This section contains information and statistics relating to the PRC economy and the industry in which we operate. We have derived such information and data partly from publicly available government official sources which have not been independently verified by us, the Selling Shareholder, the Sole Sponsor, the Sole Global Coordinator, the Joint Bookrunners, the Joint Lead Managers, the Underwriters or any of their respective affiliates or advisors. Our Directors have taken reasonable care in the reproduction of such information. The information in such government official sources may not be consistent with the information compiled within or outside the PRC.

We commissioned CRU to prepare an independent report. We believe that the sources of the information extracted from the CRU report are appropriate sources for such information and have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. The information extracted from the CRU report has not been independently verified by us, the Selling Shareholder, the Sole Sponsor, the Sole Global Coordinator, the Joint Bookrunners, the Joint Lead Managers, the Underwriters or any other party involved in the Global Offering and no representation is given as to its accuracy.

#### REPORTS COMMISSIONED FROM CRU

CRU is an independent market research, business analysis and consulting group focused on the mining, metals and fertilizer industries. We have paid a fee of approximately £64,300 to CRU to conduct analysis of, and to report on, the global and PRC silver and lead market and industry as well as the PRC antimony and bismuth market.

The parameters and assumptions of CRU's report reflect its understanding of the prevailing international silver markets at the time of preparation of the report. The historical market data is generated through the analysis of relevant data such as production, trade and consumption data that are compiled by various governmental agencies, industry associations and companies. For some countries, published data may not be available or up-to-date, in which case it is necessary to make estimates based on regular contact (e.g., via telephone interviews and in-person meetings) with industry participants such as producers, consumers and traders, as well as secondary sources such as conference presentations and news articles. Market forecasts are driven by CRU's own in-depth, macro-economic platforms that present CRU's view of the key demand drivers such as gross domestic product and industrial production on a country-by-country and key sector basis. CRU then seeks views from its industry contacts on factors such as intensity of use in key end-use sectors and inventory changes, and combines these with its macro-economic outlook and long experience of the shape of cycles in the industry to come up with a forecast.

#### SILVER OVERVIEW

Silver is usually found in native form, as an alloy with other metals, and in minerals such as argentite and chlorargyrite. Pure silver is a soft, white and lustrous metal. It is a malleable and ductile metal that has the highest optical reflectivity, as well as the highest thermal and electrical conductivity.

According to CRU, the world's silver reserves are estimated to be approximately 528,000 tonnes in 2011. Silver reserves are geographically concentrated, with approximately half of the world's reserves located in South and Central America. According to the statistics in 2011, the top five countries ranked by silver reserves accounted for approximately 73% of the world's total silver reserves.

The table below shows the world's silver reserves in 2011.

## Silver reserves in 2011 (tonnes)

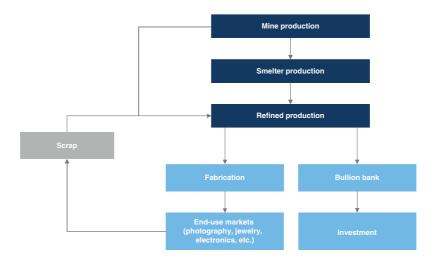
Country	2011 reserves (tonnes)	% of world total
Peru	120,000	22.7%
Poland	85,000	16.1%
Chile	70,000	13.3%
Australia	69,000	13.1%
China	43,000	8.1%
Mexico	37,000	7.0%
United States	25,000	4.7%
Bolivia	22,000	4.2%
Canada	7,000	1.3%
Other countries	50,000	9.5%
World total	528,000	100.0%

Source: CRU

Silver is typically obtained as a by-product from the production of other base metals such as copper, lead-zinc as well as gold. Silver can be extracted from ores by smelting or leaching. Silver is also recycled from sources such as photographic developing fluids and industrial catalysts.

The chart below shows the value chain of silver.

## Silver value chain



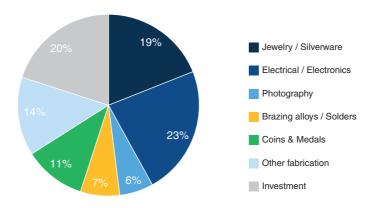
Source: CRU

Silver is considered as both a precious and an industrial metal. The most important fabrication application for silver is found in the electrical and electronics industry, while the jewelry and silverware industry is the second largest consumer of silver. Silver is used in coinage,

and the silver coins are produced for collection and investment purposes. Smaller volumes of silver are used in brazing alloys and solders, which in turn were used primarily in the electronic and plumbing sectors. Photography also accounted for 6% of the global silver consumption in 2011, declined as a result of the increasing use of digital photographic technology. Other fabrication applications of silver and silver alloys include the manufacturing of various high quality musical wind instruments, specialized mirrors and optics. Silver is recently involved in cloths manufacturing and bacterial/fungal infection prevention as well.

The chart below sets forth the end-use breakdown of the global silver demand in 2011.

## World silver demand by end-use, 2011



Source: CRU

## **GLOBAL SILVER MARKET**

## **Global Silver Supply**

The table below sets forth the global silver supply including silver mine production and silver scrap production for the period from 2007 to 2016. It is expected that the growth over the forecast period (2012-2016) to be moderate with a CAGR of approximately 1.5%, with growth in mine production slightly outpacing that of scrap production.

# Total global silver supply, 2007-2016 (tonnes)

	2007	2008	2009	2010	2011	2012f	2013f	2014f	2015f	2016f	CAGR 2012- 2016
Mine output	21,882	22,230	23,144	24,047	24,391	24,675	25,700	26,775	27,149	27,000	2.3%
Mine withheld	43	51	51	29	23	-75	0	25	0	0	
Recycled scrap	6,225	6,175	6,125	7,050	7,925	7,000	6,500	6,250	6,250	6,500	-1.8%
Total supply	28,150	28,456	29,320	31,126	32,339	31,600	32,200	33,050	33,400	33,500	1.5%
% change	2.4	1.1	3.0	6.2	3.9	-2.3	1.9	2.6	1.1	0.3	

Source: CRU

Note: "withheld" mine supply refers to volumes that were held back at the mine due to the fact that they contained large amounts of other minerals (such as lead) that were traded at low prices at the time the product was mined. These volumes are typically small, especially in recent years.

