STEEL

By Tony Sweeney

Although world economic growth slowed sharply in 2001, aggregate steel consumption and production were almost identical to the record year of 2000. The aggregate figures, however, are deceptive. China's consumption and production of steel increased rapidly, whereas most of the rest of the world declined.

Summary
The year started strongly, but weakened as it wore on. Pressure on steel prices grew and few steel companies made an adequate return on their investment. Some sought shelter from their creditors in various forms of bankruptcy. Steel trade friction flared up and some importers threatened punitive actions against steel imports. The threats were followed by action in early 2002. The steel business is cyclical (except for China, which appears to march to its own drummer), and the bottom of the cycle was probably reached at the end of 2001. Steel scrap prices are showing signs of recovery in early 2002 and steel product prices have improved significantly.

Economic environment

World economic output has averaged about 3.6%/y from 1970-2001. This has been punctuated by slow-downs, notably the oil-related recessions (in many countries) of 1974/75 and 1980/82, the widespread economic malaise of 1991/93 (whose causes could be selected from fiscal imbalances, the Gulf War, or just pausing after a good run), and the 'Asian Crisis' of 1998. The latter was mercifully brief and the recovery - world economic growth hit its long-run average in 1999 and peaked at 4.7% in 2000 - was strong.

In 2001, the US, the world's largest economy, was coming to the end of a remarkable ten-year economic expansion, the result of a fine balance of fiscal and monetary policies, and achieved with minimal inflation. The US economy was due for a cyclical pause, and this came about in the third quarter 2001. In September, the terrorist attacks on the US dented confidence, and not only there, but the economy was incredibly resilient. Latest estimates for US economic growth in the fourth quarter 2001 are over 1%, and 1.3% for the year as a whole. In essence, economic growth in 2001 was much slower than that in 2000, but it was better than expected, and this synopsis pretty well describes the rest of the world.

World Economic Indicators
- Growth Rates %

Country/Region	1999	2000	2001
EU 15	2.7	3.4	1.8
Russia	5.4	8.3	4.0
US	4.1	4.1	1.3
Brazil	0.8	4.5	2.2
China	7.1	8.0	7.5
India	6.8	6.0	4.5
Japan	0.8	1.5	(0.5)
South Korea	10.9	8.8	2.0
World Output	3.6	4.7	2.6
World Trade	5.3	12.4	2.7

Sources: IMF, OECD

Japan, the world's second largest economy, was in recession in 2001, and basically has under-performed over the past decade. Its problems are systemic and do not respond to the usual economic stimuli. The European Union followed America's footsteps, with economic growth falling from 3.4% in 2000 to 1.8% in 2001. Economic growth in Russia halved in 2001, but presented more evidence that the worst is behind it. If reported statistics are correct, China did not miss a beat and grew at 7.5% in 2001.

World economic output dropped to 2.6% in 2001, considerably below its long-run average rate. Growth in world trade, which is much more volatile than economic output, declined

sharply from 12.4% in 2000 to 2.7% in 2001. Energy prices were buoyant at the start of 2001 but declined as the year progressed. Non-oil commodity prices were generally flat, and inflation in both the developed and developing (median consumer prices) were well under control.

The outlook for 2002 is one of continuing recovery, and the IMF projects an optimistic 3.5% growth in world economic output, with the second half being stronger than the first. The volume of world trade is expected to bounce back and grow by over 5%. The recession in the US - if it was a recession and not just a slowdown in the third quarter - appears to be over, at least for now, and economic growth of between 2-3% is expected. The European Union should follow the same pattern as the US, perhaps lagged by a few months, but only little improvement is expected in Japan. Russia should continue its recovery, and strong growth is forecast for China and, to a lesser extent, India and Brazil. Oil and commodity prices are forecast to remain benign, but if economic growth proves to be stronger than expected, this view could be optimistic. Forecasts tend to be benign, because surprises, by definition, cannot be forecast.

