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Consulting Group Ltd

ANCOA Ltd

Study of the antimony market

17 October 2011

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Statement of capability

Roskill Consulting Group Ltd (including its related entities)("Roskill") is an international leader in international metals and minerals research. Based in London, United Kingdom, it provides a wide range of consulting services to metals and minerals businesses, including market assessments, feasibility studies, acquisition studies, company and product profiles and industry analysis.

This Report has been prepared by Ms Judith Chegwidden, who is a director of Roskill, with more than 30 year's experience of analysing minerals and metals markets. Her consultancy assignments have included market and industry analysis / assessments for a range of specialty metals and minerals.

Independence statement

We understand this report will be included in a prospectus to be issued by ANCOA Ltd ("ANCOA") (to change company type to a no liability company).

Roskill does not have at the date of this report, and has not had within the previous two years, any shareholding in or other pecuniary interests or relationship with ANCOA that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation the matters contained in this report.

Roskill has no involvement with, or interest in the outcome of the proposed prospectus offering and ASX listing of ANCOA (the "Transaction"), other than the preparation of this report and similar reports.

Roskill will receive a fee based on commercial rates and reimbursement of outlays for the preparation of this report. This fee is not contingent on the outcome of the Transaction. Roskill will receive no other benefit for the preparation of this report.

Consent to the inclusion of this report in the prospectus in the form and context in which it appears has been given. At the date of this report consent has not been withdrawn.

Date of Information

An earlier version of this report, which included the forecasts re-stated in this version, was initially completed on 4 July 2011. Shortly before the date of this report (being 17 October 2011) we updated the historical prices and made some minor textual amendments.

1. Introduction

Native antimony metal is rare. Antimony (Sb) generally occurs along with lead, copper and silver, and complex polymetallic ores are known that also contain molybdenum, tungsten, zinc, indium and bismuth. There are over 100 antimony minerals, although the sulphide mineral stibnite (Sb_2S_3) is by far the main one.

Around 80% of antimony mine production is converted to antimony trioxide (some used as feed for metal and other product output), which is used principally in flame retardant formulations for textiles, plastics and rubber, and in catalysts for production of polyethylene terephthalate (PET).

The principal use of antimony metal is as an ingredient in alloys where it imparts hardness, strength, anticorrosion and other properties. Antimonial lead is used chiefly for automotive and stand-by batteries. Other uses are in solders, ammunition, corrosion resistant pipes and cable sheathing.

2. Consumption

Consumption of antimony rose by 3.1%py between 2000 and 2010 to reach 199,500t Sb. Consumption growth in the mid-2000s was higher, increasing by almost 6%py, but fell by 5.2% year-on-year in 2009 due to the global economic downturn reducing demand for antimony-containing products.

Flame retardants are the largest market for antimony, accounting for 52% of consumption in 2010. Antimony is used as a synergist with halogenated (bromine- and chlorine- based) flame retardants, which are in turn used in various polymers. Antimony consumption in flame retardants has risen by 4%py since 2000, slightly higher than overall growth in antimony consumption, to total 103,500t Sb in 2010 (Table 1).

Table 1: World: Estimated consumption of antimony by end-use, 2000-2010 (t Sb)

	2000	2010	CAGR (%)	Main market driver
Non-metallurgical:				
Flame retardants	70,000	103,500	4.0	Polymer demand
Plastic catalyst	6,000	11,400	6.6	PET demand
Heat stabilizer	1,400	2,600	6.4	PVC demand
Glass	16,000	1,700	-20.1	CRT (-ve) and solar glass (+ve)
Ceramics	1,700	2,500	3.9	Construction
Other	1,500	1,840	2.1	General economic growth
Sub-total	*96,600*	*123,540*	*2.5*	
Metallurgical:				
Lead-acid batteries	40,000	53,000	2.9	Automotive production, replacement
Lead alloys	11,000	23,000	7.7	Construction
Sub-total	*51,000*	*76,000*	*4.1*	
Total	**147,600**	**199,540**	**3.1**	

Source: Roskill estimates

In the polymer industry, antimony is also used as a catalyst in the production of high molecular weight polyurethane terephthalate (PET), a polymer widely utilised for food

and drink storage (resin PET), and textiles (textile PET). In PVC, antimony acts as a heat stabiliser, preventing the release of chlorine on exposure to heat and UV light. These applications together consumed 14,000t Sb of antimony in 2010, a CAGR of 6.5% from the 7,400t Sb consumed in 2000.

Growth in the use of antimony in flame retardants, and as a catalyst and heat stabiliser, in polymers has come from increasing polymer demand in transport, construction and electronics applications, particularly in emerging economies, over the last decade. Asia now accounts for two-thirds of antimony consumption in flame retardants, PET catalysts and PVC heat stabilisers. Although losing market share to Asia, flame retardants remain the largest market for antimony in North America and Europe.

Other, minor, non-metallurgical applications for antimony include its use as a decolouriser in glass, an opacifier in ceramics and as a pigment in ceramics. The use of antimony in glass has declined because of the replacement of bulky cathode ray tube televisions and computer monitors with flat panel displays, which require only a very thin, and consequently lightweight, glass substrate. Glass, ceramic and other non-metallurgical end-uses for antimony now account for 3% of total antimony consumption, down 13% in 2000.

The other major use of antimony, accounting for 38% of total consumption in 2010, is as an alloy with lead in lead-acid batteries and fabricated lead products. Lead is too soft to be used alone in many applications and antimony metal is added to improve its strength, fatigue resistance and corrosion protection. Lead-acid batteries account for 70% of antimony metal consumption in metallurgical applications, and rolled and extruded lead most of the remainder.

