production supplies and ancillary services. The pricing policy is summarised below:

- (1) The price prescribed by the PRC government ("State-prescribed price") is adopted;
  - (2) If there is no State-prescribed price, state-guidance price is adopted;
  - (3) If there is neither State-prescribed price nor state-guidance price, then market price (being price charged to and from independent third parties) is adopted; and
  - (4) If none of the above is available, then adoption of a contractual price (being reasonable costs incurred in providing the relevant services plus not more than 5% of such costs is adopted).
- (ii) Utility services, including electricity, gas, heat and water, are supplied at Stated-prescribed price.
- (iii) Engineering, project construction and supervisory services were provided for construction projects of the Company. The state-guidance price or prevailing market price (including tender price where by way of tender) is adopted for pricing purposes.
- (iv) The pricing policy for purchases of key and auxiliary materials (including bauxite, limestone, carbon, cement, coal, etc) is the same as that set out in (i) above.
- (v) Social services and logistics services provided by Chinalco Group cover public security, fire services, education and training, school and hospital services, cultural and physical education, newspaper and magazines, broadcasting and printing as well as property management, environmental and hygiene, greenery, nurseries and kindergartens, sanatoriums, canteens and offices, public transport and retirement management and other services. Provisions of these services are covered by the Comprehensive Social and Logistics Services Agreement. The pricing policy is the same as that set out in (i) above.
- (vi) Pursuant to the Land Use Rights Lease Agreements entered into between the Group and Chinalco Group, operating leases for industrial or commercial land are charged at market rent rate. The Group also entered into building rental agreement with Chinalco Group and pays rent based on market rate for its lease of buildings owned by Chinalco.

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**35. SIGNIFICANT RELATED PARTY BALANCES AND TRANSACTIONS**

*(CONTINUED)*

(a) Significant related party transactions

*(Continued)*

All transactions with related parties are conducted at prices and terms mutually agreed by the parties involved, which are determined as follows: *(Continued)*

- (vii) The pricing policy for products processing service is the same as that set out in (i) above.
- (viii) Chinalco Finance Company Limited ("Chinalco Finance") (), a wholly-owned subsidiary of Chinalco and a non-bank financial institution incorporated in the PRC), provide deposit services, credit services and miscellaneous financial services to the Group. The terms for the provision of financial services to the Group is no less favourable than those of the same type of financial services provided by Chinalco Finance to Chinalco and other members of its group or those of the same type of financial services that may be provided to the Group by other financial institutions.
- (ix) Pursuant to Trademark License Agreement, the Company granted to Chinalco a non-exclusive right to use two trademarks for a period of ten years from July 1, 2001 to June 30, 2011 at zero cost. The Company will be responsible for the payment of a total annual fee of no more than RMB1,000 to maintain effective registration. This Trademark License Agreement has already expired on June 30, 2011 and terminated naturally.

(b) Balances with related parties



Other than those disclosed elsewhere in the consolidated financial statements, the outstanding balances with related entities at the year end are as follows:

	December 31, 2011	December 31, 2012
Cash and cash equivalents deposited with A fellow subsidiary ( <i>Note (i)</i> )	260,940	1,641,180
Trade and notes receivables		
Chinalco and its subsidiaries	506,775	410,775
Associates of Chinalco	656	4,711
Associates	3,900	4,245
Jointly controlled entities	-	5
	511,331	419,736
Less: provision for impairment of receivables	(112,461)	(119,280)
	398,870	300,456

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(CONTINUED)

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

35. SIGNIFICANT RELATED PARTY BALANCES AND TRANSACTIONS

(CONTINUED)

## (b) Balances with related parties

*(Continued)*

Other than those disclosed elsewhere in the consolidated financial statements, the outstanding balances with related entities at the year end are as follows: *(Continued)*

	December 31, 2011	December 31, 2012
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Other current assets		
Chinalco and its subsidiaries	122,158	60,687
Associates of Chinalco	166	11,440
Associates	15,813	219,305
Jointly controlled entities	325,545	676,246
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	463,682	967,678
Less: provision for impairment of other current assets	(35,907)	(34,915)
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	427,775	932,763
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Other non-current asset		
A jointly controlled entity	300,000	200,000
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Borrowing		
A fellow subsidiary	500,000	900,000
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Trade and notes payables		
Chinalco and its subsidiaries <i>(Note(ii))</i>	115,192	213,006
Associates of Chinalco	11	107
Associates	-	2,335
Jointly controlled entities	26,952	3,192
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	142,155	218,640
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**ALUMINUM CORPORATION OF CHINA LIMITED**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

35. SIGNIFICANT RELATED PARTY BALANCES AND TRANSACTIONS

*(CONTINUED)*

(b) Balances with related parties

*(Continued)*

Other than those disclosed elsewhere in the consolidated financial statements, the outstanding balances with related entities at the year end are as follows: *(Continued)*

	December 31, 2011	December 31, 2012
Other payables and accrued expenses		
Chinalco and its subsidiaries <i>(Note(ii))</i>	1,913,309	1,788,058
Associates of Chinalco	5,746	26,909
Jointly controlled entity	332	332
Associates	4,449	1,043
	1,923,836	1,816,342

Notes:

(i)

On August 26, 2011, the Company entered into an agreement with Chinalco Finance effective from August 26, 2011 to August 25, 2012. Pursuant to the agreement, Chinalco Finance agreed to provide deposit services, credit services and other financial services to the Group. On August 24, 2012, the Company renewed the financial services agreement with Chinalco Finance with a validation term of three years ended August 25, 2015.