Steel demand

Economic growth is a major factor in steel consumption, although one that varies with the degree of industrialisation in an economy and its structure. With the slowdown in world economic growth in 2001, it would be reasonable to assume that world steel consumption would have stagnated, at best, and an initial perusal of the data tends to support this assumption. Apparent steel consumption rose from 769 Mt in 2000 to 773 Mt, an insignificant increase of just 0.1%, and an all-time high.

Closer examination of the data, however, shows that apparent steel consumption in China increased significantly, from 114 Mt in 2000 to 160 Mt in 2001, a rise of 13.5%. Removing the data for China from the world total shows that steel consumption fell by 2.4% in the rest of the world, which is what would be expected from the economic data. Apart from South America, which had a growth of 7.4% - the tyranny of small numbers - in apparent steel consumption in 2001, all other regions were flat or down. The biggest drop was in North America, primarily the US, down 8.2% to 134 Mt, whereas the rest of the world was essentially flat.

Apparent Steel Consumption (Mt of steel products)[1]

Region	1999	2000	2001	% 01/00
EU 15	138	143	142	(0.7)
Other Europe	32	35	33	(5.7)
FSU[2]	31	41	41	-
North America[3]	138	146	134	(8.2)
South America	25	27	29	7.4
Africa	15	15	15	-
Middle East	15	17	17	-
Asia	311	338	354	4.7
-China	131	141	160	13.5
Oceania	7	6	6	-
World Total	**712**	**769**	**773**	**0.1**
World exc.China	581	628	613	(2.4)

[1] Note that these data are in steel product tonnes and are not directly comparable with crude steel data quoted elsewhere

[2] Former Soviet Union

[3] Includes Mexico and Central American Countries

Source: IISI

China appears to be marching to a different drummer to that of the rest of the world. It has achieved 'economic lift-off' and is in the heavy industrialisation phase of economic development. Apart from economic growth and point of development, one of the other key factors in steel demand is population. China has a population of about 1.2 billion; India is a country of some 800 million; and Asia as a whole holds around half the world's population. The apparent consumption of finished steel per head is volatile on a year-to-year basis, but shows a strong correlation with economic development: the European Union had a per capita steel consumption of 380 kg in 2000; the US 420 kg; and Japan 600 kg. By comparison, per capita consumption in South

America was 72 kg and Africa was only 26 kg. China had a per capita consumption of 110 kg in 2000, and this has more than doubled since 1991; India had a per capita consumption of 18 kg in 1991 and had reached 26 kg by 2000. These low per capita per capita consumption figures for the developing countries indicate that as economic development progresses, steel consumption will increase. This does not mean that consumption in the developing countries will necessarily reach European or American levels, because theses countries will almost certainly not follow the same pattern of development and could leapfrog into a bigger service sector at an earlier stage. The markets in developing countries have been consistently over-rated, along the simplistic lines of, "If-every-person-in-China-and-India-consumed-a-can-of-Coke....", but it is probably fair to say that the bulk of steel consumption increases is taking place, and will continue to take place, in the developing countries. Apart from the per capita consumption increases, the bulk of population growth will also take place in the developing countries - a double whammy!

Iron and Steel production

World output of blast furnace iron in 2001 was 577 Mt, roughly the same as that achieved in 2000. The aggregate world figure, however, does not accurately describe regional performances. The pattern is similar to that observed with steel consumption, with China growing strongly and the rest of the world faring poorly by comparison. Blast furnace iron production in Asia increased 5.2% to 283 Mt in 2001, with China expanding its output by 11.0%, South Korea up 3.9% to 26 Mt, and Taiwan up 4.0% to 10 Mt. Japan was the only laggard in this region, and its output dropped by 2.8% to 79 Mt. Elsewhere in the world, output was down, except in the Former Soviet Union where it was essentially flat. The biggest decline in blast furnace iron production was in North America, down 11.5% to 55 Mt, and production was down significantly in the European Union, a decline of 5.4% to 90 Mt. The other regional losses were small in tonnage terms if not percentages.

