This section contains information and statistics relating to the PRC economy and the industry in which we operate. Unless otherwise specified, the information and statistics set out in this section have been extracted, in part, from various official government publications. No independent verification has been carried out on such information and statistics. Reasonable care has been exercised by the Directors in extracting and reproducing such information and statistics; however, none of our Company, the Sole Sponsor, Sole Global Coordinator, Sole Bookrunner, the Sole Lead Manager, the Underwriters, their respective directors and advisers or any other party involved in the Global Offering make any representation as to the accuracy of such information and statistics, which may be inaccurate, incomplete, out-of-date or inconsistent with other information compiled within or outside the PRC. Certain information set forth in this section has been extracted from an industry report we commissioned from CRU Strategies, an independent industry consultancy firm. For more information on CRU Strategies, please refer to the section headed "Other Information" in Appendix VI to this prospectus.

We engaged CRU Strategies, one of the leading industry consultancy firms to conduct a detailed study of the global and Chinese scrap industry. For further information on CRU Strategies, please refer to the subsection headed "Other Information" in the section headed "Statutory and General Information" in Appendix VI to this prospectus.

CRU Strategies has compiled this report based on historical and forecast data from its sister company, CRU Analysis. Established in 1969, CRU Analysis provides independent business analysis focused on the mining, metals, power, cables, fertiliser and chemical sectors. It produces regular publications on the steel, copper and aluminium markets, as well as other metals, covering demand and supply, prices, costs, and developments in related markets such as raw materials (including scrap and its substitutes), and downstream products.

To support its publications, CRU Analysis has established databases and forecasting models that calculate market demand, supply and prices, using available data, including trade and macroeconomic statistics and data from companies, including clients, and government, and industry bodies. This historical and forecast data is adjusted based on objective economic analysis and discussions with market participants. The resulting market analysis is open to industry scrutiny, given that the subscribers to CRU Analysis's regular reports are participants of the relevant markets, including metals and mining companies, suppliers to and customers of the industries, financial institutions, and state and industry bodies.

Where bespoke or more up-to-date data was required to compile this report outside of the information published in the regular reports of CRU Analysis, CRU Strategies has undertaken further market analysis based on the databases of CRU Analysis, and additional quantitative and qualitative research, including face-to-face interviews with relevant parties where required.

Certain information set forth in this section and the section headed "Business" of this prospectus has been extracted from the CRU Report. The consultancy fees paid by our Company to CRU Strategies in connection with the preparation of the industry report for this prospectus is approximately HK$852,000.

We believe that the CRU Report is an appropriate source of information that has been extracted for inclusion in this section and the section headed "Business" of this prospectus and we have taken reasonable care in extracting and reproducing such information. We have no reason to believe that such information is false or misleading. The information has not been independently verified by us, the Sole Sponsor, the Sole Global Coordinator, the Sole Bookrunner, the Sole Lead Manager, the Underwriters or any other parties involved in the Global Offering and no representation is given as to its accuracy.

INTRODUCTION

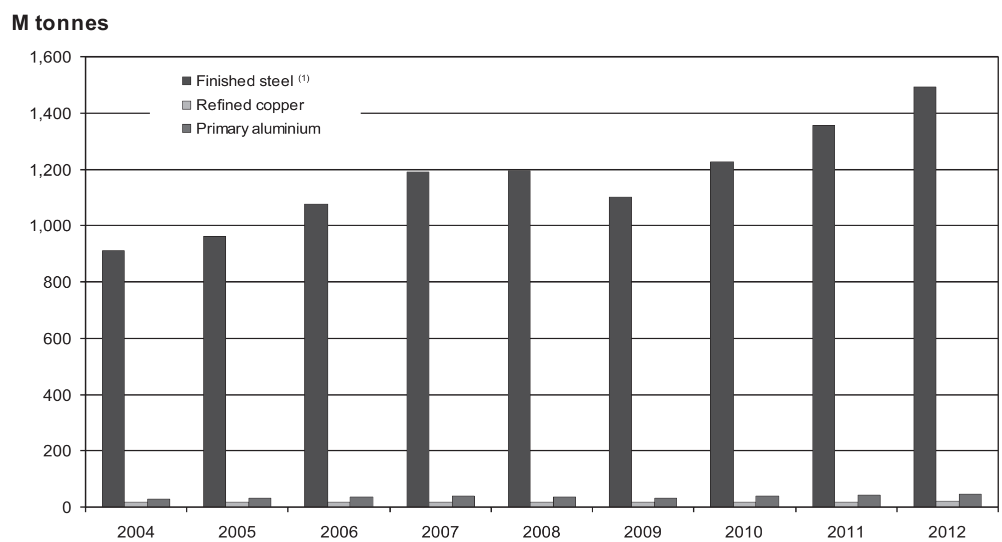
All metals are classified as ferrous and nonferrous metals depending on whether they contain the element of iron. A ferrous metal has iron as its main element and includes cast iron, manganese and chromium. A nonferrous metal refers to other kinds of metals that do not contain iron, including copper, aluminium and certain precious metals. Both ferrous and nonferrous metals are widely used for machinery, construction, automobiles, aircraft, household appliances and ship building.

Metals can also be classified into “primary” and “secondary” metals. “Secondary” metals are also known as “recycled” metals. Primary metal refers to material from ore deposits and secondary metal refers to material from recycled material, including used products and residual materials from manufacturing.

The metal recycling industry plays a vital role in the production and supply of ferrous and nonferrous metals. It contributes significantly to the protection of the environment and to the reservation of valuable natural resources, including energy, which are consumed in large quantities during primary metal production processes.

1. GLOBAL STEEL, COPPER & ALUMINIUM INDUSTRY

Figure 1.1: World consumption of steel, copper and aluminium (million tonnes), 2004-2012 *(Note)*



Data: CRU Strategies

Note: Finished steel consumption includes long products (wirerod, structurals, rebar, merchant bar), plate and flat products (hot rolled coil, cold rolled coil and coasted sheet).

The Global Steel Market Overview

Steel combines the physical attributes of hardness and ductility, and has a long list of uses in a wide range of industries such as automotive, construction, transportation, engineering, oil and gas, etc. Steel products can be broadly categorised into: (1) long products, including rods, bars and sections which are used in applications such as beams in construction, ropes in bridges, railway lines; (2) flat products, including plate, sheet and rolled coil, which are used in applications such as automotive panels, ships and domestic appliances. The steel industry, both in terms of value and tonnage, vastly outstrips other metals industries.

After a contraction in finished steel consumption of 7.9% year-on-year in 2009, a sharp recovery is forecast for 2010. Continued support from governments around the world, coupled with a recovery in consumer driven demand will see consumption increase by 11.4% year-on-year in 2010. This positive growth trend is forecast to continue through to 2012, with growth in finished steel consumption rising by an average of 10.3% per annum between 2011 and 2012.

During this period, the North American and the European markets will exhibit strong growth rates, with consumption increasing by a CAGR of 37.0% and 24.3%, respectively, thereby recovering some of their more recent loses. By 2012, global consumption of finished steel is expected to be just short of 1.5 billion tonnes.

Table 1.1: Global steel market, million tonnes, 2004–2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Finished steel consumption, by region, m tonnes *(Note)*:									
North America	136	121	136	125	113	70	85	98	111
South & Central America	31	30	34	37	42	30	34	38	42
Europe (incl. CIS)	213	210	243	263	238	163	186	207	230
China	268	327	381	449	468	565	619	680	748
Rest of Asia	175	176	177	187	190	138	158	174	189
Other world	88	98	105	129	144	134	144	157	170
Total World	**910**	**962**	**1,076**	**1,190**	**1,194**	**1,101**	**1,226**	**1,355**	**1,491**
% Change	*9.6%*	*5.7%*	*11.8%*	*10.6%*	*0.4%*	*-7.9%*	*11.4%*	*10.5%*	*10.0%*

Data: CRU Strategies

Note: Finished steel consumption includes long products (wirerod, structurals, rebar, merchant bar), plate and flat products (hot rolled coil, cold rolled coil and coasted sheet).

The Global Copper Market Overview

Copper is malleable, ductile, germicidal, and water resistant, and is a good conductor of heat and electricity when in a pure form. As a result, its main uses include pipes, electronics (for example, copper wire, electromagnets, printed circuit boards, electromagnetic motors, generators and transformers), structural engineering, household products, coinage and biomedical applications. Copper is also combined with other metals to form copper alloys, which include bronze (copper and tin), brass (copper and zinc), and copper nickel alloys.

In 2007, global consumption of refined copper*(Note)* (including both primary and secondary metal) peaked at 18.0 million tonnes. Consumption has since fallen year-on-year in both 2008 and 2009 by 1.7% and 6.6% respectively, due to the slowdown in end-use demand and resulting reduction in the production of semi-fabricated products, as a result of the global recession. By the end of 2009 world consumption of refined copper amounted to 16.6 million tonnes. The contraction in consumption was most severe in the major industrialised economies, North America, Europe and Oceania, where cumulative consumption fell by 28.0% between 2007 and 2009. Of all the regions shown in Table 1.2, only Asia and Africa/Middle East exhibited positive consumption growth between 2007 and 2009, rising by 7.4% and 5.8% respectively in absolute terms. This diverging fortune between developed and developing economies has drastically changed the nature of the market: in 2009 Asia consumed 58.1% of global refined copper, up from 44.9% in 2004. Conversely, the developed economies share of world consumption has fallen from 47.3% to just 33.0% over the same period.

Global copper consumption growth is forecast to recover in 2010, rising by an estimated 8.3% year-on-year to 17.9 million tonnes. The Asian and African/Middle Eastern markets are set to show robust growth in 2010, each growing by an estimated 10–11% year-on-year. Even so, global refined copper consumption is unlikely to surpass 2007 levels until at least 2011, and by 2012, will amount to 19.1 million tonnes, 2.2 million tonnes higher than in 2010.

Table 1.2: Refined copper consumption, by region, ’000 tonnes, 2004 – 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Refined copper consumption, by region, ’000 tonnes:									
North America	3,073	2,892	2,688	2,646	2,380	1,894	1,959	2,068	2,139
South & Central America	546	557	593	571	567	505	531	563	597
Europe (incl. CIS)	4,663	4,622	4,990	4,805	4,538	3,458	3,552	3,800	3,944
China	3,458	3,810	3,998	4,655	4,887	5,937	6,814	7,306	7,792
Rest of Asia	4,047	4,004	4,108	4,288	4,216	3,672	3,883	4,041	4,227
Africa/Middle East	748	802	855	922	997	975	1,070	1,184	1,285
Oceania	169	133	136	138	134	112	118	116	112
Total World	**16,704**	**16,821**	**17,367**	**18,026**	**17,719**	**16,552**	**17,927**	**19,078**	**20,097**
% Change	*8.8%*	*0.7%*	*3.2%*	*3.8%*	*-1.7%*	*-6.6%*	*8.3%*	*6.4%*	*5.3%*

Data: CRU Strategies

Note: CRU Strategies measures both copper and aluminium consumption at the point the metal is used to produce semi-manufactured products, such as wirerod, rods, bars and sections/extrusions, sheet, plate and tubes and other “semis” (as opposed to the final consumption of end products containing copper or aluminium).

