Wood Mackenzie, an industry consultant, was engaged by our Company to prepare the Wood Mackenzie Report, for use in whole or in part in this prospectus. Wood Mackenzie prepared its report based on its in-house database, independent third-party reports and publicly available data from reputable industry organizations. Where necessary, Wood Mackenzie contacts companies operating in the industry to gather and synthesize information about the market, prices and other relevant information. Wood Mackenzie has assumed that the information and data which it relied on are complete and accurate.

Wood Mackenzie has advised that (i) some information in its database is derived from estimates from industry sources or subjective adjustments; and (ii) the information in the database of other metals and mining data collection agencies or of other industry consultants may differ from information in Wood Mackenzie's database. The information contained herein has been obtained from sources believed by Wood Mackenzie to be reliable, but there can be no assurance as to the accuracy or completeness of any such information.

Unless otherwise specified, all references in this section to copper content are to contained copper.

We, the Joint Global Coordinators, the Joint Bookrunners, the Joint Sponsors, the Joint Lead Managers, any of the Underwriters or any other party involved in the Global Offering have taken what we believe to be reasonable care in the extraction, compilation and reproduction of information and statistics from these sources. However, none of us, the Joint Global Coordinators, the Joint Bookrunners, the Joint Sponsors, the Joint Lead Managers, any of the Underwriters or any other party involved in the Global Offering has independently verified the information and statistics derived directly or indirectly from the Wood Mackenzie Report or any publicly available sources and none of us, the Joint Global Coordinators, the Joint Bookrunners, the Joint Sponsors, the Joint Lead Managers, any of the Underwriters or any other party involved in the Global Offering make any representation as to their accuracy. You should not place undue reliance on such information and statistics contained in this section.

GLOBAL COPPER MARKET OVERVIEW

Introduction

Since 2000, the copper industry has experienced significant growth. This growth has been largely driven by China's rapid economic growth and urbanization, resulting in a nearly fourfold increase in China's copper demand over the course of the decade. China's rapid growth and increased demand from other emerging economies have more than offset the recent trend of slowly declining demand from developed countries. The increased investor interest in commodities, including copper, has further fuelled demand. This resulted in nearly 35% growth for the copper industry over the decade.

Over the same period, copper production has failed to keep pace with demand, particularly the increased demand from China, despite rapid annual production growth rates in a number of countries: 29.9% in the DRC, 20.7% in Brazil, 9.0% in China, 7.8% in Zambia and 7.5% in Iran. Copper reserves are geographically concentrated. The Latin American countries of Chile, Peru and Mexico accounted for approximately 52% of the global reserves in 2010, dominated by Chile with 31% of the global reserves. In sub-Saharan Africa, Zambia and the DRC, which lie in the Copperbelt region, have the largest reserves, accounting for 3% and 2% of identified global reserves in 2010, respectively.

This deficit of supply has been caused by both underperformance from existing mines and a slower than expected development of new mines. The high geographical concentration of copper reserves,

the trend towards larger scale operations and the migration of copper production away from politically stable countries towards developing countries with higher political risks have increased the vulnerability of supply to disruptions, resulting in sustained underperformance.

Additionally, the number of firmly committed mine expansions has also been less than expected. This reflects the fact that support and equipment industries are presently experiencing a shortage of skilled labor and are unable to keep up with demand, increasing lead times and capital costs that have increased significantly since the original feasibility studies were carried out. In this way, skills shortages and cost inflation have acted as barriers of entry.

The declining quality of recently discovered ore bodies has also acted as a significant barrier to entry to the copper industry. New entrants are increasingly required to possess not only significant capital, but technological proficiency. Increasingly, discovered ore bodies suffer from complex mineralogy, increasing depth and lower quality (head grade). These trends necessitate increasingly large-scale and underground developments and the use of innovative technologies (such as SxEw and bacterial leaching).

The structural supply deficit brought about by these factors has resulted in a steady rise in copper prices over the decade, punctuated by the global financial crisis. Prices on the LME (which other exchanges such as the Shanghai Futures Exchange and the New York's Commodity Exchange tend broadly to track) increased over 400% from an average of around US$1,800 per tonne in 2000 to over US$8,000 per tonne in 2008. The global financial crisis led investors to liquidate copper positions due to the anticipated effects of the recession on key copper consuming industries, such as construction, consumer goods and automotive vehicles. Copper prices briefly fell over 50%, to approximately US$3,000 per tonne, but soon increased to levels above their 2008 peak mainly due to the increased market demand for "hard" assets. By early 2011, copper prices were close to US$10,000 per tonne. Prices remained above US$9,000 per tonne for most of the first half of 2011 and dropped in the second half of the year as a result of the negative outlook related to the Eurozone debt crisis and more broadly, the global economy. Prices soon recovered from lower levels around US$7,000 per tonne and have been ranging between US$7,252 and US$8,600 per tonne for the majority of the year to date.

The copper industry will continue to benefit from the development of many of the world's emerging economies where rapid industrialization and urbanization is occurring. Structural changes in these countries are driving a sustained increase in the world's demand for copper. Consequently, copper prices are likely to remain elevated above historic levels. The development of operations in jurisdictions which are perceived to have higher political risks is another key opportunity for the copper industry. Discoveries of high quality copper resources have been increasingly located in countries perceived as more risky. These resources offer potentially attractive returns and represent an opportunity for companies who can operate efficiently in such environments.

Production Process

Copper is a reddish-brown metal that is malleable and ductile. It also possesses high thermal and electrical conductivity and is widely used in building and electrical products as a result. Copper minerals are extracted from underground or open-pit mines, depending on the depth and geometry of the ore deposit. Mined ore, containing valuable minerals intermixed with waste, has to be processed and upgraded to allow economic recovery of the valuable constituents. The processing method chosen depends on the characteristics of the ore.

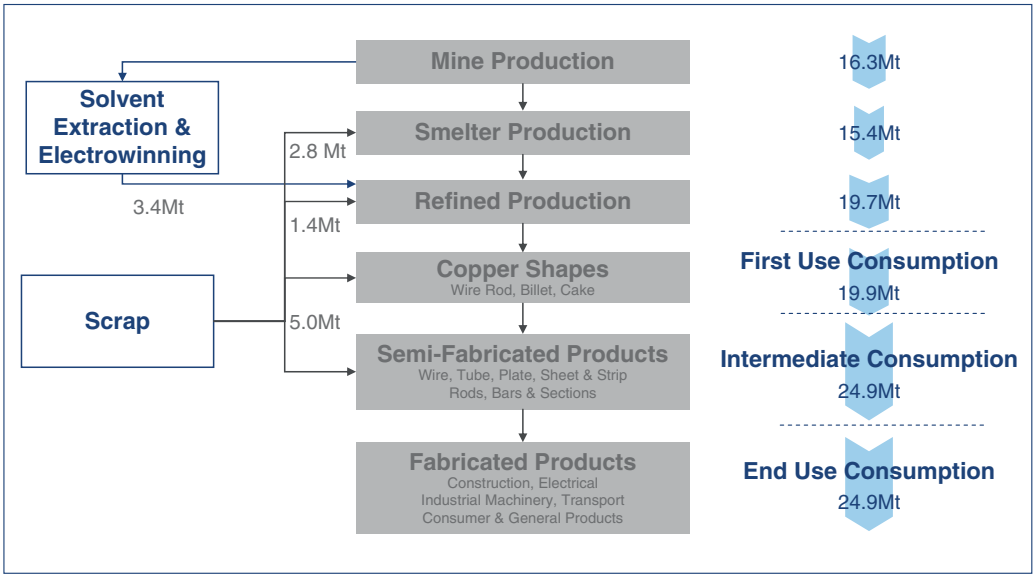
Copper ore minerals are generally classified as either oxides or sulfides. Copper oxide minerals, which account for around 19% of global copper mine production, can be readily leached and copper can be recovered from the resultant pregnant leach solution by a solvent extraction/electrowinning process to produce marketable cathodes. Sulfide minerals such as chalcopyrite ($CuFeS_2$), bornite (Cu_5FeS_4) and chalcocite (Cu_2S) are separated from the waste at the ore processing plant to form a copper concentrate which is then transferred to a copper smelter which can be local to the mine or in a different region or country.

In the smelting process, copper is separated from associated iron and sulfur in two stages, primary smelting and converting. When heated in the prime smelting unit the major minerals break down to give copper sulfide and iron sulfide which form a liquid known as matte. The liquid matte is transferred to converters where the addition of oxygen first eliminates iron sulfide in the form of fayalite and magnetite and then blister copper is formed as oxygen combines with the sulfur to form sulfur dioxide.

Blister copper, containing approximately 99% copper, is transferred to an anode furnace for final sulfur and oxygen removal prior to anode casting. The anodes produced are then transferred to an electrolytic refinery for production of cathodes of 99.9% purity for industrial usage.

The evolution of copper products is provided in the figure below.

Breakdown of Global Copper Production (2011)



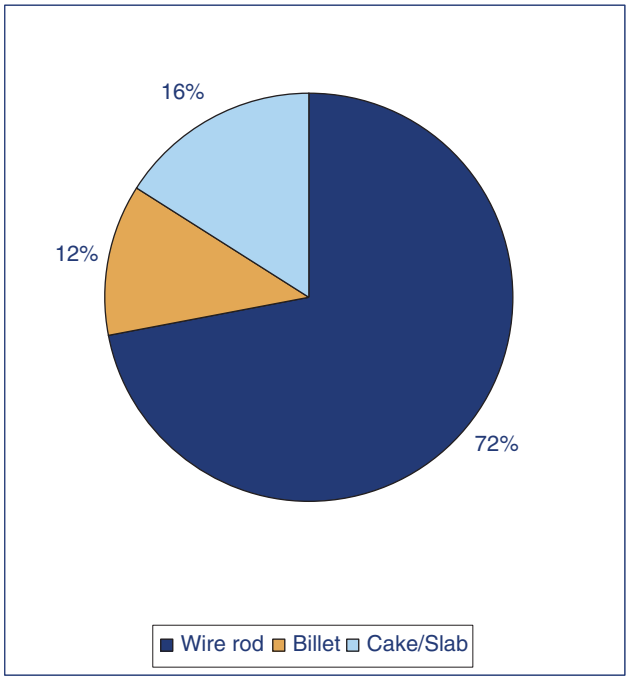
Source: Wood Mackenzie Report

Copper Consumption

Consumption by First Use

First use consumption of copper can be divided into three main product groups: copper wire rod, billets and cake/slab products. With the exception of silver, copper has the highest electrical conductivity of all metals. As a result, copper wire rod, accounting for an estimated 72% of primary consumption in 2010, is copper's main first use. Billets and cake/slab products made up the remaining 12% and 16%, respectively, in 2010.

Global Copper Consumption by First Use in 2010



Source: Wood Mackenzie Report

Consumption by End Use

In general, end use consumption of wire and cable and other copper products occurs in five broad sectors, namely construction, electrical and electronic products, industrial machinery and equipment, transportation equipment, as well as consumer and general products.

Construction accounted for 32% of total copper consumption in 2010. The main wire and cable and copper products consumed in the construction industry include building wire, power cable, copper plumbing and air conditioning tube, copper sheet, and alloy products.

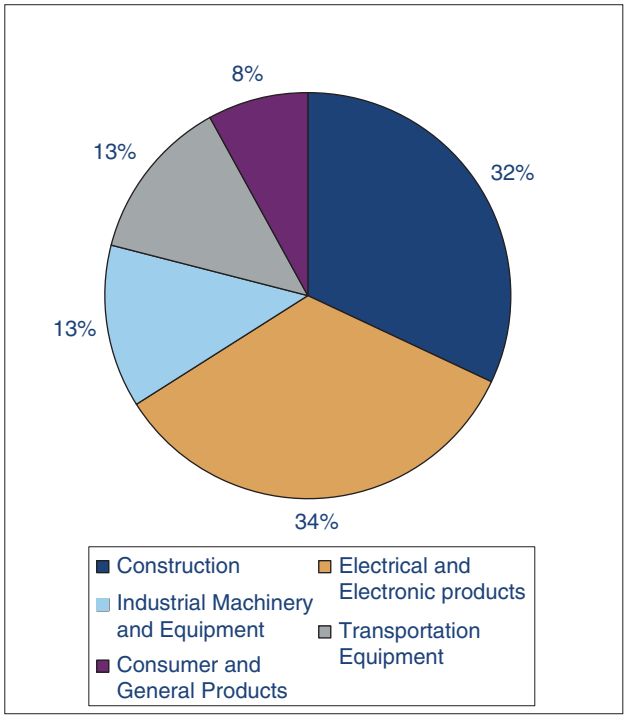
Electrical and electronic products accounted for 34% of total copper consumption in 2010. Copper containing electrical and electronic products include telecommunication cable, power cable, transformer windings, semiconductors, and motors for heavy appliances.

Industrial machinery and equipment accounted for 13% of total copper consumption in 2010. Both copper wire and cable and semi products supply this sector, which includes equipment and machinery, industrial valves and fittings, off-highway vehicles, and heat exchangers.

Transportation equipment accounted for 13% of total copper consumption in 2010. This includes the automotive, marine and aircraft/aerospace sectors.

Consumer and general products accounted for 8% of total copper consumption in 2010. The three main uses are electrical appliances, military ordnance and coinage.

Global Copper Consumption by End Use in 2010



Source: Wood Mackenzie Report

Copper Demand Analysis

Refined Copper Consumption

Historical Overview

Over the past decade, the copper industry has experienced strong growth. From 2001 to 2011, refined copper consumption grew from 14.8 Mt to 19.9 Mt per year, equivalent to an annual growth rate of 3.0%. This growth was largely driven by a significant increase in China's copper demand which grew at an average rate of 13.3% per annum and was primarily attributable to China's rapid economic growth and urbanization. This increase was partly offset by a decrease in North American, European Union and Japanese consumption which fell from 8.5 Mt in 2001 to 7.0 Mt in 2011 and was largely a result of the substitution of copper by other materials (driven by higher prices of copper) in certain applications and the ongoing impact of the global financial crisis.