World Blast Furnace Production (Mt)

Country/Region	1999	2000	2001	% 01/00
European Union 15	93	95	90	(5.4)
Other Europe	23	26	25	(4.5)
FSU[1]	65	74	75	1.3
North America[2]	60	62	55	(11.5)
South America	28	32	31	(2.2)
Africa	9	9	9	(4.8)
Middle East	2	2	2	(0.8)
Asia	254	269	283	5.2
-China	125	131	145	11.0
-Japan	75	81	79	(2.8)
Oceania	8	8	7	(12.9)
World Total[3]	**542**	**577**	**577**	**(0.1)**

[1] Former Soviet Union, inc. Kazakhstan, Russia and Ukraine in this case

[2] Includes Mexico

[3] Totals and percentages may not compute due to rounding

Source: IISI

Crude steel production closely follows blast furnace iron production, and output in 2001, 845 Mt, was down very slightly from the level achieved in 2000, which was an all-time high. This was the second successive year that world crude steel production was over 800 Mt. Regional crude steel production was essentially flat, as in the Former Soviet Union, Other Europe, South America and Oceania, or down, as in the European Union, 2.9%, and North America, 11.5%. Again, the exception - discounting the small numbers of Africa and the Middle East - was Asia, where output increased by 5.5% to 350 Mt, over 41% of the world total. China led the way with a 17% increase to 149 Mt, followed by South Korea, which was up 1.8% at 44 Mt, and Taiwan, plus 2.2% at 17 Mt. Japan again lagged its Asian neighbours and crude steel output fell by 3.4% to 103 Mt.

Crude steel production in the European Union, North America, and Japan started out strongly in 2001 but weakened as the year went on, whereas China had a massive surge in production in the second half of the year, as new capacity came on stream. If the Chinese figures are removed from the world totals, iron

and steel production in the rest of the world was in line with expectations based upon economic growth.

Comparing world blast furnace iron and crude steel production gives a ratio, which has changed only very slowly with time, eg 0.696 in 1994, 0.684 in 1997, 0.681 in 2000 and 0.682 in 2001. This ratio tends to decline slightly in strong steel production years and vice versa. However, there is wide variation by country and region; the ratio in the US has declined from 0.542 in 1994 to 0.467 in 2001, whereas in China the ratio was 1.052 in 1994, dropping to 0.976 in 2001. The reason for this is the much greater availability and use of steel scrap in the US.

World Crude Steel Production (Mt)

Country/Region	1999	2000	2001	% 01/00
European Union 15	155	163	159	(2.9)
Other Europe	43	47	46	(1.3)
FSU[1]	86	99	99	0.1
North America[2]	130	135	120	(11.5)
South America	35	39	38	(4.0)
Africa	13	14	15	9.4
Middle East	10	11	12	8.4
Asia	308	332	350	5.5
-China	124	127	149	17.0
-Japan	94	106	103	(3.4)
Oceania	9	8	8	(1.3)
World Total[3]	**788**	**847**	**845**	**(0.2)**

[1] Former Soviet Union

[2] Includes Mexico and Central America

[3] Totals and percentages may not compute due to rounding

Source: IISI

Preliminary figures for 2001 indicate that production of direct reduced iron (DRI) and hot briquetted iron (HBI) fell slightly in 2001 from the 43.2 Mt produced in 2000. The main reason for this was the elevated gas price in North America at the beginning of 2001 and this curtailed the production of DRI in Mexico.

Gas-based direct reduction systems dominate production, mainly from Midrex systems, followed by HyL processes. Gas-based systems are more reliable and efficient than coal-based processes, the latter of which have proved to be popular in India and South Africa. The prerequisite for a successful gas-based plant is a reliable and cheap supply of natural gas; hence the location of DR plants close to those oil fields with associated gas.

In most locations during 2001 steel scrap was plentiful and relatively cheap and this makes life difficult for the merchant HBI producer. Those plants with a dedicated electric arc furnace (EAF) are insulated to some extent from the vagaries of the scrap market.

