COPPER MARKET REPORT

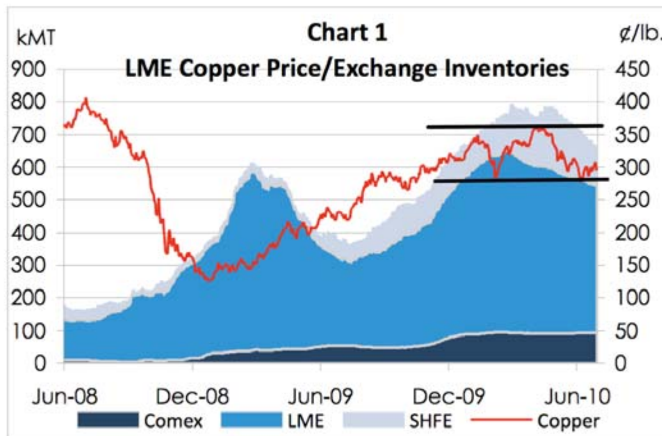
H1 2010



Prices Up But Volatile

A review of global market performance in H1 2010 shows that copper prices were driven more by developments in the global economy than by physical market fundamentals.

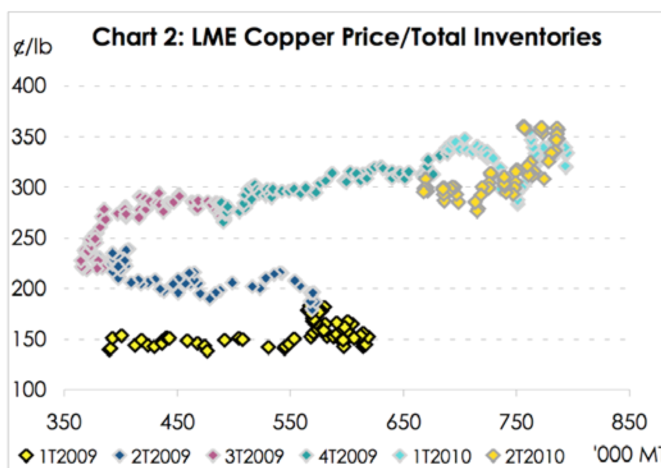
Copper traded in the London Metal Exchange (LME) in H1 averaged 323.417 ¢/lb., up significantly (76.2%) from both a year earlier and the previous six-month term (14.3%). Gains in average and daily value show that the effects of the crisis of H2 2008 are now all but water under the bridge.



That said, no clear price trend was evident (see Chart 1). Prices seem to have levelled off at a higher level but with more volatility than in H2 2009, ranging from 276 to 360 ¢/lb. (21.7 ¢/lb. standard deviation). This performance flowed from a range of economic, financial and physical market factors that led to three distinct price periods.

The first of these started in late January as copper prices dipped following a Chinese government announcement that measures designed to cool down the economy would be taken.

Improving expectations about the pace of global recovery helped markets rebound in the second period, though some residual instability lingered. Instability came back with a vengeance in early April as the Greek crisis spread through the region, impacting financial market stability and expectations. The euro's significant tumble over the U.S. dollar pressured base metal prices up and increased risk aversion, creating more volatility.



The third period started in late June as prices began to hesitantly pick up. In spite of the poor global outlook, the copper industry continued to stand on solid fundamentals as evidenced in the gradual decline of exchange inventories in H2.

The key role played by economic and financial factors and future expectations was plain to see in the positive correlation between copper prices and inventory levels (see Chart 2). This is the complete opposite of the negative correlation theory would have us expect but which is in fact common in real life.

Prices Found Support in Low Inventories, Mainly in Asia

Overall exchange inventories at the close of h1 were down 20 kMT over the close of 2009, closing at 668 kMT (see Table 1), a volume similar to mid-December 2009.

While LME inventories lost 51 kMT, the Shanghai Futures Exchange (SHFE) gained 28 kMT and Comex rose 3 kMT. In April SHFE inventories rose to an all-time record of 189 kMT, then dropped to 124 kMT late in H1. SHFE gains through April resulted from strong imports and high bonded warehouse inventories. Subsequent inventory declines appear to be the result of strong apparent demand.

Table 1: Metal Exchange Inventories

	H2 2009	H1 2010	± H2 2009 - H1 2010		± H1 2009/2010	
	'000 MT		'000 MT	%	'000 MT	%
LME	502	451	-51	-10	185	70
COMEX	90	93	3	3	38	70
SHFE (1)	95	124	28	30	68	121
Total	**687**	**668**	**-20**	**-3**	**291**	**77**

Source: Cochilco, based on Exchange reports.
N.B.: Inventories at the end of each term. All figures rounded.
(1) As of last Thursday of term.