Historic Refined Copper Consumption by Region

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011 vs 2001	
						(kt)						(kt)	(CAGR)
China	2,230	2,425	3,020	3,565	3,815	3,967	4,670	5,100	6,375	7,204	7,780	5,550	13.3%
Europe	4,539	4,437	4,498	4,736	4,607	5,023	4,787	4,482	3,536	3,861	3,994	-545	-1.3%
North America	2,859	2,644	2,497	2,712	2,549	2,395	2,307	2,188	1,764	1,897	1,957	-902	-3.7%
Japan	1,145	1,164	1,202	1,279	1,256	1,307	1,268	1,199	876	1,060	1,038	-106	-1.0%
Asia (excl. China & Japan)	2,286	2,572	2,597	2,829	2,744	2,838	2,948	2,884	2,784	3,005	2,910	624	2.4%
Latin America	960	758	847	932	955	895	864	889	768	903	889	-71	-0.8%
Others	764	893	913	969	1,032	1,058	1,137	1,187	1,199	1,333	1,363	598	6.0%
Global Total	**14,783**	**14,894**	**15,575**	**17,021**	**16,957**	**17,484**	**17,981**	**17,929**	**17,301**	**19,264**	**19,931**	**5,148**	**3.0%**
Change y-o-y (%)	-2.5%	0.7%	4.6%	9.3%	-0.4%	3.1%	2.8%	-0.3%	-3.5%	11.3%	3.5%		

Source: Wood Mackenzie Report

Outlook

According to the Wood Mackenzie Report, copper demand increased by 11.3% to 19.3 Mt in 2010, marking a strong recovery from the contraction in 2009 and surpassing the previous peak level of 2008. This growth was largely driven by China, with other developed countries also contributing to the significant growth rate. Following the strong growth of 2010, global demand grew moderately by 3.5% in 2011. China accounted for over 85% of this demand growth with ongoing uncertainty related to the Eurozone debt crisis impacting copper demand around the globe. Global copper demand is expected to increase by 3.7% to 20.7 Mt in 2012. It is anticipated that North America and Europe will see lower copper demand, which will be offset by the continued strength in China and India and an upturn in Japanese demand following the tsunami and nuclear crisis.

Forecast Refined Copper Consumption by Region

	2012F	2013F	2014F	2015F	2015F vs. 2011	
	(kt)	(kt)	(kt)	(kt)	(kt)	(CAGR)
China	8,402	8,965	9,503	10,007	2,227	6.5%
Europe	3,980	4,064	4,250	4,380	386	2.3%
North America	1,929	1,917	1,904	1,879	-78	-1.0%
Japan	1,067	1,095	1,122	1,130	92	2.1%
Asia (excl. China & Japan)	2,968	3,100	3,293	3,466	556	4.5%
Latin America	908	941	983	1,026	137	3.7%
Others	1,416	1,497	1,575	1,653	290	4.9%
Global total	**20,670**	**21,578**	**22,630**	**23,541**	**3,610**	**4.2%**
Change y-o-y (%)	3.7%	4.4%	4.9%	4.0%		

Source: Wood Mackenzie Report

China

According to the Wood Mackenzie Report, Chinese demand for refined copper grew at an average rate of approximately 13.3% per annum from 2001 to 2011 to 7.8 Mt. In 2011, China's copper demand grew by 8.0% despite weaker conditions in the fourth quarter. For the period from 2011 to 2015, average annual growth is expected to be 6.5%, which will result in Chinese consumption of refined copper reaching 10.0 Mt by 2015. The expected 2.2 Mt gain from 2011 to 2015 in refined consumption would result in China's share of global refined copper consumption rising from 37% in 2011 to 43% in 2015. The average growth rate for Chinese demand over the forecast period is expected to be lower than that in the last decade, mainly due to two factors: (1) a great deal of demand was brought forward following many recent consumer purchasing incentive schemes, and (2) China is moving into a more consumer driven economy after a period of very strong growth driven largely by infrastructure spending.

Asia (Excluding China)

According to the Wood Mackenzie Report, Asian demand outside of China decreased by 2.9% in 2011 to 3.9 Mt. Japanese demand for copper declined by 2.0% in 2011 due to the disruption to manufacturing as a result of the earthquake and tsunami that hit the northeast coast of Japan in March 2011. Over the longer term, Japanese refined copper demand is forecast to increase by 2.1% per annum during the forecast period to reach 1.1 Mt by 2015. Indian consumption is expected to grow at 8.3% per annum over the forecast period. Other Southeast Asian countries such as Thailand, Vietnam and Cambodia are expected to become increasingly important markets for refined copper demand through the forecast period. South Korea is also expected to remain a significant market throughout the forecast period. The demand for Asia (excluding China) is expected to reach 4.6 Mt by 2015.

North America, Latin America & Europe

According to the Wood Mackenzie Report, U.S. copper demand increased in 2010 as the economy grew stronger across all sectors and recovered from significantly lower demand in 2009. In 2011, copper demand in North America continued to grow by 3.2% to 2.0 Mt. Over the forecast period, the demand in North America is expected to decrease by 1.0% per annum to reach 1.9 Mt by 2015. The demand for Latin America is expected to grow from 0.9 Mt in 2011 to 1.0 Mt in 2015 at a CAGR of 3.7% over the forecast period. In 2010 and 2011, European demand grew by 9.2% and 3.4%, respectively. In 2012, the demand is expected to decrease slightly as a result of the ongoing Eurozone debt crisis. However, refined copper consumption is forecast to grow at 2.3% per annum over the forecast period to 4.4 Mt by 2015. This growth will be driven by faster growing Eastern European economies, offset by falling demand from Western European nations.

Copper Concentrate Consumption

According to the Wood Mackenzie Report, China and Africa are the areas of historic and forecast growth in copper concentrate consumption, with expected incremental demand of 1.3 Mt and 0.3 Mt by 2015, representing CAGRs of 9.7% and 8.5% from 2011 to 2015, respectively. Africa's concentrate demand increased by 0.4 Mt from 2001 to 2011 and is expected to contribute an additional 0.3 Mt growth by 2015 due to smelter expansions, including the expansion of our Chambishi Copper Smelter. Asian countries other than China are also expected to provide growth in concentrate demand rising from 3.2 Mt in 2011 to 4.1 Mt in 2015, primarily driven by expanded smelter capacity in India.

The tables below provide historic and forecast regional concentrate consumption.

Historic Concentrate Consumption by Major Countries/Regions

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011 vs. 2001 (kt)	2011 vs. 2001 (CAGR)
Africa	442	433	451	487	462	477	583	599	648	822	865	423	6.9%
Asia (excl. China)	2,969	3,024	3,053	3,043	3,226	3,349	3,503	3,378	3,384	3,350	3,217	248	0.8%
China	1,224	1,194	1,348	1,468	1,808	2,012	2,220	2,457	2,512	2,578	2,941	1,718	9.2%
Europe	2,306	2,403	2,339	2,316	2,423	2,454	2,325	2,343	2,329	2,234	2,332	26	0.1%
Latin America	2,412	2,208	2,312	2,455	2,526	2,521	2,264	2,199	2,271	2,202	2,197	-215	-0.9%
Middle East	201	189	184	163	234	251	247	250	202	201	230	30	1.4%
North America	1,408	1,190	961	1,029	1,003	1,023	1,090	984	886	866	785	-624	-5.7%
Oceania	496	523	430	427	435	407	386	419	374	354	418	-77	-1.7%
Global total	**11,458**	**11,164**	**11,078**	**11,388**	**12,116**	**12,494**	**12,619**	**12,628**	**12,605**	**12,608**	**12,987**	**1,529**	**1.3%**
Change y-o-y (%)	6.2%	-2.6%	-0.8%	2.8%	6.4%	3.1%	1.0%	0.1%	-0.2%	0.0%	3.0%		

Source: Wood Mackenzie Report

Forecast Concentrate Consumption by Major Countries/Regions

	2012F	2013F	2014F	2015F	2015F vs. 2011 (kt)	2015F vs. 2011 (CAGR)
Africa	1,004	1,176	1,205	1,202	336	8.5%
Asia (excl. China)	3,509	3,638	3,987	4,110	892	6.3%
China	3,493	3,985	4,099	4,262	1,320	9.7%
Europe	2,439	2,538	2,553	2,559	227	2.3%
Latin America	2,443	2,439	2,492	2,508	310	3.4%
Middle East	251	240	240	240	10	1.0%
North America	816	843	844	844	59	1.8%
Oceania	430	435	435	435	16	1.0%
Global total	**14,384**	**15,294**	**15,855**	**16,158**	**3,171**	**5.6%**
Change y-o-y (%)	10.8%	6.3%	3.7%	1.9%		

Source: Wood Mackenzie Report

Investment Demand

Investment demand for copper has risen significantly in recent years as part of a broader commodity uptrend. This recent interest has been underpinned by a market outlook that favors many commodities: a structurally constrained supply scenario in the context of rapidly industrializing emerging markets. In addition, according to the Wood Mackenzie Report, the monetary policies employed by certain central banks around the world have increased the demand for metals, which have come to be viewed by investors as a safe haven from inflation. Evidence of this "non-traditional" investment demand factor that has been buoying the copper market is the application from two large finance companies to establish physical-copper backed exchange-traded funds (ETFs).

Supply Analysis

Historical Overview

The global mine production of copper has grown by 2.6 Mt on a copper contained basis between 2001 and 2011, which is equivalent to a CAGR of 1.7%. Zambia, China, DRC and Brazil experienced significant rates of growth during this period with 7.8%, 9.0%, 29.9% and 20.7%, respectively. Despite this growth, supply has failed to keep pace with copper demand. This deficit of supply has been caused by both underperformances from existing mines and a slower than expected development of new mines.

With the average grade of ores steadily declining, there has also been a pronounced tendency to increase the scale of operations in order to take advantage of economies of scale. While this has allowed copper output levels to be maintained while grades have fallen, it has also increased the vulnerability of supply to disruptions which partly stems from the trend for copper production to migrate away from mature countries towards developing countries with higher political risks. In recent years, disruptions have remained high at around 5% of total production, with over half of this figure accounted for by strikes and slower than expected ramp-ups.

The number of firmly committed project expansions has also been less than expected given the substantial increase in copper prices. This is in part due to the lead times for many of these expansions being much longer now than has been the case previously for a number of reasons. First, delivery times for equipment (trucks, shovels, mills etc.) have been greatly extended compared with recent years due to significantly higher demand, with the suppliers not having the capacity to meet this demand in a timely fashion. Second, there has been a general shortage of skilled operators and engineers. Third, capital costs have increased significantly since original feasibility studies were carried out and as a result much of this work now has to be reappraised.

Global Copper Reserves and Resources

The geographic distribution of copper reserves and resources in operating mines and funded projects for 2010 is shown in the table below.

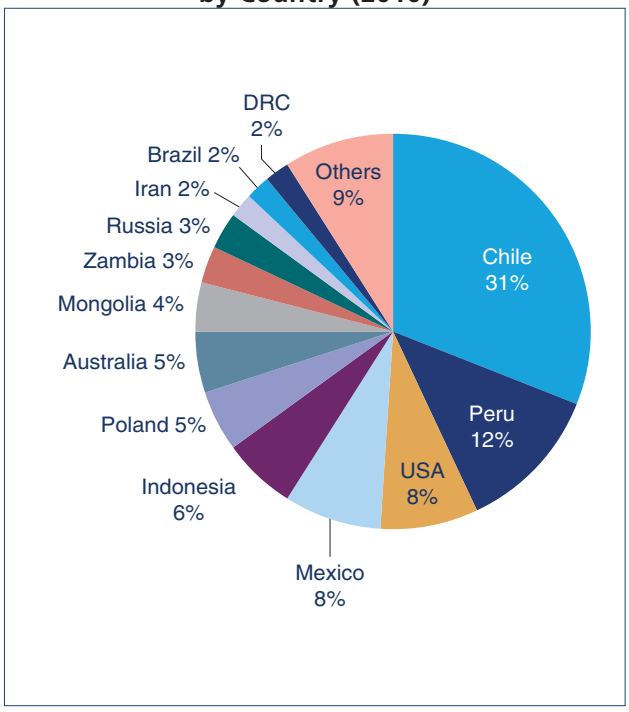
2010 Global Reserves and Resources

	Sulfide Reserves	Oxide Reserves	Total Reserves	Sulfide Resources	Oxide Resources	Total Resources
			(kt of contained copper)			
Chile	116,814	18,379	135,193	243,269	27,687	270,956
Peru	55,034	6,981	62,015	80,572	7,022	87,594
Australia	22,465	123	22,588	107,171	234	107,404
USA	24,735	5,005	29,740	37,649	9,139	46,788
Indonesia	28,742	—	28,742	44,543	—	44,543
Zambia	14,449	862	15,301	41,371	1,366	42,737
Mexico	27,353	8,033	35,385	28,643	8,033	36,676
Mongolia	17,571	—	17,571	17,772	—	17,772
Russian Federation	14,330	—	14,330	41,360	—	41,360
DRC	2,684	7,333	10,017	9,382	15,275	24,657
Rest of World	86,944	1,981	88,925	145,622	2,994	148,616
Total identified	**411,120**	**48,688**	**459,808**	**797,354**	**71,750**	**869,103**

Source: Wood Mackenzie Report

The following chart shows global copper reserves as at the end of 2010 by location.