The Global Aluminium Market Overview

Aluminium is a high strength, but lightweight metal, which is a good conductor of electricity, and relatively easy to work/re-work. As a result, it is used in a wide array of applications including: transportation (in road vehicles, aircraft, railcars and marine uses), packaging (drinks cans, aluminium foil), construction (windows, doors, cladding, facades), electrical (cable and wire), consumer durables, and in general engineering. The development of the Hall-Heroult process for the electrolytic smelting of aluminium and the Bayer process for the production of alumina, in the late nineteenth century transformed aluminium from a semi precious metal to an everyday industrial metal. This has allowed demand to grow by such an extent, that aluminium now ranks as the world's second largest metals industry, both by volume and by value.

After several years of annual global consumption growth being in the range of 5–10% year-on-year, primary aluminium consumption fell by 1.5% year-on-year in 2008. This downward trend accelerated further during the first half of 2009, as the full extent of the economic slowdown became apparent, and as a consequence, global primary consumption contracted by 8.2% year-on-year in 2009, ending the year at 34.3 million tonnes. The downturn in demand was especially severe in more developed regions – primary aluminium consumption fell by a cumulative 24.9% in 2009 in North America, Europe and Japan. The notable exceptions to these downward trends were the Chinese and Indian markets, which achieved positive consumption growth rates of 11.0% and 7.0% respectively in 2009.

The short to medium term outlook is, however, far more positive. A 3.0% year-on-year increase in world GDP growth in 2010 is forecast, and consequently primary aluminium consumption growth is also expected to recover. Between 2010 and 2012, global primary consumption is forecast to grow by 7.8 million tonnes to 45.7 million tonnes. As in both the copper and steel markets, Asia will account for the majority of the growth during this time, increasing by 4.5 million tonnes in absolute terms. Elsewhere, North America and Europe will also recover some but not all of their recent losses, growing at 8.7% and 7.1% CAGR respectively through to 2012.

Table 1.3: Primary aluminium consumptions, by region, '000 tonnes, 2004 – 2012

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Primary aluminium consumption, by region, '000 tonnes:									
North America	7,169	7,164	7,190	6,483	5,990	4,569	4,988	5,492	5,898
South & Central America	1,087	1,185	1,231	1,402	1,533	1,434	1,569	1,680	1,807
Europe (incl. CIS)	8,270	8,467	8,922	9,413	8,774	6,530	7,067	7,525	8,113
China	6,066	7,162	8,752	12,071	12,604	13,994	16,347	17,853	19,746
Rest of Asia	6,003	6,117	6,383	6,378	6,163	5,648	6,324	6,821	7,380
Africa/Middle East	1,436	1,527	1,666	1,862	2,008	1,840	2,011	2,209	2,420
Oceania	408	358	358	374	348	325	356	370	386
Total World	**30,439**	**31,980**	**34,501**	**37,982**	**37,420**	**34,341**	**38,662**	**41,949**	**45,750**
% Change	*9.8%*	*5.1%*	*7.9%*	*10.1%*	*-1.5%*	*-8.2%*	*12.6%*	*8.5%*	*9.1%*

Data: CRU Strategies

2. SCRAP CONSUMPTION

Scrap Consumption in the Production of Steel

There are presently three distinct technologies utilised in the production of steel, including: the Blast Furnace ("BF")/Basic Oxygen Furnace ("BOF"), the Electric Arc Furnace ("EAF"), and the Open Hearth Furnace ("OH"). Of these, the BF/BOF route, which uses iron ore as its principal feedstock, is the most popular accounting for 71.2% of global steel production. Typically, a BF/BOF steel complex produces a higher quality of steel and is therefore most suited to producing higher value flat products (such as hot rolled coil). The EAF route accounts for 28.1% of world crude production. In contrast to the BF/BOF route, EAF steelmaking uses ferrous scrap and/or directly reduced iron/hot briquetted iron (DRI/HBI)[Note] as its main feedstock. OH production is an old technology, used in the ex-Soviet republics, which accounts for 1.7% of global crude production. Scrap is consumed in both the BF/BOF and the EAF routes, but its usage is far more intensive in the latter accounting for 80% of the iron input units (i.e. feedstock), compared to just 8% in the former.

Between 2004 and 2007, global EAF production grew by 16% in absolute terms from 353 million tonnes to 411 million tonnes. However, since the global financial crisis and economic slowdown, global EAF steel production has fallen in successive years, contracting by 1% and 17% year-on-year to 406 million and 339 million tonnes in 2008 and 2009 respectively. On a regional basis, Asia produced 169 million tonnes of steel in 2009 through the EAF route, which is just under half of the world's total EAF production. Elsewhere, North America and Europe jointly accounted for 35% of production, with the remainder being evenly split between Africa/Middle East and South and Central America. In addition to showing global EAF production, Table 1.4 also shows the proportion of scrap that is consumed in the production of steel. Total world consumption of scrap rose by 23kg/tcs to 532kg/tcs between 2004 and 2009, as result of an increasing degree of scrap usage, particularly in Asia. Scrap usage grew most strongly in EAF production, rising by 42kg/tcs to 866kg/tcs over the same time period, but the dominance of BF/BOF production in world steel output means that the global average is skewed downwards.

CRU Strategies Forecast

Looking ahead, world EAF production is forecast to grow by 9.0% per annum between 2010 and 2012, from 381 million tonnes in 2010 to 452 million tonnes in 2012 in line with a broader global recovery in the crude steel markets. Again, Asia is expected to lead the growth, accounting for a third of the growth during this period. However, the growth will by no means be confined to developing regions, with Europe and North America, each accounting for over 22% of the absolute growth during this time period. This growth, is not, however, expected to filter down into higher unit consumption of scrap/tonne of crude steel. Instead, the consumption of scrap in the production of crude steel is expected to contract to 524kg/tcs, even though total consumption of scrap is expected to rise by 93 million tonnes between 2010 and 2012, to 559 million tonnes. This trend corresponds with a stronger rate of growth in Hot Briquetted Iron ("HBI") consumption during this period (i.e. CAGR of 9.6% for scrap between 2010 and 2012, versus 14.5% for DRI/HBI during this period).

Note: DRI can be used instead of scrap in the event that the mill has access to cheap gas. However, it does present some logistical issues, as it has the tendency to self combust, during transit – and is thus typically converted into briquettes (i.e. hence HBI).

Table 1.4: Global steel market outlook, million tonnes, 2004 – 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global crude steel production	1,069	1,133	1,250	1,345	1,327	1,206	1,338	1,463	1,570
Global crude steel capacity	1,221	1,316	1,419	1,523	1,555	1,648	1,725	1,797	1,862
Global EAF steel production	353	360	398	411	406	339	381	421	452
Consumption of finished steel *(Note)*	910	962	1,076	1,190	1,194	1,101	1,226	1,355	1,491
Global consumption of scrap in production	435	447	477	495	497	417	466	524	559
Steel scrap consumption as a % of crude production	40.7%	39.5%	38.2%	36.8%	37.5%	34.5%	34.8%	35.8%	35.6%
Consumption of scrap in the production of steel (kg/tonne crude steel)	509	518	518	516	520	532	531	531	524

Data: CRU Strategies

Scrap Consumption in the Production of Copper

The consumption of secondary materials experienced rapid growth in the mid-2000s. During 2004-2007, consumption of these materials in the production of refined copper grew on average by 11.4% per annum, driven by improved scrap availability, high refined copper prices, and growth in Chinese secondary production. Scrap based refined copper production, which is processed via the pyrometallurgical method, peaked in 2007 at 2.8 million tonnes, accounting for 15.9% of total refined production. A further 6.6 million tonnes of scrap was consumed in the production of semi-fabricated copper products, giving a total consumption figure of 9.4 million tonnes for the year. Since then, the availability of scrap for secondary and semis production has declined, due to lower scrap discounts and a fall in the rate of scrap generation. Lower levels of economic activity in more developed countries, plus slower replacement rates for consumer durables due to tighter consumer spending has reduced scrap generation. Scrap consumption in global secondary copper production in 2009 amounted to 2.6 million tonnes (accounting for 14.8% of global refined production), whilst semis production fell to 5.8 million tonnes.

CRU Strategies Forecast

Looking ahead, scrap consumption is forecast to rebound in 2010, with its consumption in secondary production reaching 2.8 million tonnes. However, CRU Strategies expects a lag in scrap supply growth, because industrial production and construction activity in the key scrap supplying regions, i.e. Western Europe and North America is likely to remain well below pre-crisis levels activity for some time. By 2012, scrap consumption secondary copper production is forecast to be 11.5% higher than in 2010, reaching 3.5 million tonnes.

Table 1.5: Global refined copper market outlook, ’000 tonnes, 2004 – 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global refined copper production	15,839	16,518	17,218	17,926	18,131	17,789	17,743	19,018	20,060
Global refined copper capacity	20,091	20,955	22,046	23,611	24,688	26,224	27,035	27,657	28,098
Global refined copper consumption	16,704	16,821	17,367	18,026	17,719	16,552	17,927	19,078	20,097
Scrap consumed in refined metal production	2,019	2,200	2,447	2,789	2,768	2,629	2,827	3,197	3,517
Scrap consumption as a % of refined production	*12.7%*	*13.3%*	*14.2%*	*15.6%*	*15.3%*	*14.8%*	*15.9%*	*16.8%*	*17.5%*

Data: CRU Strategies

Scrap Consumption in the Production of Aluminium

CRU Strategies calculates secondary aluminium scrap consumption by measuring the total metal requirement for aluminium, which is a function of semis production, and subtracting primary consumption. On this basis, CRU Strategies estimate that consumption of secondary aluminium in 2009 was 13.0 million tonnes, compared to 34.3 million tonnes of primary consumption. This means that secondary material accounted for 27.5% of the total demand for aluminium during that year.

The increased demand for secondary alloys in automotive production, coupled with an increased market share for aluminium beverage cans (also known as used beverage cans, or UBC), which in turn, has yielded a new source of post-consumer scrap that returns to the market quickly, has contributed to the sharp rise in secondary production since the 1960s. This trend has slowed somewhat, more recently, keeping the secondary market’s share of total metal requirement between 26–28% over 2004 and 2009. Two factors have contributed to the slowdown: firstly, a decline in the rate of growth of aluminium consumed in beverage cans, and secondly, the massive surge in primary consumption (or total metal requirement) forthcoming from the Chinese markets.

Consumption of aluminium scrap is expected to remain fairly flat during 2010, increasing by 60,000 tonnes year-on-year. This, however, corresponds with a marked recovery in total metal requirement, which is forecast to grow by 9.3% on 2009’s number, and is thereby expected to push the secondary market’s share down to a low of 25.3% for the year.