Growth in consumption of antimony in lead alloys has been driven by emerging economy demand for lead-acid batteries in automotive applications and fabricated lead products for construction. North America and Europe remain large markets for antimony in lead alloys, reflecting the need for replacement lead-acid batteries for their sizeable vehicle stock, and together accounted for 40% of antimony consumption in metallurgical applications in 2010. However, Asia now accounts for almost 50% of consumption, largely because of rapid expansion of the Chinese domestic lead-acid battery industry, but also because of rising fabricated lead consumption in construction.

In addition, Asia, particularly China, has a very small pool of secondary antimony (recovered from spent lead-acid batteries and scrap lead) available for re-use in new lead-acid batteries and fabricated lead products and therefore requires more primary antimony than is the case in North America and Europe, where supply of secondary antimony is greater. Secondary antimony accounted for 56% of antimony consumption in lead alloys in 2010 and 20% of total antimony consumption.

Antimony trioxide is the main form of antimony consumed by the market, reflecting its use in flame retardants, the main market for antimony. Antimony trioxide accounted for around 60% of total antimony consumption in 2010 and almost 75% of primary antimony consumption (i.e. excluding secondary antimony). Antimony metal and antimonial lead (containing secondary antimony) each accounted for 18% of consumption. Sodium antimonate, used mainly in glass and ceramics, and other specialist antimony products accounted for the remaining 4%.

3. Production

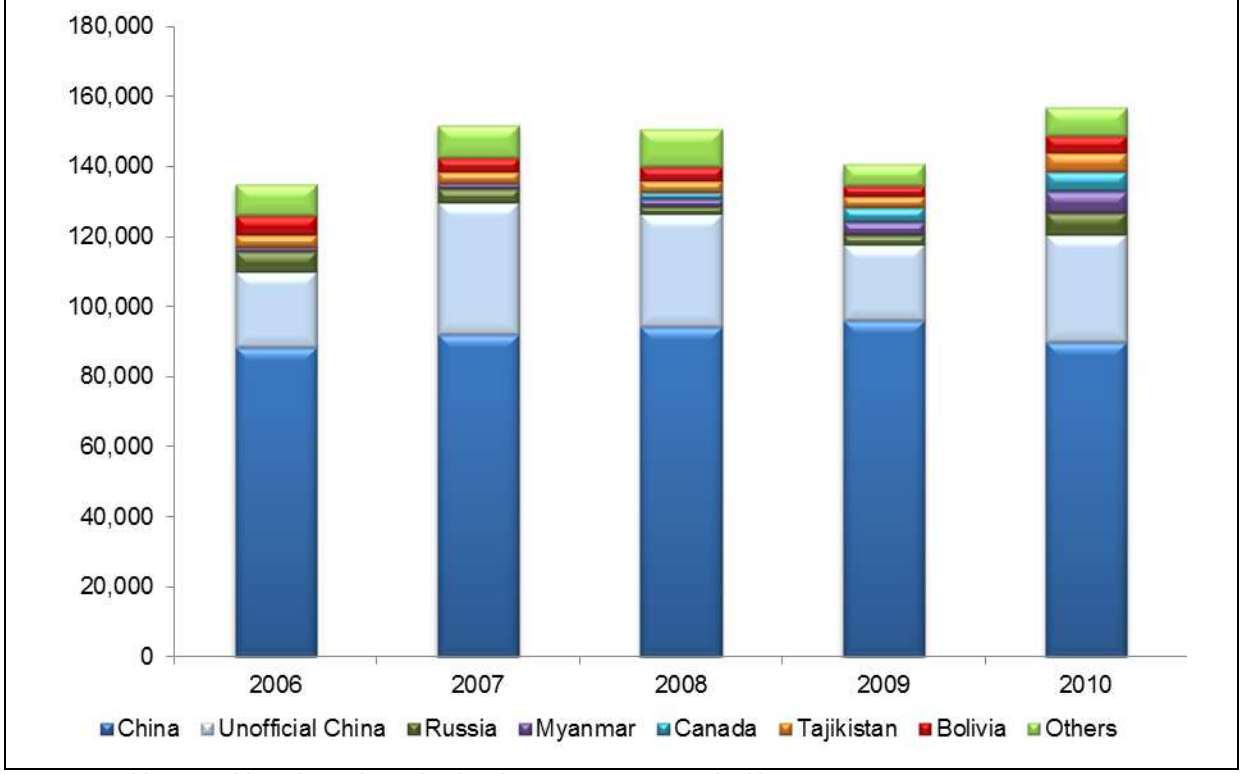
In calculating supply of antimony, three elements have to be taken into account; official primary production, unofficial primary production and secondary production.

Official recorded primary production of antimony grew by 2.8%py between 2006 and 2010. When unofficial production is also taken into account, Roskill estimates that annual average growth rate for output of primary antimony was rather higher at 3.8%py (Figure 1 and Table 2). China accounted for 71% of official production in 2010 down from around 80% in earlier years. The fall reflects a drop in official production in China and increases in a number of other countries. China is the source of all unofficial production, and once this is taken into account, the country accounted for an estimated 77% of total primary production.

Roskill has inferred the level of unofficial production from trade data and has incorporated the results into the overall supply estimate. Unofficial production is an important contributor to the overall global supply of antimony, accounting for 16% of total antimony supply in 2010.