Contained Copper in Reserves by Country (2010)



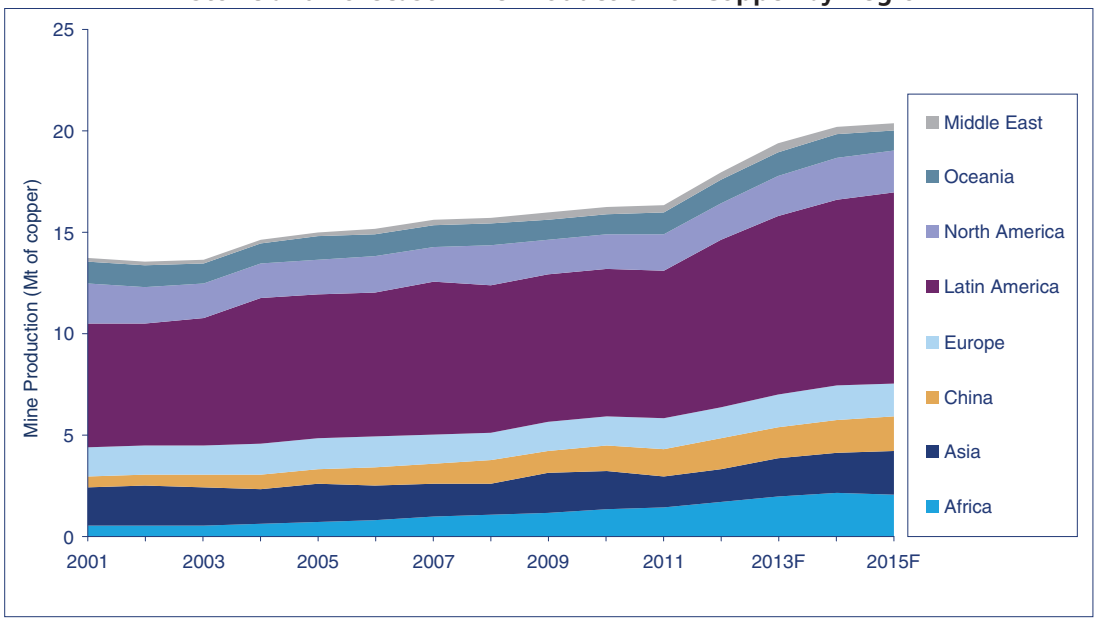
Source: Wood Mackenzie Report

Mine Production

Estimated global copper mine production totaled 16.3 Mt during 2011, of which 79.0% was derived from operations using conventional milling and flotation techniques and the remaining 21.0% was derived from the leaching of ores to produce copper cathode. Mine production in 2011 increased by 0.5% from 16.2 Mt in 2010. According to the Wood Mackenzie Report, the overall net loss in copper mine production in 2011 was 6.2% relative to initial expectations, equivalent to over 800 kt, which was higher than the average loss in recent years of 5.0%.

The global mine production of copper increased by 2.6 Mt of contained copper between 2001 and 2011, equivalent to a CAGR of 1.7%. The DRC, Brazil, China, Zambia and Iran had the highest rates of growth during this period at 29.9%, 20.7%, 9.0%, 7.8% and 7.5%, respectively. Despite a more modest growth rate of 1.0%, 509 kt was added to Chile's production, surpassed only by China's 787 kt and DRC's 514 kt increase.

Historic and Forecast Mine Production of Copper by Region



Source: Wood Mackenzie Report

Historic Mine Production of Copper by Key Country

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011 vs 2001	
					(kt)							(kt)	(CAGR)
Chile	4,804	4,645	4,935	5,504	5,363	5,458	5,599	5,402	5,453	5,473	5,314	509	1.0%
China	575	578	613	752	772	892	992	1,157	1,056	1,258	1,363	787	9.0%
Peru	714	820	810	1,012	984	1,027	1,160	1,229	1,225	1,204	1,207	493	5.4%
USA	1,356	1,153	1,125	1,186	1,159	1,216	1,185	1,340	1,209	1,145	1,143	-213	-1.7%
Australia	878	868	814	800	914	885	858	875	845	861	920	42	0.5%
Zambia	330	353	393	448	489	510	565	546	654	695	699	369	7.8%
Russia	623	628	627	625	656	670	677	682	692	670	666	43	0.7%
Indonesia	1,047	1,163	1,003	842	1,064	817	789	650	995	871	540	-507	-6.4%
Canada	620	596	543	567	582	595	586	612	486	497	597	-23	-0.4%
DRC	40	28	40	51	69	155	214	286	348	456	554	514	29.9%
Others	2,737	2,695	2,724	2,851	2,906	2,944	3,000	2,924	2,995	3,063	3,275	538	1.8%
Global Total	**13,726**	**13,528**	**13,628**	**14,637**	**14,962**	**15,169**	**15,624**	**15,705**	**15,958**	**16,194**	**16,279**	**2,553**	**1.7%**

Source: Wood Mackenzie Report

Forecast Mine Production of Copper by Key Country

	2012F	2013F	2014F	2015F	2015F vs 2011	
		(kt)			(kt)	(CAGR)
Chile	6,030	6,348	6,585	6,445	1,131	4.9%
China	1,503	1,570	1,605	1,655	292	5.0%
Peru	1,268	1,382	1,460	1,822	615	10.8%
USA	1,227	1,388	1,425	1,431	288	5.8%
Australia	975	1,000	1,003	982	62	1.6%
Zambia	805	946	990	973	274	8.6%
Russia	694	700	747	777	111	3.9%
Indonesia	590	675	790	940	400	14.9%
Canada	635	634	656	616	19	0.8%
DRC	687	760	824	811	257	10.0%
Others	3,515	3,934	4,111	3,939	662	4.7%
Global Total	**17,930**	**19,338**	**20,194**	**20,389**	**4,110**	**5.8%**

Source: Wood Mackenzie Report

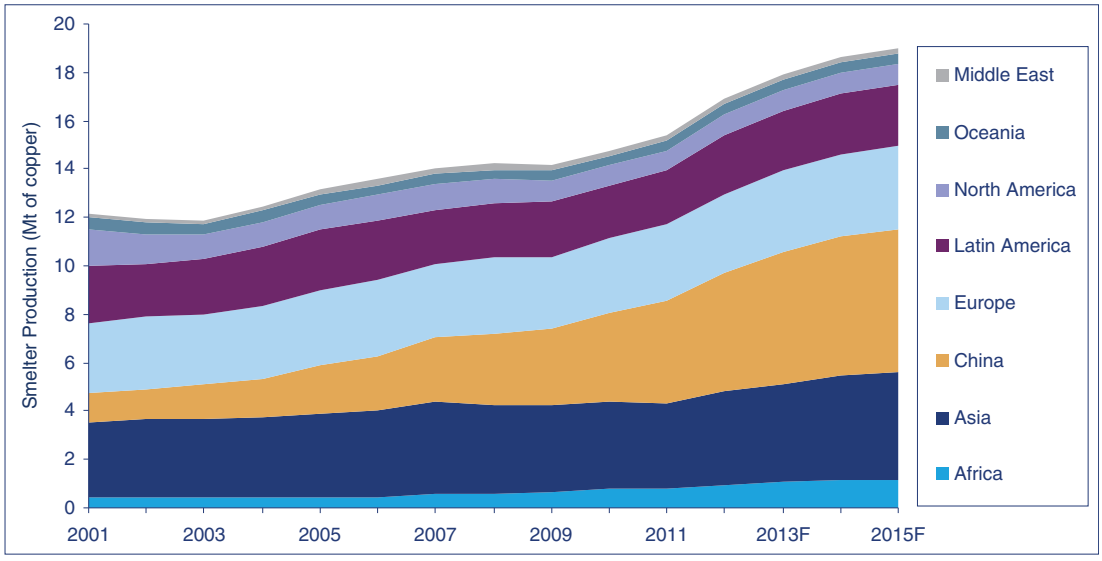
According to the Wood Mackenzie Report, overall base case mine production capacity is expected to increase at a CAGR of 5.8% from 2011 and 2015 with output reaching 20.4 Mt in 2015 (base case refers to current operations and funded projects). Zambia is expected to continue to expand production through the forecast period, increasing at a CAGR of 8.6% by adding a further 274 kt. Indonesia, Peru and the United States are also expected to maintain their growth, as is Brazil, from 209 kt in 2011 to 422 kt in 2015.

According to the Wood Mackenzie Report, demand for mine production in 2011 exceeded available supply by a considerable margin of 400 kt. The deficit is expected to reach 237 kt in 2012.

Smelter Production

According to the Wood Mackenzie Report, global smelter production of copper in blister and anode forms increased by 4.3% in 2011 to reach 15.4 Mt. Base case global copper smelter production capacity is forecast to increase at a CAGR of 5.4% from 2011 to 2015. Smelter production is forecast to increase by 10.0% from 2011 to reach 16.9 Mt in 2012.

Historic and Forecast Copper Smelter Capacity by Region



Source: Wood Mackenzie Report

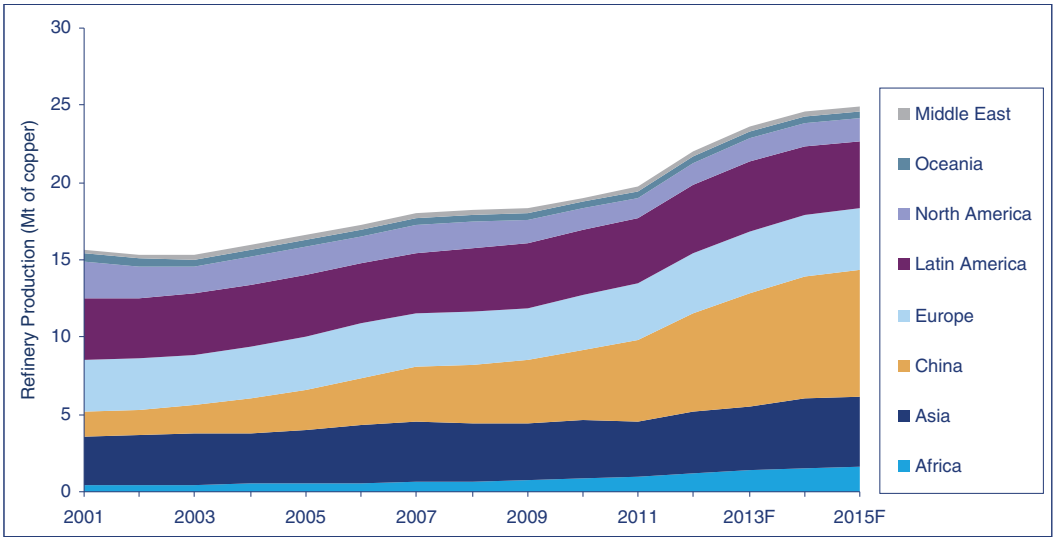
It is expected that an additional 3.6 Mt per annum of smelting capacity is to be commissioned from 2011 and 2015. Base case Chinese smelter production capacity is forecast to increase by 8.7% per annum, rising from 4.3 Mt in 2011 to 5.9 Mt in 2015. Smelter production capacities in Zambia and India are also expected to expand at 10.0% (from 541 kt to 792 kt) and 15.3% (660 kt to 1,167 kt), respectively, during the same period.

Refinery Production

Refined copper is derived from three sources: blister copper and copper anode from concentrates consumed at smelters, SxEw copper cathode from mines, and, to a much lesser extent, concentrate leach and scrap. According to the Wood Mackenzie Report, in 2011, global refined copper production amounted to 19.7 Mt, including 1.4 Mt from scrap, and 3.4 Mt from SxEw copper cathode, representing a 3.8% year-on-year increase.

Base case global copper refined production capacity is expected to reach 22.0 Mt in 2012 and to continue to increase in 2013 and 2014. Overall global capacity is expected to increase at a CAGR of 6.0% from 2011 to 2015.

Historic and Forecast Copper Refining Capacity by Region



Source: Wood Mackenzie Report

Overview of Key Copper Producers

The copper market is diverse geographically in terms of production and the ownership concentration in the industry is relatively low. According to the Wood Mackenzie Report, during 2011, the ten largest copper producers accounted for 50.0% of total world mine production with the next ten largest companies accounting for approximately a further 13.0%. In 2011, Codelco remained the world's largest copper producer, followed by Freeport-McMoRan, BHP Billiton, Xstrata, Rio Tinto, Anglo American and Southern Copper.

According to the Wood Mackenzie Report, the total consolidated copper mine production for 2011 by equity share of Chinese firms from overseas assets was 190 kt, or 1.0%, of global copper mine production. According to the Wood Mackenzie Report, we were the largest PRC enterprise in terms of overseas copper production in 2011 (including copper concentrate, blister copper and copper cathode).

The following table sets forth the top ten copper producers in terms of mining production and smelting production, respectively, in 2011.

Top Ten Copper Producers by Mining Production and Smelting Production (2011)

Mining Production			Smelting Production		
Company	kt	% of global	Company	kt	% of global
Codelco	1,767	10.9	Codelco	1,017	6.6
F-McM Copper & Gold	1,412	8.7	Jiangxi Copper Company	932	6.1
BHP Billiton	1,060	6.5	Xstrata AG	717	4.7
Xstrata AG	884	5.4	Aurubis	703	4.6
Anglo American plc	645	4.0	Nippon Mining and Metals	582	3.8
Southern Copper (ex SPCC)	586	3.6	KGHM Polska Miedź	560	3.6
Rio Tinto	525	3.2	F-McM Copper & Gold	508	3.3
KGHM Polska Miedź	434	2.7	Jinchuan	475	3.1
Antofagasta plc	409	2.5	Mitsubishi Materials	471	3.1
RAO Norilsk	386	2.4	Sumitomo Metal Mining	464	3.0

Source: Wood Mackenzie Report

Copper Cost Analysis

Overview of Copper Cost Development

The copper industry has experienced increasing cost pressures in recent years. The main drivers of cost increases were stronger domestic currencies in producing countries and higher costs of raw material inputs, labor and energy. Stronger prices in by-product metals including gold, molybdenum and cobalt partly offset the cost increases. Some producers continued to reduce costs via productivity improvements.

The other recent copper cost trend has been a steepening of the cost curve. This steepening was due in part to higher prices for by-product metals. The operations with significant production from gold and molybdenum generally occupy the lower end of the cost curve. Those mines higher up the curve with only minor by-product metal revenue benefitted less from these higher prices. In addition, there was a significant recovery in the copper price since 2009, encouraging a number of higher cost mines to restart production, which in the environment of late 2008 and early 2009 may have been considered uneconomical.