#### Global Silver Mine Production

According to CRU, in 2011, South and Central America region accounts for the largest silver mine production volume in the world, while North America is the world's second largest silver mine production region. Asia ranks third in terms of the silver mine production volume, with China contributing approximately 65% of the total silver mine production volume in Asia in 2011.

The table sets forth the historical regional silver mine supply for the period from 2007 to 2011.

#### Historical regional silver mine supply, 2007-2011 (tonnes)

	2007	2008	2009	2010	2011	CAGR 2007-2011
South & Central America	6,509	6,887	7,545	7,367	7,116	2.3%
North America	5,289	5,277	5,455	6,310	6,623	5.8%
China	2,925	2,850	2,825	3,000	3,250	2.7%
Asia (excluding China)	1,711	1,664	1,813	1,650	1,738	0.4%
Europe	2,937	3,052	3,112	3,073	3,229	2.4%
Australasia	2,131	2,130	2,009	2,239	2,027	-1.2%
Africa	380	369	386	408	408	1.8%
Total	21,882	22,230	23,144	24,047	24,391	2.8%
% change	5.1	1.6	4.1	3.9	1.4	

Source: CRU

During the period from 2007 to 2011, the world's total silver mine supply increased at CAGR of approximately 2.8%. Despite the decrease in the production volume of Chile, Canada, the United States and Australia during this period, the significant increase in the supply from Mexico, Bolivia and Argentina maintained the world's silver supply positive. Mexico, China and Kazakhstan contributed most to the growth of world's silver production in 2011. The total increase in silver mine production volume of these three countries in 2011 was equal to the decrease in the production volume of Peru, Australia and the United States.

According to CRU, the world's total silver mine supply is mainly contributed by committed silver mine supply<sup>(1)</sup>. Besides, CRU also expected production will come from deposits and projects still in the planning and development stages. Combined total committed mine production (less disruption allowance) and potential production (as well as any price-induced supply curtailments), the world's total silver mine supply may be lifted to a level of 27,000 tonnes by 2016, resulting in a CAGR of 2.3% over the period from 2012 to 2016.

CRU has forecasted the global silver mine production from 2012 to 2016 based on investigations of the future plans and new projects of silver mines around the world.

World committed silver mine supply is expected to increase at a CAGR of approximately 2.1% over the period from 2012 to 2016. The growth will be driven primarily by the increase in South and Central America, with production volume in this region expected to increase by approximately 950 tonnes for the period from 2012 to 2016. It is also expected to see strong production volume increase in Asia. According to CRU, the committed mine supply in Asia is expected to increase at a CAGR of approximately 2.7% during the period from 2012 to 2016, which will largely be driven by the increase in production volume in China and India.

<sup>(1) &</sup>quot;mine supply from existing mines and, over the forecast period, projects where construction is in progress"

The table below sets forth the expected regional silver mine supply for the period from 2012 to 2016.

## Forecast regional silver mine supply, 2012-2016 (tonnes)

	2012f	2013f	2014f	2015f	2016f	CAGR 2012-2016
South & Central America	7,268	7,540	8,291	8,440	8,212	3.1%
North America	6,771	7,142	7,127	7,010	7,076	1.1%
China	4,250	4,550	4,700	4,725	4,725	2.7%
Asia (excluding China)	1,098	1,173	1,194	1,216	1,222	2.7%
Europe	3,324	3,386	3,446	3,526	3,593	2.0%
Australasia	1,884	1,961	1,990	2,003	1,947	0.8%
Africa	413	421	431	431	431	1.1%
Committed production	25,008	26,173	27,179	27,351	27,206	2.1%
less disruption <sup>1</sup>	258	373	404	402	381	
<b>Total committed production</b>						
(inc. disruption)	24,750	25,800	26,775	26,949	26,825	2.0%
% change	1.5	4.2	3.8	0.6	-0.5	
Potential new mines <sup>2</sup>	0	0	500	1,625	2,125	
Potential redevelopments <sup>2</sup>	0	175	275	300	300	
From expansions	0	0	0	25	50	
Price-induced curtailments <sup>3</sup>	-75	-275	-775	-1,750	-2,300	
Total world forecast production	24,675	25,700	26,775	27,149	27,000	2.3%
% change	1.2	4.2	4.2	1.4	-0.5	

Source: CRU

### Notes:

- (1) "Disruption" refers to a portion of production that is deducted due to uncontrollable events, such as labour disputes and adverse weather.
- (2) "Potential" means volumes that CRU forecasts will come from mines that are not yet financed or permitted.
- (3) "Price-induced curtailments" refers to a voluntary reduction in supply/generation of mine output due to current low market prices.

#### Global Silver Scrap Supply

Scrap supply can be derived from almost every use of silver, with the largest amount recovered from the photographic, catalytic and electronic sectors. Although photographic scrap has decreased in recent years as a result of the decline in silver demand from this sector, the total scrap supply from sources other than photographic scrap has experienced stable increase since 2006 given the increasing silver price as compared to the relatively low cost to process silver scrap. It is expected that total silver supply from recycled scrap will not decrease significantly through the period from 2012 to 2016. The total silver scrap supply is expected to maintain at a level of above 6,000 tonnes per year during the period from 2012 to 2016.

# **Global Silver Demand**

According to CRU, the world's total consumption of silver in 2011 was approximately 33,100 tonnes. Global demand for silver is dominated by fabrication demand which accounts for approximately 80% of the total global demand, and purchases by banks and investors account for the remaining in 2011.

The table below sets forth the historical world silver demand by key region/country for the period during 2007 to 2011.

