

Where next for the global steel industry?

March 2006

Introduction

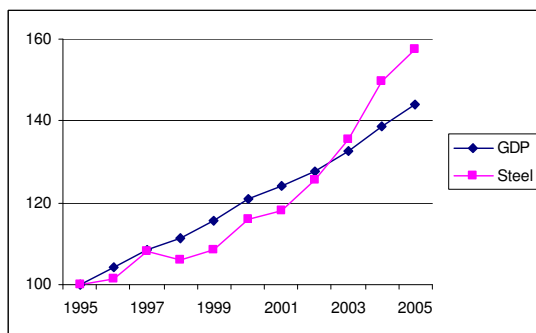
Since mid-2003 the steel market has been buoyant and prices have been high. This in turn has raised profitability throughout the industry –and for some companies these are the first real profits made for several years.

Will the boom continue? As always, there are a variety of opinions, with some saying that this is “just another cycle” whilst others insisting that it is a “step-change” in the market that will benefit the industry for many years ahead. We tend towards the former view and this review describes why we believe that the 2004/05 “season” will eventually be seen as an anomaly, rather than a new trend.

Trends in demand

Throughout the 1990’s the steel intensity of the world economy drifted downwards. In nearly every year GDP growth exceeded that of the demand for steel. This changed at the turn of the century and for the last five years the reverse position has held.

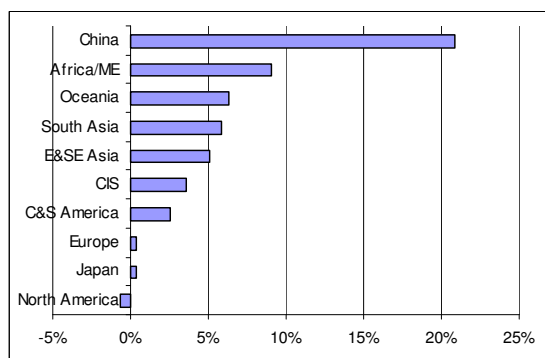
Figure 1: GDP and steel demand, 1995 - 2005



Source: IISI, IMF

In absolute terms there has also been a change in the pace of growth. From 1995 to 2000 demand increased by about 20Mt per year; but from 2000 to 2005 it increased by over 50Mt per year. The big change of course was China, but most of the so-called developing world has seen annual growth rates of 10% or more in overall consumption.

Figure 2: Steel demand growth by region, 2000 -2005



The reason, of course, lies in the level of investment being experienced throughout the world. The last few years have seen low real interest rates and globalisation has encouraged industrial investment in “low-cost” regions which in turn adds to the demand for infrastructure and housing.

Something like 50% of all steel is used directly in the construction sector but when one includes new plant, transport equipment (lorries, railway rolling stock and ships), oil and gas pipelines, and other capital goods, around 80% of steel demand is actually driven by investment¹.

We should not be surprised therefore that steel demand has increased so rapidly in recent years. Investment is “lumpy”, however, and rather more volatile than consumption. The dependence of the steel industry upon investment is one of the reasons for its highly cyclical behaviour.

In contrast to the newly emerging markets demand has been relatively stagnant in North America, much of Europe and Japan. Not only do these regions have lower rates of GDP growth, but much of it is in services rather than manufacturing or construction. There is a constant drift of manufacturing towards low cost regions which in turn keeps the level of investment at a lower proportion of GDP.

The consensus view regarding the future economic outlook for the next few years seems to be a continuation of growth in the developing regions of the world. However it is also widely recognised that the situation is much more uncertain, with major questions remaining about the US deficits and hence the value of the dollar, trade wars and possible protectionism, the oil price, and security concerns in the Middle East and elsewhere. All these risks are downside ones and steel demand growth will almost certainly moderate.

Steel prices

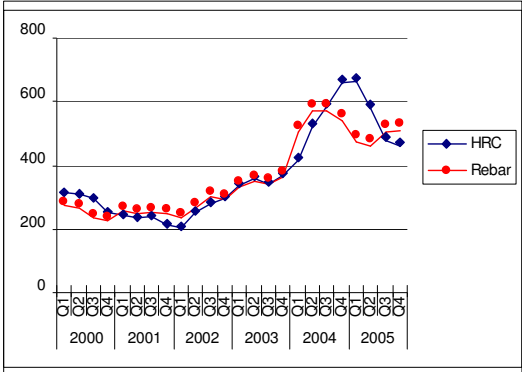
Not surprisingly, given the strong picture of demand, steel prices have risen dramatically over the last few years. The story is rather similar – throughout the 1990’s prices fell in real terms and there appeared to be little that would change this. Companies planned for a “cost-price” squeeze by getting more productivity from their assets and from their labour force. Over the past few years, however, prices have consistently out-paced inflation.

