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The lead market: outlook for the global market and prices

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Abstract

This study of the lead market examines four areas in depth. Western World consumption is considered first before turning to the role of Chinese exports. Two factors on the supply side—secondary production and mining—are then examined.

Keywords: China; Lead; Market; Mining; Secondary production; Western World

1. Lead price

A chart of London Metals Exchange (LME) prices is shown in Fig. 1. While lead has the reputation for being one of the duller metals traded on the LME, the metal has been through a turbulent period in recent years with prices very volatile. In the early 1990s, large surpluses occurred in the market and cash prices dropped to just over US$350 per tonne, which led to a shake out. This was in marked contrast to the last couple of years during which demand temporarily overtook supply and resulted in a nearly three-fold increase in price to over US$900 per tonne in early 1996.

By contrast, 1998 has been a very quiet year so far; the spot price has remained virtually for the whole period in the range from US$500 to US$600 per tonne. The lead market is certainly finely balanced at the moment, and a return to more volatile times cannot be ruled out, given that the battery season is approaching in Europe and North America, and that stocks remain at historically low levels.

2. Lead consumption

The good news for the lead industry is that a new era appears to have dawned for consumption. The intensity of use for lead is given in Fig. 2 as a plot of the relationship between OECD economic growth and lead consumption in the Western World for 1970–1997. For nearly the whole of the period from 1970 to 1991, the trend was downwards, i.e., lead consumption was growing more slowly than economic growth. On average, lead consumption grew at 2.2% below economic growth.

The under-performance of lead has been halted since 1991. At present, lead consumption is tracking economic growth much more closely. From 1991 to 1997, lead consumption was only 0.1% below economic growth, on average. There are two key reasons to believe that this new, flatter trend will be sustained.

First, the rapid substitution of lead by other materials, which has been caused mainly by worries over health and environmental issues, is unlikely to continue. Some small applications are still under threat, but it seems that the worst is over. In particular, the phasing out of leaded petrol is coming to an end, since it has been virtually eliminated in North America and Europe.

Second, consumption is now heavily concentrated in the battery sector, where substitution is much more difficult, and where growth has been much faster. The lead–acid battery currently accounts for just over 70% of consumption. Certainly, there are few immediate viable alternatives to the automotive battery because this battery is reliable, cheap and easy to produce. The next major area of consumption is pigments and compounds which account for a further 10.8%—equivalent to 503 000 tonnes. Here the increasing demand for television sets and computer moni-

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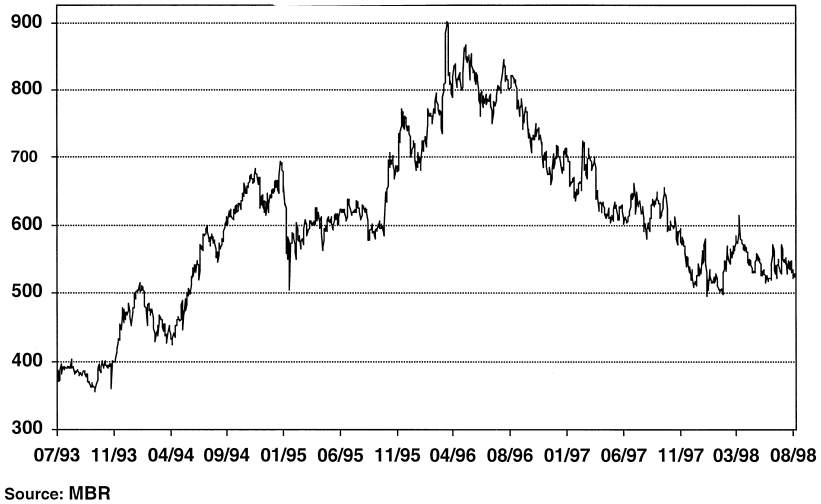

Fig. 1. LME spot prices for lead, 1995–1998 (US$ per tonne).

tors, which contain lead oxide, will make this another area of growth. Other sectors such as rolled/extruded products, cable sheathing, alloys, shot and gasoline additives are now very small consumers of lead.