## Historical world silver demand by region, 2007-2011 (tonnes)

	2007	2008	2009	2010	2011	CAGR 2007-2011
Total fabrication demand	26,540	26,560	23,810	26,940	26,620	0.1%
Europe	6,460	6,480	5,650	5,900	5,570	-3.6%
North America	5,850	6,070	5,520	6,830	6,840	4.0%
Japan	4,000	3,360	2,190	3,160	2,930	-7.5%
India	2,770	2,870	3,240	2,930	2,830	0.5%
China	3,270	3,560	3,430	3,950	4,340	7.3%
Other	4,190	4,220	3,780	4,170	4,110	-0.5%
% increase	1.6	0.1	-10.4	13.1	-1.2	
Europe	-5.0	0.3	-12.8	4.4	-5.6	
North America	-1.0	3.8	-9.1	23.7	0.1	
Japan	-2.2	-16.0	-34.8	44.3	-7.3	
India	7.4	3.6	12.9	-9.6	-3.4	
China	20.7	8.9	-3.7	15.2	9.9	
Other	3.7	0.7	-10.4	10.3	-1.4	
Total investment demand	1,110	1,646	5,010	5,686	6,480	55.5%
Total demand	27,650	28,206	28,820	32,626	33,100	4.6%

Source: CRU

The top consumers of silver are companies in the electrical and electronics industry as well as the jewelry and ornament industry. Manufacturers of photographic products are still among the major consumers of silver, though their shares of total silver demand have declined in the recent years due to the increasing use of digital photography. Demand for silver from investors and banks are largely determined by the prevailing silver price. Many investors also perceive silver to be a "safe haven" commodity and as a result, demand for silver by these investors tends to increase during the time of extreme market volatility, which is evidenced by the record shown during the 2008 and 2009 financial crisis.

The table below sets forth the forecast world silver demand by key region/country for the period from 2012 to 2016.

## Forecast world silver demand by region, 2012-2016 (tonnes)

	2012f	2013f	2014f	2015f	2016f	CAGR 2012-2016
Total fabrication demand	26,650	27,200	27,850	28,175	28,550	1.7%
Europe	5,450	5,450	5,425	5,425	5,500	0.2%
North America	6,600	6,225	6,150	5,850	5,575	-4.1%
Japan	2,825	2,975	2,950	3,075	3,050	1.9%
India	2,900	3,100	3,425	3,525	3,650	5.9%
China	4,725	5,150	5,500	5,850	6,225	7.1%
Other	4,150	4,300	4,400	4,450	4,550	2.3%
% increase	0.1	2.1	2.4	1.2	1.3	
Europe	-2.2	0.0	-0.5	0.0	1.4	
North America	-3.5	-5.7	-1.2	-4.9	-4.7	
Japan	-3.6	5.3	-0.8	4.2	-0.8	
India	2.5	6.9	10.5	2.9	3.5	
China	8.9	9.0	6.8	6.4	6.4	
Other	1.0	3.6	2.3	1.1	2.2	
Total investment demand	4,950	5,000	5,200	5,224	4,950	0.0%
Total demand	31,600	32,200	33,050	33,399	33,500	1.5%

Source: CRU

According to CRU, the world's total fabrication demand is forecasted to grow at a CAGR of 1.7% during the period from 2012 to 2016. This growth will be driven by China, which is forecasted to account for approximately 79% of the growth in fabrication demand over the forecast period. Jewelry and silverware, brazing alloys and solders, and electrical and electronics applications will be the primary sectors driving this growth, which are expected to increase at a CAGR of 3.2%, 4.8% and 6.0% respectively over the forecast period. Consumption of silver in the coin and medal sector has peaked. This sector is forecasted to decline at a CAGR of -16.3% during the period from 2012 to 2016. Silver's use in photography will also decline with a CAGR of -3.2% during the period 2012-2016. Silver consumed in other fabrication sectors will be largely recovered in all regions from the economic downturn, resulting in a CAGR of 3.4% in 2012-2016. The world investment demand is expected to remain stable during the period from 2012 to 2016, with around 5,000 tonnes demand per year over the forecast period.

## Forecast world silver demand by end-use, 2012-2016 (tonnes)

	2012f	2013f	2014f	2015f	2016f	CAGR 2012-2016
Jewelry / Silverware	6,572	6,768	7,201	7,357	7,451	3.2%
Electrical / Electronics	7,286	7,750	8,182	8,779	9,187	6.0%
Photography	1,949	1,883	1,823	1,766	1,712	-3.2%
Brazing alloys / Solders	2,422	2,560	2,682	2,804	2,926	4.8%
Coins & Medals	3,606	3,300	2,838	2,157	1,769	-16.3%
Other fabrication	4,815	4,939	5,124	5,312	5,506	3.4%
Total fabrication demand	26,650	27,200	27,850	28,175	28,550	1.7%
Total investment demand	4,950	5,000	5,200	5,224	4,950	0.0%
Total demand	31,600	32,200	33,050	33,399	33,500	1.5%

Source: CRU

Silver demand consists of both industrial (fabrication) demand and investment demand. CRU has forecasted the fabrication demand for silver based on macro-economic data provided by CRU's macro-economics team as well as its understanding of the trends in each of the major enduse sectors. Investment demand is forecasted based on official or government investments in silver, exchange investments and relevant exchange-traded fund activities. Since it is difficult to forecast future investment demand for silver, CRU assumes that the forecasted investment demand equals the gap between the total silver supply and the fabrication demand for silver during the forecast period.

Weakening economic growth has continued to curtail industrial demand for silver; however, it has boosted the investment demand due to the economic uncertainty. Global economic growth has continued to slow down during the first half of 2012, and this has had further repercussions for the fabrication demand for silver. CRU recognizes that the fabrication demand for silver started to curtail in the second half of 2011, and evidence has suggested further weakening of such demand since then.

CRU expects China's GDP growth in 2012 and 2013 to be 7.5% and 8.1% respectively, with signs that the Chinese economy is bottoming out in the third quarter of 2012. Europe has been at the heart of the world economic slowdown and is forecasted to recover fully only in 2014 to 2015.

CRU believes that the demand from the coin sector for silver has passed its peak but the volume of silver coin worldwide will largely be maintained in the short term as it continues to be an attractive product given the global economy outlook. Furthermore, CRU believes that an eventual economic recovery will be the catalyst for a drop in off-take in this sector.

Silver's use in photography will also decline, although CRU continues to believe that this decline will not be rapid. On the one hand, the digital photography market is now mature and so there is not much room for consumer film demand to fall further. Meanwhile, digital technology is unlikely to quickly erode silver's use in radiography in light of conservative public spending plans. Taking into account of the economic growth analysis, CRU has derived a total demand forecast for the fabrication of silver.

Total demand for silver through investment activity has increased since the onset of the financial crisis in 2008. Investment demand remained high in 2011 and is forecasted to continue to stay high over the forecast period.