Technology

Steel is produced overwhelmingly in oxygen blown converters (OBC) or electric arc furnaces (EAF). OBC steel, predominantly virgin iron units, is sourced from iron ore via a blast furnace (BF), and in 2000 this integrated route (BF/OBC) produced 58.4% of total crude steel output. The EAF route is essentially a scrap-melting process and only involves virgin iron units when DRI/HBI or cold pig iron is charged to the furnace. These virgin iron units are sometimes used to dilute the deleterious elements in scrap, or used as the main charge, as in the case of integrated DR/EAF plants. Steel produced from the EAF route accounted for 33.9% of world output in 2000.

To produce EAF steel requires a reliable source of steel scrap at a competitive price, and for this reason the preponderance of EAF steelmaking occurs in countries with available scrap banks, ie those countries with a history of sizeable steel consumption. Scrap-based EAF plants are the essential infrastructure of the mini-mill concept, which is a plant with access to scrap, usually local, producing a limited variety of steel products with non-union labour. Mini-mills are flexible, with a low minimum economic scale, and they can often achieve profitability on the downside of the cycle. Their lower capital and operating costs have made them formidable competitors to the larger, integrated BF/OBC plants, and nowhere has this been seen more clearly than in the US. Advances in technology, such as

thin-strip casting, have allowed the mini-mills to produce a much wider spectrum of steel products and permitted them to compete on a broader front with the BF/OBC plants. The downside is that as the plants become bigger and more complex they begin to lose the speed of reaction and flexibility, which made them successful in the first place.

Obviously, not all steel can be produced from scrap because the supply is limited, to say nothing of the quality issues involved. Forecasts predicting a massive shortage of steel scrap are misguided, because if the scrap is not available the plants will not be built. In North America, nearly half of domestic crude steel production in 2000 came from scrap-based EAF plants. In the developed world, those countries with scrap banks are tending to produce more of their steel by this method, but the developing countries tend to favour production of virgin iron units - by necessity.

Integrated BF/OBC plants have a larger minimum economic scale than their scrap-based counterparts, and therefore capital costs tend to be higher. These plants also involve ancillary plant and equipment, such as coke ovens and sinter plants, which can trip over environmental hurdles as they age, and they have proved to be a problem in North America and Europe. Developing countries, such as China, South Korea, and Brazil, have fast-growing domestic consumer markets and they need large increments of capacity, and the integrated BF/OBC plants fit the bill.

Integrated plants have also used other types of steelmaking furnaces, such as the Open Hearth process, but they proved to be uneconomic. They have been largely phased out, and their continued operation is a good indication of inefficiency. The Former Soviet Union is the biggest repository of these furnaces and an indication of the lack of market economics in a centrally planned economy. Some 14% of Indian steel production came from the Open Hearth process in 2000.

Plant Process Used in 2000 %

Region	OBC[1]	EAF[2]	Other[3]	CC[4]	IC[5]
EU 15	60.3	39.7	-	96.3	3.1
Other Europe	56.6	41.6	1.7	84.2	15.2
FSU[6]	54.6	12.5	32.9	39.4	58.1
North America[7]	51.0	49.0	-	95.2	4.7
South America	65.6	32.2	1.1	90.1	9.6
Africa	50.4	49.0	0.6	97.1	2.3
Middle East	20.4	79.6	-	100.0	-
Asia	62.1	28.6	9.3	86.2	13.3
Oceania	83.3	16.7	-	99.6	0.4
World	**58.4**	**33.9**	**7.7**	**84.7**	**14.6**

[1] Oxygen Blown Converter; [2] Electric Furnace; [3]usually Open Hearth Furnace;

[4] Continuous Casting; [5] Ingot Casting

[6] Former Soviet Union

[7] Includes Mexico and Central America

Source: IISI

Another measure of modernity and efficiency in a steel plant is the degree of continuous casting (CC) used. Some ingot casting for special sizes and shapes is to be expected, but at least 95% of steel production should be continuously cast. Again, the Former Soviet Union fares poorly, as do the European countries in the former Eastern Bloc. Asia had over 13% of its steel production ingot cast in 2000, primarily in China and India. As China moves to rationalise its steel industry - it has several hundred steel producers - the proportion of steel production that is continuously cast will increase.