When unofficial primary supply is added to reported primary supply, the total primary supply figure for 2010 was approximately 157,000t. Some material was likely supplied to the market from stockpiles but the volume is not known. Stockpiles (mainly in China and Russia) were significant contributors to supply in the 2000s but, given the reduction in output in Russia in 2008 and 2009 and the restriction on supply in China in 2010, are likely to be running down.

Figure 1: World: Primary production of antimony, 2006-2010 (t Sb)



Source: Table 2: World: Estimated supply of antimony, 2006 to 2010 (t Sb)

Table 2: World: Estimated supply of antimony, 2006 to 2010 (t Sb)

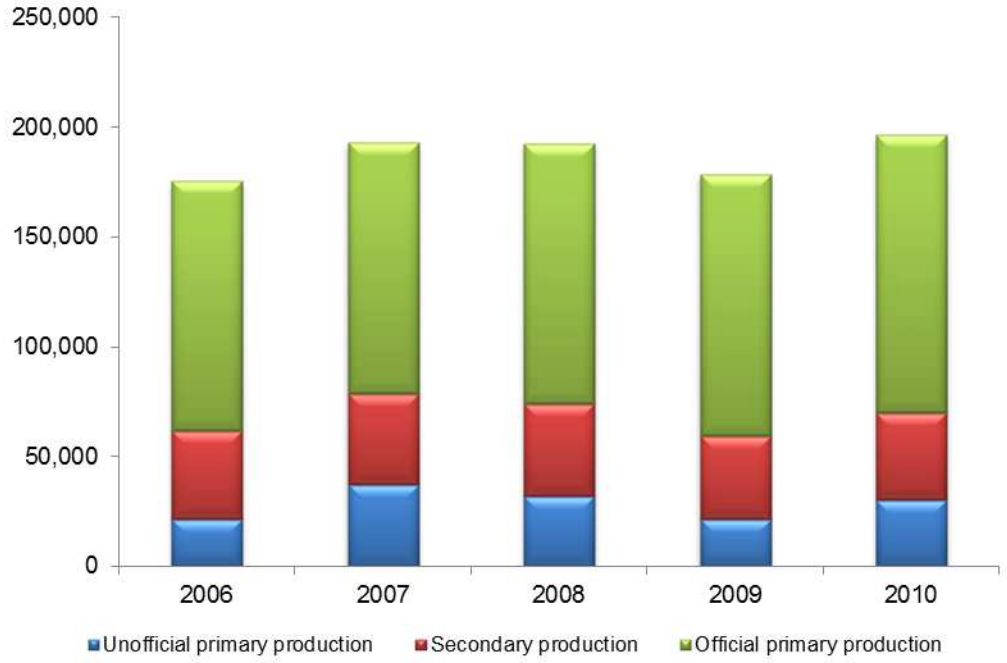
	2006	2007	2008	2009	2010
Primary production:					
Asia:					
China	88,317	92,144	94,358	96,000	90,000
Myanmar[1]	1,112	1,451	2,122	3,656	5,897
Tajikistan	3,480	3,480	3,390	3,081	5,370
Turkey[2]	1,100	1,200	2,400	1,200	2,000
Kazakhstan[1]	780	1,226	757	933	840
Thailand	544	271	422	555	600
Laos[1]	108	403	375	545	493
Kyrgyzstan[3]	-	480	480	480	480
Pakistan	100	100	100	100	100
Sub-total Asia	*95,541*	*100,754*	*104,404*	*106,549*	*105,780*
Europe:					
Russia	6,000	4,000	2,200	2,900	6,500
Sub-total Europe	*6,000*	*4,000*	*2,200*	*2,900*	*6,500*
Africa:					
South Africa	4,443	3,436	3,674	2,090	2,257
Sub-total Africa	*4,443*	*3,436*	*3,674*	*2,090*	*2,257*
South America:					
Bolivia	5,460	3,881	3,905	2,990	4,980
Peru	824	829	584	263	120
Guatemala	-	365	-	-	-
Sub-total South America	*6,284*	*5,075*	*4,489*	*3,253*	*5,100*
Oceania:					
Australia[4]	225	540	1,417	23	1,106
Sub-total Oceania	*225*	*540*	*1,417*	*23*	*1,106*
North America:					
Canada[1]	100	-	1,941	4,250	5,669
Mexico	778	414	380	-	70
USA	50	-	-	-	-
Sub-total North America	***928***	***414***	***2,321***	***4,250***	***5,739***
Sub-total primary production	***113,421***	***114,219***	***118,505***	***119,065***	***126,482***
Unreported Chinese production:					
Smuggled through Vietnam	3,036	4,962	4,764	1,841	2,876
Misreported China exports	18,501	32,609	27,293	19,778	27,586
Sub-total Unreported China	***21,547***	***37,571***	***32,057***	***21,619***	***30,462***
Secondary production	**40,500**	**41,000**	**42,000**	**38,000**	**39,540**
Total supply	**175,468**	**192,790**	**192,562**	**178,684**	**196,484**

Sources: Compiled by Roskill from various publicly available information and Roskill estimates

Notes: 1-Inferred from reported imports.
2-2010 figure is a Roskill estimate
3-Estimate. Actual figure could be zero.
4-Data for 2009 and 2010 is only for reported production by one company.

In addition to primary supply from reported and unofficial sources, secondary antimony, contained in antimonial lead recovered from recycled lead-acid batteries and lead waste, is estimated to have totalled 39,540t Sb. Total antimony supply in 2010 was therefore close to 196,500t Sb, a 10% increase on 2009. Secondary supply fell back sharply in 2009 and has not recovered to the 42,000t produced in 2008. Increases in supply of antimony in antimonial lead from the growing number of batteries in use has been offset to some extent by decreases in the percentage of antimony used in the battery alloy.