Zambia Copper Mine and Smelter Costs

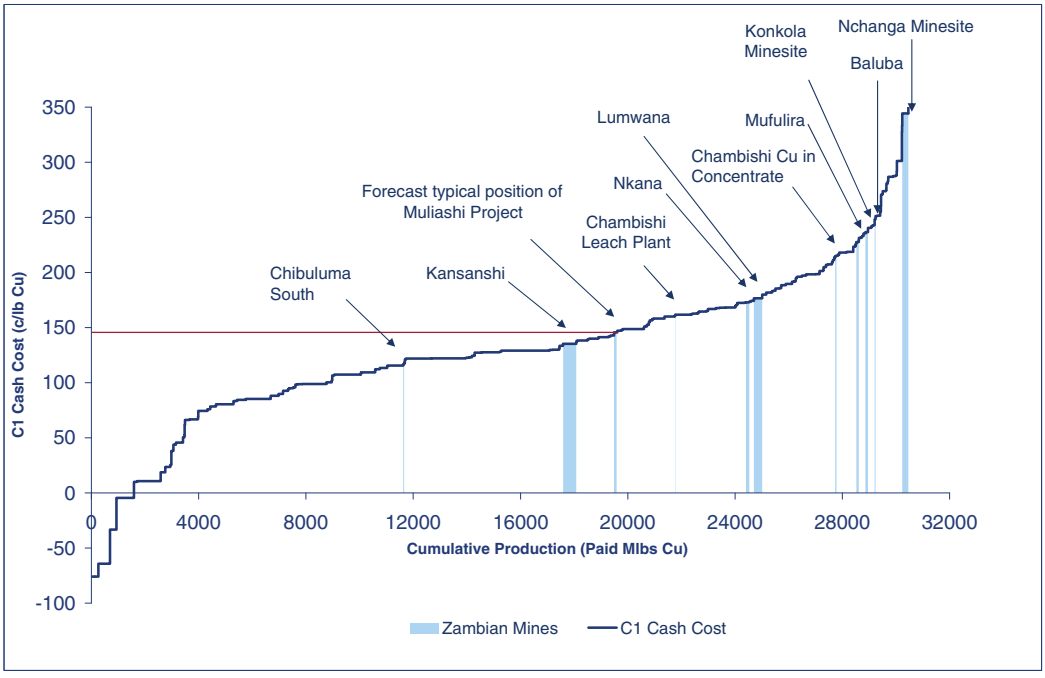
Historically, Zambia has been a major copper producer, with the first commercial production from Kansanshi in 1908. Throughout the 1960s, Zambia and Chile alternated for the position of largest copper producing nation. However, following the nationalization of the copper industry, Zambia was devastated by the oil crises of 1974 and 1979 and corresponding collapse in copper prices. The result was a debt crisis in Zambia and consequently, state-owned Zambia Consolidated Copper Mines Limited ("ZCCM", the predecessor of ZCCM-IH) suffered from a lack of reinvestment. No new mines were opened after 1979 for over 20 years and production at ZCCM decreased significantly from 750 kt in 1973 to 257 kt in 2000. Zambia's mining industry was privatized in the late 1990s and following extensive liberalization and structural reform, sustained growth in Zambia's economy began. According to the Wood Mackenzie Report, CNMC was the first Chinese firm to invest in Zambia's copper assets after the privatization of the copper industry.

The Copperbelt province in Zambia, neighboring the DRC, contains abundant high-quality copper reserves and resources. According to the Wood Mackenzie Report, copper and cobalt constitute over 80% of Zambia's exports and contribute almost 30% to its total GDP. As compared to the new mines, Zambia's older copper mines are at the relative high end of the cost curve, as most older copper mines are underground operations with old concentrators and therefore low production capacity.

Our Muliashi Project commenced production in March 2012. According to the Wood Mackenzie Report and for illustrative purposes only, if it were in operation at its nameplate capacity, the project would occupy a position between the 60th and 65th percentile of the global cost curve.

The three major Zambian copper smelters, the Chambishi Copper Smelter (owned by our Company), Mufulira Smelter and Nchanga Smelter, benefit from relatively low power and labor costs and occupy positions in the lowest quartile of the global direct cash cost curve, with costs of the Chambishi Copper Smelter that started production in 2009 being the lowest of the three.

C1 Cash Cost Curve for 2011 Global Copper Mine Production



Source: Wood Mackenzie Report

Notes:

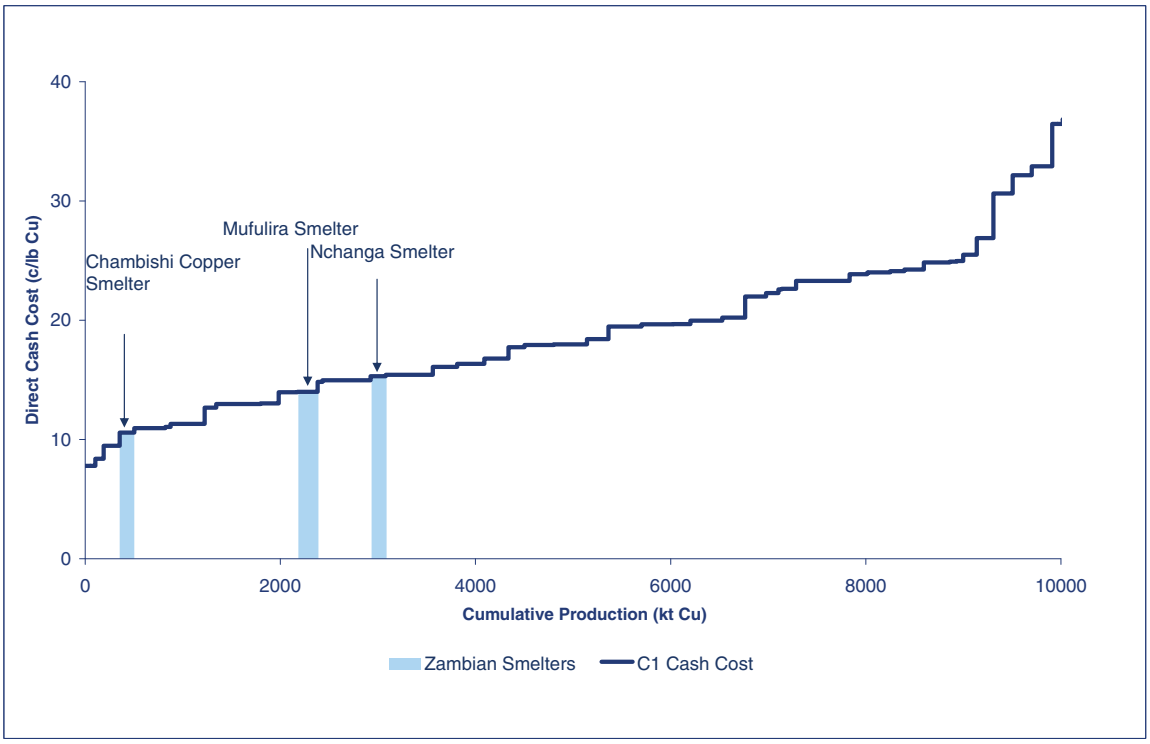
(1) The C1 cash cost curves are a measure of all direct costs, expressed in US cents per pound ("c/lb") on a "paid copper" basis. Direct costs include mining, ore processing, leaching, solution pumping, solvent extraction/electrowinning, on-site administration and general expenses, any off-site services which are essential to the operation, smelting and refining (including toll charges if applicable), concentrate freight costs, marketing costs and property and severance taxes paid that are not profit related.

(2) Competitive cost position shown for the Chambishi Leach Plant, the Chambishi Copper Mine, the Baluba Center Mine and the Muliashi Project are based on data provided by CNMC and adjusted by Wood Mackenzie to reflect standardized C1 costing methodology. Muliashi Project's original cost data is based on designed nameplate cost adjusted for inflation and effect of exchange rate changes to reflect cost in 2011 US dollars.

(3) The production costs were relatively high for Chambishi Leach Plant in 2011 as higher proportion of externally purchased oxide ore was used in production than in the past years.

The average monthly LME copper price in 2011 was 400.4 c/lb. According to Wood Mackenzie, the median C1 cash cost was 127.5 c/lb, equivalent to 32% of the average copper price. The 90th percentile C1 cash cost was 207.1 c/lb, equivalent to 52% of the average copper price.

C1 Cash Cost Curve for 2011 Copper Smelter Production



Source: Wood Mackenzie Report

Note:

(1) Competitive cost position shown for the Chambishi Copper Smelter is based on data provided by CNMC and adjusted by Wood Mackenzie to reflect standardized C1 costing methodology.

Copper Pricing

Concentrate Market Introduction

According to the Wood Mackenzie Report, global copper mine production totaled 16.3 Mt during 2011, of which 79% was derived from operations using conventional milling and flotation techniques to produce copper in the form of concentrates, with the remaining 21% from facilities recovering market-ready copper cathode using the leaching and solvent extraction/electrowinning method. Approximately 56% of copper produced in concentrate form in 2011 were sold to third parties for smelting and refining with the balance being consumed in integrated facilities. Measured on a copper content basis, the third-party concentrate market has grown at a CAGR of 4.5% over the past 20 years while there has been no net growth in the integrated sector since the mid-1990s. As a consequence, sales of copper concentrates into the third-party market have gained considerable market share over this time period, with the size of the third-party market exceeding that of the integrated sector since 2003. Approximately 70% of third party concentrates were bought and sold internationally in 2011 with the remainder consumed domestically by smelters within the same country. Traders accounted for approximately 31% of the third-party market and 17% of the overall market in 2011.

Market Operation

The London Metal Exchange (LME) acts as a guarantor of the product quality and sets a governing standard of Grade A copper cathode conforming to BS EN 1978:1998 (Cu-CATH-1). Metal producers apply for product quality approvals from the LME once they are confident that their sources of supply can meet the specifications on a consistent basis.

The LME is a transparent and terminal market for the buying and selling of refined metal. The metal stocks to be delivered at closing are stored in LME designated warehouses and are branded by the LME to ensure that it meets the prescribed criteria for shape, weight and quality. Prices are set among producers, consumers, funds and speculators on the exchange and are traded in the spot market or futures market.

Copper Concentrate Pricing

There is no terminal market where copper concentrate can be traded at a precise known price, and since there is no market of last resort for concentrates, it is common for miners to sell their concentrate on the public market to a number of different smelters, often in different regions of the world as a means of minimizing the risks of non-performance by buyers. These long-term contracts can have a delivery period of between one and fifteen years. Spot sales usually involve small tonnages (5-10 kt of concentrate) and are awarded to merchants or smelting companies via a process of tendering.

Although the published metal prices (e.g., the cash settlement price for Grade A copper cathode determined by one of the metal exchanges) form part of the calculation of the gross price of copper concentrates, there are other more significant components, including the treatment charges (TC) and refining charges (RC), which are applied in order to arrive at the net price of the copper concentrates.

The components required to calculate the net value of copper concentrates are established through a process of negotiation between buyer and seller. These negotiations are carried out within what is known as the "third-party copper concentrate market". The participants in this market are miners, smelters and traders. Miners are sellers of copper concentrates and smelters are buyers. Traders (also known as merchants) act as intermediaries that both buy and sell copper concentrates.

Buyers and sellers draw up a copper concentrate smelting contract to provide a framework covering a whole range of terms and conditions. These include TC and RC, price participation (PP) (if any), payables for copper, payables for other by-products, penalties for impurities, quotation periods for payable metals and payment terms that the miner or trader will pay to the smelter or trader for smelting and refining services. The main aspects of the contract that are subject to regular negotiation are the TC/RCs that are expressed in US dollars per dry metric tonne of concentrate and in cents per pound of payable copper and PP.

Originally, TCs and RCs were reflective of the individual costs associated with the smelting and refining process. However, over time this concept was phased out in favor of the price setting TC/RC mechanism (i.e., a price setting mechanism based on the demand and supply of third-party copper concentrates) that is common in copper contracts.

With respect to long-term contracts, the annually negotiated terms (the TC, RC and PP) are usually universally valid for a period of one year or spread over two years (where the terms apply to 50% of the annual quantity for each of the two years). Exceptionally, there are some contracts where the TC

and RC apply for a period longer than two years. The significant TC and RC negotiations typically commence at the start of every September, prior to the "LME Week" (the annual metals and mining industry event in London), and can continue to April in the following year. While the great majority of contracts are negotiated during that period, some contracts are also negotiated at other times of the year. For producers who have a large number of contracts, there are clear benefits in spreading out the negotiation period. Mid-year settlements also serve to increase the frequency of establishing terms in the long-term market to twice yearly.

PP clauses in long-term contracts enable smelters/buyers to participate, subject to negotiation, in price movements above and below a trigger LME price (only in Asia). During 2006, the very high prevailing copper price enabled smelters/buyers to capture unprecedented levels of PP. Many sellers deemed this level of PP inappropriate or unreasonable in the context of the ongoing over-capacity within the custom concentrate market. Consequently, the PP component of many long-term contracts was removed or delayed by mutual consent, albeit reluctantly in the case of smelters/buyers. In recent years, processing contracts have rarely included PP, which is unlikely to return until the balance of concentrate supply and demand moves in favor of the third-party concentrate smelters/buyers.

A freight credit, or allowance, can be negotiated between the miner and trader for concentrates sold on an FOB basis. This credit is based in part upon prevailing or anticipated market rates to a given destination point. These rates are usually determined through discussions with freight brokers and also with reference to indices such the Baltic Dry Index (BDI). The actual rate negotiated is not necessarily fully representative of the actual costs since it also depends on whether the buyer or seller is in a stronger or weaker position vis-à-vis the copper concentrate market.

The spot market differs from the long-term market in that virtually any tonnage can be offered for sale at any time of the year and there is normally no PP. The seller contacts interested parties, which are usually traders, inviting them to submit bids to purchase the concentrate. The seller will indicate the expected month(s) of shipment(s) and will ask the prospective buyers to submit their purchase terms. Sometimes the seller stipulates most or all of these terms, leaving the buyer to offer just the TC/RC. Spot treatment and refining charges are, therefore, determined through competitive bidding on a one-off, transparent basis.

Variations in spot terms tend to be much greater than in the long-term market, which is to be expected given the high frequency of spot sales into an ever-changing market. Low spot terms always reflect a tight concentrate market and vice versa. Furthermore, given that the spot market reflects the marginal tonne of concentrate, in a deficit market traders will pay a premium (low TC/RC) for the material and in surplus years they will impose a discount (high TC/RC) on the material.

Price Outlook

Historically, copper prices have largely reflected the factors that drive the prices of many commodities, including supply-demand relationship and monetary supply. In nominal terms, copper prices have been steadily increasing since the 1960s, with periods of rapid increases and falls largely tracking global economic performance. The 1960s and early 1970s experienced volatile and high real prices reflecting sustained structural deficits and increasing world demand. Copper prices then declined significantly following the Organization of Petroleum Exporting Countries energy crisis in 1973. There were intermittent price increases in the 1980s and 1990s as stocks tightened following a muted supply response to strong demand.