CRU Strategies Forecast

Between 2010 and 2012, scrap consumption is expected to grow by a CAGR of 9.2%, eventually reaching 15.6 million tonnes in 2012.

Table 1.6: Global aluminium market outlook, ’000 tonne, 2004 – 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Global aluminium market outlook, ’000 tonnes:									
Global primary aluminium production	29,883	31,970	33,914	38,117	40,129	37,780	41,301	43,132	46,563
Global primary aluminium capacity	34,558	36,682	38,477	44,105	45,310	49,194	52,968	57,101	60,849
Global primary aluminium consumption	30,439	31,980	34,501	37,982	37,420	34,341	38,662	41,949	45,750
Total aluminium consumption	42,017	44,178	47,830	51,364	51,500	47,379	51,757	56,311	61,350
Global aluminium scrap consumption	11,578	12,198	13,329	13,382	14,079	13,038	13,095	14,362	15,600
Scrap consumption as a % of Total Metal Requirement	27.6%	27.6%	27.9%	26.1%	27.3%	27.5%	25.3%	25.5%	25.4%

Data: CRU Strategies

Price Trends

Both refined copper and primary aluminium are traded on the LME, which acts as the main reference point for prices. Pricing structures are far more opaque in the steel markets, and consequently CRU Strategies has presented its estimates of HR Coil prices in the US Midwest, Europe and China. Trends in the metal prices are outlined below.

Table 1.7: Metals price outlook, 2004 – 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Benchmark metals prices (US$/tonne):									
HR Coil, US Midwest	670	601	644	582	948	531	642	682	661
HR Coil, US Germany	551	561	583	668	927	569	622	659	691
HR Coil, China domestic	n.a.	492	490	565	728	528	587	668	675
3-Month LME copper price	2,793	3,508	6,675	7,096	6,884	5,185	7,778	7,573	7,620
3-Month LME aluminium price	1,721	1,899	2,594	2,662	2,620	1,701	2,160	2,130	2,220

Data: CRU Strategies

Steel Price Trends and CRU Strategies Forecast

Price trends have fluctuated widely between the different steel markets presented in Table 1.7. Between 2004 and 2007, HR coil prices contracted by a CAGR of 4.6% in the US Midwest, whilst increasing by 6.7% and 7.2% in Europe and China, respectively (note with the absence of a Chinese price in 2004, the CAGR growth here relates to growth between 2005 and 2007). As far as steel markets go, 2008 was an anomaly which saw HR coil prices shoot up to an all time high, ranging between US$920/t–US$950/t range in Europe and North America. This, however, came to a dramatic ending once the asset bubble burst with Lehmann’s demise late in 2008, and a year later in 2009, HR coil prices had fallen back down to the US$530–US$560/t range. The contraction was particularly severe in the US market, where prices fell by 44.0% year-on-year.

Nevertheless, with both construction and automotive demand picking up from 2010 onwards, the short/medium term outlook is positive. Between 2009 and 2012, steel prices are expected to increase by between 21.4%–28.0% in absolute terms. Consequently, prices are forecast to range from US$661/t in the US Midwest to US$691/t in Germany by 2012. The China domestic price is expected to fall in-between these two values, at US$675/t.

Copper Price Trends and CRU Strategies Forecast

The annual 3-Month LME copper price has ranged from a low of US$2,793/t in 2004 to an annual high of US$7,096/t in 2007. Whilst fundamentals, and in particular, the limited availability of concentrates, have gone part of the way to support this rise, an influx of investment into the sector through fund activity has also contributed to the price inflation. The rise in prices halted during the second half of 2008, when copper prices collapsed in line with lower demand from end-use sectors and weakened investor confidence. Overall, the 3-month LME copper price fell by 3.0% during 2008, reaching a low of US$2,870/t on 23 December. In 2009, the copper price steadily rose and averaged at US$5,185/t for 2009 as a whole, helped by a wave of Chinese buying, and the re-entry of many investors.

Recovering demand coupled with a shortage of feedstock (both concentrates and scrap) is forecast to push the markets back into deficit in 2010, where it will stay through to 2012. Consequently, prices are forecast to recover to the range of US$7,573/t – US$7,778/t during this period.

Aluminium Price Trends and CRU Strategies Forecast

Aluminium prices rose steadily 2004 and 2007, driven by strong Chinese consumption growth and investor fund inflows. By 2007, the average 3-month LME price of US$2,662/t was an estimated 54.7% higher than the yearly average in 2004. However, with the emergence of the global financial crisis late in 2008, the aluminium price suddenly came under severe pressure as demand collapsed and massive stocks accumulated. By the end of the first quarter in 2009, the 3-month LME price fell to an average of US$1,396/t. Since then, the 3-month aluminium price has recovered significantly, and at the time of writing*(Note)* was trading at US$1,982/t.

CRU Strategies expects aluminium prices to continue rising in nominal terms, with the 2012 forecast to 9.3% higher at US$2,220/t, than the yearly average for 2009. However, in real terms, prices will remain short of the high levels set in 2006 to 2008, due to significant capacity overhang and stock levels still being considerably higher than in the past, acting as a constraint on any prolonged rally in prices.

Table 1.8: Metal Scrap Price Trends, 2004 – 2009

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Scrap Prices, US$/tonne:									
No 1, HMS, Chicago	207	191	220	191	350	201	296	319	305
No 1, HMS Rotterdam, FOB	216	205	233	205	432	248	318	345	330
No 1, HMS, Pohang (S Korea), C&F	275	254	266	254	505	300	380	394	380
Copper scrap price, #2, USA	2,453	3,107	5,646	5,678	5,853	4,191			
Copper scrap price, #2, Europe	2,416	3,093	5,668	6,009	5,975	4,511			
Aluminium old sheet & cast price	1,225	1,286	1,657	1,683	1,603	1,017			
Aluminium segregated alloys price	1,736	1,873	2,301	2,278	2,211	1,486			

Data: CRU Strategies

In the absence of a market exchange for scrap, the prices quoted for scrap in table above are from CRU Analysis, which regularly speaks to scrap market participants to estimate prevailing scrap prices or discounts. Every scrap transaction is the result of an individual negotiation, and therefore there is no single price for a certain grade of scrap at a certain time. Instead, the prices shown in this section are indicative of general market movements.

Note: February 8, 2010.

The pricing of scrap is dependent on a series of variables, which are briefly discussed below:

- **Metal content, quality, and physical make-up of the scrap (including any impurities and by-products):** typically the higher the metal content (and the lower the impurities) of the scrap material, the higher its price, subject to market conditions. For example, in the steel market, there is a premium paid for prompt scrap over obsolete scrap.

- **The level of demand for scrap and its availability:** For example, the aluminium old sheet and cast price has soared by 70% between the beginning of June 2009 and February 2010, on the back of stronger global demand, and constricted supply conditions.

- **Amount and difficulty of the sorting process:** the greater the sorting completed by the seller, the higher the scrap price may be. Equally, the greater the requirement for further processing by the buyer, the lower the scrap price.

- **The relative performance of the benchmark price:** Scrap prices are typically linked to benchmark metals prices. For example, copper scrap is priced on the basis of the LME: the tonnage of scrap is multiplied by its copper content, and then a discount is made to cover the cost of refining the scrap into metal. As a result, the increase in the benchmark copper prices over 2006 to 2008 translated into increased scrap prices. The copper, aluminium and steel scrap prices illustrated in Table 1.7, showed a positive correlation ranging between 87.1% and 99.5% to their respective benchmark prices.

- **Arbitrage between Chinese and benchmark world prices:** Chinese buyers have featured increasingly in world scrap markets over the last decade. The buying activity of Chinese scrap consumers can therefore determine the price of scrap in regional markets. Chinese scrap consumers will tend to pursue material in foreign markets more when the difference between local metal prices (for instance SHFE) and the price in other key regions (i.e. LME) is unfavourable (i.e. when it is higher than overseas prices).

Whilst the drivers identified above are common across the spectrum of scrap products, they will vary in importance and move independently in individual metal scrap markets at any given time.

CRU Strategies only publishes prices forecasts for ferrous scrap. These are shown in the Table 1.8. Whilst CRU Strategies does not forecast prices for aluminium and copper scrap, it is expected that these prices will rise upwards in line with LME prices, given the strong correlation between the two sets of prices. Improved availability of scrap on account of the recovery in global industrial activity, especially in 2011 and 2012, may mean that the scrap price as a proportion of the metal price declines slightly. This may be more apparent in the copper than the aluminium market, because relatively large aluminium stocks are expected to persist.

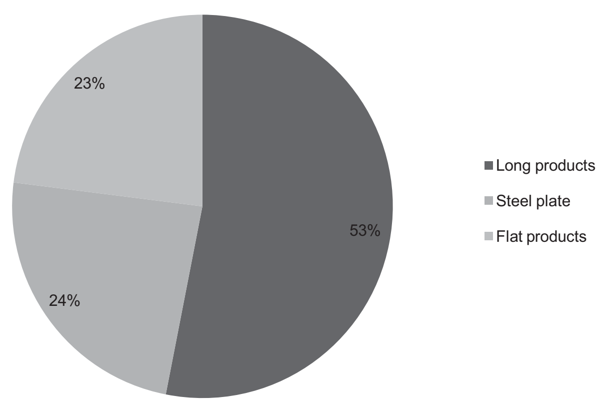
2. THE CHINA'S METAL MARKETS

2.1 The Chinese steel market

2.1.1 Steel consumption and production trends

China's finished steel consumption totalled an estimated 565 million tonnes in 2009, of which around 53% was consumed in the form of long products, including bar, wire rod and structurals. The growth in long products consumption has been driven by investment in construction and infrastructure. The growth in consumption of flat products (including plate) has exceeded that of long products (a CAGR of 18.9% per annum over 2004 to 2009 versus 14.0% for long products). This results from the rapidly developing automotive, ship building and machinery manufacturing industries. Consequently, flat products' share of total Chinese consumption of finished steel is forecast to grow from 42% in 2004 to 48% in 2012.

Figure 2.1: Chinese steel consumption by major product type, 2009



Data: CRU Strategies

China's rapid industrialisation has been the single most important influence on the global steel market in recent years. Between 2004 and 2007, the country's GDP grew by an average of 11.4% per annum, whilst IP soared by 16.8% per annum. This robust growth filtered down through the economy, boosting investment in public infrastructure (i.e. power generation/distribution, transport links and other public services), private infrastructure (i.e. residential and commercial property, etc.) and manufacturing, whilst also increasing the average income levels in the country. Consequently, the country's consumption of finished steel rose by 68% (in absolute terms) during this period, from 268 million tonnes in 2004 to 449 million tonnes in 2007*(Note)*.

Note: Whilst the figure for finished steel consumption represents a good indication of the magnitude of total steel consumption, the actual value is likely to be higher than that presented in Table 2.1, and thus is not directly comparable to production.