Figure 2: World: Trends in the production of primary and secondary antimony, 2006-2010 (t Sb)



Source: Table 2: World: Estimated supply of antimony, 2006 to 2010 (t Sb)

Table 3 summarises the main producers of antimony and provides an estimate of Chinese capacity at major producers. The largest individual producers in the rest of the world are Beaver Brook in Canada, GeoPro Mining in Russia, Consolidated Murchison in South Africa and Anzob (now owned by Comsup) in Tajikistan.

Table 3: World: Mine capacity by main producing companies, mid-2011

Country:	Company:	Capacity (tpy Sb)	Notes:
Australia	Mandalay Resources	2,750	Expected to be at full capacity in 2011 and 2012.
Bolivia	Various	5,460	Mainly small producers. Figure shown is peak production level (2006).
Canada	Beaver Brook	6,000	Reopened in the late 2000s. Now appears to be at close to capacity.
China	Hsikwangshan Twinkling Star	55,000	Estimate.
	Hunan Chenzhou Mining[1]	20,000	Estimate.
	China Tin Group	20,000	Estimate (Sb + Pb capacity of 40,000t)
	Shenyang Huacheng Antimony	15,000	Estimate.
Kazakhstan	Kazzinc	1,000	Estimate. 40% Sb concentrate produced as a by-product of lead refining.
Kyrgyzstan	Kadamdzhai	500	Estimate.
Laos	SRS	500	Estimate. Exported as ore containing 40% Sb.
Mexico	US Antimony	70	Reported 2010 production, including bought-in material.
Myanmar	Various	6,000	Inferred from 2010 trade. True capacity unknown.
Russia	GeoPro Mining	6,500	Roskill estimate for 2010.
South Africa	Consolidated Murchison	6,000	Based on peak production. Current production is much lower, owing to Chemtura Chapter 11 (bankruptcy protection).
Tajikistan	Anzob	5,500	Estimate.
Thailand	Unknown	600	Based on peak production.
Turkey	Cengiz & Özdemir Antimuan Madenleri	2,400	Based on peak production.
Total listed		**143,280**	

Source: Compiled by Roskill from various publicly available information and Roskill estimates

Reported production of antimony in **China** fell in 2010 and is unlikely to increase in the coming years, despite the fact that the country is facing a serious shortage of antimony. No significant antimony deposits have been developed for about ten years and the remaining economic reserves are being rapidly depleted. Reserves in the area of Lengshuijiang City in Hunan once the main antimony producing region in China, are reported to face exhaustion within five years. In the past Hsikwangshan Twinkling Star has accounted for a significant proportion of total Chinese production.

To preserve dwindling reserves, the Chinese government has introduced a number of measures including exploration and mining licences, the granting of which has been suspended until at least 2012, production quotas and export controls. It is also attempting to halt illegal mining and is taking steps to rationalise the industry, with the closure of the very large number of producers and consolidation of the larger ones. At

[1] Now part of Shenyang Huacheng Non-Ferrous Group

one time, there were more than 400 antimony producers in China. In May 2011, a well-known Chinese information network reported that just six companies now account for more than 90% of China's reported production of antimony (and thus for about two thirds of legitimate global supply in 2010):

- Hsikwangshan Twinkling Star (Hunan)
- Shenyang Huacheng[2] (Hunan)
- China Tin (Guangxi)
- Guangxi Huati Chemicals (Guangxi)
- Guangxi Rixing (Guangxi)
- Yunan MuLi Antimony Industry (Yunnan)

The consolidation process is continuing in both Hunan and Guanxi; Minmetals now has a significant stake in operations in both these provinces.

Other countries in Asia made up only 15% of the region's total reported production in 2010 but output is growing and doubled between 2006 and 2010. There is increasing supply from **Myanmar**, and production in **Tajikistan** also rose sharply in 2010. Although still small-scale, **Laos** has emerged as an exporter of antimony ores since the late 2000s.

Production in **Russia** also appears to have recovered, while that in **South Africa** has fallen. In the latter case, the bankruptcy of Chemtura in 2008 resulted in the closure of its processing facility in Mexico, which had been supplied with crude antimony trioxide produced in South Africa by another part of the group. If prices for antimony remain high, Roskill considers it likely that funds will be found to increase output to former levels.

In South America, production in **Peru** may have now ceased following the closure of Doe Run's operation in 2009. Production in **Guatemala** also appears to have stopped. The remaining production in the region is from **Bolivia**, which is one of the larger non-Chinese producing countries. Most production in Bolivia is from small mining operations, which are flexible and can readily adjust their output according to market conditions. There will probably be an increase in mine output following the 2011 announcement that the idled Vinto smelter is to restart.

With the reopening of the Beaver Brook mine in 2008, **Canada** has quickly become a major exporter of antimony. Production in **Mexico** will start to increase during 2011, when US Antimony commissions its new mine and processing facility.

Australia appeared set to become a major producer of antimony from the Hillgrove project. It produced briefly, in 2008 and 2009, but was then idled. Another operation in Australia, Mandalay Resources has now ramped up and is expected to be producing at design capacity in 2011 and 2012.

[2] Includes most of the antimony mining and smelting operations in Hunan that are not in Lengshuijiang City

4. Trade

Trade in antimony concentrates has increased over the last decade, as China has sourced increasing quantities of concentrate from non-domestic sources. The main exporters of concentrate in 2010 were Myanmar, Russia, Canada and Australia; the overwhelming majority of shipments from these countries went to China.