Across regions, outflows were led by Asia (24 kMT) and Europe (22 kMT). The U.S. reported inflows of 26 kMT. These trends show that most activity is taking place in Asia, driven by strong Chinese performance, and Europe, in response to both a rebounding manufacturing sector and the vagaries of inventory cycles -an important albeit fading driver of consumption growth.

Chinese Demand Strong Despite Steps To Cool Down The Economy

Although the year was off to a strong start in anticipation of a rapid recovery, optimism waned after a few months. At present there is consensus that a fuller recovery will take time, which helps explain the increased volatility noted in Q2. Most fears center around a backslide in the U.S., whose contracting real estate and construction industries, along with employment, remain under close watch.

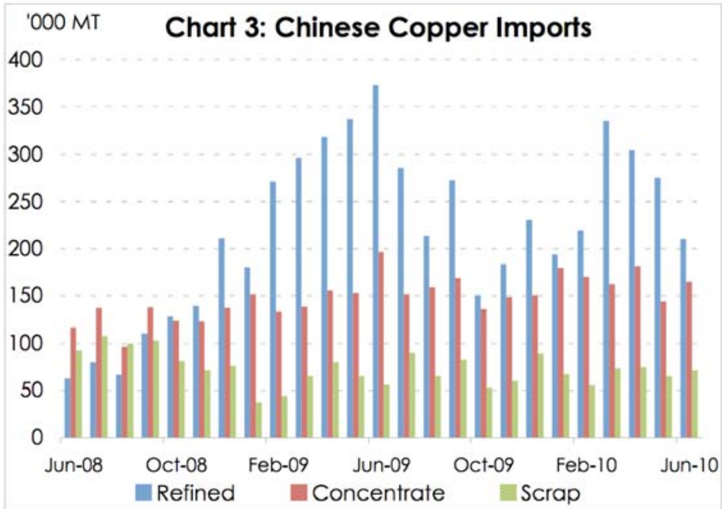
Adding to the mix was the sovereign debt crisis in Europe, which brought to the fore structural currency weaknesses that helped compound the crisis. The issues underlying fiscal deficits in these economies also caused additional financial market volatility. That said, the leading driver of expected demand for copper is a slowdown in some sectors of the Chinese economy. It should be noted that China alone buys 35 to 40 percent of the world copper output.

Government measures designed to keep real estate prices in check and burst a perceived bubble portend continued sluggishness in China through the remainder of the year. Since the Chinese government's sustainable growth target stands at 9 percent, the 10.3 percent growth figure chalked up in Q2 leaves enough room to continue cooling down the economy in H2.

Efforts to contain real estate speculation –June prices rose 11.4 percent from a year earlier– and a tight money policy that raised bank reserve requirements to three years- have resulted in a slowdown, albeit one starting from a fairly high level. These measures took the Chinese stock index down nearly 28 percent, turning it into one of the world's worst-performing.

The PMI Index, which anticipates the health and heading of industrial activity, illustrates the effect of these measures. The June Index stood at a higher-than-expected 52.1 points, warning about a possible revision to industrial production estimates. Accounting for these results were measures such as restricting home purchases to one per family effective May, freezing capital increases at real estate firms, and direct government control of mortgages, to name a few. Efforts by the Chinese government to contain mortgage expansion caused a slight downward revision in growth estimates. The *Consensus Forecast* average estimations for 2010 dropped from 10.3 percent in May to 10.2 percent in June. Projections for 2011 fell from 9.2 to 9 percent.

Last June our global demand estimates suggested a 240 kMT drop in 2010, explained by lower Chinese demand (down 909 kMT), partially offset by increases elsewhere (669 kMT). Global demand data for Q1 2010 -the most recent available- remains in line with projections for the world minus China. Yet, apparent demand figures for China through June surprisingly point to chances of it exceeding initial estimates by up to 650 kMT as a result of higher imports and production in H1.

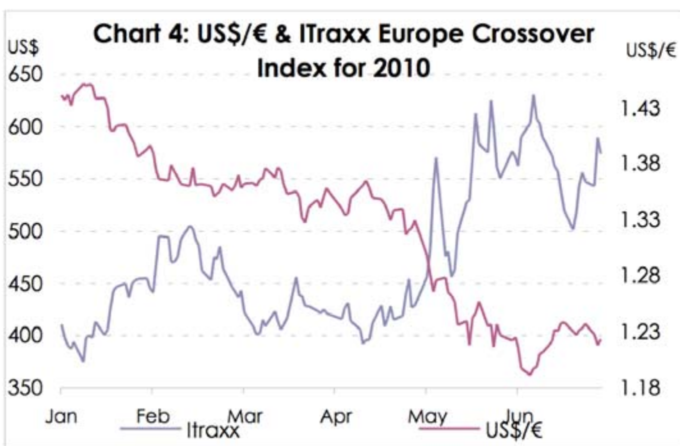


Chinese customs reports (see Chart 3) show net annual imports down 3.5 percent in June. Refined copper purchases declined 13.4 percent, partially offset by increases in net concentrate and scrap (up 7.9% and 16.8%, respectively). Net refined imports in April-June stand above expectations and the historical average and should be kept high by the recent reopening of the LME/SHFE arbitrage window.