Table 2.1: Chinese steel market, million tonnes, 2004 – 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Market overview									
Consumption of finished steel(Note 1)	268	327	381	449	468	565	619	680	748
Production of crude steel	280	349	423	489	500	571	616	659	702
– of which EAF production	42	45	54	39	46	52	56	60	64
EAF % of total steel production	*14.9%*	*12.9%*	*12.8%*	*8.1%*	*9.1%*	*9.1%*	*9.1%*	*9.1%*	*9.1%*
Crude steel capacity	305	382	466	545	557	635	689	737	784
Apparent net trade balance(Note 2)	-21	-7	9	34	31	9	8	17	23
Scrap overview									
Production of EAF steel	42	45	54	39	46	52	56	60	64
Scrap rates in crude steel production (kg/tonne crude steel)	415	388	327	310	335	356	357	369	403
Chinese consumption of steel scrap	57	66	70	65	76	92	102	116	126
Recovery rate	42.7%	44.9%	47.4%	43.6%	36.3%	32.3%	41.9%	49.8%	48.6%

Data: CRU Strategies

Notes: (1) This is based on finished steel consumption including long products (wirerod, structurals, rebar, merchant bar), plate and flat products (hot rolled coil, cold rolled coil and coated sheet);

(2) Net trade is assumed to be crude steel production less finished steel consumption.

Even with the onset of the economic crisis late in 2008, China's GDP growth remained high in comparison to other countries, with quarterly GDP growth dipping to 6.1% year-on-year in the first quarter of 2009 at its lowest point. Swift support from the National Government, in the form of a massive stimulus package focused on infrastructure investment, kept Chinese GDP and IP growth at an average rate of 8.7% and 11.3% in 2009 respectively. And although finished steel consumption growth initially fell to 4.1% year-on-year during 2008, it quickly recovered to 20.9% year-on-year in 2009.

Similarly, Chinese crude steel production doubled from 280 million tonnes in 2004 to 571 million tonnes in 2009. In 2009 the country accounted for 47% of global output (up 21% since 2004). Around 91% of the country's crude steel production is produced through the BF/BOF route (compared to a 71% average around the world), up from 85% in 2004. The remainder is produced through the EAF production route. The recent growth in the share of BF/BOF of total steel production has not been as a result of falling EAF production. In fact, Chinese EAF production increased by 24.6%, in absolute terms between 2004 and 2009. Meanwhile, BF/BOF production grew by a faster rate during the corresponding period (117.2% per annum CAGR) as result of the following factors: firstly scale advantages, as a BF/BOF plant can produce up to 5 million tonnes per annum ("mpta") versus 1mtpa for an EAF plant; secondly the Chinese steel industry is presently focused on moving away from producing lower value added products towards higher value added products; lastly, a shortage of readily available feedstock for EAF mills in China (i.e. scrap steel) and high power costs have constrained EAF production, as EAF production is more energy intensive than BOF. These factors are expected to continue playing a role in limiting EAF production's growth relative to BF/BOF production growth, and as a consequence, EAF's share of total steel production is forecast to remain static at 9% to 2012.

China's consumption of finished steel is forecast to grow at a CAGR of 10.0% per annum between 2010 and 2012, whilst crude steel production is expected to grow by an estimated 6.7% CAGR during the same period.

2.1.2 The steel scrap market

Chinese crude steel production has surged in recent years, hitting 571 million tonnes in 2009. Much of this growth has, however, come about through the expansion of BF/BOF production, and whilst scrap is used in both the BF/BOF and EAF processes, consumption is much more intense in the latter. Despite this, the Chinese steel industry has in recent years become the single largest global consumer of steel scrap. In 2009, the country consumed an estimated 92 million tonnes of scrap in the production of steel, up nearly 60%, in absolute terms, from 2004. On a global perspective, the country now accounts for 22.0% of global consumption of steel scrap.

Although encouraging, this growth in scrap consumption has been outstripped by stronger growth in production of crude steel between 2004 and 2009 (i.e. scrap consumption grew by a CAGR of 9.8% per year versus a crude production growth of 15.3% CAGR). Chinese producers tend to consume less scrap per tonne of steel than their counterparts in the rest of the world, 356kg/tcs in China versus 532 kg/tcs in the world as a whole. This is because they substitute some of this requirement with pig iron, which is widely available in China.

Going forward, steel scrap consumption in China is forecast to rise to 126 million tonnes in 2012, at a rate of 11.2% per annum over 2010-2012. During this period, scrap consumption rates are expected to rise from 357 kg/t of steel in 2010 to 403 kg/t of steel. Whilst this will remain well below global levels (524kg/t of steel in 2012), the differential is expected to narrow by 2012.

2.1.3 The iron scrap market

Iron generally refers to pig iron (produced from iron ore, coke and coal in the blast furnace), and DRI (the reduction of iron ore by natural gas). Hot metal (pig iron) production totalled just over 900 million tonnes in 2009, 61% of which came from China. DRI/HBI production totalled 62.2 million tonnes in 2009, less than 1% of which came from China. However, only a small amount (<10%) of this iron (or hot metal) is actually cast into metal. Through the BOF, EAF and OH processes, most iron is transformed into liquid steel. The drivers of iron demand and production are therefore primarily the same as those for steel.

Iron scrap[1] is derived from iron that has been cast, it mostly comes from products containing iron that have reached the end of their useful life. Iron containing products are typically made from wrought iron or cast iron, and include items such as railings, pipes, cylinders in engines, cookware, chains and nails. Wrought iron is no longer produced on a significant commercial scale, but still represents a potential source of scrap. Cast iron is still produced, but in many applications it has been replaced by other materials, whose performance is superior, for example, steel and plastics. As a result of these factors, the pool of iron scrap available for recycling in the future is expected to reduce over time, whilst the supply of steel scrap will increase.

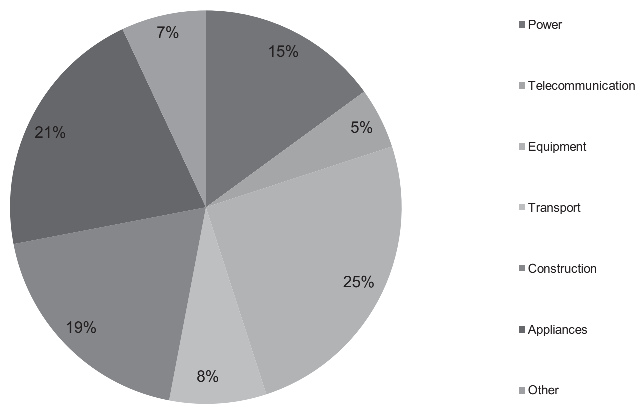
Obsolete iron scrap is primarily used to produce steel, and is consumed in BOF and EAF steel production, whose forecasts are included in this report. Iron scrap is also used in foundries, but CRU Strategies believes that foundry use of iron scrap represents only a small percentage of total world scrap consumption. There is a scarcity of data available to ascertain the exact magnitude of iron scrap consumption in foundries and also of cast iron production, overall though iron scrap is believed by CRU Strategies to be of relative insignificance in the ferrous value chain.

1 Steel and iron scrap together is classified as ferrous scrap.

2.2 The Chinese copper market

2.2.1 Copper consumption and production trends

Figure 2.2: Chinese refined copper demand by end-use, 2008



Data: CRU Strategies

The above analysis is an estimation of Chinese consumption of refined copper by end use in 2008. This analysis shows that electric/electrical related applications accounted for the largest proportion of consumption, with industrial electrical and equipment, power generation and utility, appliances and accessories, and electronics accounting for a combined 61% of consumption. Construction related applications represented the next largest end use sector for copper consumption.

China has accounted for the vast majority of the world's copper consumption growth in recent years. Over 2004 to 2009, Chinese consumption has soared by 71.7%, making it the world's single largest consumer of refined copper. In 2009, the country consumed an estimated 5.9 million tonnes of copper, which equates to 35.9% of global consumption. This figure is almost four times the consumption of the world's second biggest consumer, the USA.

The initial surge in refined copper consumption between 2004 and 2007 (i.e. 10.4% per annum CAGR) was the result of rapid growth in semis production and higher exports of copper containing goods. After a brief slowdown in 2008 with the onset of the financial crisis, refined copper consumption growth soared to 21% year-on-year in 2009, largely fostered by the positive impact of the government's various stimulus packages (and specifically the measures taken by the State Reserve Bureau, which kick-started the country's restocking programme), as well as a shortage of alternative raw materials for semis producers (i.e. scrap).

Looking ahead, China's refined consumption is forecast to continue growing at a robust rate of 6.9% per annum between 2010 and 2012, and by 2012 will amount to an estimated 7.8 million tonnes. This growth will be driven by a continued infrastructure spending, and an expected increase in semis production capacity, as local production seeks to replace semis imports.

Table 2.2: Chinese copper market, ’000 tonnes, 2004 – 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Market Overview									
Consumption of refined copper	3,458	3,810	3,998	4,655	4,887	5,937	6,814	7,306	7,792
Production of refined copper	2,195	2,619	2,995	3,489	3,755	4,019	4,530	5,208	5,708
Refined copper capacity	2,482	3,087	3,587	4,297	4,867	5,652	6,082	6,777	6,977
Net trade balance *(Note)*	1,076	1,082	584	1,370	1,362	3,109	2,554	2,893	3,105
Scrap Overview									
Consumption of scrap in the production of refined copper	620	760	999	1,200	1,125	1,253	1,332	1,530	1,851
Consumption of scrap in the production of semis	938	1,115	1,499	1,698	2,027	1,767	1,883	2,104	2,436
Total scrap consumption	1,558	1,875	2,498	2,898	3,152	3,020	3,215	3,634	4,287
Scrap consumption as a % of refined copper production	*28.2%*	*29.0%*	*33.4%*	*34.4%*	*30.0%*	*31.2%*	*29.4%*	*29.4%*	*32.4%*

Data: CRU Strategies
Note: Chinese Imports of refined copper, less exports

Whilst global production of refined copper declined in 2008 and 2009, in China refined copper production grew by an average of 7.3% year-on-year over the corresponding years. In 2009, the country’s production amounted to 4.0 million tonnes, up 83.1% in absolute terms from 2004, and consequently China now accounts for 22.4% of global production. The rapid expansion of smelter and refining capacity was not, however, matched by upstream production growth (i.e. concentrates), during this period, and hence smelter and refinery utilisation rates declined.

Chinese refined production is forecast to continue growing rapidly at 12.3% per annum until 2012, as further capacity additions and debottlenecking programmes are implemented along the copper value chain. By 2012, China’s production of refined copper is expected to be 5.7 million tonnes. Although some of this growth will be satisfied through higher scrap based production (see below), the growing imbalance between refined production and raw materials availability is likely to constrain growth potential.