They peaked at around the start of 2005 in most regions but even after the fall that has been seen during 2005, end-year prices were still 50% higher than those obtained in the period 2000 – 2002. Much of this can be explained by tighter supply and improved capacity utilisation but, as we shall see, there is another component: the rise in operating costs, particularly relating to raw materials and energy.

Long products prices have not been as volatile as those for flat products. At first sight this is surprising as this sector of the industry is less consolidated and has many small, single-plant producers. On the other hand both the structure of costs (a greater proportion of these are variable) and the dominant technology (EAF’s rather than integrated plants) allow producers to be more flexible with their output. They can more quickly adapt to changes in demand.

There is also a growing trend towards linking prices with the cost of scrap. In a rising market this has been helpful to steel makers but it does run the danger of making long products producers no more than toll-rollers and it is debatable whether this pricing mechanism will survive for long.

Figure 3: Hot rolled coil prices, 2000 – 2005 (US\$/tonne)



Source: SBB estimates of European prices

¹ Steel used for “consumption” as defined in the national accounts consists only of privately purchased passenger cars, packaging, household appliances, and a wide range of small household goods.

What will happen to prices over the next three years? Apart from sentiment and the level of stocks perceived to be in the system² there are two “fundamentals” affecting steel prices: the supply and demand balance and operating costs.

The supply and demand balance

Consider the following simple calculation, based on broad consensus estimates. Assume that average steel demand grows in the following way over the next three years:

- China: 12% per year
- Europe, North America and Japan: 1% per year
- The rest of the world: 4% per year

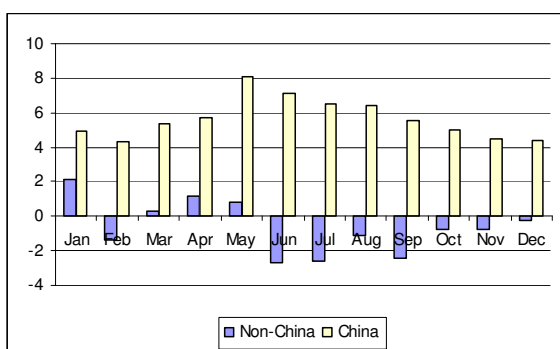
This implies 40-50Mt more finished steel each year in China and 15-20Mt in the rest of the world.

What about supply? Estimating new supply capacity is more difficult than it seems. Indeed it is often over- or under-estimated for political or commercial reasons. As we look further ahead, reported contracts and plans become less and less certain. Furthermore there is a surprising amount of “additional” capacity that can be found in existing works by de-bottle-necking or improved operating practise. What is undoubtedly true is that the industry always seems to over-invest at the peak of the cycle.

During 2005, capacity in China increased by around 70Mt but that rate of increase will decline in future years – perhaps to 40-50Mt. The 2005 capacity expansions were matched by increased production but this was a result of previous expansion – it takes time for a steel company to build up production in a new plant. There is

currently an overhang of production capacity, with stocks building up and prices falling. For the rest of the world, we estimate that capacity will expand by around 20-25Mt per year. In both China and elsewhere there are reasons to think that average capacity utilisation will fall in 2006 and possibly 2007 as well. The big question for non-Chinese companies, of course, is whether there will be significant exports “leaking” from the country. The Government policy is that this should not happen and that older, less economic plant will be retired instead. Experience elsewhere, however, shows that this is always a rather dangerous assumption. Due to the social implications and the capital intensive nature of the industry, it has been found more difficult to close capacity than to let plants limp on in the hope that better market conditions will arise. It is not of course over-capacity per se that impacts on steel prices but rather over-production. The industry is not very consolidated and, in the past, steel companies have not been very disciplined in restricting output to match the likely level of real demand. This may be changing. In the summer of 2005, it was clear that output was being fairly closely managed. It remains uncertain, however, whether this will remain the case.

Figure 4: Monthly increase (decrease) in crude steel production, 2005 compared to 2004 (Mt) Non-China China



Source: IISI

Operating costs

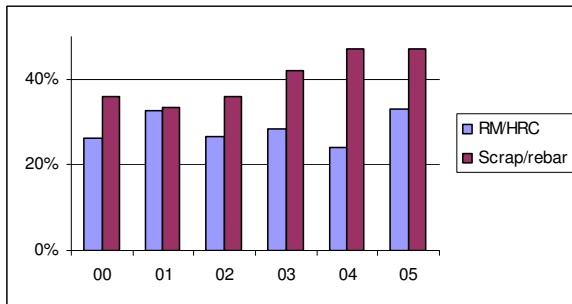
On the cost side, there have been two particular areas of concern for steel companies: the 2005 price settlement for raw materials (which saw the price of ore increase by 70%, and for coal by 120%), and the cost of other energy inputs, principally electricity and gas.