Overall, the growth of lead consumption in the Western World is expected to be at least 1% faster (relative to economic growth) than it has been in the past. This is equivalent to an additional 50 000 tonnes of lead consumption per year.

While the underlying trend in consumption looks promising, it is clear that 1998 has not been a good year for the battery sector. Shipments of automotive batteries in the USA, for example, rose by 0.9% year-on-year in the first 7 months of 1998, although the strike at General Motors is bound to have pulled down the headline figures. Meanwhile, the severe economic problems in Asia have had a direct impact on the local battery industry. In Japan, lead–acid battery shipments fell by 6.1% in the first half of 1998, while in Korea the corresponding drop was 12%. The only bright spot in Asia has been Taiwan, where battery shipments rose by 7%. Europe has also performed well, helped by solid growth in the vehicle sector. Overall, the forecast is for a 1.2% rise in Western World consumption this year, followed by 1.7% growth in 1999.

2.1. Importance of China

Chinese exports of refined metal to the West have risen very dramatically in recent years, to reach 250 000 tonnes in 1996, which is three times higher than the level in 1993 (Fig. 3). The country has become an key variable in the global supply–demand balance and is also the second largest producer of refined metal, after the USA. The dramatic rise in Chinese exports is also due to an increasing tendency for trade to be much more price sensitive than before. This is demonstrated in Fig. 3 which shows a fairly convincing relationship between the 6-month rolling average of exports and spot lead prices. Both variables are indexed.

As can be seen, lead prices rose to very high levels in early 1996 (6-year highs). This was soon followed, however, by an unprecedented rise in Chinese exports, which

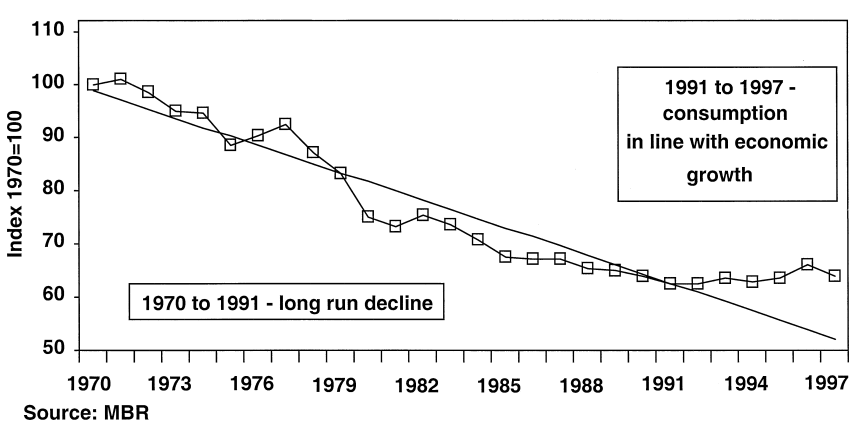

Fig. 2. A new era dawns for lead consumption? (Intensity of use: OECD IP growth vs. consumption).

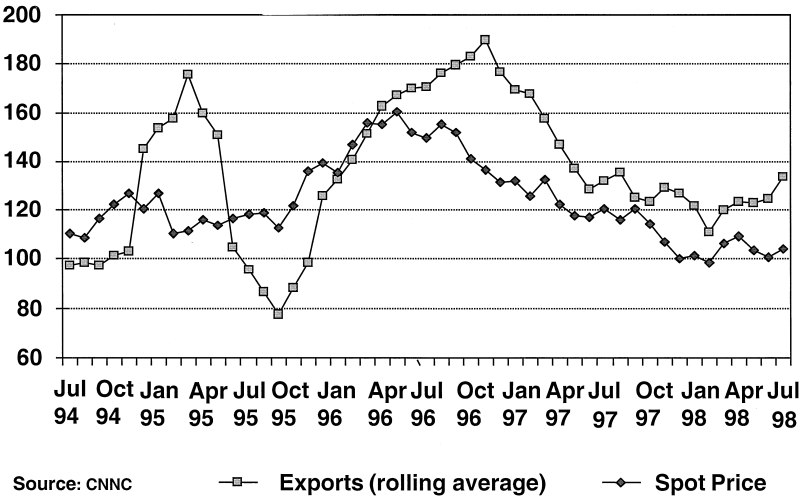

Fig. 3. Chinese give a helping hand—Chinese exports (in tonne) of refined lead.