2.2.2 The Copper scrap market

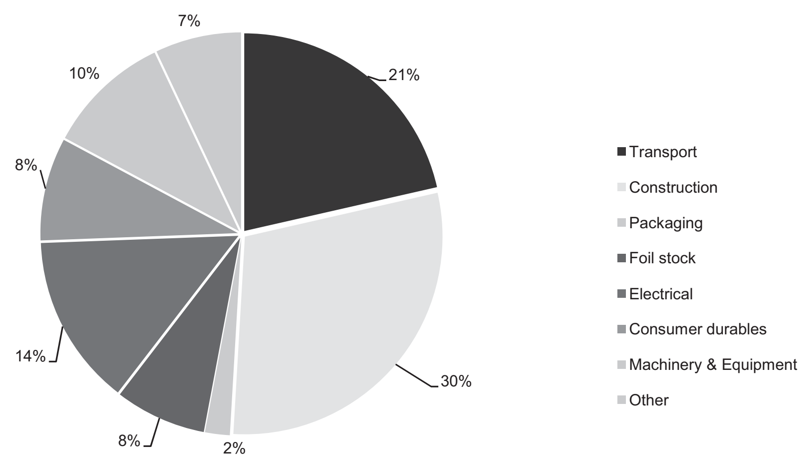
Continued tight availability of concentrates has contributed to the rapid rise in Chinese scrap consumption since 2004. Between 2004 and 2007, scrap consumption in refined copper production surged by a rate of 24.6% per annum, whilst scrap consumption growth in semis production was not far behind at 20.1% per annum. This growth slowed considerably during 2008 and 2009, due to a tightening in scrap availability in China. Indeed, the combination of lower global industrial production, falling copper prices, a tightening of the credit markets (thereby reducing working capital), and a crackdown by Chinese authorities on tax-evading copper scrap imports reduced the domestic availability of scrap during these two years. As a result, growth of copper scrap consumption in both refined copper production and semis production fell to a CAGR of just 2.2% and 2.0% respectively, between 2007 and 2009.

The short to medium term outlook for scrap consumption is, however, more positive, and is expected to be closer to 2008 levels. As most developed economies begin to emerge from the recession, their scrap generation should improve, improving their ability to supply China with scrap. Subsequently, CRU Strategies expects total copper scrap consumption (i.e. refined and semis) to increase by a CAGR of 15.5% between 2010 and 2015, reaching 4.3 million tonnes in 2012.

2.3 The Chinese aluminium market

2.3.1 Aluminium consumption and production trends

Figure 2.3: Chinese aluminium semis consumption by end- use, 2009



Data: CRU Strategies

In China, the construction sector was the most important end use sector for semis consumption, accounting for 30% of consumption in 2009. The transport sector has grown in significance from 14% in 2004 to 21% in 2009. This is on account of strong growth in vehicle production. CRU Strategies estimates that vehicle production (cars and commercial vehicles) rose by 163% between 2004 and 2009. Other important end uses for Chinese semis consumption include the electric/electricity sector (14% of 2009 Chinese semis consumption), machinery and equipment (10%), and consumer durables (8%).

Chinese aluminium consumption increased by 147.7% between 2004 and 2009*(Note)*, and unlike many other countries around the world, China maintained positive consumption growth throughout the recent downturn, increasing by estimated 10.2% and 10.5% year-on-year respectively in 2008 and 2009. The principal reason for this continued growth has been the government's active efforts to boost demand since late 2008 through various stimulus measures.

Even with the government's announcement, on the 11th February 2010, that it will gradually scale back its monetary stimulus measures over the coming months in order to cool down credit markets, it is expected to keep in place a number of measures aimed at stimulating consumer demand for the remainder of the year, including those relating to the sales of vehicles and appliances. This, plus a forecast acceleration in consumer spending growth should serve to support growth in China's aluminium consumption. CRU Strategies expects total aluminium consumption to grow by 13.7% year-on-year in 2010, reaching 20.9 million tonnes. CRU Strategies forecasts a CAGR of 10.3% per year in Chinese aluminium consumption growth between 2010 and 2012, which translates into absolute growth of 4.5 million tonnes of aluminium, bringing the country's total consumption figure to 25.4 million tonnes by the close of 2012.

Note: This includes primary and secondary consumption. The latter term refers to the consumption of secondary aluminium and therefore exclude the direct consumption of scrap in semis production.

Table 2.3: Chinese Aluminium Market, ’000 tonnes, 2004 – 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Market Overview									
Total metal requirement *(Note 1)*	7,688	9,347	11,954	15,589	17,154	19,020	21,634	23,752	26,341
Total consumption of primary and secondary aluminium	7,427	9,037	11,606	15,100	16,647	18,396	20,908	22,946	25,414
Production of primary aluminium	6,646	7,812	9,324	12,574	13,693	13,750	17,366	18,195	20,286
Primary aluminium capacity	8,983	10,400	11,569	14,009	16,637	19,590	21,993	24,549	27,115
Production of primary and secondary aluminium	8,157	9,850	12,462	15,751	17,772	18,234	21,966	23,307	25,934
Net trade balance *(Note 2)*	–729	–813	–856	–651	–1,125	162	–1,059	–362	–520
Scrap Overview									
Total metal requirement	7,688	9,347	11,954	15,589	17,154	19,020	21,634	23,752	26,341
Consumption of scrap in the production of aluminium	1,775	2,406	3,685	3,597	4,526	5,029	5,136	5,699	6,304
Consumption of scrap directly in the production of semis	313	370	460	607	691	818	949	1,064	1,202
Total scrap	2,088	2,775	4,145	4,204	5,217	5,846	6,085	6,762	7,506
Scrap consumption as a % of total metal requirement	27.2%	29.7%	34.7%	27.0%	30.4%	30.7%	28.1%	28.5%	28.5%

Data: CRU Strategies
Notes: (1) Total metal requirement is calculated as the total of semis production, adjusting for melt loss.
(2) Chinese Imports o f primary and secondary aluminium.

Total aluminium production (including primary and secondary) in China fell to 2.6% year-on-year, in response to production cutbacks implemented over Q4 2008 and the first half of 2009, especially amongst primary smelters. Of the 7.1 million tonnes of primary aluminium capacity taken off-stream globally between October 2008 and August 2009, approximately 53% was located in China. However by the end of 2009 many marginal producers were able to restart idled capacity, owing to the initial swift response by Chinese producers to deteriorating market conditions, the active support of the market by the government (including the metal stockpiling and power tariff discounts) and improvements in metal prices. CRU Strategies estimates that by the end of November 2009, 90% of the previously curtailed primary production in China had been restarted. This is expected to boost total aluminium production well beyond 22.0 million tonnes in 2010.

Total aluminium production is forecast to grow by 4.0 million tonnes between 2010 and 2012, growing by a CAGR of 8.7% per year. This strong robust growth will ensure that China resumes its status as a net exporter of aluminium through to 2012.

2.3.2 The aluminium scrap market

In recent years, China has become one of the world’s largest users of aluminium scrap: consuming a total of 5.8 million tonnes in 2009. This includes 5.0 million tonnes of scrap consumed in the secondary production process, with the balance being made up of scrap consumed in semis production.

China’s secondary aluminium industry has a relatively brief history, but it has developed very rapidly, especially after the 1990s. Official Chinese statistics show that secondary aluminium production was 2.7 million tonnes in 2008. However, CRU Strategies believes that this production level is seriously under estimated, based on market analysis and discussions with market participants. CRU Strategies estimates that secondary production reached 4.1 million tonnes in 2008.

Rapid growth in semis production has also driven the rise in scrap consumption. Over 2004 to 2009, Chinese semis production is estimated to have expanded at a CAGR of 22.9% per annum. Two of the fastest growing semi-fabricated product forms in China during this period have been extrusions and castings, which consume the greatest proportion of scrap.

Aluminium scrap consumption is forecast to increase by a CAGR of 11.1% per year between 2010 and 2012. Scrap as a proportion of the country's total metal requirement is forecast to remain high, whilst the availability of local scrap improves. Despite this, scrap consumption as a proportion of the total metal requirement is expected to fall from 30.7% in 2009 to 28.5% over 2009-12, as result of faster growth in primary consumption relative to scrap consumption.

3. THE GLOBAL SCRAP INDUSTRY

3.1 Overview of the global scrap industry

Table 3.1: The historical importance of scrap in metal markets *(Note)*

	2004	2005	2006	2007	2008	2009
Steel scrap consumption as a % of crude production	40.7%	39.5%	38.2%	36.8%	37.5%	34.5%
Copper scrap consumption as a % of refined production	12.7%	13.3%	14.2%	15.6%	15.3%	14.7%
Consumption of aluminium scrap as a % of total aluminium metal	27.6%	27.6%	27.9%	26.1%	27.3%	27.5%

Data: CRU Strategies

Note: In the absence of a total world aluminium figures (primary and secondary), the aluminium recycling rate is based on a % of consumption, and is therefore not strictly comparable to those of steel and copper which are based on a % of production

The importance of metal recovery from scrap is illustrated in the Table above by showing the proportion of total metal production accounted for by scrap consumption and/or the share of total metal consumption met by scrap.*(Note 1)* Despite not all being strictly comparable, these "recycling rates" show that scrap represents an important raw material for metals markets, especially the steel market. Scrap consumption accounts for around 35% of total world crude steel production in 2009. This rate has, however, decreased from 2004 levels, due to higher growth in BOF production (especially in China) vis-à-vis EAF production. Similarly, in the aluminium industry 26-28% total metal needs have been met by scrap over 2004 to 2009. In comparison the proportion of total refined copper consumption accounted for by scrap seems relatively low at 14.7% in 2009, however it has grown from since 2004. The lower importance of scrap in the copper market is due to scrap being used more heavily in the production of copper semis than in refined copper production. Semis production represented 68% of total scrap consumption in 2009.

Moreover, in absolute terms scrap consumption across the metals industry has shown growth – scrap consumption increased between 2004 and 2007 in the steel (+61 million tonnes), aluminium (+1.8 million tonnes) and copper (+2.2 million tonnes)*(Note 2)*.The downturn in 2008-09 reduced demand for metals and lowered scrap availability, and in turn lowered scrap consumption. However CRU Strategies is of the view that global scrap consumption will continue growing from 2010, meaning the demand for the three Recycled Metal Products that we sell is set to continue growing.

Notes:

(1) In the absence of a figure for world aluminium production (primary and secondary), it is not possible to show the share of aluminium production met by scrap. Equally the proportion of total consumption met by scrap is not presented because finished steel consumption does not represent total steel consumption.

(2) This figure includes scrap consumption in ferrous productor and refined production.