- (ii) The other payables to Chinalco and its subsidiaries included an amount payable to Xinan Aluminum (Group) Company Limited ("Xinan Aluminum")  
( ) which was a non-controlling interest of a subsidiary of the Company prior to December 23, 2011. On December 30, 2011, Chinalco acquired 32.15% equity interest of Xinan Aluminum. Thereafter, Chinalco's effective equity interest in Xinan Aluminum increased from 17.81% to 49.96% and it exercises de-facto control over Xinan Aluminum. Accordingly, the balances with Xinan Aluminum as of December 31, 2011 and 2012 were included in "Chinalco and its subsidiaries".

As at December 31, 2012, included in long-term loans and borrowings and short-term loans and borrowings are borrowings payable to other state-owned enterprises amounting to RMB23,960 million (December 31, 2011: RMB21,669 million) and RMB36,938 million (December 31, 2011: RMB29,823 million) .

The terms of all balances with the exception of the entrusted loans were unsecured and were in accordance with terms as set out in the respective agreements or as mutually agreed between the parties concerned.

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**ALUMINUM CORPORATION OF CHINA LIMITED**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**35. SIGNIFICANT RELATED PARTY BALANCES AND TRANSACTIONS**

*(CONTINUED)*

- (c) Compensation of key management personnel of the Group

	2010	2011	2012
Fees	870	741	732
Basic salaries, housing fund, other allowances and benefits in kind	3,476	4,093	4,604
Discretionary bonus	1,384	1,616	-
Pension cost-defined contribution schemes	192	250	330
	5,922	6,700	5,666

## (d) Commitments with related parties

As at December 31, 2012, except for the other capital commitments disclosed in Note 37(c) of the consolidated financial statements, the Group had no significant commitments with other related parties.

## 36. CONTINGENT LIABILITIES

As at December 31, 2011 and 2012, the Group had no significant contingent liabilities.

## 37. COMMITMENTS

## (a) Capital commitments of property, plant and equipment

	December 31, 2011	December 31, 2012
Contracted but not provided for	6,450,714	8,415,513
Authorised but not contracted for	33,525,464	32,560,108
	39,976,178	40,975,621

## (b) Commitments under operating leases

The future aggregate minimum lease payments as at December 31, 2011 and 2012 pursuant to non-cancellable lease agreements entered into by the Group are summarised as follows:

	December 31, 2011	December 31, 2012
Within one year	666,963	705,338
In the second to fifth years, inclusive	2,655,916	2,784,132
After five years	18,905,447	19,120,917
	22,228,326	22,610,387

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**ALUMINUM CORPORATION OF CHINA LIMITED**  
**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

*(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

**37. COMMITMENTS**

*(CONTINUED)*

(c) Other capital commitments

As at December 31, 2011 and 2012, commitments to make capital contribution to the Group's jointly controlled entities and associates were as follows:

	December 31, 2011	December 31, 2012
Associates	69,613	3,435,715
Jointly controlled entities	-	130,800

Available-for-sale financial investment	-	29,600
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	69,613	3,596,115
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## 38. EVENTS AFTER THE REPORTING PERIOD

- (i) On January 18, 2013, the Company completed a private issuance of long-term bonds with a total face value of RMB3 billion at par value of RMB100.00 per unit with a maturity date of January 18, 2018 for working capital needs and repayment of bank borrowings. The fixed annual coupon interest rate of these bonds is 5.76%.

On March 14, 2013, the Company completed a private issuance of short-term bonds with a total face value of RMB3 billion at par value of RMB100.00 per unit with a maturity date of March 14, 2014 for working capital needs and repayment of bank borrowings. The fixed annual coupon interest rate of these bonds is 4.03%.

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**ALUMINUM CORPORATION OF CHINA LIMITED****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS***(CONTINUED)*

For the years ended December 31, 2010, 2011 and 2012

(Amounts expressed in thousands of RMB unless otherwise stated)

## 38. EVENTS AFTER THE REPORTING PERIOD

*(CONTINUED)*

- (ii) On August 13, 2012, the Company signed an agreement with Bank of China Group Investment Limited () to acquire 23.42% equity interest in Ningfa for a purchase price of RMB1,347.7 million. On December 31, 2012, the Company signed an agreement with the other shareholders of Ningfa to increase its equity interest in Ningfa to 70.82% for a capital injection of RMB2 billion. Both of the transactions were completed in the form of cash payment on January 23, 2013, and the Company took effective control of Ningfa from January 23, 2013. Ningfa was renamed as China Aluminum Ningxia Energy Group Co., Ltd. since February 8, 2013.

The acquisition of Ningfa supports the Company's long-term strategy of integrating electricity supply with its aluminum business, especially in the primary aluminum segment.

As the acquisition of Ningfa was completed shortly before the date of approval of these financial statements and the initial accounting for this acquisition is not completed on the date of approval of these financial statements, it is not practicable to disclose further details about the acquisition.

- (iii) According to the resolution of Board of Directors held on March 27, 2013, the Board did not propose any payment of final dividend for the year ended December 31, 2012.
- (iv) On March 14, 2013, the Company received the "Approval Concerning the Non-public Issue of Shares by Aluminum Corporation of China Limited" (Zheng Jian Xu Ke No. [2013]185) () () from China Securities Regulatory Commission, pursuant to which the Company's proposed non-public issue of not more than 1,450 million new A shares has been approved. The approval shall be valid for six months from the date of such grant.

### 39. APPROVAL OF THE FINANCIAL STATEMENTS

The financial statements were approved and authorised for issue by the audit committee of the Board of Directors on April 25, 2013.