²Market perceptions have a surprisingly important role on short term spot prices, though they have less impact on contract prices.

Coking coals prices perhaps represent a bubble in that the premium, over and above steam coal widened significantly in 2005. This premium will revert to more normal levels soon, but coal prices will not fall much until, or if, oil prices do the same.

The increase in the ore price reflected two things. Firstly, iron ore producers were genuinely short of capacity and needed to invest in new mines and infrastructure. Secondly, there was an element of “catch-up” involved as steel prices had moved higher in percentage terms than those related to ore. It is important to note, however, that the rises were not due to lack of profits - like steel, these were at record levels.

Figure 5: Typical ratios of raw materials costs and finished products prices (%)



Source: GSC estimates. They take into account average yields and freight costs.

At the time of writing, ore prices for 2006 have not been fixed. Both increases and decreases are being predicted but it is unlikely that the net change will be very large. Prices are always “stickier” downwards but when looking further ahead to 2007/08, we believe that they will fall as significant new mining capacity comes on stream. The overall impact of raw materials prices is as follows. They represent a growing proportion of the price of steel and this trend will not be reversed for some time. That said, however, the “margin” between raw materials costs and finished products prices – the space within which all other operating costs must be accommodated – remains higher than historic levels, when expressed in US\$/tonne. They need to be, of course, because other input prices are rising – particularly electricity and gas.

This is, of course, a very simplified and general picture; there are efficient and inefficient plants, and more importantly there are good and bad locations for making steel, both between regions and within them.

The most dramatic differences are between regions. North America, Europe and Japan have very efficient operating practices and make much of the high quality, value-added products³. Nevertheless their steel making can be US\$100-150/tonne more expensive than in regions with cost advantages in either or all of the following inputs: iron ore and coal (usually via lower freight costs), energy and labour.

Furthermore these differences will become wider. Many of the producers in the low-cost regions can make further gains as they re-invest their profits and improve operating efficiency. By contrast, environmental costs are rising in the developed regions which in turn will add to costs and push up energy prices. The latter is particularly true in the EU where the emissions trading system will add to costs significantly.

Steel company profits and strategies

This then is the environment within which steel companies will be operating for the next couple of years. Supply will probably increase faster than demand, at least in 2006 and companies will need to maintain discipline in terms of the volume of steel they sell. At the same time, they are looking over their shoulders in the hope that Chinese surpluses don't come onto the international market in a significant way. They can expect falls in raw materials costs at some stage, though no-one is quite sure when. Finally, producers cannot expect a significant improvement in steel prices, over and above those being obtained at the end of 2005.

Several different strategies are being adopted to try to avoid margins being eroded:

- Many companies have made investments in raw materials. With hindsight, of course this would have been a good thing to do in 2003, but simply buying into the market now
- Consolidation is taking place and there will be long-term gains in doing this. At some stage over the next, say, five years, there will be a “top-10” list of companies making perhaps half the world's steel. (Currently the figure is about 30%) Lower profitability and hence lower asset prices may encourage M&A activity, but in the short-term company valuations are still high. Furthermore there are restrictions on majority

³ Europe and Japan are the main net-exporters of high quality products. The CIS countries provide much of the semis and hot-rolled products. seems to us to be an expensive way of securing supplies.

ownership in China, precisely the place where the market is growing most rapidly.

- There is a movement towards making steel in lower cost regions and rolling it nearer to the market. It is in steel making itself where the economies are to be found and the developed countries still have the best finishing equipment and technical know-how. The slab trade is currently quite small but this will change with intra-company movements taking the place of market transactions.
- There are co-operative efforts to grow the size of the market, especially in construction where steel is thought to hold many advantages over more traditional concrete based methods. There are opportunities here to grow both the absolute volume and, more importantly, the value of the steel sold.
- Finally, there are many different market strategies. The main choice seems to be to “join the giants” or to remain small and focussed on particular segments of the market. Sometimes the smaller niche steel makers make more profits than the less-focussed giants. This is especially true when they co-operate with their customers and really understand and develop their business together.

Global Steel Consultants are not investment advisors and this article specifically does not comment on the terms of the proposed merger; or on the financial benefits to shareholders in the two companies involved.

Global Steel Consultants is a network of independent steel specialists who specialise in strategic planning, steel restructuring, due diligence and project appraisal.

**GLOBAL
STEEL**
CONSULTANTS
group contact

T: +44 1737 358625

www.globalsteelconsultants.net
info@globalsteelconsultants.net