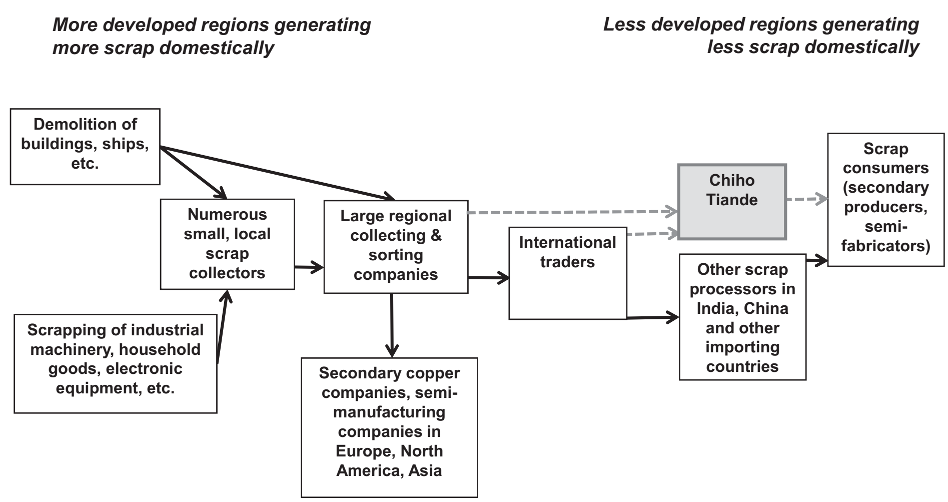
3.2 The global scrap market value chain

Scrap raw material may be broadly divided into the following two categories:

- New scrap (process scrap) is generated during industrial processes or the production of semi fabricated and final products containing the metal and metal alloys. This scrap can range from low grade residues to offcuts, misshapes and sub-standard products from the fabricating industry. In the ferrous scrap industry a distinction is made between types of new scrap: Home scrap is generated within the steel industry, whilst scrap generated in manufacturing industries in the process of making finished goods, e.g. cars and white goods, is known as prompt industrial scrap. In the copper and aluminium scrap industries the scrap generated by the fabricating industries, which is recycled in-house is known as runaround scrap.

- Old scrap (or end of life or post consumer scrap) is generated when a product comes to the end of its useful life and is discarded (or scrapped). In the ferrous scrap industry old scrap is more commonly referred to as obsolete scrap. There are many different types of old scrap containing varying amounts of contained copper. As a result of its varying quality, it is typically not as easily substituted for primary metal as new scrap. Examples of products form which old scrap is commonly derived include wire cables, electric motors and other electrical/consumer goods, beverage cans, old building material, and discarded cars.

Figure 3.1: Flowchart for mixed scrap recycling in China and our position in the value chain



Data: CRU Strategies

The global scrap value chain for old scrap is illustrated in the chart above. Old scrap originates from materials that have reached the end of their useable life in various end-use sectors, including construction, transport, and consumer durables. If suitable for recycling, the scrap will then pass through various layers of market participants to be collected, dismantled, sorted, graded, and processed for sale to scrap consumers, such as semis producers or secondary metal producers. For overseas sales an international merchant may be used arrange the transportation and sale of the scrap.

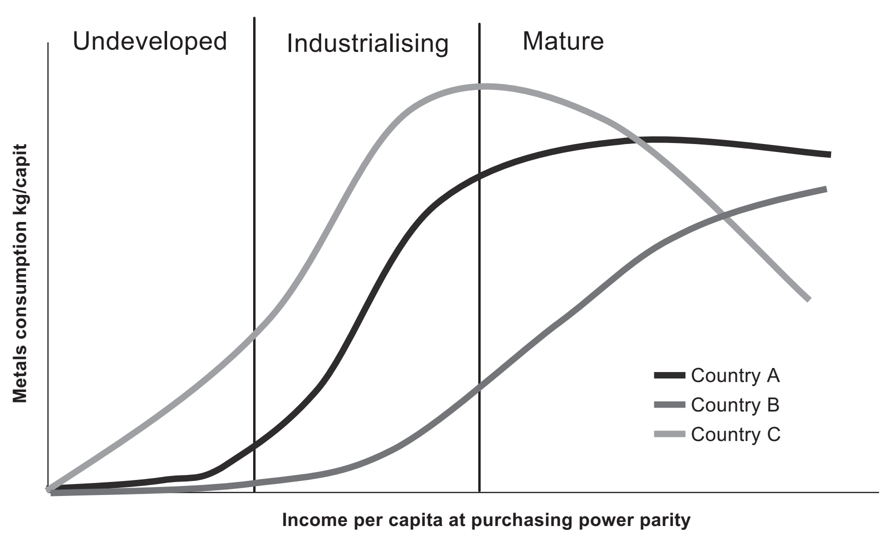
We are positioned at the processing stage – disassembling and sorting Mixed Metal Scrap into recyclable single metal scrap for sale to metals processors and producers. We procure our Mixed Metal Scrap from international traders which predominantly source from more developed regions such as Europe and North America.

3.3 Broad drivers of scrap supply and demand

The supply of scrap raw materials for a scrap processor such as our Group will depend on both the generation and availability of scrap. Not all scrap generated over a given period will become available in the marketplace. The key underlying factors that affect scrap generation and availability, both short term and long term are summarised below:

- **Past metals consumption and final consumption patterns** – Over the long term the pool of scrap available worldwide for recycling increases as a reflection of the long term increase in metals consumption. Metals consumption over the long term is linked to the stage of development of an economy. Metals demand per capita will typically increase sharply as nations move from being largely agrarian economies into an industrial phase with rising household incomes. However, it generally slows and even declines as nations become post-industrial, service-based economies that import manufactured goods. Common patterns in metals consumption are shown in Figure 3.2. Similarly, scrap generation increases as an economy develops. The "scrap fund" or "scrap pool" of products containing metals that can be recycled in the future grows over time as a country industrialises and matures. This reflects rising consumption of metals and final consumption patterns. Over time, changing patterns of end use demand, including technological advances, and a reduction in the average life expectancy of many consumer products, in line with rising disposable incomes, result in improved scrap availability, as products are recycled sooner. Moreover, environmental awareness and regulations take time to develop, meaning that more investment in recycling systems tends to be made by more developed countries.

Figure 3.2: Intensity of use of metals varies as countries reach different stages of the development cycle



Source: CRU Strategies
Note: These curves are for indicative purposes and reflect noted trends in data, and are not based on actual data for a given country.

- **Economic growth and industrial activity** – Economic growth results in the generation of scrap, both in terms of boosting local metals consumption and reducing product lifecycles, and also by determining local industrial activity. Construction and refurbishment activity in industrial sectors also affects the generation of old scrap from the replacement of fittings and from the demolition of old buildings. As a result of these factors, when consumer spending and industrial activity contracts during recessionary periods, such as during the recent downturn, scrap supply is tighter.

- **Movements in the commodity/metal price and price expectations** – During times of rising prices more scrap becomes available, as merchants can sell on their scrap at higher prices than they paid for it. Hoarded scrap also becomes available. Margins increase, making the collection economic again for marginal sources of scrap supply. On account of this, scrap availability improved with the rise of metals prices over 2004 to Q3 2008. Falling prices have the opposite effect, and scrap supply falls.

- **Environmental factors and collection systems** – Increasing environmental awareness is raising the scrap collection rate, i.e. the proportion of scrap generated that is recycled. Environmental regulations and the increased provision of recycling facilities in many countries, especially developed ones, are now ensuring that an increasing proportion of generated scrap is returned for recycling.

- **Drive to reduce energy consumption** – In the face of growing environmental awareness, and constraints on fuel and energy supplies, metals production via scrap has grown in attractiveness because it is typically less energy intensive and therefore conserves natural resources in the long term. For example, according to the European Aluminium Association, energy savings of up to 95% can be achieved per tonne of aluminium produced from scrap compared to primary aluminium.

- **Technological advances** – Changes in the technology used to produce metals or efficiency can affect the amount of scrap generated. For example, improvements at a plant could result in less runaround scrap being generated.

The drivers of scrap consumption are closely linked to the supply of scrap, in particular, the availability of scrap will determine how easily consumers can secure material and scrap prices, and in turn the economics of recovering metal from scrap versus primary material. Most important determinants of scrap consumption are: 1) the production of downstream products, especially semi-fabricated products*(Note 1)* and 2) metals production. Recycled metal is recovered and consumed – directly at semi-fabricators' mills, for example, depending on the production process concerned, at their own cast houses or directly in the production*(Note 2)*, or indirectly through the purchase of secondary metal, which is re-melted for the production of semi-fabricated products. The secondary metal can contain alloys that, to some buyers, such as castings producers, are of a greater value than primary metal as it will contain the correct alloy. End-use demand for the metal (both primary and secondary) will in turn influence production levels at semis and secondary producers.

Notes:

1. Please note that the steel industry less commonly refers to its flat and long products as semi-fabricated products, instead referring to them as foundries, but for ease of reference CRU Stategies includes these steel products under the term of semi-fabricated products or "semis".
2. The direct use of high grade scrap in semi-fabrication is commonly referred to as "direct melt".

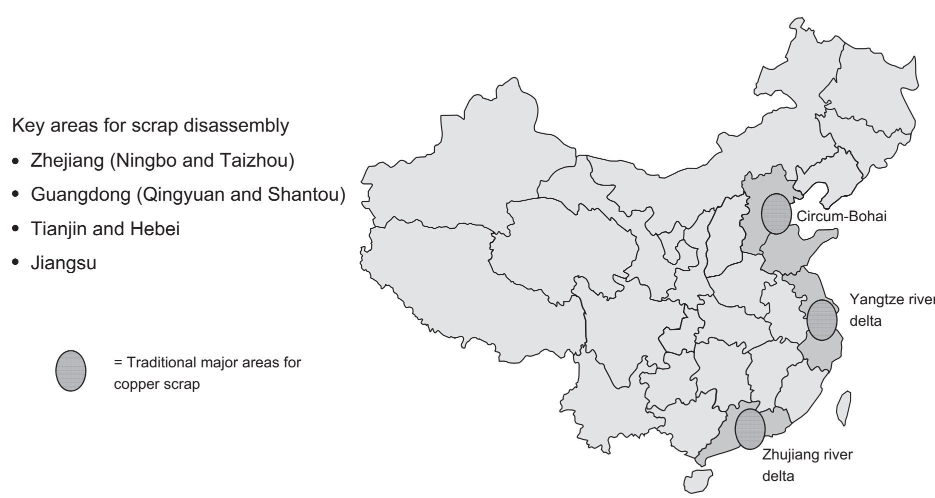
Other factors that can affect the recovery of metal from scrap materials include technological advances. For example, technological advances have increased the amount of metal recovered from scrap in recent decades. Likewise, for instance, a trend in growth towards the BOF route of crude steel production would reduce demand for scrap. The availability of other raw materials also influences scrap consumption, for example, copper scrap consumption has risen in recent years, in response partly to the persistent deficit in the concentrates market.