The blast furnace has been given the last rites on numerous occasions and yet always seems to survive and see off the pretenders to the throne. The iron making graveyard is full of headstones of various processes, all of which, at one time or another, were going to replace the blast furnace. One day, perhaps, but not yet! The blast furnace is a remarkably flexible piece of plant capable of producing hot iron from almost any grade of iron ore, but it obviously does better with higher grades. The weakness of the blast furnace is the ancillary plant such as coke ovens and sinter plants, which are expensive, and the older plant can be environmentally suspect. In the US and

Western Europe, for example, coke rates have been reduced sharply by using pulverised coal injection (PCI), and other injectants, thereby reducing the demand for coke (and coke ovens). The US also imports a considerable proportion of its coke needs, in effect exporting the pollution problems of the coke ovens. Sinter plants also create environmental problems, and these are now used less than in the past, especially in Western Europe. This has resulted in an increase in the demand for directly charged iron ores, such as pellets, and a softening in the demand for sinter fines.

There is a constant R&D effort in the steel and supporting industries, to develop processes that have a smaller minimum economic scale than the BF/OBC system, but retain its flexibility. There are several smelting processes (a process where the iron oxide is reduced at a temperature sufficiently high to produce liquid iron) that are in commercial production or close to it. The most advanced example is the Corex process, which bypasses the blast furnace system, has low emissions, a profitable export gas, and is based on ordinary coal. The rich export gas can be used for drying, heating, electricity generation, or in a gas-based ancillary DR production system. The DR system is touted as an advantage, but it does raise the minimum economic scale hurdle. Claiming byproduct gases are an advantage is making the best of a bad job, and without some means of obtaining full economic value for the gas, the Corex process appears to be uneconomic. There has been a commercial plant in South Africa since 1990, and the South Koreans built one in 1995. Another unit was ordered for South Korea, but this now appears to have been postponed. Meanwhile, the blast furnace reigns supreme and is likely to for the foreseeable future.

Steel trade

Steel is largely consumed where it is produced, but the volume of trade is growing. International trade in steel products has risen from 23.9% of world production in 1980 to 37.0% in 2000, down from 39.6% in 1999. Most of this trade is intra-regional, including within the European Union or the North American Free Trade area, and less than half is inter-regional. Interestingly, the share of production that is exported does not appear to be influenced by the cyclical behaviour of the steel market.

The export data show that there was a discontinuity in the volumes of steel exported, corresponding to 1990-92. This is probably due to the collapse of the centrally planned economies of the FSU. Steel demand fell sharply, as did steel production but by nowhere near as much. This extra production found its way to the export market and this could account for the sudden surge in steel exports.

Some countries and regions are persistent steel importers and these include North America (essentially the US), China, Taiwan, India, and Africa/Middle East. For a developed country like the US, it makes sense to rely on imports for a portion of domestic demand, simply because it has other better opportunities to use its available capital. China is a major importer (the single biggest importing country in 2001) because its industrial base is expanding so quickly that steel demand continues to outpace domestic steel production. China also exports some grades of steel, but these volumes are small in comparison to steel imports. Taiwan is in a similar position to China, albeit on a much smaller scale, as are India and Africa/Middle East.

Over two-thirds of steel production in the European Union is exported, although nearly all of this is intra-regional trade, and the region was a small net exporter of steel in 2000. The European Union has been a substantial net exporter in the past; while steel production has remained fairly constant, domestic steel consumption has increased significantly since 1998, and the volume of steel available for (net) export has decreased. Other Europe is a persistent net exporter, although less so now than in the past, as consumption increases and some

rationalisation of production capacity has taken place. In ten years, the Former Soviet Union has moved from practically zero net exports to exporting some two-thirds of its production, making it the largest net exporter, by a long way, in the world. Japan has been a consistent net exporter of steel, and as China has increased its imports, exports from Japan increased. Japan's steel production capacity far exceeds its domestic requirements and some 25% of its steel production was exported in 2000. South Korea is growing rapidly, and increases in steel production capacity come in blocks. Because of this, it switches from net importer to net exporter, although only a small proportion of its consumption/production. South America is also a net exporter of steel products, relatively small in absolute tonnage but running at about 20% of domestic production.