## CHINESE SILVER MARKET

#### Silver Production in China

China's silver mine production

China's silver reserves are mostly concentrated in its south central region. China's silver production mainly locates in Hunan, Henan, Jiangxi, Yunnan, Zhejiang, Anhui, Shandong, Gansu, Hubei and Guangxi provinces. The total silver production volume of these provinces accounts for 94% of the total silver production in China. The top five producing provinces accounted for approximately 78% of silver production of China in 2011.

More than 60% of China's mined silver production is obtained as a by-product of copper and lead-zinc mines. According to CNIA, in 2011, 27% of China's silver mine production came from primary silver mines, 32% from lead-zinc mines, 29% from copper mines, 10% from gold mines and 2% from other mines.

According to CRU, Henan province produced the largest volumes of mined silver in 2011, which was closely followed by Sichuan province and Inner Mongolia. Most of the top chinese primary silver mines are located in the above mentioned provinces, such as Bairendaba mine, Xiasaiyin mine and Tieluping mine, which are located in Inner Mongolia, Sichuan Province and Henan Province, respectively.

#### China's silver scrap supply

In China, scrap plays a significant role in domestic silver supply, which accounted for over 23.4% of the total domestic silver supply in 2011, or 992 tonnes reported by GFMS. Chinese secondary silver refining production is concentrated in Hunan and Zhejiang provinces, which do not have significant silver mine resources.

## China's import of silver ore and concentrate

Despite its position as the third largest silver producing country in the world, China still needs to import large amount of silver ore and concentrate to meet its domestic demand.

The total silver supply in China is shown in the table below, which includes domestic mine and scrap production, as well as silver production contained in the net imports of ores and scraps. China's silver production increased by 18.4% from 10,510 tonnes in 2007 to 12,446 tonnes in 2011. In the period from 2012 to 2016, Chinese total silver production is forecasted to rise at a CAGR of 2.6%, mainly due to the slowdown in the growth of both supply domestic and overseas scrap supply.

#### Chinese silver supply, 2007-2016 (tonnes)

	2007	2008	2009	2010	2011	2012f	2013f	2014f	2015f	2016f	2007-11	2012-16
Domestic Scrap	700	705	787	909	992	1,108	1,187	1,232	1,233	1,282	9.1%	3.7%
Domestic Mine	2,925	2,850	2,825	3,000	3,250	4,250	4,550	4,700	4,725	4,725	2.7%	2.7%
Silver contained in the net												
imports of ores and												
scraps	6,885	6,923	7,883	7,708	8,204	7,262	7,199	7,378	7,713	7,978	4.5%	2.4%
Total silver supply	10,510	10,478	11,495	11,617	12,446	12,620	12,936	13,311	13,670	13,985	4.3%	2.6%

CACD CACD

Source: CRU

The table below sets forth the top ten largest silver producers in China in terms of silver production volume and market share in 2011.

Top ten Chinese silver producers by production, 2011

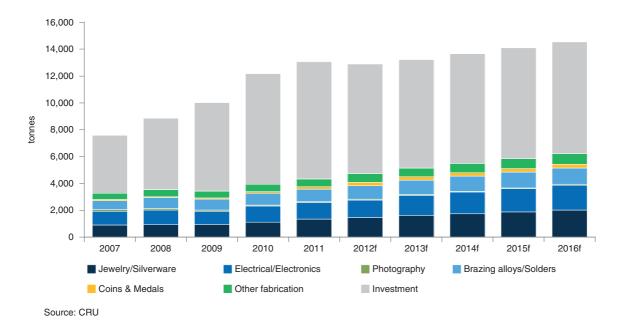
Company	Type of company	production volume (tonnes)	Silver % of total revenue	Market share*
Yuguang Gold & Lead Co. Ltd	Chinese state-owned	691	34.9%	5.56%
Jiangxi Copper Co., Ltd	Chinese state-owned	526	2.9%	4.23%
Chalco Yunnan Copper Co., Ltd	Chinese state-owned	474	8.7%	3.81%
Tongling Nonferrous Metals Groups Holding				
Co., Ltd	Chinese state-owned	412	3.7%	3.31%
Daye Nonferrous Group Co., Ltd	Chinese state-owned	355	4.7%	2.85%
Chenzhou City Jingui Silver Industry Co.,				
Ltd	Privately-owned	247	51.4%	1.98%
Anyang Yubei Gold & Lead Group Co., Ltd	Privately-owned	240	59.3%	1.93%
Shuikoushan Nonferrous Metals Group Co.,				
Ltd	Chinese state-owned	200	30.1%	1.61%
Chihong Zinc & Germanium Co., Ltd	Chinese state-owned	126	13.1%	1.01%
Our Company	<b>Privately-owned</b>	113	<u>73.1</u> %	0.91%
Top ten subtotal		3,385		<u>27.20</u> %
Total silver supply in China		12,446		100.0%

<sup>\*</sup> Represents production volume out of total silver supply in China (including domestic scrap, domestic mine and silver contained in the net imports of ores and scraps)

Source: CRU

The companies shown in the table above does not include metal recyclers that also produce silver. According to the table above, we are the tenth largest silver producer in China in terms of production volume in 2011. As also shown in the table above, in terms of percentage of revenue attributable to silver, we are a silver producer in China with the highest percentage of revenue (73.1%) deriving from sales of silver ingot in 2011. We are also one of the first batch of companies in Jiangxi province to be certified as a "Circular Economy Examplar Enterprise" by the local authorities. According to CRU, "Circular Economy" is a concept developed in China as a strategy for reducing the economy reliance on natural resources, as well as reducing the damage caused to natural environment, such as committing in recycling. A Circular Economy Examplar Enterprise is a type of certificate issued by the NDRC or the relevant local government. Furthermore, according to CRU, we are also the only non-state-owned or -controlled entity among the seventeen Chinese enterprises whose products are accepted by the LBMA Good Delivery List.

The chart below shows China's silver consumption by end-use for the period from 2007 to 2016.