4. OVERVIEW OF THE CHINESE SCRAP MARKET

4.1 Background to the Chinese scrap industry

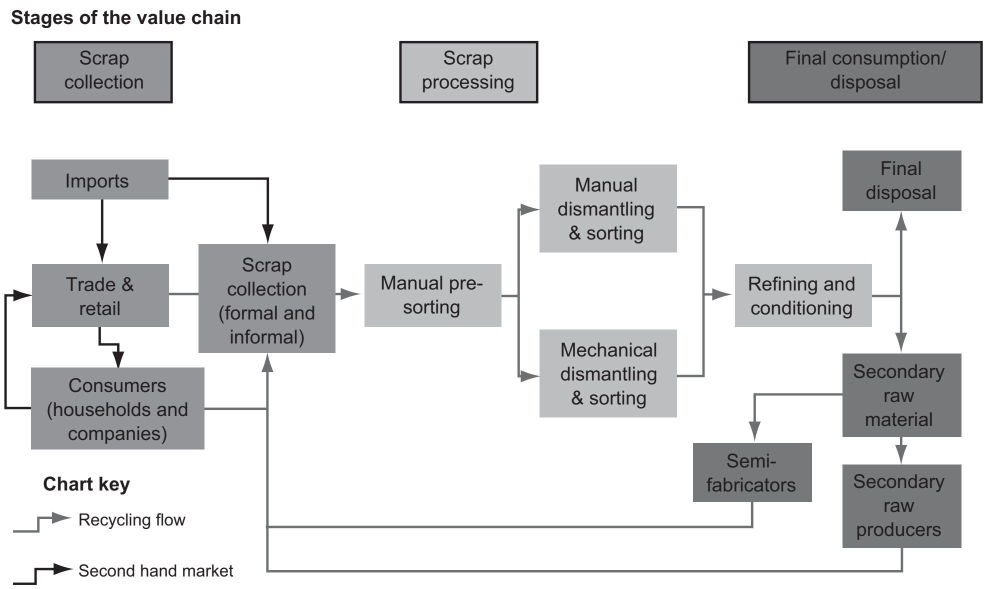
Historically, the Chinese scrap industry was formed of special agencies for scrap recycling, including state-owned and collective-run institutions. Recycling systems, including collecting, sorting, smelting, processing, etc., were well organised and were directed by the state. However, economic reforms gained momentum over the 1980s and 1990s and economic growth took off and the demand for raw materials grew, the recycling industry has opened up to other participants, including a growing number of private enterprises and individual operators. However many of these participants operate without a licence and the amount of state direction in the system diminished in importance, although more recently the Chinese government has been reasserting its influence.

Figure 4.1: Scrap processing has tended to favour coastal geographical locations



The scrap industry in China has tended to concentrate in coastal locations in order to reduce the freight costs for transporting imported scrap from the port to the processors. Large numbers of firms engaged in the pre-treatment of scrap and other associated market participants, such as secondary producers and smaller scale collectors, have tended to cluster around the deltas of the Yangtze and Zhujiang rivers in Jiangsu, Zhejiang and Guangdong provinces, as well as around the Circum Bohai bay area in Tianjin and Heibei.

Figure 4.2: Structure of the Chinese scrap system



The scrap system in China is similar to that of more developed regions discussed in Section 3, for example, it is a tiered system, but there are some key differences. Firstly, the second hand market plays a greater role in markets than in developed regions, hence products have a longer lifecycle, and this, combined with a poorer local classification system, results in a lower quality of local scrap. Secondly, the number of market participants is higher, with a larger number of smaller sized and 'informal' players. Faster local consumption growth has created market opportunities for new entrants, a situation assisted by lower barriers to entry in the form of lower regulatory requirements and compliance, and the lower cost of labour. There can also be more tiers of the value chain that scrap passes, for example, more levels of collectors, or alternatively integration between disassembly yards and a scrap consumer is less common than in other regions. Thirdly, much of the country's scrap requirement is imported. This is largely attributed to the relative infancy of the local scrap market, given the country's position on the economic development cycle, and is further complicated by the sheer scale of the country, which results in logistical issues. Fourthly, Chinese scrap processing has a lower degree of mechanisation, with manual disassembly more common.

4.2 Overview of sources of present and future scrap supply in China

Table 4.1: China's supply of ferrous, copper and aluminium scrap

		2004	2005	2006	2007	2008	2009	2010	2011	2012
Steel	**Unit**									
Domestic scrap generation	m tonnes	54.8	63.6	72.8	71.1	80.4	85.1	100.9	117.4	127.9
– of which home scrap	m tonnes	12.6	15.5	19.4	13.8	24.1	26.0	28.4	30.8	33.3
– of which prompt scrap	m tonnes	23.9	27.5	30.0	33.9	35.3	38.6	43.1	47.9	52.5
– of which obsolete scrap	m tonnes	18.2	20.6	23.4	23.3	21.0	20.5	29.4	38.7	42.1
Net imports	m tonnes	10.1	9.9	5.1	3.0	3.0	13.7	9.2	7.3	6.6
Total scrap supply	**m tonnes**	**64.9**	**73.6**	**77.9**	**74.0**	**83.5**	**98.8**	**110.1**	**124.7**	**134.5**
% change	% yoy		13.4%	5.9%	–4.9%	12.7%	18.4%	11.4%	13.3%	7.9%
Copper										
Domestic scrap availability	000 tonnes	109	173	424	457	811	1420	1520	1693	2071
– of which new scrap	000 tonnes	97	144	321	362	568	864	939	1021	1115
– of which old scrap	000 tonnes	12	28	103	95	242	556	581	672	956
Net imports (adjusted)*(Note)*	000 tonnes	1449	1853	2074	2441	2341	1629	1836	2203	2534
Total scrap supply	**000 tonnes**	**1558**	**2025**	**2498**	**2898**	**3152**	**3049**	**3356**	**3897**	**4605**
% change	% yoy		30%	23.3%	16.0%	8.7%	-3.2%	10.1%	16.1%	18.2%
Aluminium										
Domestic scrap generation	000 tonnes	1402	1703	1862	2281	2704	3082	3584	3818	4272
– of which new scrap	000 tonnes	717	827	1005	1252	1391	1586	1790	1958	2162
– of which old scrap	000 tonnes	685	876	857	1030	1313	1496	1794	1860	2110
Net imports (adjusted)*(Note)*	000 tonnes	1196	1686	2283	2091	2513	2765	2502	2944	3234
Total scrap supply	**000 tonnes**	**2598**	**3389**	**4145**	**4372**	**5217**	**5846**	**6085**	**6762**	**7506**
% change	% yoy		30.5%	22.3%	20.5%	19.3%	20.3%	4.1%	11.1%	11.0%

Data: CRU Strategies
Note: Net imports have been adjusted to reflect smuggling.

China's scrap pool is smaller and less mature than those of more developed countries, whilst the quality of its scrap is generally considered poorer. This is attributable to comparatively lower disposable incomes and in turn longer product lifecycles, plus a poorer classification and collection system. Whilst China is now a major global consumer of metal, decades ago its consumption was much lower, the pool or "scrap fund" of products containing steel, aluminium, copper, etc, in China which can be recycled in the future is therefore much smaller. Moreover, because China is a major net exporter of finished products, its pool of metal-containing materials is growing more slowly than its total metals consumption. Scrap recovered from Chinese exports of metal products arises in the countries where those materials are finally used. Moreover, China has a vast land and broad market distribution, so the logistics of the scrap supply chain are complex. However, the generation of domestic scrap is increasing, along with the availability of new process scrap, while China has now become a major importer of scrap to supplement its domestic supply.

The domestic generation of ferrous scrap in China satisfies a higher proportion of domestic scrap demand than in the copper and aluminium industries. In 2008 the domestically generated scrap accounted for 95% of domestic steel scrap supply. In 2009, however, it fell back to 81% as domestic availability fell and imports rose sharply. The majority of its scrap supply comes from prompt scrap (44% in 2008), following by home scrap (30%), and obsolete (26%). The domestic supply of ferrous scrap has gradually been growing, up to 83.5 million tonnes in 2008 from 64.9 million tonnes in 2004, driven by rapid growth in the country's steelmaking industry. In the period from 2009 to 2012, CRU Strategies forecasts that domestic scrap generation will rise from 98.8 million tonnes to 134.5 million tonnes, representing a CAGR of 10.7%.

The availability of copper scrap in China grew by a share 643% over 2004 to 2008, in the face of rising demand and higher prices. In late 2008 and 2009, the drop in global prices and demand for scrap led to reduced availability of scrap material for import by Chinese buyers. Furthermore, in the fourth quarter of 2008 several Chinese scrap traders defaulted on payments for imported shipments, thereby causing foreign suppliers to be wary of doing business with Chinese merchants and demanding cash upfront for shipments to China. This reduction in imports led to greater collection and availability of domestically generated scrap. Domestic availability is expected to continue increasing to reach 2.1 million tonnes in 2012, driven by increasing tonnages of old and new scrap and improvements in scrap collection systems, in response to increased environmental awareness and growing demand for scrap.

In the Chinese aluminium market domestic supplies of scrap are steadily increasing, with domestic generation rising by 17.9% per annum on average over 2004 to 2008. CRU Strategies believes that domestic generation is split relatively evenly between old and new scrap, with the latter accounting for 51.5% of domestic generation in 2009. Annual growth in Chinese semis production of a CAGR of 22.2% per annum between 2004 and 2008 has spurred on new scrap generation. The expansion of China's domestic supply of aluminium scrap moderated to growth of 13.9% year-on-year in 2009, with the moderation in national GDP growth. However, CRU Strategies is of the view that domestic aluminium scrap supply is expected to continue to grow over 2010 to 2012, with a more moderate CAGR of 9.2% per annum forecast, in line with more moderate semis production growth. Meanwhile, CRU Strategies believes that the development of a more co-ordinated domestic aluminium recycling industry should boost old scrap collection.

4.6 Imports versus domestic material

The limitations on China's domestic scrap generation and availability means that China has imported scrap in order to meet internal demand for scrap. CRU Strategies believes that illegal/unrecorded imports supply a significant amount of scrap to the Chinese market, although the importance of these informal imports will vary for different types of scrap. Some of the reasons for this are applicable to the global scrap trade, but some are more China specific. Under–reporting of scrap imports has also been noted in China due primarily to misclassification of shipments at Chinese ports of entry (including relating to shipments' nature, metal content and material breakdown). This situation is further aggravated by competition between Chinese ports and region and it is believed that some ports accept lower declarations on scrap values, which serves to support the local recycling industry.

5. MIXED METAL SCRAP PROCESSING AND THE POSITION OF OUR GROUP IN THE MARKET

5.1 Types of materials and metals contained in Mixed Metal Scrap

There is no official worldwide definition of Mixed Metal Scrap, it generally refers to scrap that contains both ferrous and non-ferrous elements in varying quantities and includes products such as electric motors, large household appliances such as refrigerators, electric wire etc. Although there are national classifications in some countries, they are not always widely used and/or not practical for international trade. As a consequence of the difficulties classifying Mixed Metal Scrap and scrap in general, at the international level nearly the entire scrap industry uses one set of standard definitions provided by the US Institute of Scrap Recycling Industries (ISRI). It also has commercial guidelines for mixed metals scrap to provide industry-wide quality standards for when this scrap is traded. The two important definitions for the Mixed Metal Scrap processed by our Group are:

- ELMO 'mixed electric motors' which consist of whole electric motors and/or dismantled electric motor parts that are primarily copper wound; and
- SHELMO 'shredded electric motors' also called 'shredder pickings' or 'meatballs' which consist of mixed copper-bearing material from ferrous shredding, comprised of motors without cases.