swamped the market, and led to a serious downward correction in prices. The relationship between exports and prices has continued in the first half 1998, with Chinese exports of refined lead down by 3.9% and prices down by 17%. For the rest of 1998, Chinese exports are likely to continue on this downward trend, with lower LME prices discouraging shipments. For 1998 as a whole, net exports are forecast to dip to around 200 000 tonnes, with a further fall to 180 000 tonnes in 1999.

2.2. Mine production

An important factor which will depress prices will be growth in mine production. World mine production has barely changed in the last couple of years, although the first part of 1998 has seen a return to growth. Of particular importance has been China, where mine production has risen by 3.9% year-on-year in the first half of 1998 to 267 000 tonnes of contained metal. Australia has also seen some notable increases, due to the Cannington silver–lead mine coming onstream where output is expected to reach 200 000 tonnes per year of contained lead, which would make it the largest lead mine in the world. Looking ahead, mine output is expected to rise convincingly in the next couple of years. One of the problems for lead is that, in approximately 75% of cases, it is produced as a by-product of zinc. This means that expansions in mine output will not directly take account of lead prices.

The most notable new mines will be the Lisheen mine in Ireland and the Century mine in Australia, both of which are due to come on stream in the final quarter of 1999. Together, these mines will produce around 70 000 tonnes per year of contained lead. Extra production can also be expected from Galmoy (Ireland) and Los Frailes

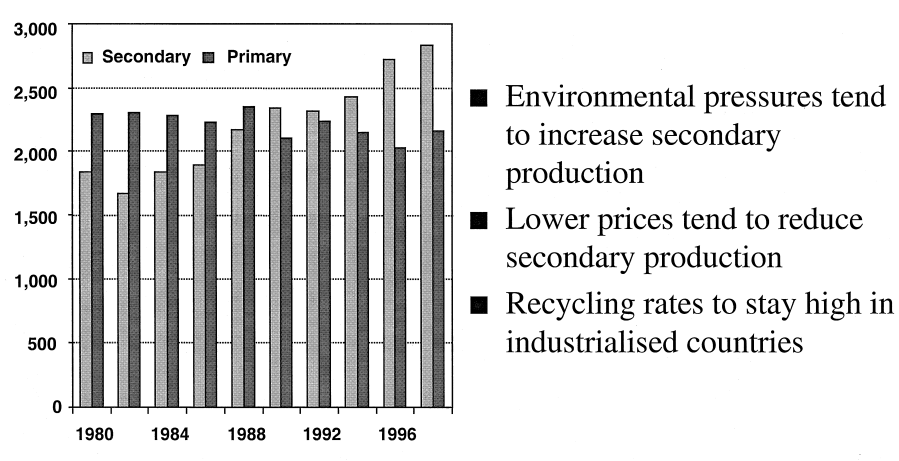

Fig. 4. Secondary production of lead is expected to increase!