Most steel producing countries are both exporters and importers of steel, because of over or under capacity in certain steel products. Steel trade allows the markets to clear and allows competitive advantages to occur in certain product specialties.

Production capacity and the steel market

Someone once said that all new countries wanted a flag, an anthem, an airline and a steelworks. If it were just a flag and an anthem there would be no problem, but airlines and steelworks are part of the world economic system and new additions add to the world capacities in both sectors. It is no coincidence that both airlines and steel companies tend to have an inadequate return on investment, and that many now face bankruptcy.

Once upon a time, a steel production facility only existed close to supplies of iron ore and coking coal. One American academic opined, in 1949, that Japan could never become a major steel producer because it had no domestic supplies of iron ore or coal. The discovery of rich deposits of iron ore in, for example, Brazil and Australia, and the advent of large bulk seaborne carriers, meant that any country with deep-water ports, an educated workforce, and access to capital, could become major steel producers.

The steel business is classically cyclical, feast followed by famine, euphoria by depression, and the industry still has no idea how to tame the cycle. The minimum economic scale, the high fixed costs, and the production economies of scale, combined with the lack of market leadership (the biggest steel producer in the world is responsible for only 5% of world production), tend to keep production high when a sub-optimal level of production would be better for all producers.

World Steel Production and Trade (Mt; %)[1]

Year	Production	Exports	%Share
1980	589	141	23.9
1982	543	136	25.0
1984	606	159	26.2
1986	617	162	26.3
1988	680	171	25.1
1990	678	171	25.2
1992	636	196	30.8
1994	644	239	37.0
1996	669	247	36.9
1998	696	273	39.3
1999	706	280	39.6
2000	759	281	37.0

[1] Production and export data are for finished steel

Source: IISI

When world economic growth softened in 2001, steel demand followed suit, but production was slow to react. The best indicator in the business, the US composite scrap price, was depressed throughout the year and fell further in the final quarter of the year. There was just too much steel chasing the markets. The blame was laid at the door of steel production capacity, especially the old, inefficient capacity that was losing money and required subsidies to keep operating. Wild estimates placed this capacity at 200 Mt, which must have included plants that had little or no chance of operating again, and eventually the consensus settled at 110 Mt. The critical question was, "Whose capacity was it?" and the OECD was nominated as the

forum for inter-governmental steel negotiations designated to answer that question. Negotiations such as these are fraught with self-interest and self-denial and need the best will in the world to succeed. This 'best will' was effectively removed when the US imposed tariffs on its steel imports.

The imposition of tariffs on steel imports into the US was not a surprise since the action was building for most of the year. Some of the biggest integrated steel companies in the US had declared bankruptcy, and they had all pointed the finger at imports as the cause of their problems. A composite steel price used in the industry had declined from over US$500/net ton in 1995 to less than US$300/net ton in 2001, a level at which the integrated steel producers could not turn an operating profit.

Ironically, steel imports had been falling from a peak of 38 Mt of semi-finished and finished steel products in 1998 - a level substantially above previous years - to under 30 Mt in 2001 (net imports were an estimated 23.5 Mt in 2001), but still significantly greater than the years prior to 1998. The drop in imports was not sufficient to mollify the US steel industry.

President Bush, ostensibly a proponent of free trade, had promised to help the steel industry and was not about to sacrifice his Administration on the altar of free trade. The Clinton Administration had turned a deaf ear to protectionist pleas from the steel industry and this had almost certainly cost presidential candidate Gore the state of West Virginia, which was enough to give the presidency to George Bush. There are House and Senate elections in November 2002, some of the steel industry is located in the politically sensitive states of West Virginia, Pennsylvania, and Ohio, and politics won out over economics.

Apart from the direct impact on the exporters of steel to the US, the knock-on effects of protectionism can escalate. Because the US imposes tariffs on imports, those steel products that are deflected from the US will look for a consumer elsewhere. The European Union will almost certainly erect barriers to hold down steel imports into that region, and they and other countries could possibly respond to the US by imposing tariffs on US exports of both steel and non-steel products. It becomes tit-for-tat, and the World Trade Organisation will be asked to adjudicate. It would have been much better for the parties involved to negotiate, but that would not have played well in the steel heartlands of America.