Copper prices have risen significantly since 2000, largely driven by a failure of supply to keep pace with increased demand from emerging markets, in particular China. Prices on the LME (which

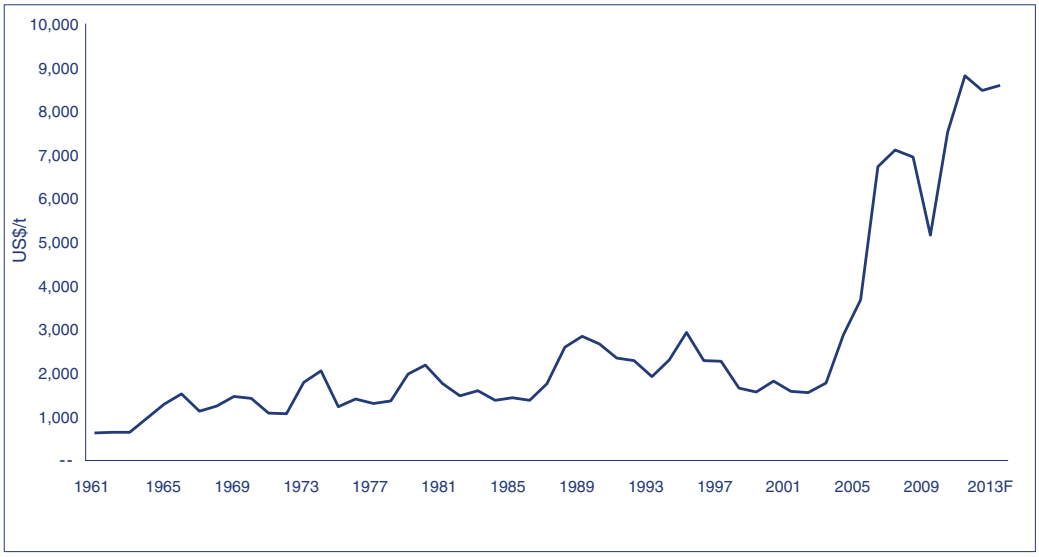
other exchanges such as the Shanghai Futures Exchange and the New York's Commodity Exchange tend broadly to track) increased over 400% from an average of around US$1,800 per tonne in 2000 to over US$8,000 per tonne in 2008. Demand was stalled by the global financial crisis and decreased by 3.5% in 2009. This fall in demand, combined with increased risk aversion saw prices briefly fall over 50% towards US$3,000 per tonne. According to Wood Mackenzie, copper's strong fundamentals and a demand for "hard" assets pushed copper prices to average US$7,540 per tonne in 2010, increasing by 46% from US$5,159 per tonne in 2009 (both in nominal terms).

According to the Wood Mackenzie Report, refined copper production during 2010 increased by 4% to 19.7 Mt, which was insufficient to meet the stronger end-products demand growth. The global copper market ended the year with a small deficit of 237 kt. Copper prices were particularly volatile during 2011, with a low of under US$7,000 per tonne and a high of over US$10,000 per tonne resulting from great uncertainty surrounding the economic outlook. Despite this, prices averaged US$8,818 per tonne in 2011, representing a 17% increase from the average of US$7,540 per tonne in 2010 (both in nominal terms).

Although 2011's metal deficit was small compared to the overall size of the market, its importance is more directly related to how 2012 will unfold. According to the Wood Mackenzie Report, the supply side is expected to continue to underperform in 2012, leading to a deficit of approximately 207 kt. It is expected that 2012 and 2013 metal stock days of consumption will remain below the levels in 2011. During 2007 to 2008 producers were reluctant to invest as capital costs were high. This was followed by a significant decrease in the availability of funding in late 2008 and 2009. The combination of supply shortages coupled with high demand from China and increased fund appetite has resulted in prices moving in excess of levels that would ordinarily be expected. Therefore, market is expected to remain tight and continued higher momentum on prices is expected to average US$8,488 per tonne in 2012 and US$8,600 per tonne in 2013, respectively (both in nominal terms).

For industries such as copper that are in structural deficit, that is, with long-term demand significantly in excess of base case production intentions, incentive pricing is used to establish long-term cycle average prices. This system examines the price required to provide a given rate of return for each project and calculates the price required in theory to incentivize investment in a project. The rate of return required to warrant an investment is formulated. The incentive price is then calculated such that cumulative global capacity is sufficient to meet potential demand. In this context long-term can be considered the cycle average price over the next cycle, i.e. the decade over which a project would expect to see payback. In terms of long-term cycle average prices, these are critically dependant upon the metal demand outlook and on capital and operating costs. The incentive price methodology starts by estimating the demand for additional mine capacity after allowing for scrap usage and base case mine production changes. Critically, in a demand growth scenario involving depleting mines, the demand for additional capacity increases with time and care must be exercised in precisely defining the forecast period over which the cycle average price is to be estimated. Note that while the forecast is in constant dollar terms, no allowance has been made for specific inflation which could further increase the forecast.

Historic and Forecast LME Copper Cash Prices



Source: Wood Mackenzie Report

Historic and Forecast LME Copper Cash Prices

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012F	2013F
Copper (US$/tonne)	1,587	1,565	1,786	2,866	3,682	6,724	7,121	6,945	5,159	7,540	8,818	8,488	8,600
Copper (c/lb)	72	71	81	130	167	305	323	315	234	342	400	385	390

Source: Wood Mackenzie Report

Copper Trade — Regional Balance

The Asian region has a greater shortfall in supply of copper compared to other regions, partly as a result of the strong consumption in the region. China's supply shortfall is greater than any other country and has been steadily growing for the past decade. According to Wood Mackenzie, this shortfall is forecast to continue to grow rapidly through to 2015. Latin America, Africa and Oceania are the key export regions which have a significant oversupply of mined copper relative to demand expectations. The tables below show the balance between refined copper production and refined copper demand within China and Asia (excluding China).

China Implied Concentrate and Refined Copper Balance

	2001	2005	2010	2011	2012F	2013F	2014F	2015F	2015F vs. 2011	
					(kt)				(kt)	(CAGR)
Concentrate production	569	762	1,156	1,255	1,378	1,433	1,461	1,505	250	4.6%
Concentrate demand	1,224	1,808	2,578	2,941	3,493	3,985	4,099	4,262	1,320	9.7%
Implied concentrate balance	-654	-1,046	-1,422	-1,687	-2,115	-2,553	-2,639	-2,757	-1,070	13.1%
Refined production	1,523	2,600	4,575	5,267	6,386	7,355	7,887	8,153	2,885	11.5%
Refined consumption	2,230	3,815	7,204	7,780	8,402	8,965	9,503	10,007	2,227	6.5%
Implied refined balance	-707	-1,214	-2,629	-2,513	-2,017	-1,611	-1,617	-1,855	658	-7.3%

Source: Wood Mackenzie Report

Asia (excl. China) Implied Mine and Refined Copper Balance

	2001	2005	2010	2011	2012F	2013F	2014F	2015F	2015F vs. 2011	
					(kt)				(kt)	(CAGR)
Mine production	1,864	1,859	1,827	1,495	1,591	1,814	2,016	2,118	623	9.1%
Refined consumption	3,431	4,000	4,065	3,949	4,035	4,195	4,415	4,596	647	3.9%
Implied balance	-1,567	-2,142	-2,238	-2,454	-2,444	-2,381	-2,399	-2,478	-25	0.2%

Source: Wood Mackenzie Report

ZAMBIA COPPER MARKET OVERVIEW

Introduction

According to the Wood Mackenzie Report, Zambia's real GDP has increased at a CAGR of over 6% since 2005. In 2010, Zambia's economy expanded by 7.6%, with over 80% of exports comprising copper and cobalt, equating to almost 30% of its total GDP. After factoring in the importance of copper for mining royalties, income taxes and excise duties, the copper industry is an important source of Zambian Government revenue and economic growth.

The high-quality copper deposits in the Zambian Copperbelt region are situated along the border with the DRC. In Zambia, the Copperbelt extends 100 kilometers from the Konkola deposit in the northwest to Ndola and Luanshya in the southeast. This area is one of the largest metallogenic provinces in the world with significant deposits of copper and large accumulations of cobalt.

Major Zambian Copper Assets

	Resources (kt)
CNMC[1]	7,198
Konkola	7,965
Konkola North	7,710
Kansanshi	5,126
Lumwana	4,463
Nchanga	4,333
Nkana	3,856

Source: Wood Mackenzie Report

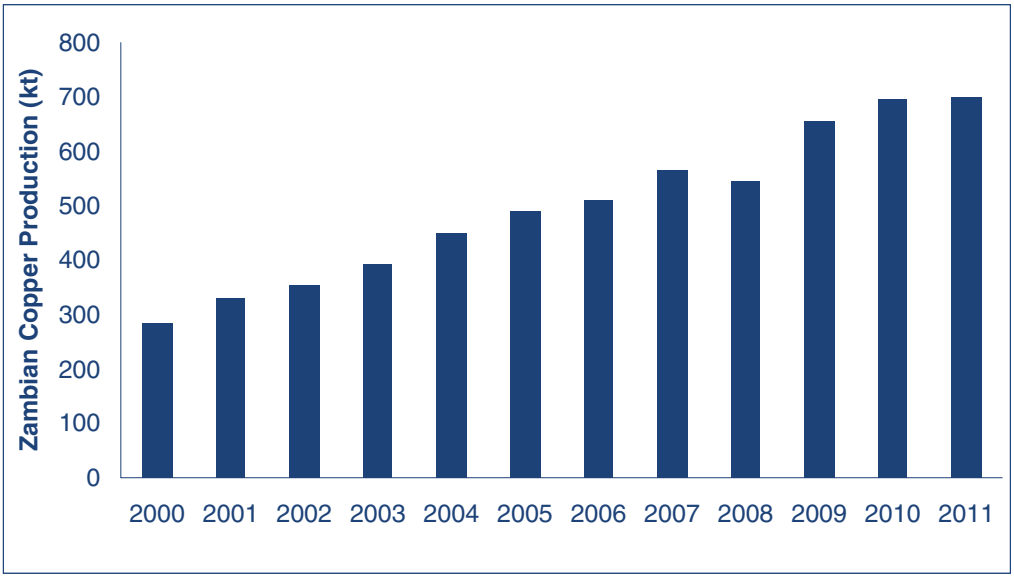
Note:

(1) Represents the copper resources controlled by CNMC in Zambia in aggregate, calculated on a 100% ownership basis for each asset. CNMC's copper assets include the Chambishi Main Mine, the Chambishi West Mine, the Chambishi Southeast Mine, the Baluba Center Mine, the Muliashi North Mine and other assets.

Zambian Copper Supply

Zambian copper supply has experienced sustained growth since the privatization of the copper industry in the late 1990s. The Mines and Minerals Act of 1972 was repealed and replaced by the Mines and Minerals Act of 1995, which provides incentives for investors in the mining sector. From 2000 to 2011, production has increased at an average rate of 8.5% per annum.

Zambia — Historic Copper Production



Source: Wood Mackenzie Report

According to the Wood Mackenzie Report, the Zambian copper mining industry is estimated to produce 805 kt of copper during 2012 with 74% of this originating from concentrates and the balance from copper cathode produced from SxEw facilities. The Zambian government is keen to improve self-sufficiency of the country's copper smelting and refining asset base and has introduced a concentrate export tax of 15% to discourage sales to smelters in other countries.

According to the Wood Mackenzie Report, Zambian mine production is forecast to rise in the short to mid term as Chambishi continues its expansion and the Lumwana and Konkola Deep projects ramp up production.

In 2012, CNMC, through its control of the Chambishi Copper Mine, the Muliashi North Mine and the Baluba Center Mine, is expected to contribute approximately 65 kt of contained copper mine production, making it the largest PRC copper mining enterprise in Zambia.

Three smelters, namely the Chambishi Copper Smelter, Mufulira Smelter and Nchanga Smelter, provided approximately 95% of the national capacity in 2011, with leach facilities providing the balance.

The commissioning of the 150 kt per annum Chambishi Copper Smelter in 2009 represented a significant development in the Zambian copper industry. The Chambishi Copper Smelter is a joint venture between CNMC and Yunnan Copper Group and is the only large-scale overseas copper smelter owned by a PRC enterprise. In 2009, the joint venture partners announced plans for a smelter expansion, the construction of which commenced in 2010 and is expected to be completed in late 2012. The annual production capacity of the smelter is expected to increase to 250 kt of blister copper by 2013.

In addition to domestic concentrates, Zambian smelter feed is currently supplemented with imported concentrates from the DRC. The majority of these imports came from First Quantum's Frontier mine.

The following table shows historic and forecast copper mine production in Zambia.

