

Metals resources: products in turmoil[†]

Michael J. Shea*

1. Introduction

We are in economic turmoil. By definition, this means that no one knows what will happen next. In 1998 the Japanese government announced another fiscal stimulation package (the seventh since 1992) to stabilise the country's financial system, bolster confidence and achieve positive growth in 1999. This one was the biggest ever, totalling A\$320 billion of public works spending and tax cuts. The effort was supported by the United States when President Clinton and Prime Minister Obushi announced an 'Asian growth and recovery initiative' package of unspecified amount or timetable.

But so far it has come to naught — at least until the time of writing. Industrial production plunged in the December quarter to record a Japanese annual contraction of 6.4 per cent. Retail sales fell 4.7 per cent during the year. The strengthening yen is detrimental for exports, and industrial production will stay low at least through 1999. Changes in wage levels (including the bonus component) will also be negative for another year (estimated down 0.5 per cent). The strong yen derives from a favourable trade balance and rising current account founded on low import values, with low prices for energy imports a major contributing factor. The yen will stay high to the detriment of exports and confidence is decidedly fragile.

There is concern that China may initiate another round of Asian currency devaluations. The government's restructuring policy includes closure of state-owned enterprises that carried the bulk of social service expenditure. These enterprises have accumulated massive losses whose funding through state banks hides the magnitude of the government deficit. The enterprise losses accumulate partly through their social service responsibility and partly through a continuing imbalance between controlled selling prices and open market input costs.

[†] An earlier version of this article was presented at the AARES Symposium, The Asian Crisis and the Australian Agricultural and Resource Sectors, held in Sydney on 20 November 1998.

* Michael Shea is Associate Director of AME Mineral Economics, Sydney, NSW.

The restructuring policy necessitates a devolution of responsibility right down to the individual. In the past, economic growth was used as a palliative to soften the pain of that restructuring. It will be so used again — and growth is faltering. Growth rates of less than 6 to 7 per cent mean that social tensions may become explosive.

Much of the growth orientation is towards export earnings. The country's terms of trade, however, have deteriorated compared with those of its neighbours over the last eighteen months. There is every incentive to devalue. The United States has exerted strong pressure to prevent it — threatening to use China's membership application to the World Trade Organization as a punitive weapon. But the incentive is there. If China elects to devalue, it will be followed by a new round of defensive devaluations throughout the region, accompanied by further capital outflows, deepening liquidity problems, a return to protectionism and further delay in recovery of domestic demand. It is the biggest risk facing the region.

People disagree about the timetable for recovery. Japan, the chief provider of cash for Asia, will remain mired in recession at least through 1999, and probably for two full years through 2000. The country is hardly a source of ready cash. Europe will wrestle with its common currency and spend prudently to maintain qualification for the Euro. Asia cannot rely on domestic savings to fuel short-term growth. There is no credit availability from normal operating sources. Many insolvent Asian companies have not yet agreed with creditors on programs to work down debt levels — partly the result of weak bankruptcy laws.

What is the impact on metal resources? The fundamentals indicate that base metals prices should be higher. LME stocks have been falling but real prices are down (see table 1). Driven by strong demand in the United States and industrialised Europe, order books were healthy in 1998. The economic pain in emerging nations translates into a low import price benefit for industrialised nations — muting inflationary pressure. Falls in export volume from industrial to emerging nations was delayed into 1999, and had only a slight impact on the very high value component of total trade. Capacity utilisation rates in developed economies have not been unduly painful.

For copper, consumption was strong in 1998 and early 1999 (see table 2). US base metals demand was strong generally as a result of new capital investment in productive plant to relieve high general utilisation rates. Annual North American copper consumption in tonnage terms grew 6.1 per cent in 1998. Most of the new general plant investment will be commissioned by the end of 1999 when installed productive plant capacity will stand at a 20-year high. New US plant investment is reflected in improved labour productivity, which increased 4 per cent in the December

Table 1 LME stocks 1955–1998

	LME US\$/t Real Price (1998\$)			LME USc/lb Real Price (1998\$)		
	Lead	Zinc	Copper	Lead	Zinc	Copper
1955	1722	1475	6203	78.1	66.9	281.3
1956	1795	1509	5583	81.5	68.5	253.3
1957	1440	1216	3695	65.3	55.2	167.6
1958	1067	966	3201	48.4	43.8	145.2
1959	1014	1176	3760	46.0	53.3	170.6
1960	1016	1258	3828	46.1	57.1	173.6
1961	894	1082	3543	40.5	49.1	160.7
1962	768	920	3525	34.8	41.7	159.9
1963	851	1029	3472	38.6	46.7	157.5
1964	1330	1551	5108	60.3	70.4	231.7
1965	1478	1450	6664	67.0	65.8	302.3
1966	1177	1262	7591	53.4	57.3	344.3
1967	991	1189	4792	45.0	53.9	217.4
1968	1060	1158	5669	48.1	52.5	257.1
1969	1214	1199	6381	55.1	54.4	289.5
1970	1210	1177	5788	54.9	53.4	262.5
1971	962	1174	4190	43.7	53.3	190.0
1972	1116	1397	3946	50.6	63.4	179.0
1973	1459	2890	6147	66.2	131.1	278.8
1974	1846	3857	6447	83.8	175.0	292.4
1975	1172	2115	3499	53.2	96.0	158.7
1976	1205	1903	3738	54.7	86.3	169.6
1977	1547	1479	3241	70.2	67.1	147.0
1978	1529	1376	3119	69.4	62.4	141.7
1979	2564	1584	4152	116.3	71.9	188.4
1980	1772	1483	4165	80.4	67.3	188.9
1981	1303	1524	3017	59.1	69.1	136.9
1982	907	1241	2383	41.1	56.3	108.1
1983	679	1226	2460	30.8	55.6	111.6
1984	678	1362	2047	30.8	61.8	92.9
1985	578	1130	2062	26.2	51.3	93.6
1986	581	1083	1990	26.4	49.1	90.2
1987	827	1111	2408	37.5	50.4	109.2
1988	880	1667	3431	39.9	75.6	155.7
1989	863	2121	3604	39.2	96.2	163.5
1990	1001	1856	3244	45.4	84.2	147.2
1991	655	1309	2738	29.7	59.4	124.3
1992	618	1416	2603	28.0	64.2	118.1
1993	444	1084	2122	20.2	49.2	96.3
1994	597	1086	2505	27.1	49.3	113.7
1995	668	1092	3104	30.3	49.6	140.8
1996	802	1062	2373	36.4	48.2	107.7
1997	634	1339	2312	28.8	60.8	104.9
1998	528	1023	1653	24.0	46.6	75.0