Cooling steps notwithstanding, China's potential to drive demand remains intact. On July 5 the National Development and Reform Commission unveiled 23 infrastructure projects targeting China's less developed western regions. The US$100-billion plan (equivalent to one third of all infrastructure spending in 2000-2009) includes roads, railroads, power grids and nuclear plants. The plan comes on the heels of government incentives to home appliance and automobile purchases that further hint at the future of Chinese demand for copper.

Financial Factors Key in Explaining Volatility

Copper prices in H1 were under the strong influence of financial market factors. Chief among these was fiscal trouble in the Eurozone, which started in Greece in mid-January and spread through the region as Spain, Portugal and Germany took steps to address the deficit.

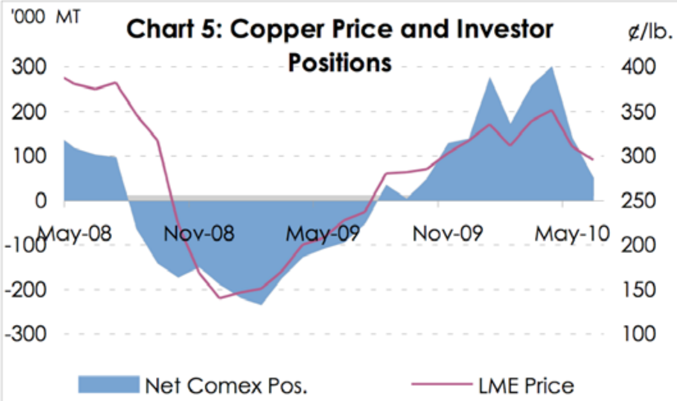


This translated into the U.S. dollar gaining against the euro due to its safe haven role (gains levelled off, then reverted after peaking at $1.19/€1 on June 7) and into the increased financial risk noted in the 5-year Itraxx Europe Crossover Index[1] (see Chart 4).

[1] A reliable indicator of risk aversion in Europe. It measures default risk based on 5-year loan default swaps for 50 European firms rated below investment grade. It is often used in derivatives to transfer credit risk.

The correlation between the US$/€ exchange rate and the Itraxx Europe Index in H1 stood at a conspicuous -0,85, identical to the correlation with copper and a clear example of the strong negative correlation existing between these indicators. In other words, the U.S. dollar was a major factor in copper prices staying down and volatile from the moment this currency began to gather strength.

China's decision to float the renminbi had mixed effects on the copper market. It may cut into export competitiveness and reduce demand for copper (unlikely, since most of it comes from infrastructure). Since prices are denominated in U.S. dollars, *ceteris paribus,* the resulting currency translation effect should cause an immediate rise in the price of copper (most likely). While the Chinese government has yet to furnish details, the effect is expected to be gradual and circumscribed.



Investors consistently disposed of long positions in H1, bringing them back to the levels of August 2009 (see Chart 5). The strong, direct relationship between investor sentiment and copper prices led in H1 to a 0.98 correlation between LME copper prices and net investor positions (managed money, per the CFTC's definition).

Copper Supply Evolved as Expected, Market Unaffected

Our June report estimated world mine production after expected losses at 15,949 kMTF for 2010 and 16,304 kMTF for 2011. Other than minor incidents, no significant changes have been reported since. The effect of these developments is noted as estimated production losses.

As such, our mine copper production estimates for Chile and the world in 2010 and 2011 remain unchanged. As stated in June, Chilean mine copper production before expected losses is expected to rise to 5,743 kMTF (6.5%) in 2010 and to 5,868 kMTF (2.2%) in 2011. Based on history, losses should not exceed 150 kMTF.