Zambian Copper Mine Production

	Current Ownership	2010	2011	2012F	2013F	2014F	2015F
					(kt)		
Base case							
Baluba Center Mine[1]	CNMC 80%, ZCCM-IH 20%	10	16	19	20	20	20
Bwana Mkubwa SxEw	First Quantum 100%	7	—	—	—	—	—
Chambishi Copper Mine[1]	CNMC 85%, ZCCM-IH 15%	22	23	27	31	34	37
SML's Chambishi leach plants[1]	CNMC 55%, NFCA 15%, Hainan Sino-Africa Mining 30%	7	7	15	19	30	40
Chibuluma South	Vale 85%, ZCCM-IH 15%	18	17	15	15	15	15
Jifumpa/Kalengwa	Hetero Mining Company	2	2	2	2	2	2
Kansanshi	First Quantum 80%, ZCCM-IH 20%	147	135	155	185	180	170
Kansanshi SxEw	First Quantum 80%, ZCCM-IH 20%	87	100	100	100	100	95
Konkola	Vedanta 79.4%, ZCCM-IH 20.6%	38	40	40	40	30	—
Konkola Deep	Vedanta 79.4%, ZCCM-IH 20.6%	—	—	60	125	150	170
Konkola North	Vale 50%, African Rainbow Minerals 50%	—	—	—	10	42	46
Lumwana	Barrick Gold 100%	147	145	140	140	135	145
Mindola North SxEw	First Quantum 16.9%, Glencore 73.1%, ZCCM-IH 10%	10	10	2	9	12	20
Mufulira	First Quantum 16.9%, Glencore 73.1%, ZCCM-IH 10%	36	41	29	28	28	26
Mufulira SxEw	First Quantum 16.9%, Glencore 73.1%, ZCCM-IH 10%	—	—	12	15	19	6
Muliashi Project[1]	CNMC 80%, ZCCM-IH 20%	—	—	19	33	40	40
Munali Restart	Albidon 100%	2	2	2	2	2	2
Nchanga	Vedanta 79.4%, ZCCM-IH 20.6%	54	53	50	50	50	50
Nchanga SxEw	Vedanta 79.4%, ZCCM-IH 20.6%	56	55	55	60	20	—
Nchanga Refractory Ore SxEw	Vedanta 79.4%, ZCCM-IH 20.6%	—	—	—	—	30	50
Nkana/Chibuluma	First Quantum 16.9%, Glencore 73.1%, ZCCM-IH 10%	40	41	41	35	35	36
Nkana/Chibuluma RLE Feed	First Quantum 16.9%, Glencore 73.1%, ZCCM-IH 10%	12	9	15	18	18	19
Total base case Zambia		**694**	**696**	**798**	**937**	**992**	**979**
Total highly probable Zambia						**10**	**30**
Total probable Zambia						**125**	**395**
Total possible Zambia						**3**	**35**

Source: Wood Mackenzie Report

Note:

(1) Data provided by CNMC. Chambishi Copper Mine data includes mine production from the Chambishi Main Mine, the Chambishi West Mine, the Chambishi Southeast Mine and the SML Chambishi Processing Plant.

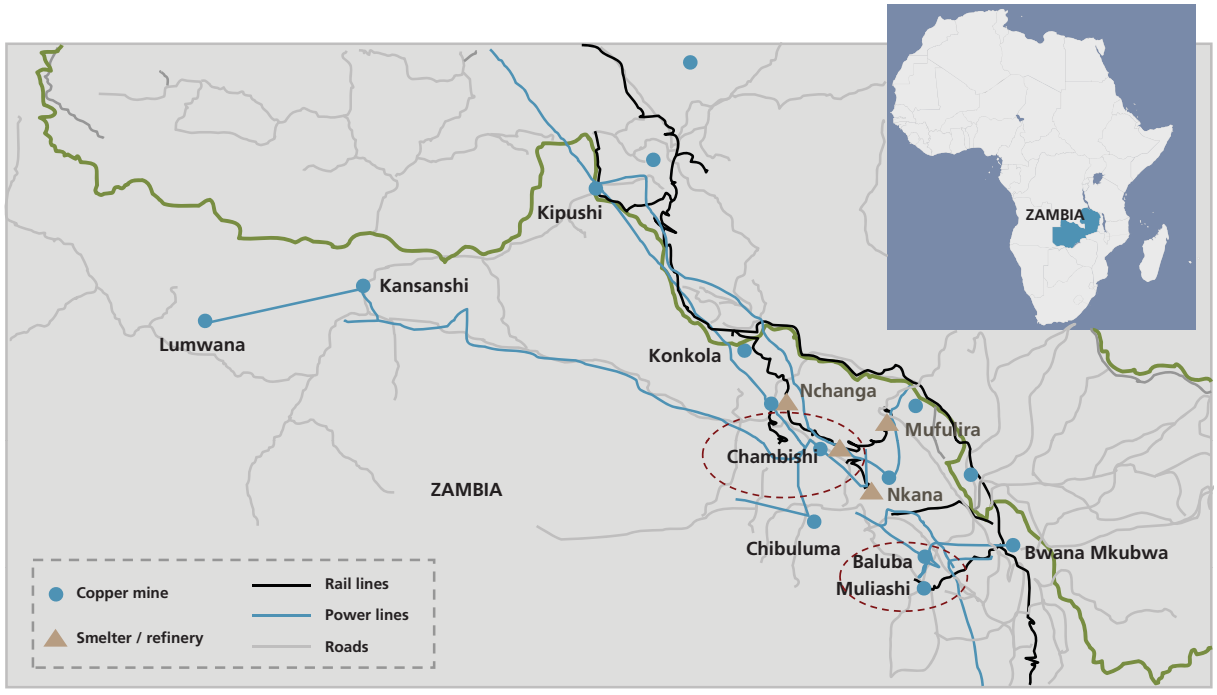
According to Wood Mackenzie, the Company's market share of Zambian copper mine production is expected to increase from approximately 5% in 2011 to 11% by 2015.

The following table sets forth the ownership and production capacity of major smelters in Zambia as of 2011.

Smelter	Ownership	Product Type	Capacity per annum (kt)
Nchanga Smelter	Konkola Copper Mines (Vedanta 79.4%, ZCCM-IH 20.6%)	Anode	300
Mufulira Smelter	Mopani Copper Mines (First Quantum 16.9%, Glencore 73.1%, ZCCM-IH 10.0%)	Anode	200 (rising to 220 by 2013)
Chambishi Copper Smelter	CNMC 60%, Yunnan Copper Group 40%	Blister	150 (rising to 250 by 2013)

Source: Wood Mackenzie Report

The following map shows the location of major mines and smelters/refineries in Zambia.



Source: Wood Mackenzie Report

Zambian Copper Exports

Zambia has been a traditional supplier to the copper markets in mature Asian economies, including Japan and South Korea, the Middle East and North Africa, where some additional growth is expected to occur in the future, for example, in Egypt. China has been the largest source of export growth since 2009, increasing as a result of the production from Chambishi Copper Smelter.

CHINA COPPER MARKET OVERVIEW

Introduction

China is the world's largest consumer of copper and is expected to remain so for the foreseeable future. Although its domestic mining industry is expected to be able to meet a proportion of the country's demand, a considerable shortfall between domestic supply and demand is still expected. This shortfall will have to be met through imports of raw materials and refined metal.

Consumption Outlook

According to the Wood Mackenzie Report, Chinese demand for refined copper grew by 8.0% in 2011 to 7.8 Mt as continued strong economic growth underpinned an expansion in the metal's consumption. In particular, infrastructure spending continues to form the major part of end use demand.

According to the Wood Mackenzie Report, the pace of growth in Chinese demand for refined copper is expected to remain strong in 2012, increasing by 8.0% to reach 8.4 Mt. Infrastructure and construction spending will continue to underpin growth in demand, with the expansion in low cost social housing expected to offset the slowdown in commercial real estate development.

Through the forecast period as a whole, the rate of expansion is expected to be moderate as the economy begins the transition from being infrastructure led to consumer driven, which will reduce the relative size of the construction and infrastructure market in the end use demand mix. This decline is expected to be partly offset by the growing transportation market and further developments in the power sector in a bid to harness green energy.

Pursuant to the Wood Mackenzie Report, for the period from 2011 to 2015, the average annual growth in refined copper consumption in China is expected to be 6.5%, which will result in Chinese consumption of refined copper reaching 10.0 Mt by 2015. The 2.2 Mt gain in refined copper consumption during this period will result in China's share of global refined copper consumption rising from 39% in 2011 to 43% in 2015.

Chinese Refined Copper Demand by Sector

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011 vs 2001	
					(kt)							(kt)	(CAGR)
Building and Construction	684	755	944	1,047	1,162	1,232	1,440	1,554	1,865	2,175	2,439	1,755	13.6%
Electrical and Electronic Products	644	724	905	1,227	1,363	1,489	1,739	2,022	2,524	2,821	3,101	2,457	17.0%
Industrial Machinery and Equipment	208	234	266	301	327	331	385	418	501	540	560	352	10.4%
Transportation Equipment	116	136	175	210	213	237	292	343	482	601	594	478	17.7%
Consumer and General Products	577	575	731	780	750	677	814	762	1,004	1,067	1,086	508	6.5%
Total	**2,230**	**2,425**	**3,020**	**3,565**	**3,815**	**3,967**	**4,670**	**5,100**	**6,375**	**7,204**	**7,780**	**5,550**	**13.3%**
Change y-o-y(%)	20.5%	8.7%	24.5%	18.0%	7.0%	4.0%	17.7%	9.2%	25.0%	13.0%	8.0%		

Source: Wood Mackenzie Report

Chinese Refined Copper Demand by Sector Forecast

	2012F	2013F	2014F	2015F	2015F vs. 2011	
	(kt)				(kt)	(CAGR)
Building and Construction	2,607	2,760	2,936	3,108	669	6.2%
Electrical and Electronic Products	3,440	3,726	4,040	4,296	1,196	8.5%
Industrial Machinery and Equipment	589	638	690	733	173	7.0%
Transportation Equipment	632	665	707	738	144	5.6%
Consumer and General Products	1,133	1,202	1,291	1,369	283	6.0%
Total	**8,402**	**8,990**	**9,664**	**10,244**	**2,464**	**7.1%**
Change y-o-y(%)	8.0%	7.0%	7.5%	6.0%		

Source: Wood Mackenzie Report

Although China is the world's largest consumer of copper, it does not have significant copper resources and lacks world-class high grade copper projects. Moreover, after decades of significant production, the production and grade of the existing copper mines are declining. Despite strong support from the PRC government for the development of the PRC copper industry and a number of newly commissioned mines expected to provide an increase in copper mine production, overall growth in copper mine production is not significant and is lagging behind the growth of demand for copper concentrate. According to the Wood Mackenzie Report, China's domestic concentrate production is expected to grow at a CAGR of 4.6% from 2011 to 2015, compared to 9.7% for demand as China continues to construct smelter capacity. This supply deficit is expected to increase from 1.7 Mt in 2011 to 2.8 Mt in 2015. The growing deficiency is a key driver for the low TC/RCs in the current market and has also led to growth in the capacity of Chinese secondary smelters processing scrap.

In order to reduce the pressure of demand for copper concentrate, Chinese companies have generally been seeking interests in overseas assets to secure concentrate supply and engaging in long term contracts with suppliers to reduce exposure to price fluctuations in the custom concentrate market.

Chinese Copper Concentrate Balance

	2011	2012F	2013F	2014F	2015F	2015F vs. 2011	
			(kt)			(kt)	(CAGR)
Concentrate production	1,255	1,378	1,433	1,461	1,505	250	4.6%
Demand for concentrate	2,941	3,493	3,985	4,099	4,262	1,320	9.7%
Implied balance	**-1,687**	**-2,115**	**-2,553**	**-2,639**	**-2,757**	-1,070	13.1%

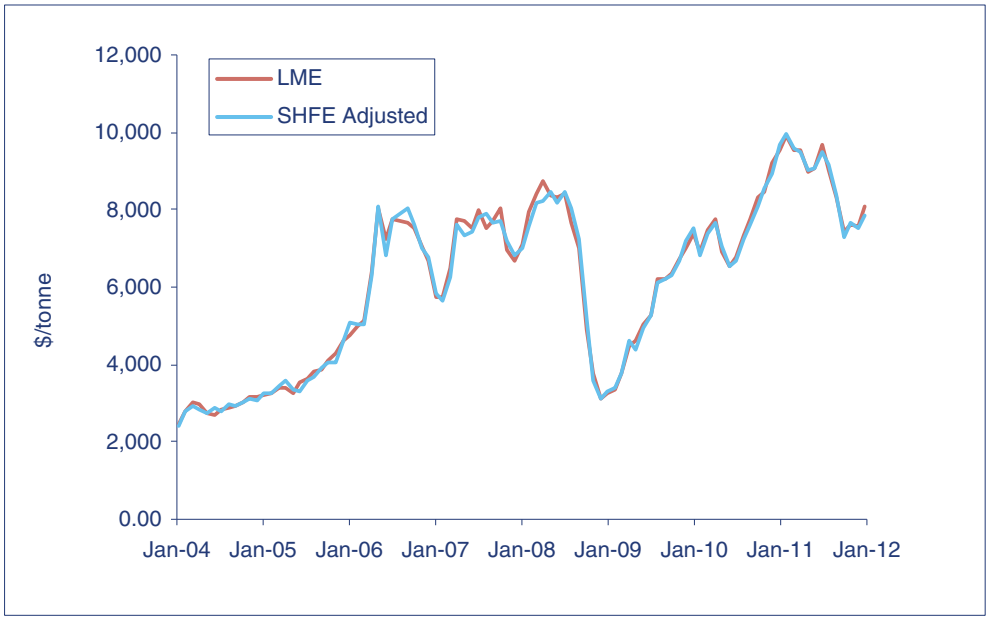
Source: Wood Mackenzie Report

China Copper Pricing

Copper has been traded on the Shanghai Metals Exchange in China since 1992. In 1999, the Shanghai Futures Exchange (SHFE) was formed from an amalgamation of various Shanghai commodity exchanges. Since its inception, the SHFE has grown rapidly and with the 2010 futures volume of 245 Mt has overtaken the New York Mercantile Exchange (117 Mt) as the world's second largest copper exchange behind the LME (749 Mt).

The chart below shows the correlation between the LME cash copper price and the SHFE price.

LME and Shanghai Copper Price



Source: Wood Mackenzie Report

COBALT MARKET OVERVIEW

Introduction

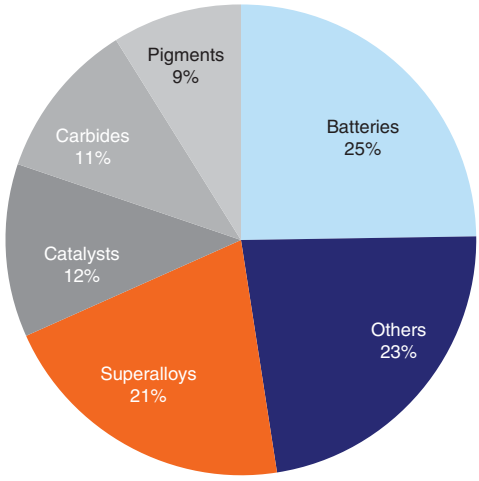
Cobalt is a silvery-white metal, present in the earth's crust at about 25-50 parts per million. Cobalt occurs in nature in a variety of minerals, including cobaltite, smaltite, erythrite and linnaeite, and is associated with nickel, copper, iron, silver and lead ores. Cobalt, iron and nickel are the only three naturally occurring magnetic metals.