Recorded exports of antimony metal are not a true reflection of the volume of trade in this commodity as most of the exports from China are not included in the official export data. The main trade flows, once unofficial shipments are taken into account are from China to Belgium, France, South Korea, Japan and the USA.

Until 2005, South Africa was the main exporter of antimony oxide, but China now accounts for around 55% of export shipments. Other leading exporters of antimony oxide are the companies converting antimony metal to oxide in Belgium and France.

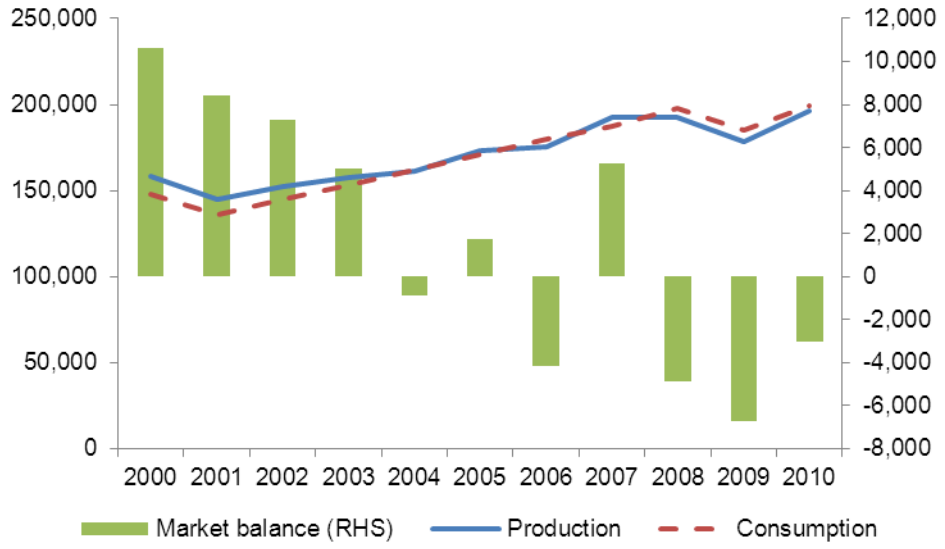
5. Supply/demand balance and outlook

Although the largest end-use, consumption of flame retardants has not been the fastest growing end-use. For the period 2000-2007, consumption of primary antimony grew at an annual average rate of 9% in plastic catalysts, with 8% per year growth in antimony consumption in heat stabilisers and alloys.

While consumption of antimony has grown strongly, production has been variable and volatile. For the period 2000-2010, primary antimony production has grown at 2.2%py. The differences in these growth rates highlight the problems with antimony supply over the last few years. A crackdown on illegal Chinese mines and smelters, and a lack of new suppliers have been the main contributors to volatile production.

The antimony market moved from a position of oversupply in the early-2000s to become more tightly balanced in the mid-2000s (Figure 3). The cessation of output from some mines in China in 2006 caused a supply deficit, but this was short-lived. From 2008, a more pronounced shortage in supply is evident, but as consumers outside China liquidated stocks during the global economic downturn in late 2008/early 2009 the knock-on effect of undersupply did not become apparent in the market until 2010 when demand started to increase.

Figure 3: World: Antimony production and consumption, 2000-2010 (t Sb)



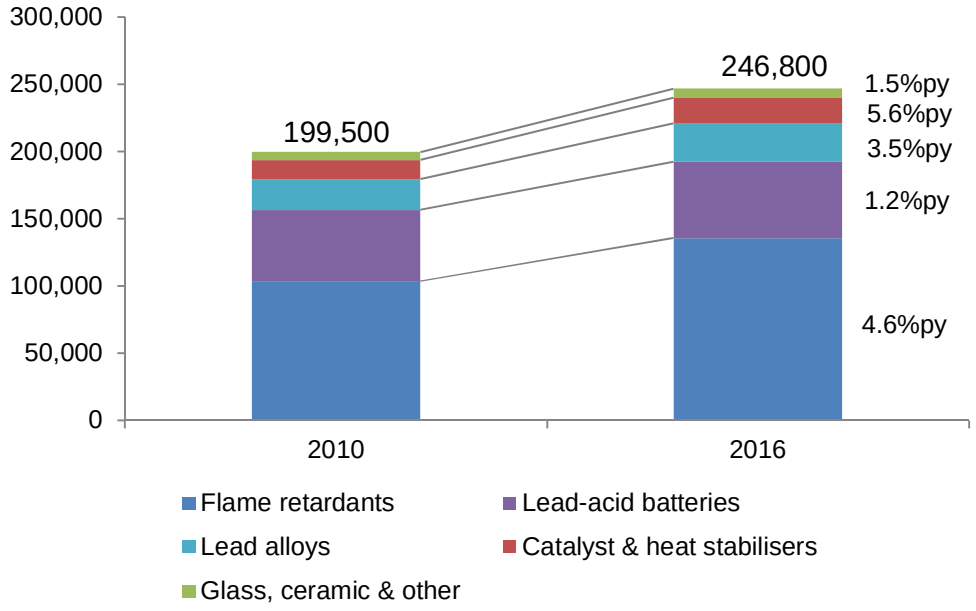
Source: Roskill data

5.1 Outlook for demand

Future demand for antimony will remain highly dependent on the level of demand for antimony trioxide from the flame retardants sector and antimony metal from the lead-acid battery sector, which together accounted for 80% of antimony consumption worldwide in 2010. Overall, total demand for antimony is forecast to grow at around 5%py throughout the forecast period, compared to world GDP growth of around 3.5%py.