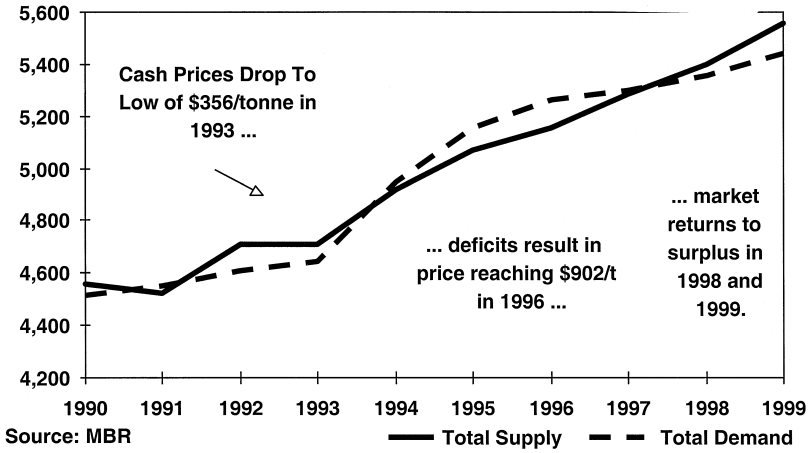

Fig. 5. World balance in lead (thousands of tonnes).

(Spain), both of which were closed for part of 1998, due to industrial action and production problems, respectively. Apart from this, some of the most significant expansions can be expected in Australia, where Pasminco is expanding its Elura and Rosebery mines, and Mount Isa Mines is pushing up utilization rates at McArthur River. The Pillara mine in Australia also came on stream in June 1998 and should make a full-year contribution in 1999. A final large expansion is occurring at the Red Dog mine in the USA.

It is forecasted that, in terms of contained metal, lead mine production will rise by around 140 000 tonnes in 1998, followed by further growth of 90 000 tonnes in 1999.

Rising mine supplies will quickly feed through to help to ease the concentrates markets, which will enable primaries to continue increasing output after a large increase in 1997. A growth in primary production of 5% is forecast for 1998, followed by 6% growth in 1999. It is worth noting that primary smelters have been operating well below capacity during the past few years, with utilization rates typically around 80–85%, and as a result there is plenty of potential for growth.

2.3. Secondary production of lead

A final bearish factor for the lead market will be the continued growth of secondary production. In Fig. 4, the data on the left highlights the rapid rise in secondary production that has taken place since 1980. In recent years, secondary production has overtaken primary production, and is now the main supplier of refined lead. As shown, Western World secondary production has climbed fairly steadily, i.e., from 1.83 million tonnes in 1980 to 2.83 million tonnes in 1997. In terms of its relative size, secondary production has risen from 44% of total production to 57% during the same period. Primary output, on the other hand, has been in decline—it has fallen from 2.30 million tonnes in 1980 to 2.16 million tonnes in 1997.

For the remainder of 1998, there will be two forces acting on secondary producers. On the one hand, environmental pressures will tend to keep secondary output on a rising trend. This is because regulations concerning the dumping of lead waste have become much stricter in recent years, and battery producers are often forced to collect old batteries when selling new ones. This is particularly the case in North America where recycling rates have risen from around 75% in the early 1980s to more than 95% in the last couple of years. On the other hand, secondary producers do tend to scale back output, in response to lower LME prices, as scrap becomes more difficult to obtain. This is more likely to have an effect in the less regulated markets of Asia and Latin America.

Despite the above potential problems, the forecast is for a growth in secondary production of just under 2% for both 1998 and 1999. It should be noted, however, that these growth rates are well below the recent trend, i.e., secondary output has risen by more than 3.5% in each of the years from 1994 to 1997.

3. Supply–demand of lead

The recent history of the lead market in terms of supply and demand is summarized in Fig. 5, together with Metal Bulletin Research's view of the market. Data for the world supply of lead includes exports from the former Eastern Bloc countries and sales by the US government from its strategic stockpile. Data for the world demand for lead includes imports by the Eastern Bloc.

4. Summary

Clearly, lead prices have been quite volatile in recent years; they have tripled from the lows in 1993 to the highs

of 1996. It is unlikely, however, that the next couple of years are going to witness prices anywhere near these extremes. The market is likely to experience a small surplus in 1998, before moving into a larger surplus in 1999. The author's forecast is for spot prices to fall slowly from current levels for the remainder of 1998 to give an average of US$550 per tonne for 1998 as a whole. In 1999, prices are expected to fall further to average US$500 per tonne.