Does the US have a case? As with most things, it depends upon perspective. The US argues that a lot of steel production capacity in the world is inefficient - true - and some producers receive subsidies - possibly - but subsidies have been largely phased out and the inefficient capacity has closed or is in the process of closing. When the state-owned steel industries of Europe and elsewhere were privatised more than a decade ago, past debts were forgiven, and this seems to be the main plank of the US argument. The integrated producers in the US have been struggling for the past twenty-five years, and have themselves received considerable protection in that time. Almost half the steel produced in the US comes from the relatively low-cost scrap-based EAF plants, and these producers have taken market share from the integrated steelmakers. Low prices have pushed the US steel industry to the wall, but nobody dies. Bankrupt steel companies enter Chapter 11, a sort of limbo where they are protected from their creditors, and re-emerge at a later date, more often than not to fail. Capacity that should have been closed continues to produce, downward pressure is exerted on steel prices, and the healthy steel companies are penalised.

The big losers, of course, are the steel consumers in the US, whose products may now become more uncompetitive. Despite being vastly more numerous than the steel producers, with far more employees, the steel consumers lack political clout because they are not concentrated in any one area, with the possible exception of the automobile industry,

and are not as well organised. The steel industry has argued that steel is a critical material for that cover-all, 'national security', which cannot rely on foreign supplies at times of crisis and, therefore, their survival is paramount; they need these tariffs to buy time to reorganise and consolidate their industry, and survive. Even if the consumers accepted the 'national security' argument, they would still come to diametrically opposed positions on steel imports, ie free trade in steel and no tariffs. The amount of steel involved in the defence sector is only a small proportion of total steel consumption, albeit often high value-added, and is just as easily supplied by the scrap-based sector.

One factor, which is rarely discussed, is the strength of the US dollar. The buoyant US economy has made the dollar attractive to hold, but this has pushed up its value. This is probably the single most important factor in the steel trade imbroglio, but it is outside the control of the steel industry. The same problem occurred in the mid-1980s, when the dollar was again very strong, and basic industries such as steel suffered badly.

The integrated steel industry in the US has to learn to live with a strong currency. Attempts are being made to consolidate this sector and it is possible that five integrated companies could merge: US Steel, Bethlehem, Wheeling Pittsburgh, National and Weirton, could form one company. For this, the government has to waive monopoly considerations (no problem) and pick up the 'legacy costs', ie the generous pensions and benefits that the steel employees won in better times. These legacy costs are thought to be worth several billion dollars, a sum that exceeds the market value of the US steel industry, and dumping them onto the taxpayer is a political hot potato. The industry is essentially trying to buy time, to cut inefficient capacity down the road, to die later rather than now, Chapter 11 notwithstanding. The steel cycle will do the rest, and this appeared to have hit bottom at the end of 2001. The steel industry hopes that the cycle is a rising tide that will raise all boats.

Steel outlook

World economic growth should rebound in 2002 to something close to its long-run average growth rate (3.6%). The economic slowdown in the US appears to have been short and shallow - at least for now - and this economy will tend to drag the others along. Should a full-scale war break out in the Middle East and oil prices rise sharply, all bets are off.

The US composite steel scrap prices hit a low point at the end of 2001, and bounced back in the first quarter of 2002. Steel prices have also shown strength and the consensus is that the bottom of this particular steel cycle has passed. The price increases have occurred without the tariffs on US steel imports, although the threat is often enough to give them a boost, and the action of the US Government may give rise to a two-tier pricing system, with steel being more expensive in the US, to the detriment of the US steel consumer. Improved consumption and prices would go some way to cooling the heat generated by trade friction.

What happens in China will have a major impact on world steel consumption and production data. It is difficult to conceive the Chinese steel industry growing at the same rate in 2002, but this country continues to amaze (although some doubt the veracity of the economic data). Overall, steel consumption/production in 2002 should be up slightly, with the second half of the year being stronger than the first half.