Cobalt Demand Analysis

Cobalt has several uses based on its functional properties, including: batteries for vehicles (including nickel batteries and lithium-ion batteries) and consumer electronics; superalloys for aerospace, jet and gas turbine engines and other uses; catalysts, carbides, pigments, magnets, hardfacing alloys and other alloys.

The following graph shows the cobalt demand by sector in 2011.

2011 Cobalt Demand by Sector

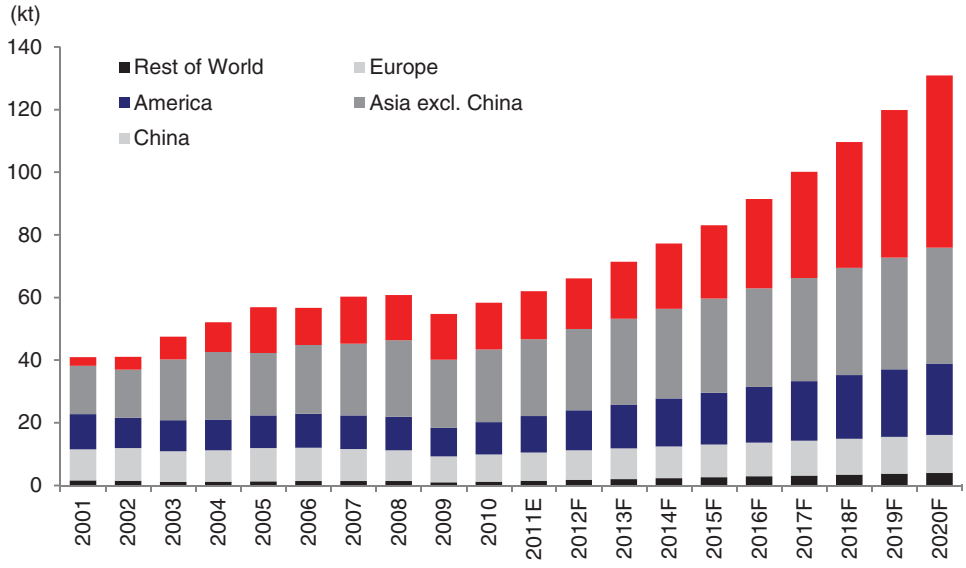


Source: Wood Mackenzie Report

Demand for cobalt has grown substantially since the 1990s with the battery and superalloys industries being responsible for a significant part of this growth. Wood Mackenzie estimates that total current cobalt demand is more than 50% higher than it was in the early 2000s, when demand was more evenly split between regions.

In the early 2000s, cobalt demand was negatively impacted by adverse economic conditions, which resulted in lower demand from the battery and superalloys sectors. However, consumer stockpiling combined with rapid demand growth in Asia, particularly from China, Japan and South Korea, allowed cobalt demand to recover by mid-2000s, with lithium-ion batteries emerging as a key demand driver. In particular, China has emerged as a main demand contributor during the 2000s. China's share of global cobalt demand increased from less than 10% in the early 2000s to around 25% in 2008. On the other hand, cobalt demand from Europe and the Americas decreased during the same period. During this period, China became one of the world's largest manufacturers of lithium-ion batteries. The global financial crisis saw global cobalt demand drop by close to 10% in 2009. Wood Mackenzie expects the global cobalt market to recover to peak 2008 levels in 2012.

Historical and Forecast Cobalt Demand by Region



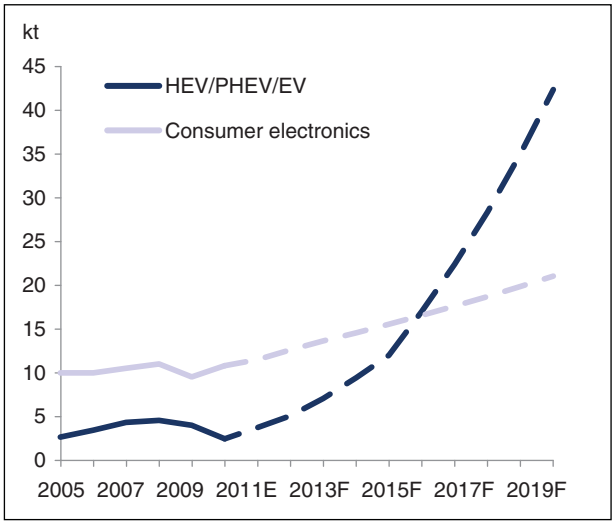
Source: Wood Mackenzie Report

Batteries Sector

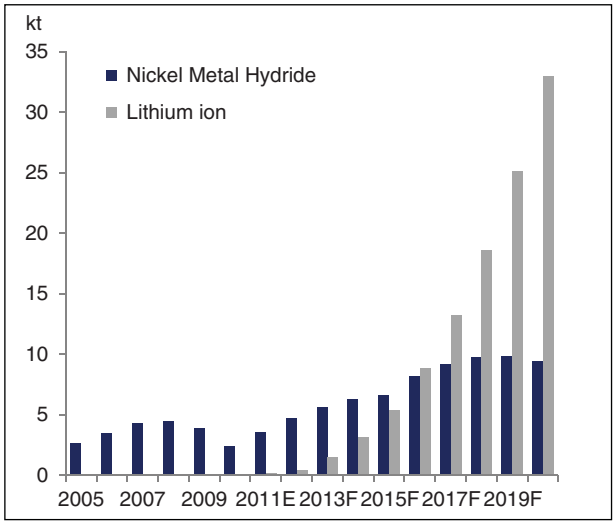
Rechargeable batteries are an important end-use sector for cobalt, accounting for close to 20% of total cobalt demand. Nickel-metal hydride batteries have historically dominated cobalt use in vehicle batteries, but within the next decade cobalt use in lithium-ion batteries is expected to surpass nickel-metal hydride batteries as electric vehicle technology becomes more popular.

According to the Wood Mackenzie Report, hybrid and electric vehicle production could account for 4.2% of global light vehicle output by 2017. About 4.3 million electric vehicles (including plug-in hybrid electric vehicles) are estimated to be on the road by 2017.

Cobalt Use in Batteries



Cobalt Use by Vehicle Battery Type

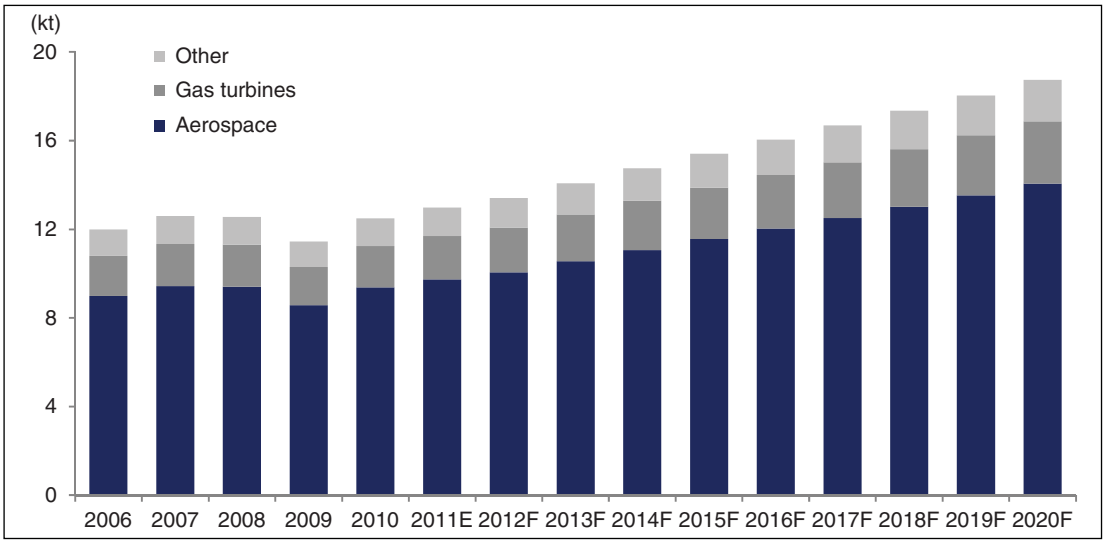


Source: Wood Mackenzie Report

Superalloys

Cobalt's use in the superalloys market encompasses the aerospace industry (75%), the automotive and other land-based industries (21%), and the oil, gas and tools industries (4%). Europe and the United States account for more than 80% of cobalt demand in superalloys. According to the Wood Mackenzie Report, cobalt demand in the superalloys market is expected to grow by 3.3% in 2012. According to Wood Mackenzie, demand is estimated to rise at an average annual rate of 4.2% until 2020, with the aerospace industry retaining the largest market share.

Historic and Forecase Cobalt Use in Superalloys



Source: Wood Mackenzie Report

Catalysts

Cobalt is used as a catalyst in the petrochemical and plastics industries. Cobalt, in the form of cobalt oxide (3-5%) combined with molybdenum trioxide and alumina, rapidly converts organic sulfur to hydrogen sulfide in the treatment of hydrocarbons. This CoMOX catalyst accounts for the greatest use of cobalt in the catalyst sector. In addition, cobalt is also used in the manufacture of resins for plastic bottles and ultra-strong plastics.

Carbides

Cobalt is also used to increase metal hardness to varying degrees, depending on the end use, and helps to retain metal strength at higher temperatures. Fine cuts (approximately 3% cobalt) are used for precision boring, while coarser/rougher cuts (up to 15% cobalt) are suitable for more heavy impact use, such as for dies, tooling and for rock drills in the mining industry. This sector represents close to 7 kt of cobalt demand.

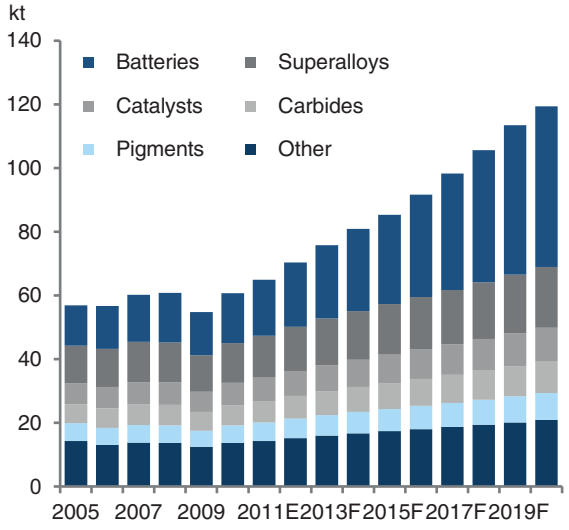
Other Uses

Cobalt has a variety of other applications, including specialist alloys. Cobalt is commonly alloyed with chromium and tungsten to make high-speed cutting tools, it is added to steel to make maraging steels used in the aerospace and military industries, it can be used in electronic alloys, and cobalt-chrome alloys are used for prosthetics. Alloys of alumina, nickel, cobalt and iron, and samarium-cobalt are used in permanent magnets. Cobalt is also used as a pigment in the glass, ceramics, paint and varnish industries. These end uses account for more than 30% of the total cobalt demand.

The long-term major upside for cobalt demand is the battery sector for hybrid and electric vehicles. According to the Wood Mackenzie Report, this sector will grow from approximately 10% of the total demand in 2011 to over 30% by 2020, primarily taking away the market share from superalloys.

The following diagram shows Wood Mackenzie's forecasted cobalt demand by sector.

Cobalt Demand by Sector



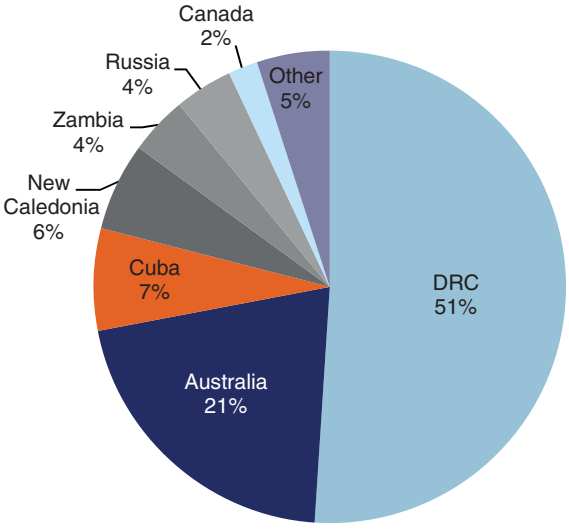
Source: Wood Mackenzie Report

Cobalt Supply Analysis

There are four types of cobalt deposit: nickel-bearing laterites, nickel-copper sulfide deposits, strata-bound copper deposits and silver-cobalt sulfarsenide deposits.

Global reserves of cobalt total approximately 7.5 Mt. The DRC ranks first and accounts for 51% of global reserves. Other countries with major cobalt reserves are Australia, Cuba, New Caledonia (France) and Zambia.

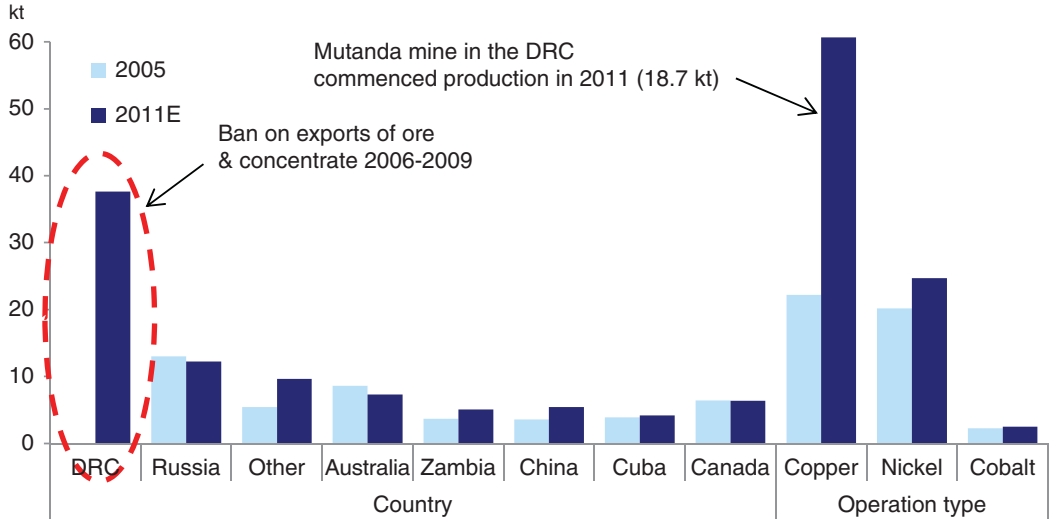
Global Reserve Split



Source: Wood Mackenzie Report

Cobalt is primarily mined as a by-product in the extraction of nickel and copper ores. Mines that extract cobalt as the primary mineral currently account for only 2% of total supply. Copper ores are the main source of cobalt, contributing approximately 70% to the global supply in 2011, and primarily come from the DRC, Russia and Zambia. Nickel ores, which provided about 28% of total cobalt supply, are located primarily in Russia, Cuba and Australia.