Non-metallurgical markets for antimony are forecast to increase by 4.6%py through 2016, with higher growth for flame retardants and plastic catalysts tempered by lower growth for heat stabilizers, ceramics and other applications, and a continued decline in sodium antimonate use in glass. Metallurgical markets are forecast to increase by 1.9%py. Fabricated lead products are expected to show higher rates of growth for antimony than lead-acid batteries.

Figure 4: World: Forecast consumption of antimony by end-use, 2010-2016 (t Sb)



Source: Roskill data

Perceived environmental and health issues with regard to brominated and chlorinated fire retardants, often using antimony trioxide synergists, have prompted a switch in Europe and North America to non-halogenated flame retardants, such as phosphorus compounds, or mineral-based flame retardants. However, emerging economy use of brominated compounds remains strong and growth in polymer demand in East and South Asia, Eastern Europe, CIS and South America, together with increasing consumption of plastics in transport and consumer products, are expected to result in continuing demand growth for antimony trioxide synergists through 2016.

Trends in the plastics sector are also key to future demand for antimony as a catalyst in PET and as a heat stabilizer in PVC. Future growth in production of PET in mature economies are expected to be low, while PVC output is expected to continue to decline in Europe and North America. Nevertheless, overall growth is expected to be positive due to increased PET and PVC production in China and other emerging economies. Concerns about contamination by antimony compounds in food containers and other PET packaging have been the subject of much debate, but research indicates a very low risk to human health, or environmental damage. Alternatives to antimony have been developed, including titanium-based catalysts, but antimony still predominates. However, should prices for antimony trioxide remain high, there could be some substitution of antimony on a price basis rather than on a performance or environmental basis.

The slide in consumption of antimony in metallurgical markets witnessed during the 1990s and early 2000s was reversed in the mid-2000s due to rising automotive battery production and construction uses of lead alloys in emerging economies. The construction boom in Europe and North America during the mid-2000s also boosted fabricated lead use in construction.

Antimony content of automotive batteries is falling worldwide and could be completely eliminated in developed economies within the next decade. In emerging economies, it

may take slightly longer for antimony content to reduce but ultimately battery technology in these regions is expected to follow the global trend. Motive and industrial batteries are facing increased competition from other rechargeable battery types, not least lithium-ion, but it may take a few years for the cost advantage of lead-acid batteries to be diminished to an extent whereby lithium-ion, which is currently much more expensive, becomes attractive.

Despite an on-going reduction in lead-acid battery antimony content, primary antimony metal demand is expected to grow through 2016 because of a shortage of secondary antimonial lead scrap in emerging economies. Demand for lead-antimony alloys in the solder, shot and ammunition markets is expected to continue to be adversely affected by voluntary and legislative restrictions on the use of lead.

One potential area of growth in the future is the use of antimony in glass panels for photovoltaic solar cells. Elsewhere, output of CRT screens is diminishing in favour of FPDs while ceramics uses for antimony is expected to be relatively steady and could be negatively affected by continued high prices.

5.2 Outlook for supply

Production in China is unlikely to increase in the next few years and could even fall in the face of government determination to limit environmental damage from smaller, more polluting operations. In some other Asian countries there is evidence of increasing production but assessing future trends is difficult because of lack of information. No Asian country (excluding China) produces more than a few thousand tonnes a year and there may be only limited opportunity to expand output.

Production in South Africa is unlikely to increase by much unless Chemtura emerges from Chapter 11 (bankruptcy protection), while production in Bolivia will likely fluctuate in line with demand and will probably increase with the restart of the Vinto smelter.

Australian production could increase by as much as 5,500tpy if the Hillgrove operation emerges from care and maintenance and if the new investors in Anchor Resources, China Shandong Jinshunda Group, bring the Bielsdown deposit on stream

The new US Antimony Corp operation in Mexico should be fully operational by 2013, but will only add 1,600tpy to global supply when fully ramped up.

Much of the production in Myanmar and Laos is understood to be from artisanal or small scale producers, which could limit future growth.

Production from Russia could be augmented by 2,800tpy if RusAnt succeed in developing the Iliskoye deposit.

In total, new projects could add up to 11,200tpy Sb to world mine capacity within the next four to five years. Beyond that, developments in Slovakia, Turkey and Italy could contribute to global supply.

Table 4: World: Summary of potential antimony mine projects, mid-2011

Country	Company	Capacity (tpy Sb)	Notes:
Australia	Straits Resources	5,000	Some production in 2008/09. Currently idle. Subject to sale agreement
	Anchor Resources	1,450	Prefeasibility study due to start end-2011. China Shandong Jinshunda Group acquire significant stake in June 2011
	Northwest Resources	…	Exploration underway, mostly for gold. Antimony resource appears to be quite small.
Bolivia	Raptor Ventures	350	Potential initial production. Project still under investigation.
Canada	Various	…	Only very early stage projects.
China	Unknown	…	Probably none. Licensing for new mines has been suspended.
Italy	Adroit Resources	…	Large deposit of at least 35,000t contained Sb. Mining permit has been applied for but no indication given on timelines or possible production.
Mexico	US Antimony	1,600	After ramp-up, which starts mid-2011.
Russia	RusAnt	2,800	UK- based RusAnt is planning to develop the Iliskoye deposit in Chita.
Slovakia	Global Minerals	…	Large deposit being explored. No indication of timelines or possible production.
Turkey	Tri-Star	…	Early stage.
Total listed		**11,200**	

Source: Compiled by Roskill from various publicly available information and Roskill estimates

Roskill thus anticipates only incremental increases in conventional production through 2013, to about 132,000t, and little or no growth beyond that. The fairly strong possibility of declining production in China could cancel-out expansion elsewhere.