Chinese total silver demand has grown at a fast pace at a CAGR of 14.6% from 2007 to 2011 and reached 13,044 tonnes in 2011, mainly because of the increasing investment demand during the economic crisis. The total consumption is forecasted to continue to grow from 12,893 tonnes in 2012 to 14,527 tonnes by 2016, representing a CAGR of 3.0% in the forecast period. CRU estimated that investor-driven demand for silver grew at a CAGR of 19.2% over the period of 2007 to 2011 and reached 8,704 tonnes in 2011, and such demand is expected to stay above 8,000 tonnes over the forecast period. Compared to the CAGR of 7.3% from 2007 to 2011, fabrication demand is also anticipated to maintain a healthy growth rate in China during the period from 2012 to 2016, at a CAGR of 7.1%. Within the total fabrication consumption of silver, the electrical/ electronics segment has the highest CAGR of 9.7% in the forecast period and will reach 1,874 tonnes in 2016. The jewelry/silverware segment is expected to grow at a CAGR of 8.1% in the forecast period and reach 2,014 tonnes in 2016. The brazing alloys/solders segment will grow with a CAGR of 5.0% in the forecast period and reach 1,207 tonnes in 2016. CRU also estimated that domestic silver demand in 2012 will be higher than domestic silver supply. In addition, the forecasted CAGR of domestic silver supply will be 2.9% from 2012 to 2016, compared to a CAGR of 3.0% for domestic silver demand during the same period. Based on the above, we believe that there is a strong and sustainable demand for silver products in China.

#### SILVER MARKET PRICING

Silver price is determined by the available supply versus demand. The LBMA offers a mechanism called "London Fix" which enables silver to be sold and bought at a single price. The London bullion market is a wholesale over-the-counter ("OTC") market for the trading of gold and silver. Trading is conducted among LBMA members, most of which are major international banks or bullion dealers and refiners.

The bulk of global trading in gold and silver is conducted on the OTC market. London is by far the largest global trading platform for OTC transactions, which is followed by New York, Zurich and Tokyo. Exchange-based trading has grown in recent years with COMEX in New York and TOCOM in Tokyo generating most of the trading activity. Although there are physical markets for gold and silver all over the world, most wholesale OTC trades are cleared in London.

The LBMA is unlikely to give favorable consideration to an application for listing unless the following criteria are met:

- 1) The applicant has been in business for not less than five years and has been involved in refining operations of the metal for which it is applying for admission into the LBMA Good Delivery List for not less than three years prior to the application;
- 2) The applicant has established an annual refining production (which needs not be in the form of standard bars) of not less than 10 tonnes in the case of gold, or not less than 30 tonnes in the case of silver; and
- 3) The applicant has a tangible net worth of not less than the equivalent of 10 million pounds sterling or such figure as the LBMA may from time to time determine.

Over 130 companies in 20 countries have been admitted as either LBMA members or associates.

The "London Fix" is accepted worldwide as the market price, and is used in many countries as the pricing basis for sale of silver by producers to consumers. The paper contract trading market for silver is in the COMEX. Both futures and options contracts are traded in the COMEX. Mining companies, fabricators of finished products, and users of industrial materials that contain silver can use the COMEX silver futures and silver options contracts to manage their price risk.

In China, physical silver is mainly traded on the Shanghai White Platinum & Silver Exchange and the Tianjin Precious Metal Exchange (天津貴金屬交易所), which publish domestic spot prices on a daily basis. The Shanghai White Platinum & Silver Exchange benchmarked the silver ingots into three grades, namely No. 1 international, No. 2 international and No. 3 international. The grading is in line with China's National Standard of Silver, GB/T 4135—2002.

Name	Grade	Silver purity
No. 1 international	IC-Ag99.99	Not less than 99.99%
No. 2 international	IC-Ag99.95	Not less than 99.95%
No. 3 international	IC-Ag99.90	Not less than 99.90%

When silver ingots are traded on the Shanghai White Platinum & Silver Exchange, there are slight differences among the trading prices of the three silver grades. As an industrial practice, the trading price is determined with reference to the purity of silver products. The price of No. 1 International Silver Ingot is the highest among the three grades because of its highest silver purity. The price difference of silver ingots between any two consecutive grades ranges from RMB10 per kilogram to RMB20 per kilogram.

In terms of silver fabrication applications, all the silver ingots of the three grades are widely used in electricity, electronic, lightening and jewelry industries. There are generally no distinctive and significant differences among the three grades, except for certain applications in

certain downstream industries, such as electronics, military and aerospace, where high purity silver products are required.

The China Domestic Silver Price is synchronized with the global silver price save for small differences due to value added tax, shipping fees and exchange rates. The chart below shows the monthly averages of the China Domestic Silver Price and the monthly average silver price quoted by the LBMA, respectively, for the period from January 2009 to November 2012, which shows that the China Domestic Silver Price had a high correlation with the LBMA price.

10,000 45 9,000 40 8,000 35 7,000 30 RMB/kilogram 6,000 25 5,000 20 4,000 15 3,000 10 2,000 5 1,000 0 Jan Jul

2012

London silver fix (Right Axis)

LBMA London Silver Fix and the China Domestic Silver Price, January 2009 to November 2012

Source: CRU

2009

Note: The China Domestic Silver Price is expressed in RMB per kilogram, and LBMA price is expressed in US dollar per oz.

2010

Chinese domestic spot silver price (Left Axis)

## **Factors Affecting Silver Price**

The price of silver is determined by the available supply versus demand. In recent years, fabrication demand has greatly outpaced mine production forcing market participants to use existing stocks to meet demand. However, as silver is a tangible asset, and is recognized as a store of value as well as a hedge against risk, its price can also be affected by other major factors such as macro-economic trend, gold price, investment demand, interest rate and inflation rate.

Demand versus supply: — Typically demand versus supply is the most important determinant of silver price. When demand surpasses available supply, the price will go up and vice versa. New technologies, new mine projects and import and export policies will influence silver production and supply. Although silver is becoming more popular as a hedging asset against risk, the fabrication industry remains the main driver for silver demand.

Macro-

economic trends:

— As silver can be considered as industrial material as well as a tangible asset used as a hedge against risk, macro-economic trends usually have a great impact on the silver price. In an economic boom, increased demand will push the silver price up. During an economic recession, much like gold - although not to the same extent - silver prices are more resistant to the decline in price than other commodities experienced, due to the fact that silver is recognized as a store of value.