Cobalt Production by Region and Ore Type



Source: Wood Mackenzie Report

Cobalt mine production has been cyclical over the past 20 years and has typically posted strong growth except during periods of economic recession. Zaire (the DRC) had been the largest producer of cobalt until the 1980s, but the economic crisis it suffered resulted in the decline of its mining industry and the significant decrease in cobalt production. La Générale des Carrières et des Mines (Gécamines) contributed substantially to government revenues, producing more than 10 kt of cobalt in 1990. However, production decreased by approximately two-thirds within the following three years.

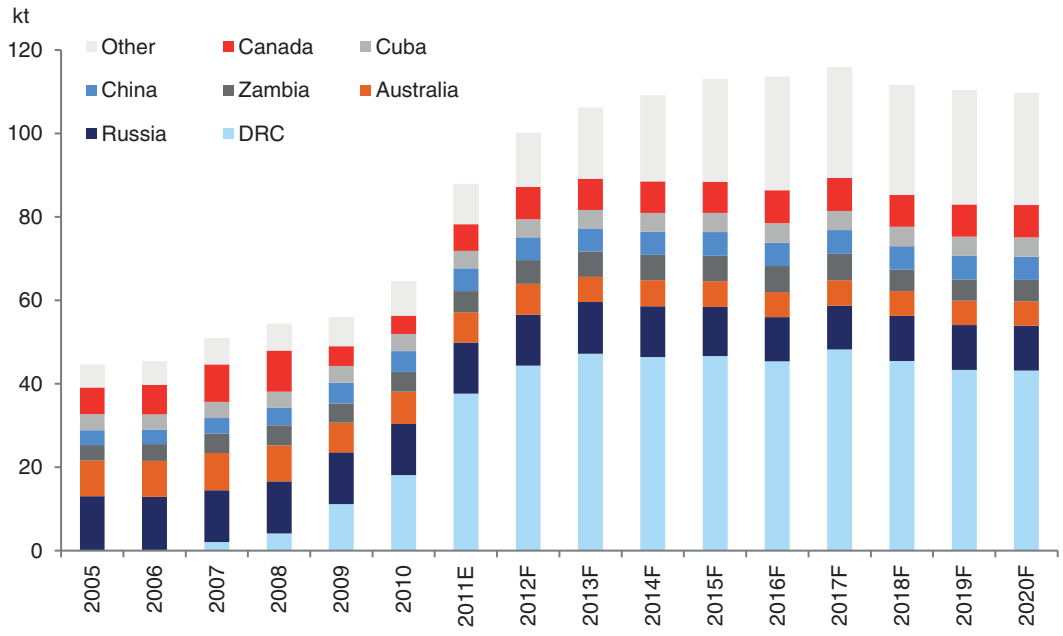
Copper-cobalt mining has also historically played an important role in the Zambian economy. Cobalt production was increasingly promoted in the 1980s as copper output peaked.

The DRC accounted for 44% of the global cobalt supply in 2011, increasing substantially since the early 2000s. The start-up of Mutanda mine in 2011 is estimated to have produced over 18 kt of cobalt, while the start-up of Tenke Fungurume accounted for 17% of production growth from this region in 2011.

China has the largest cobalt refining capacity, with more than 100 companies that process cobalt in various forms. In response to growing domestic demand for cobalt from battery manufacturers, cobalt refining capacity in China expanded rapidly in the early 2000s. Jinchuan Nonferrous Metals is currently the largest cobalt refiner, with an annual production capacity of 6 kt of cobalt.

It is estimated that global mine production increased by over 30% in 2011. New mines and the re-start of existing mines in the DRC are primarily responsible for this step-up in output compared to the 2010 levels. According to the Wood Mackenzie Report, global production is forecast to increase by an annual average of about 5% to 2017.

Forecast Mine Production by Country



Source: Wood Mackenzie Report

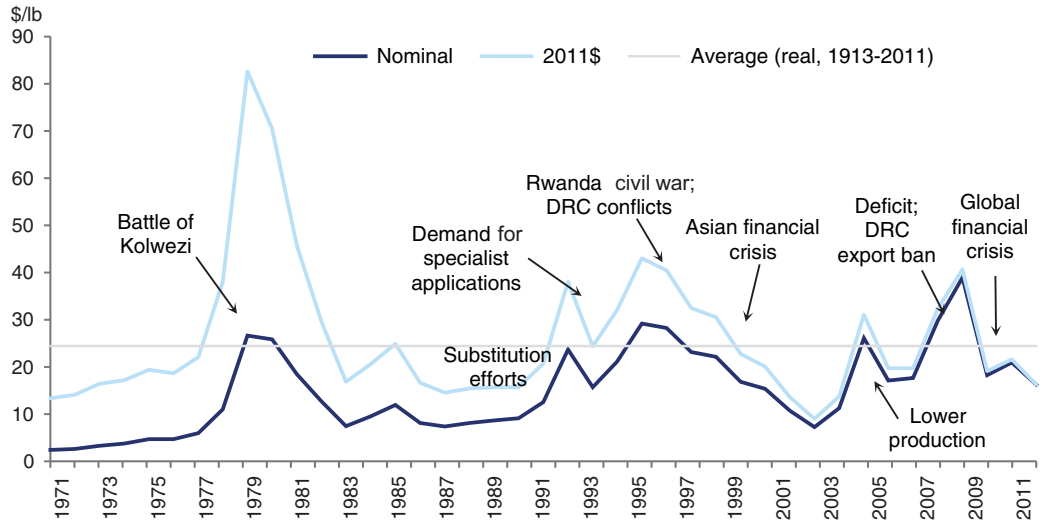
Cobalt Market Balance and Pricing

Until the late 1970s the cobalt price was relatively stable at around US$2/lb. Since then, political instability or other developments in the DRC and neighboring countries have been the key driver of price volatility.

In 1978, the Front for the National Liberation of the Congo invaded Zaire (the DRC), which culminated in the Battle of Kolwezi. Political unrest in the country hosting the largest cobalt reserves pushed up the nominal price to almost US$27/lb. In the late 1990s, civil war in neighboring Rwanda and further conflict within the DRC lifted the price up to US$29/lb before the Asian financial crisis unfolded. The export ban on unprocessed cobalt imposed by the DRC government in 2006 resulted in a price of close to US$40/lb by 2008, as mine production in the DRC and refined production in China dropped at the same time.

In 2011, cobalt prices were lagging behind those of copper and nickel as the fall-off in demand during the global financial crisis was greater than cobalt's production losses, but the recovery in output at nickel and copper mines pulled cobalt supply up faster than demand has recovered.

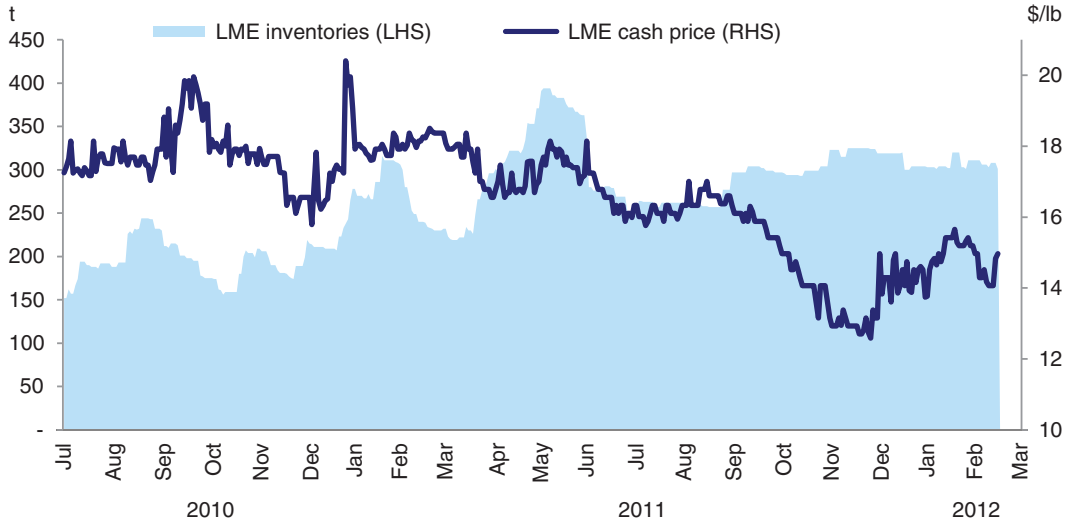
Historical Cobalt Price



Source: Wood Mackenzie Report

The LME began trading cobalt futures in February 2010 and producers have since then been referencing LME prices in contract negotiations.

LME Cobalt Inventories and Price



Source: Wood Mackenzie Report

It is anticipated that the LME may serve as a platform for risk management given the inherent volatility in the cobalt price. Cobalt LME inventories accumulated to a peak of 394 tonnes of cobalt in May 2011.

Clearly, historical volatility, the by-product nature of supply and its reliance on the DRC mean that the cobalt market is subject to several different influences. Overall, as the market is expected to remain undersupplied, the widening supply gap over the next ten years is likely to lift prices above the historical long-term average.

FEE PAID AND ASSUMPTIONS AND PARAMETERS FOR WOOD MACKENZIE REPORT

We commissioned Wood Mackenzie to produce the Wood Mackenzie Report for use in whole or in part in this prospectus. Wood Mackenzie is a leading independent research house that specializes in producing detailed analytical and strategic research on the global metals and energy industries. Wood Mackenzie has served mining, energy, engineering, financial and government sector clients around the world for over 40 years. We paid Wood Mackenzie a total of US$101,900 in fees for the preparation and update of the Wood Mackenzie Report.

Wood Mackenzie provides comprehensive sources of knowledge about the world's energy and metals industries. Wood Mackenzie analyzes and advises on every stage along the value chain — from discovery to delivery, and beyond — to provide clients with the commercial insights. Wood Mackenzie assesses, and places a value on, thousands of individual assets and companies around the world. Alongside this Wood Mackenzie evaluates economic indicators as well as market supply, demand and price trends. Wood Mackenzie has in-house teams dedicated to all major sectors of the energy and metals and mining industries.

Wood Mackenzie prepared its report based on its in-house database, independent third-party reports and publicly available data from reputable industry organizations. Where necessary, Wood Mackenzie contacts companies operating in the industry to gather and synthesize information about the market, prices and other relevant information. Wood Mackenzie has assumed that the information and data which it relied on are complete and accurate. Wood Mackenzie has advised that (i) some information in its database is derived from estimates from industry sources or subjective adjustments; and (ii) the information in the database of other metals and mining data collection agencies or of other industry consultants may differ from information in Wood Mackenzie's database. The information contained herein has been obtained from sources believed by Wood Mackenzie to be reliable, but there can be no assurance as to the accuracy or completeness of any such information.

The key assumptions and parameters used in the Wood Mackenzie Report are set forth below.

Global Economic Growth

Wood Mackenzie assumed that the global economy will grow at a rate of 2.4% in 2012 and 3.1% in 2013. Wood Mackenzie expects the global economy to maintain moderate growth, driven by the economic growth of emerging economies.

Demand

Wood Mackenzie regards demand as the key variable driving supply. Wood Mackenzie's demand analysis is guided by historic and expected future trends within individual industry sectors, such as construction, electrical, industrial machinery, transportation and consumer and other general products. Wood Mackenzie also considers various influences on demand, such as changes in inventory, infrastructure capacity and regulations. Additionally, the growth pattern of developing countries was considered in light of other recently developed and more developed countries in various regions.

Supply

Wood Mackenzie's supply analysis takes into account various factors affecting suppliers as they attempt to meet demand requirements. Wood Mackenzie considers material flow from the majority

of the world's large mines through the beneficiation process and then to buyers. Wood Mackenzie's supply forecast is built on an asset by asset basis, identifying base case production capabilities and probable projects. Wood Mackenzie also considers any additional production that may be required over and above this base case and probable output in order to fill supply gaps. Wood Mackenzie also considers the effect of price levels, scrap and concentrate availability and industry cost structures and on industry output.

Prices

Recognizing the inherent uncertainty present in any forecast, Wood Mackenzie forecasts average period prices based on its expert analysis of industry fundamentals. Wood Mackenzie balances supply and demand to verify any potential shortfalls or stockpile buildups, towards the end of providing a view on likely price movement pressures. Wood Mackenzie's analysis on prices included an assessment of the relative negotiating power of buyers and sellers and the framework within which these negotiations are conducted. Wood Mackenzie publishes a short-term copper price outlook every month and its long-term price outlook on a quarterly basis (or more often should this be required by material industry developments).

For industries such as copper that are in structural deficit, that is, with long-term demand significantly in excess of base case production intentions, Wood Mackenzie uses incentive pricing to establish long-term cycle average prices. The incentive price methodology starts by estimating the demand for additional mine capacity after allowing for scrap usage and base case mine production changes. This system then examines the price required to provide a given rate of return for each project and calculates the price required in theory to incentivize investment in a project. The rate of return required to warrant an investment is formulated to reflect the different sovereign and technical risks applicable to different projects. The incentive price is then calculated such that cumulative global capacity is sufficient to meet potential demand. In this context long-term can be considered the cycle average price over the next cycle, i.e. the decade over which a project would expect to see payback. In relation to short term pricing, Wood Mackenzie forecasts prices by reconciling supply and demand to establish a market balance, then estimating metal stocks and using historic trends as a basis for market responses. Primary copper demand is forecasted using estimates for consumption by sector and country and scrap availability. The copper supply chain considers production of concentrates/precipitates, output from smelters/refineries and SxEw from existing operations and projects.