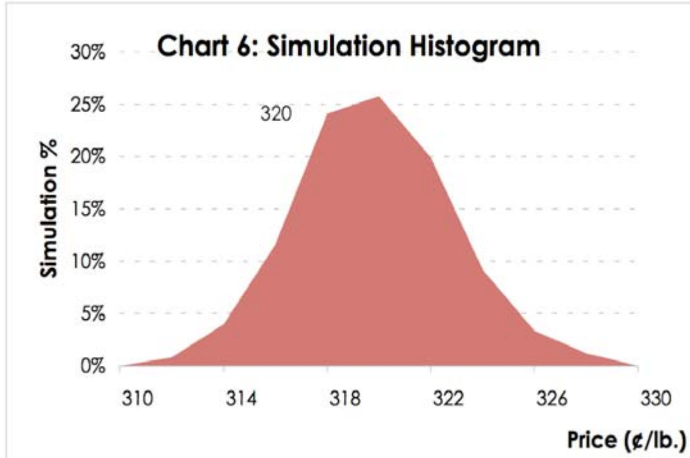
Table 2 compares Chilean mine production in January-May 2009 and 2010. These figures show that production recovery at Codelco Norte and expansion at Collahuasi and Los Pelambres continue and that Escondida is on track to recovering. The Candelaria recovery should be reflected in H2, as should the Andina expansion once startup work is finalized. As reflected in the output to date, this work has impacted production negatively in recent months. These figures also show that the labor strike at Codelco Norte early in the year and the mega-earthquake that hit central and southern Chile in February had no discernible effect on production in the early part of the year. That said, Collahuasi reported that the subcontractor dispute last May caused 11.3 kMTF in losses.

Table 2: Chilean Mine Copper Production

	2009		January-May		
kMT	**Total**	**±**	**2009**	**2010**	**±**
Codelco Norte	875	119	312	365	53
Salvador	66	23	25	29	5
Andina	210	-10	91	61	-30
El Teniente	404	23	153	155	2
Minera Gaby	148	80	58	49	-9
Codelco	1,702	236	639	660	21
Escondida	1,104	-150	411	416	5
Collahuasi	536	72	206	222	16
Los Pelambres	323	-29	137	158	21
Anglo American Sur	277	-7	108	109	1
El Abra	164	-2	66	65	-2
Candelaria	134	-39	59	44	-16
Anglo American Norte	152	3	63	55	-8
Spence	162	3	78	75	-3
Other (I)	836	-25	346	349	3
Chile	**5,390**	**62**	**2,113**	**2,152**	**39**

Source: Cochilco, based on company reports.
N.B.: All figures rounded. "Other" includes operations under 150 kMTF in 2008. (I) Interim.

Cochilco Price Projection Holds



As noted, the physical fundamentals –supply and demand– show no significant change over our June report.

This suggests that the relative supply at the close of 2010 should surpass 2009 due to the combined effect of increased primary and secondary supply and decreased apparent Chinese demand. Estimates for 2011 point to a shortfall and a subsequent drop of relative inventories to levels reflecting a tighter copper market.

Based on this context, price projections for 2010 and 2011 remain at 320 ¢/lb. and 330 ¢/lb., respectively. Average price in 2010 will not fall below US$3/lb. even if the European crisis should trigger an extremely adverse financial scenario. Our base scenario simulation[2] continues to show a US$3.2/lb. average for the year (see Chart 6).

Projection risks are contingent on key factors shifting from the base scenario, notably a European currency that has ceased to slide but remains volatile and risk aversion being slow to return to pre-crisis levels. Yet, while recent leading industrial activity indicators may be pointing to sluggish growth and deteriorating physical fundamentals, China remains capable of tightening the market and of helping close 2010 with apparent demand about 500 kMT above expectations.

Other Relevant Markets

In H1 the **Global Steel Price Index** (SPI) averaged 182.1 points, up 29 percent year-on-year and noticeably better than the 146.8-point average, 130-point low and 150-point high in 2009. That said, last June (latest available) the SPI lost nearly 5 percent to the global downturn.

Molybdenum averaged $15.9/lb. in H1, up 79 percent from a year earlier, which compares well to the $10.9/lb. average for 2009. In recent months, however, prices have been replicating the sliding trend in steel prices, which further supports our previous projection of an average price of $14 to $18/lb.

In H1 2010 **gold prices** averaged $1,152.6/oz. (London Initial), up 25.9 percent year-on-year. **Silver** averaged $17.62/oz. (London Spot), up 33.8 percent from a year earlier. Our price projections for 2010 hold for both gold ($1,085 to $1,180/oz.) and silver ($17.4 to $18.9/oz.).

Supply contract TC/RC for H1 stood at 46.5/4.65, 38 percent in early negotiations, below a year before and 26 percent below the average for 2009. The downbeat prospects foreseen by the smelting industry early in the year have materialized in the performance of **spot contract fees**, which averaged 6.2/0.62 in H1 and, despite impending midyear negotiations, dropped to negative values in some late H1 transactions. This confirms the downtrend in supply contract TC/RC, which should hover between 38/3.8 and 40/4 in H2 2010.

[2] Consisting of 1,000 non-deterministic iterations with restrictions on daily variability and closing quarterly values, based on the historical distribution of price variations, expected physical fundamentals trends, and technical analysis results. Base scenario assumes moderate Q3 and Q4 price increases over the close of June.

A Cochilco Research and Policy Planning Department Publication Prepared By

Paulina Ávila
Joaquín Jara

Market Analysis Coordinator

Juan Cristóbal Ciudad

Director, Research and Policy Planning Department

Ana Zúñiga

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