Gold price:

— Throughout history, gold and silver have played closely related roles as precious metals and are usually considered as substitutes to reduce similar types of risks in portfolios. Therefore, the gold price has inevitably influenced the silver price. Silver often tracks the gold price due to store of value, although the gold to silver price ratio can vary. Statistics show that the correlation between these two prices is over 90%. The average gold to silver price ratio during the 20th century is 47:1. However, in recently years, this ratio has surged highly over 60:1, partly due to the relatively declining fabrication demand for silver, but the increasing demand for gold as a hedge against risk.

Investment demand:

— The silver market is much smaller in value than the gold market. CRU has noted silver as a constituent in certain exchange-traded funds. Their selling or stocking would have an impact on silver price.

Interest rate.

— The change of interest rates can have a great impact on the silver price. As interest rates in the U.S. are currently anticipated to maintain at low level through mid 2015, investment demand for silver will still be encouraged.

Inflation rate:

— As silver is a tangible asset and is recognized as a store of value, its price can be affected by inflation (real or perceived). Currently, many currencies of all the major countries are under severe pressure because of massive government deficits. Moreover, in order to prevent economic slowdown, many countries have adopted loose

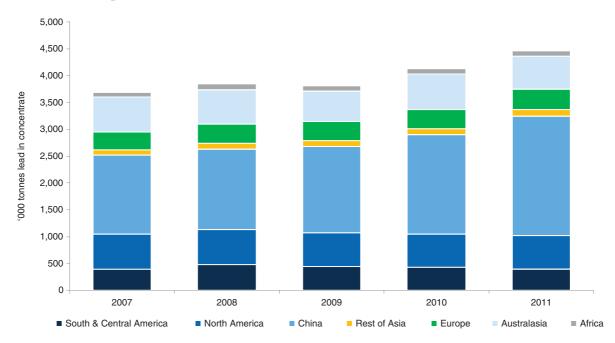
monetary policies. As more money is injected into these economies, the less valuable the currencies become. In such case, possession of physical silver bullion becomes more attractive. The supply of physical silver is more limited than the amount of paper products available, which in turn cause the silver price to rise.

#### **LEAD**

Lead is usually found in ore with zinc, silver and copper, and is extracted together with these metals. Lead is mainly used for the production of lead-acid batteries. Lead is also used in construction, bullets and shots, solders, fusible alloys, and as a radiation shield.

The chart below shows the global lead mine production for the period from 2007 to 2011.

## Global lead mine production, 2007-2011



Source: CRU

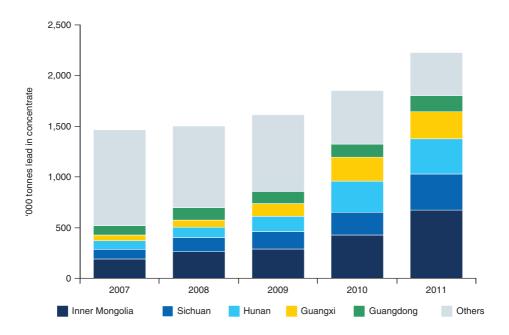
China has the third largest reserves of lead in the world after Australia and the United States. In 2011, China's domestic mine production was 2.23 million tonnes (metal content). According to CRU, China's domestic refined lead production grew by approximately 10.7% year-on-year to 4.47 million tonnes in 2011, with growth in secondary lead output of approximately 4.8% year-on-year to 1.43 million tonnes, accounting for 31% of the total lead production in China in 2011. Growth in the Chinese primary refined lead output has outpaced mine production, promoting China's lead concentrate imports to rise. In 2011, China imported 1.44 million tonnes of lead concentrate in total and the three largest import sources were Peru, Australia and Russia.

Along with the high speed of economic growth in China, consumption of lead has increased at a CAGR of 20.0% during the last ten years. CRU expects that China's domestic consumption in

2012 will be approximately 4.65 million tonnes. China's domestic lead mine production is forecasted to increase by 10.0% as compared to 2011 to reach 2.45 million tonnes in 2012. The refined lead production is forecasted to increase by 4.5% as compared to 2011 to reach 4.67 million tonnes in 2012. China's domestic lead market is in modest surplus in 2011. China's demand and supply of lead is roughly in balance in 2012. In recent months subsequent to June 30, 2012, the growth in domestic lead consumption has slightly exceeded the increase in domestic lead production. We expect that for the second half of 2012, domestic lead consumption will continue to slightly exceed domestic lead production, which will result in a slight surplus of domestic lead production over domestic lead demand for the full year of 2012.

The chart below sets forth China's lead mine production volume by province for the period from 2007 to 2011.

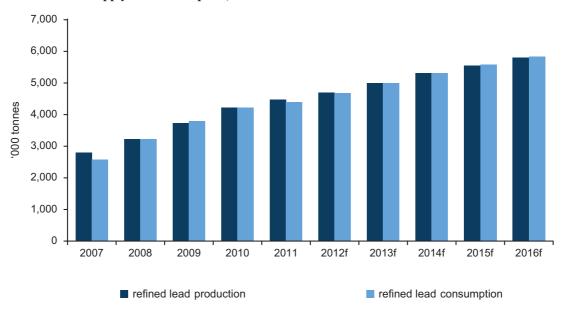
## China lead mine production by province for major mines, 2007-2011



Source: CRU

As shown in the chart above, Inner Mongolia accounts for the largest lead concentrate production in China. It is expected that the production volume in Inner Mongolia will reach approximately 859,000 tonnes in 2012. Sichuan province ranks second in terms of lead production, followed by Hunan province. According to CRU, both Sichuan and Hunan provinces are each expected to produce more than 400,000 tonnes of lead concentrate in 2012.