The extent to which non-conventional supply contributes to future supply will depend on whether the Chinese government is able to curtail illegal production and smuggling. This is almost impossible to predict.

If non-conventional supply remains unofficial at current levels, total supply is expected rise to about 162,000tpy Sb. A 50% reduction in non-conventional supply would see total supply fall from an estimated 198,000t in 2010 to about 180,000tpy.

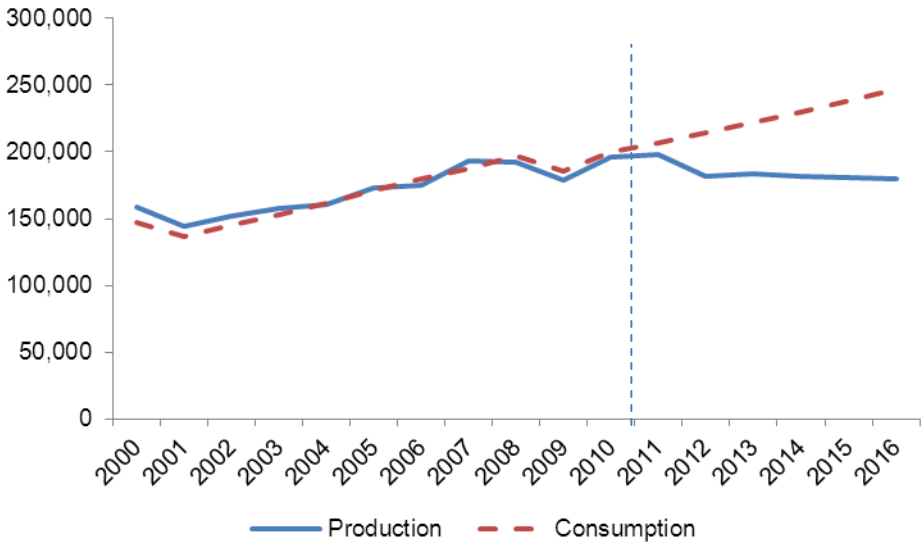
The British Geological Survey published a Risk List in the second half 2011 which gives an indication of the relative risk in 2011 to the supply of the chemical elements or element groups which are need to maintain the economy and lifestyle currently pertaining in the UK. Antimony was ranked first in this Risk List.

The list focuses on risks to supply and does not include any assessment of factors that influence demand, such as criticality of an element to a particular technology or how easy it is to substitute that element with another. The position of an element on this list was determined by a number of factors which might impact on supply, including the abundance of elements in the Earth's crust, the location of current production and reserves, and the political stability of those locations.

5.3 Summary supply/demand outlook

Roskill's summary supply and demand forecasts are set out in the chart below:

Figure 5: World: Antimony demand and supply[1] forecast, 2000-2016 (t Sb)



Source: Roskill
Note: 1) Supply data refers to Chinese smuggling being reduced scenariowhich is current government policy.

6. Prices

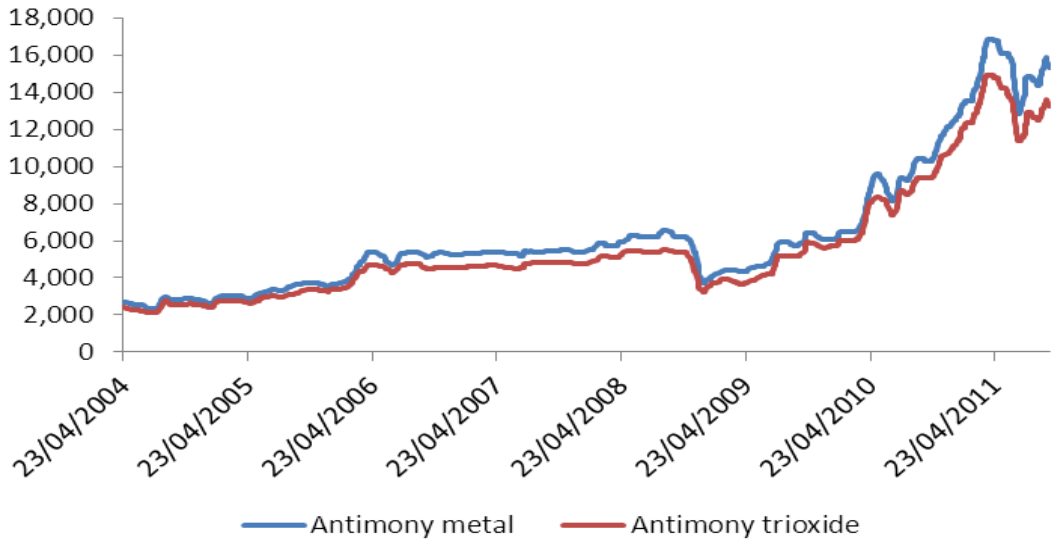
Antimony is not traded on international metal exchanges and prices are agreed between producer or trader and consumer, depending on the quality and form of the product sold.

China accounts for around 77% of the supply of antimony and changes in Chinese government policy have been the most important factor affecting antimony prices since the early 1990s.

The first five months of 2011 saw antimony trioxide prices rise to an average of US$15,000/t in Europe (Metal Bulletin Free Market Price), two-thirds higher than the annual average price in 2010. Antimony prices increased steadily from early 2010, as mine closures in China restricted global supplies. At the end of 2009, European antimony trioxide prices had dipped to US$6,050/t. As mine closures in 2010 came in to force however, and Chinese supply was restricted, prices doubled to US$12,159/t at the end of the year. In 2011, a similar trend has taken place, with prices rising by US$4,000/t between the end of 2010 and April 2011. However, by the end of August 2011, European prices had fallen again, to an average of US$14,900/t.