5.2 Methods of collection, processing, dismantling and sorting of Mixed Metal Scrap

Typically, recycling mined metal scrap consists of a variety of steps, including collecting, inspecting, sorting, stripping, shearing, cutting, shredding and baling. The precise steps involved depend on the types and condition of the raw material scrap that are sourced and whether the scrap can be recycled using equipment/machines or manual labour. For some materials, a number of these steps are required to produce recycled metal that meets the requirements of customers. For other materials, only a few of these steps are required.

For ferrous metal scrap, heavy machinery such as a shredder or hydraulic shear is used to break large pieces of metal scrap into smaller pieces. In the shredding process, the ferrous metal is separated from other materials by an automated electromagnetic drum. For non-ferrous metal scrap, lighter machinery, such as wire strippers to strip plastic coating off copper wires and balers are used to press the non-ferrous metal in bales for delivery to customers. Non-ferrous metal scrap is also recovered through the use of an eddy current separator in the shredding process, which separates non-ferrous metal from non-metal materials. The non-ferrous metal is then manually separated into copper, aluminium and other non-ferrous metal primarily based on colour and weight of the extracted metal pieces. This manual separation process requires minimal training.

The mechanical or automated processing of scrap typically involves a crane or forklift to feed the unprocessed mixed scrap such as household appliances, etc onto the conveyor belt. Metal scrap is compacted before feeding into the hammer mill for shredding. The hammers inside the shredder shear the metal scrap. Air cyclones remove rust, plastics, dirt, rubber and paint from the compressed scrap. Ferrous and non-ferrous metals are separated by means of an electromagnetic drum. Recycled scrap contains mainly iron, steel and non-ferrous metal. Non-ferrous metal are separated from non-metal materials by means of an eddy current separator. Recovered non-ferrous metal is then separated manually into copper, aluminium and other types of non-ferrous metal. Scrap non-ferrous metal such as copper wires and cables are processed using a wire stripper to strip off their plastic coating. The processed scrap non- ferrous metal is separately packed into bundles using a baler, stored, awaiting delivery to customers.

A recycler of Mixed Metal Scrap would typically dismantle and separate Mixed Metal Scrap such as a motor scrap and electric wire and cable scrap into Recycled Metal Products such as copper, iron and steel and aluminium scrap. The separation is mainly carried out manually assisted by simple tools and machineries. Such Recycled Metal Products are sold to consumers and manufacturers for further processing.

The recycling of Mixed Metal Scrap such as motors in China is distinguished from that undertaken by metal recycler in the USA and Europe, in that the latter countries mainly use heavy machineries such as large scale shredders to shred metals scrap into smaller pieces and magnetic machines and density machines to separate different type of metals. Those separation processes involve minimal labour and rely on heavy machineries. However, the separation by heavy machineries has its limitations. Certain types of Mixed Metal Scrap cannot be separated by machines. A typical example is motor scrap consisting of various types of metals assembled together. There is no heavy machinery available to dismantle a motor scrap into its pure metal constituents. Therefore, the separation of motor scrap requires labour to separate it into its recyclable metal constituents.

The labour costs in Western countries are generally much higher than those in China, and it is therefore not cost effective for a Western metals recycler to engage in this labour intensive separation process. Therefore, Mixed Metal Scrap which requires manual separation is generally shipped to China in large quantities. Mixed metal recycling companies in China can then dismantle manually the Mixed Metal Scrap into Recycled Metal Products such as copper, steel and aluminium scrap for sale.

The process adopted by our Group is to store all of the scrap together in stock, and to separate the products by size, using a simple machine. The divided scrap by size is sent to different workshops for further processing. The workers then dismantle the scrap by hand, or using the cutting machine, to cut the sides of the motors or other scrap, then take out the metals contained inside. The workers separate the products by different metals, sorting into copper, aluminium and steel scrap products. The larger sized motors are entirely dismantled by hand, since there are no machine that can process such motors.

5.3 CRU Strategies' Assessment of our Group

Our business comprises Mixed Metal Scrap recycling, reuse and processing which involves breaking-down, demolition and separation of Mixed Metal Scrap such as motor scrap and electric wires and cable scrap into their respective metal constituents, comprising mainly copper, iron and steel and aluminium. We have a special emphasis on importing motor scrap and other Mixed Metal Scrap for recycling and processing copper in view of the higher price this commodity commands. Our Mixed Metal Scrap recycling, reuse and processing business is operated through CT Metals in Taizhou and CT Metals (Ningbo) in Ningbo. As a share of total company revenue between 2007 and 2009, sales of copper accounted for 49%-61%, whilst sales of steel and iron scrap accounted for 15%-20%, and aluminium scrap sales amounted to 2-5%. The share of each metal scrap varies due to changes in prices and volumes and types of motors purchased. CRU Strategies believes that in terms of weight the average scrap motor processed by the company contains 80%-90% steel, 10-15% copper, and 3-5% aluminium.

Our Group also engage in the foundry business which involves the production and sale of aluminium-alloy ingots and copper rods and wires. Our foundry aluminium alloy-ingots business is operated through CT Foundry and CT Metals operates our foundry business of copper rods and wires, both based in Taizhou.

Based on the information from MEP, in terms of approved import volumes, we are a Mixed Metal Scrap recycler in China with the largest import volume of Mixed Metal Scrap used for recycling, reuse and processing over the 2005 to 2009 period. Our position is corroborated by the fact that our approved volumes were generally 63-93% higher than the second largest approved import quota company. Moreover, the actual combined volumes of Mixed Metal Scrap purchased by us during this period were higher than the second largest approved import quota. This means that no other Chinese company was permitted to import volumes of Mixed Metal Scrap over 2005 to 2009 in excess of those actually imported by us.

Table 5.1: Ten largest importer of Mixed Metal Scrap based on approved import volumes

	Company Name	Approved import volume *(tonnes)*
2009		
1	CT Metals and CT Metals (Ningbo)	440,000
2	Qingyuan Huaqing Recycling Resource Invest & Develop Co., Ltd	240,000
3	KLT Industrial (Zhejiang) Co., Ltd.	211,900
4	Taizhou Huixinda Metal Co., Ltd.	177,000
5	Qingyuan Yibao Material Recycling Corporation Ltd.	135,000
6	Ningbo Ji Cheung Renewable Metal Co Ltd	130,000
7	Global Metals	120,000
8	Ningbo Donghe Metal Co., Ltd.	120,000
9	Foshan Nanhai Zhongxin'ao Metallurgical Manufacturing Corporation Limited	110,000
10	Winmex Group Ltd. (Foshan)	100,000
2008		
1	CT Metals	350,000
2	Jiangsu Yongheng Steel Industrial Co Ltd	200,000
3	Qingyuan Huaqing Recycling Resource Invest & Develop Co., Ltd	180,000
4	KLT Industrial (Zhejiang) Co., Ltd.	171,500
5	Ningbo Ji Cheung Renewable Metal Co. Ltd	130,000
6	Ningbo Taiwa Recycling Resources Co. Ltd	120,000
7	Qingyuan Yibao Material Recycling Corporation Ltd.	120,000
8	Global Metals	100,000
9	Winmex Group Ltd. (Foshan)	100,000
10	Foshan Nanhai Zhongxin'ao Metallurgical Manufacturing Corporation Limited	95,000
2007		
1	CT Metals	265,000
2	Qingyuan Huaqing Recycling Resource Invest & Develop Co., Ltd	137,000
3	Ningbo Ji Cheung Renewable Metal Co. Ltd	126,000
4	KLT Industrial (Zhejiang) Co., Ltd.	101,000
5	Ningbo Taiwa Recycling Resources Co. Ltd	96,000
6	Changchun Dahua Metal Material Co., Ltd.	90,000
7	Zhejiang Haiwai Metal Industry Co., Ltd.	89,000
8	Qingyuan Yibao Material Recycling Corporation Ltd.	87,000
9	Foshan Nanhai Great Wall Metal Co., Ltd.	80,500
10	Qingdao Recycling Aluminium Alloy Branch of Aluminium Corporation of China Limited	80,000
2006		
1	CT Metals	240,000
2	Ningbo Ji Cheung Renewable Metal Co. Ltd	139,000
3	Taizhou Changqing Metal Co., Ltd.	97,000
4	KLT Industrial (Zhejiang) Co., Ltd.	94,000
5	Zhejiang Haiwai Metal Industry Co., Ltd.	89,000
6	Qingyuan Yibao Material Recycling Corporation Ltd.	84,000
7	Global Metals	70,000
8	Taizhou Dongxin Recycling Resources Processing Co., Ltd.	69,000
9	Taizhou Weilong Metal Co., Ltd.	67,000
10	Taizhou Dafengye Metal Co., Ltd.	59,500

	Company Name	Approved import volume *(tonnes)*
2005		
1	CT Metals	219,800
2	Conghua Yuxin Metal Products Co., Ltd.	135,000
3	Zhejiang Haiwai Metal Industry Co., Ltd.	100,000
4	Ningbo Ji Cheung Renewable Metal Co Ltd	100,000
5	Fujian Ningde Baoyi Metal Products Co.,Ltd.	96,000
6	Fujian Quantong Resources Industrial Zone Co., Ltd.	90,000
7	Qingyuan Yibao Material Recycling Corporation Ltd.	87,500
8	Wuzhou Li'an Resources Recycling Co., Ltd.	82,000
9	Fujian Mindong Jiecheng Metal Products Co., Ltd.	80,000
10	Beijing Zhaoling Environmental Technology Development Resources Recycling Factory	80,000

Data: Environmental Bureau of China; CRU Strategies and China National Resources Recycling Association

Note 1: Refers to mixed metal scrap trade codes only.

Note 2: The above figures include those instances whereby companies are allowed to import Mixed Metal Scrap through third parties for processing.

Theoretically, a Chinese scrap processor could process Mixed Metal Scrap based on domestically generated motors and other types of Mixed Metal Scrap. However, CRU Strategies believes that at present it is difficult to source sufficient quantities of Mixed Metal Scrap domestically, due to the existing limitations on China's domestic scrap generation. In particular, many products containing motors in China may be exported either in new products or second-hand products. Moreover, local motor scrap is believed to be of an unreliable and poor quality which makes processing Mixed Metal Scrap from domestic sources more uneconomic relative to importing. In the longer term (beyond the forecast period to 2012), however, its economics should improve.

As China's largest importer of Mixed Metal Scrap for recycling, reuse and processing, Chiho Tiande is believed to be a significant Mixed Metal Scrap recycler in China. Moreover, CRU Strategies also conducted interviews with suppliers, trade associations and the Environmental Bureau, all of which confirmed that CT Metals is a significant Mixed Metal Scrap recycler in China.