## Chinese refined lead supply and consumption, 2007-2016f



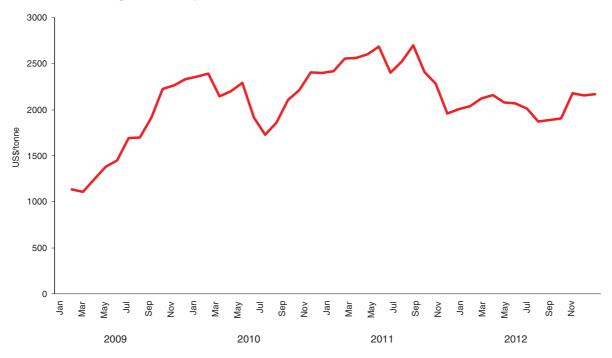
Source: CRU

China is currently the largest refined lead producer in the world. Refined lead capacity in China has grown at a CAGR of 10.2% during the period from 2007 to 2011. China's lead smelting capacity is concentrated in Henan, Hunan, Anhui, Yunnan and Guangxi provinces, which in aggregate accounts for over 60% of China's total lead smelting capacity. The key market players of lead industry are Henan Yuguang, Zhuzhou Smelter Group Co., Ltd. (株洲治煉集團股份有限公司), Shenzhen Zhongjin Lingnan Nonfemet Co., Ltd. (深圳市中金嶺南有色金屬股份有限公司), MCC Huludao Nonferrous Metals Group Co., Ltd. (中治葫蘆島有色金屬集團有限公司) and Yunnan Chihong Zinc & Germanium Co., Ltd. (雲南馳宏鋅鍺股份有限公司). In addition, companies which have achieved fast growth in lead production include Jiyuan Wanyang Smelting (Group) Co., Ltd. (濟源市萬洋冶煉(集團)有限公司), Bayannur Zijin Nonferrous Metals Co., (巴彥淖爾紫金有色金屬有限公司), Yinxing Nonferrous Metals Co., Ltd. (桂陽銀星有色冶煉有限公司), Jiangxi Copper, Hubei Jinyang Co., Ltd. (湖北金洋冶金股份有限公司) and Jiaozuo Dongfang Gold & Lead Co., Ltd. (焦作東方金鉛有限公司). China is expected to produce approximately 5.8 million tonnes of refined lead by 2016, of which 64% will be obtained from the lead concentrates through smelting and refining. For the period from 2012 to 2016, CRU forecasts that China's refined lead capacity will grow at a CAGR of approximately 0.6%.

CRU expects the lead market surplus to endure for another two to three years, with sufficiently high metal prices causing lead production to continue to outweigh lead consumption.

Due to six years of surplus (2009-2014), it could take time to run lead industry inventories down to comfortable levels. However, most of the excess lies in LME hoards, much of which is unavailable for immediate lead industry (rather than investment) needs. Taking a more realistic line on LME stock availability results in a much tighter stock situation.

LME 3-month lead price, January 2009 to November 2012



Source: CRU

According to CRU, LME price rises reached a high point of US\$2,564 per tonne in 2007. Economic downturn in 2008 and 2009 had pulled the lead price down to US\$1,741 per tonne, which went back to over US\$2,000 again in 2010 and 2011. According to CRU, lead is expected to continue to be traded at a price ranging from US\$2,000 to US\$2,325 per tonne for the period from 2012 to 2016.

## The national grades of Chinese lead

According to China's National Standards, there are different grades for lead. For lead, the grading standard is China's National Standard of Lead, GB469 — 83. Set out below is the grading for lead:

Name	Grade	Lead purity
No.1 Lead	. Pb-1	Not less than 99.994%
No.2 Lead	. Pb-2	Not less than 99.900%
No.3 Lead	Pb-3	Not less than 99.000%

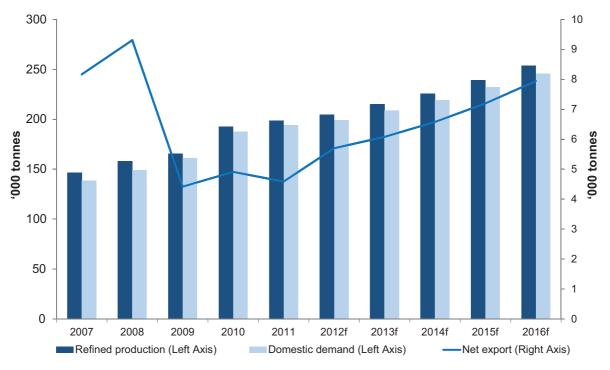
## **ANTIMONY**

Antimony is a toxic chemical element and found in nature mainly as the sulfide mineral stibnite. Antimony is widely used as alloying material for lead and tin, and for lead antimony plates in lead-acid batteries. Alloying lead and tin with antimony improves the properties of the alloys which are used in solders, bullets and plain bearings. Antimony trioxide is one of the most important compounds and is primarily used in flame-retardant formulations. These flame-retardant applications include children's clothing, toys, aircraft and automobile seat covers.

China is the largest supplier of antimony and its compounds. However, as antimony is toxic and mining/smelting can be environmentally hazardous and detrimental to human health, Chinese government has established stringent requirements in both antimony mining and smelting/refinery industries. In addition, government continues to shut down illegal antimony mines and smelters in an effort to minimize environmental and safety problems.

The chart below shows China's supply and demand for antimony for the period from 2007 to 2016.

# Chinese demand for antimony, 2007-2016f



Source: CRU

According to CRU, the Chinese government has announced a quota of 105,000 tonnes for mine output control of antimony. Also, the government has encouraged imports of antimony concentrates, which, together with mine output control, has boosted antimony concentrate imports in 2011. In addition, refined antimony production has also been affected by weak demand due to high antimony prices, resulting in refined antimony production only increasing slightly to 198,700 tonnes in 2011. China continues to control antimony supply through environmental regulation and production concentration. In 2011, 60,151 tonnes of antimony ore and concentrate were imported, representing an increase of 29.7% as compared to 2010.

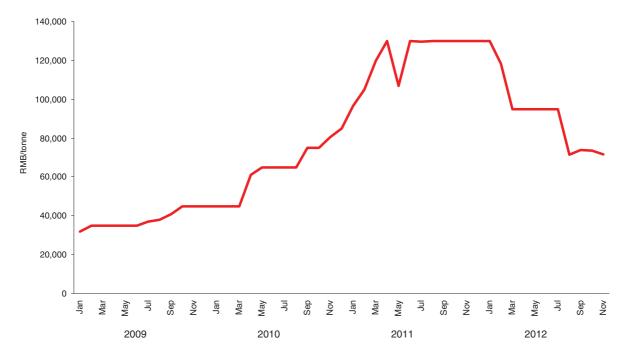
China is the largest exporter of antimony oxide and refined antimony in the world. Given the political and economic uncertainties in the western world, overseas purchasers are likely to purchase antimony on the spot market to meet their immediate needs, as well as look for substitution to reduce the production costs.