In April, the re-opening of the nine antimony operations in Hunan, combined with some destocking, caused Chinese domestic prices to fall to US$14,000/t (Figure 6). However, by the end of August 2011, Chinese antimony metals prices were trading at US$15,350/t.

Figure 6: China: Trends in the domestic, fob, price for antimony metal and antimony trioxide, 2004-2011 (US$/t)



Source: Asian Metal

Based on the outlook for both demand and supply of antimony in the coming years, Roskill expects antimony prices to increase. Since the beginning of 2011, prices for antimony trioxide have traded between US$12,700/t-US$16,850/t, and in September 2011 were trading at around US$15,340/t due to a squeeze on supply, and given the lack of new supply due to enter the market, and with the continuing crackdown on illegal mining by the Chinese government, it is likely that prices will continue to increase.

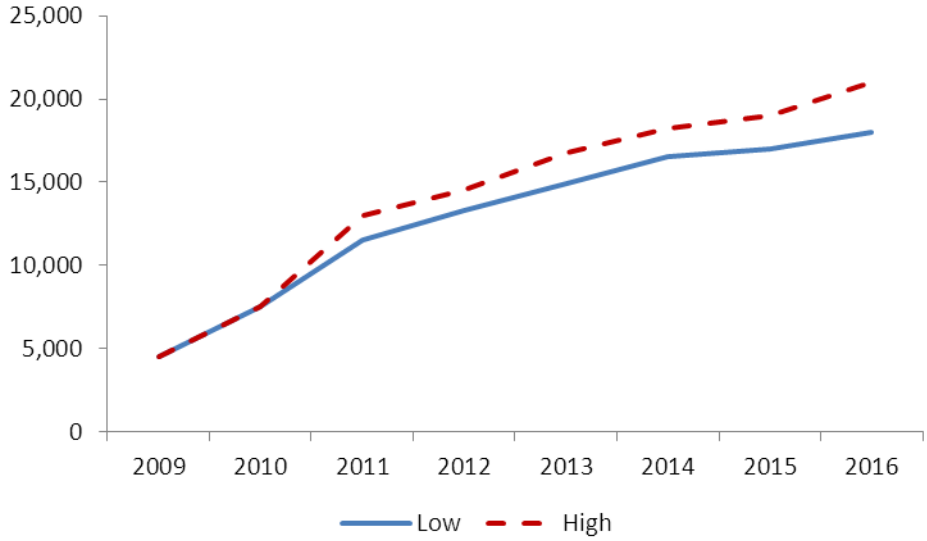
Chinese export prices of antimony trioxide have fallen in Q2 2011, and stocks of antimony trioxide still remain high. For 2011, prices are likely to remain high, averaging around US$11-13,000/t (Table 5 and Figure 7). Going forward, Roskill anticipates that the lack of new supply should see a scramble for antimony, particularly trioxide, with prices in 2012 rising to as high as US$14,500/t. Going further forward, prices for antimony trioxide could quite easily reach US$20,000/t as the market deficit continues and widens.

Table 5: China: Forecast antimony trioxide export prices (US$/t Sb)

	Low	High
2010	7,509	7,509
2011	11,500	13,000
2012	13,250	14,500
2013	14,900	16,750
2014	16,500	18,200
2015	17,000	19,000
2016	18,000	21,000

Source: Roskill forecasts

Figure 7: China: Forecast antimony trioxide export price (US$/t Sb)



Source: Table 5

Although prices are expected to increase, there are many factors which could lead to both a larger and much smaller price increase than forecast. Some of the more obvious, specific factors are listed below:

Potential upside risks to price forecast:

- The Chinese government cracks down on illegal mining. Currently there is illegally mined or traded material finding its way to international markets, particularly into Europe. However, if the Chinese government take more steps to limit the illegal supplies (ie, to reduce illegal supply by more than 50%), antimony on the international markets could quickly become limited, causing prices to rise sharply.

- Chinese domestic antimony demand grows much quicker than supply. At present, antimony demand is forecast to grow much quicker than supply. If Chinese domestic demand increases at a faster rate, then more domestic production would be diverted to the domestic market, leading to an antimony shortage on international markets, which in turns would drive Chinese export prices much higher.

- A decrease in Chinese mining /or export quotas could limit total supply. If the Chinese government was to further control the supply of antimony, by way of cutting mining and/or export quotas, this could generally be expected to restrict antimony available for export to the rest of the world. A restriction in both mining and export levels would likely see a rise in not only export prices for antimony, but also rising Chinese domestic prices.

Potential downside risks to price forecast:

- Illegal mining in China continues, and increases or is only marginally reduced. Although mentioned as a potential upside risk to prices, it is entirely possible that illegal mining by Chinese producers continues. A rise in illegal mining (or a reduction by less than 50%) would provide a regular supply to the international markets, keeping prices at a more moderate level than those forecast. However, at present, Roskill considers it unlikely that illegal Chinese antimony mining will rise sharply.

- As prices for antimony rise, it is possible that antimony consumers are forced to look at alternatives to using antimony. In Europe, antimony containing flame retardants have been in some cases substituted for phosphorus based systems. There is already pressure on the use of antimony as a synergist from brominated flame retardants, and which are being replaced by inorganic flame retardants. Continuing high prices for antimony could speed up the shift to inorganic alternatives.