Prices of antimony declined after climbing up in April 2011, and have fluctuated at a high level. Domestic demand was depressed due to price increases in the first half of 2011, as well as the weakening economic situation in the second half of 2011. Substitution has reduced

consumption of antimony in flame-retardant applications, and exports appeared to be weak due to slack demand in Japan and the U.S. In the long term, demand for antimony will be driven by the domestic market. The government's policy to encourage the development of China's photovoltaic industry since July 2011 is expected to support the consumption of antimony in the mid-long term. However, due to high price levels and substitution, antimony demand in China will be suppressed under 250,000 tonnes until 2016.

The chart below shows China's domestic price for antimony for the period from January 2009 to November 2012.

## Domestic prices of antimony, January 2009 to November 2012



Source: CRU

China has made efforts to improve environmental protection and will continue these efforts in 2012, which will cause the production cost of antimony products to increase and support the price at a high level. However, demand in the antimony market is shrinking at the same time due to global economic slowdown following the debt crisis in the Eurozone. Certain consumers cannot bear the high prices of antimony products and are starting to use substitutes where possible. As a result, according to CRU, it is expected that the price of antimony products will be volatile within a narrow range and is unlikely to increase or drop sharply unless there is any significant change in the antimony market.

## The national grades of Chinese antimony

According to the Chinese National Standards, GB/T1599-2002, antimony can be graded as follows:

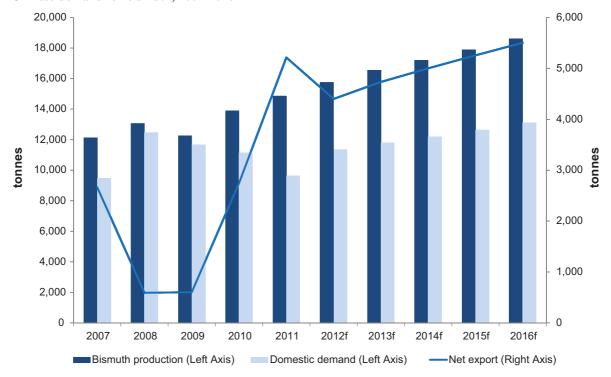
Name	Grade	Antimony purity
No.0 Antimony	Sb 99.90	Not less than 99.90%
No.1 Antimony	Sb 99.85	Not less than 99.85%
No.2 Antimony	Sb 99.65	Not less than 99.65%

#### **BISMUTH**

Bismuth is mainly obtained as a by-product of lead ore processing. Given its unique properties, bismuth has a wide variety of applications, including uses in free-machining steels, brass, pigments, and solders. It also can be utilized in pharmaceuticals, foundry industry, construction field and holding devices. Bismuth is considered as an environmentally-friendly substitute for lead in plumbing and many other applications, including fishing weights, hunting ammunition, lubricating greases, and soldering alloys.

The chart below shows China's supply and demand for bismuth for the period from 2007 to 2016.

## Chinese demand for bismuth, 2007-2016f



Source: CRU

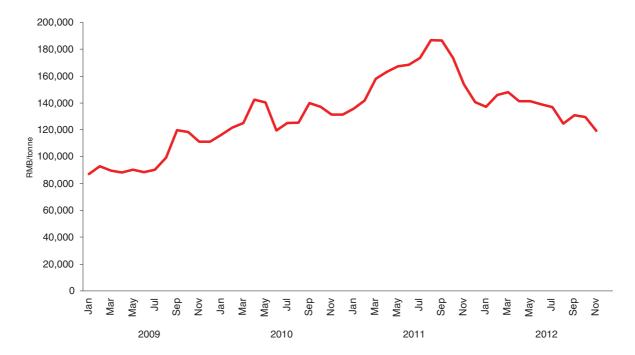
According to CRU, there are two sources of bismuth in China: bismuth concentrate and by-products from the copper/lead/tin smelting process. Production of bismuth in China has increased at a stable rate since 2005. China now is the biggest bismuth producer and exporter in the world. CNIA's statistics show that there are more than fifty bismuth manufacturers in China, many of which are in Hunan and Jiangxi provinces. In 2010, China produced 13,898 tonnes of bismuth

products, with 9,104 tonnes from Hunan province, accounting for the largest share, followed by the 2,629 tonnes from Jiangxi province. China exported approximately 6,730 tonnes of bismuch products in 2010, accounting for 48.4% of the world's total production volume. However, as the government raises the environment protection standard and reinforces protection of primary resources, CRU assumes that China's bismuth production and exports will continue to rise, but not as quickly as in the period from 2007 to 2011. Import of bismuth was decreasing during these years, and we expect it will decrease further in the forecast period from 2012 to 2016 due to increasing domestic supply at a forecasted CAGR of 4.2% in the same period.

The main usages of bismuth products are in the chemical industry as bismuth alloys and as an additive in metallurgical processes. Increasing consumption of bismuth comes from various applications of bismuth oxide as a new type of functional material. Bismuth oxide can be used in condensers, arresters, special glass, and fire retardants. With development of these industries, the demand for bismuth products is expected to have a steady growth in the long term. In the short term, demand is expected to be sluggish as the economic outlook remains grim in Europe. Chinese consumption for bismuth will see a recovery in 2012 and grow at a steady pace over the forecast period from 2012 to 2016, due to the increasing demand in chemical industry and steel industry. Nevertheless, the market would need to consume the stocks created in 2010 and 2011. Production of bismuth in China is likely to grow faster than the demand, which will create a larger surplus in the Chinese market.

The chart below shows China's domestic price for bismuth for the period from January 2009 to November 2012.

#### Domestic prices of bismuth, January 2009 to November 2012



Source: CRU

As shown in the chart above, the average price of bismuth in China's domestic market was around RMB140,000 per tonne for the first half of 2012. For the period from January to October 2012, the monthly average price fluctuated between RMB123,000 per tonne and RMB145,333 per tonne.

## The national grades of bismuth

According to the Chinese National Standards, GB/T915-1995, bismuth can be graded as follows:

Name	Grade	Bismuth purity
No.0 Bismuth	Bi 99.997	Not less than 99.997%
No.1 Bismuth	Bi 99.99	Not less than 99.99%
No.2 Bismuth	Bi 99.95	Not less than 99.95%