Table 2 Copper world market balance (000t Contained Metal)

	1995	1996	1997	1998	1999	2000
Production						
Mine	10 084	11 048	11 526	11 892	12 780	13 088
Primary Metal	9 681	10 578	11 494	11 971	12 628	12 781
Secondary Metal	2 195	2 049	2 070	1 848	1 864	1 928
Strategic Stocks						
Total Metal Available	11 876	12 627	13 564	13 819	14 492	14 709
Consumption	12 062	12 630	13 084	13 435	13 769	14 270
<i>Consumption Growth</i>	4.3%	4.7%	3.6%	2.7%	2.5%	3.6%
Metal surplus (Deficit)	(186)	(3)	480	384	723	439
Capacity utilisation						
Mine	89%	90%	92%	89%	88%	87%
Refineries	85%	88%	89%	84%	85%	83%
Stock cover (wks)	3.5	2.0	4.2	5.3	7.9	9.2

Source: ABARE, February 1999 Outlook.

1998 quarter after a 2.5 per cent gain in September. This is higher than the normal annual pace. Productivity gains over the last ten years averaged 1.1 per cent.

Copper mine and smelter utilisation rates have been above 80 per cent throughout the world over the past two years. Estimated metal stock cover was low up to the last quarter of 1998 (comfortable operating levels are 5–6 weeks of consumption). The same can basically be said about zinc (see table 3). Real falls in mine and smelter utilisation rates will not happen until next year.

Lead, however, was rather flat in 1998 (see table 4) as motor car assembly rates declined. Lead demand is mainly derived from battery use in motor vehicles. Ford Motor Co announced a decrease in its production scheduling, the Japanese generally forecast a 7 per cent decrease in this year's motor car production schedule and there is something like 45 per cent idle capacity in Asian vehicle assembly plants. Demand for lead-acid batteries for the original equipment sector is likely to be weak. We are still waiting for the surge in replacement battery demand based on the age of the average battery in the motor vehicle fleet. 1994 was a peak battery sales year for units now due for replacement. This normally offsets falls in the original equipment sector. The delay is related to technical improvements extending normal battery life, together with benign weather conditions which have a major influence on battery failure rates.

Table 3 Zinc world market balance (000t Contained Metal)

	1995	1996	1997	1998	1999	2000
Production						
Mine	6 981	7 295	7 335	7 404	7 242	7 271
Primary Metal	6 862	6 916	7 236	7 391	6 832	6 958
Secondary Metal	462	509	497	507	451	440
Strategic Stocks	16	17	32	25	40	40
Total Metal Available	7 340	7 442	7 765	7 923	7 323	7 438
Consumption	7 513	7 539	7 758	7 797	7 359	7 388
<i>Consumption Growth</i>	<i>7.8%</i>	<i>0.3%</i>	<i>2.9%</i>	<i>0.5%</i>	<i>(5.6%)</i>	<i>0.4%</i>
Metal surplus (Deficit)	(173)	(97)	7	126	(36)	50
Capacity utilisation						
Mine	85%	83%	71%	79%	73%	70%
Primary Smelters	78%	76%	81%	79%	76%	71%
Stock cover (wks)	11.3	9.2	8.8	8.2	8.4	8.9

Source: ABARE, February 1999 Outlook.

Table 4 Lead world market balance (000t Contained Metal)

	1995	1996	1997	1998	1999	2000
Production						
Mine	2 749	3 001	3 033	3 088	3 296	3 460
Primary Metal	3 086	3 046	3 110	3 103	3 197	3 340
Secondary Metal	2 673	2 792	2 920	2 910	2 658	2 662
Strategic Stocks	34	38	26	50	50	50
Total Metal Available	5 793	5 876	6 056	6 063	5 905	6 052
Consumption	5 858	5 992	6 011	5 985	5 916	6 046
<i>Consumption Growth</i>	<i>3.4%</i>	<i>2.3%</i>	<i>0.3%</i>	<i>(0.4%)</i>	<i>(1.2%)</i>	<i>2.2%</i>
Metal surplus (Deficit)	(65)	(116)	45	78	(11)	6
Capacity utilisation						
Mine	68%	71%	72%	72%	70%	68%
Primary Smelters	62%	62%	64%	61%	63%	62%
Secondary Smelters	71%	72%	79%	77%	77%	76%
Stock cover (wks)	6.2	5.6	5.9	5.5	5.4	5.4

Source: ABARE, February 1999 Outlook.

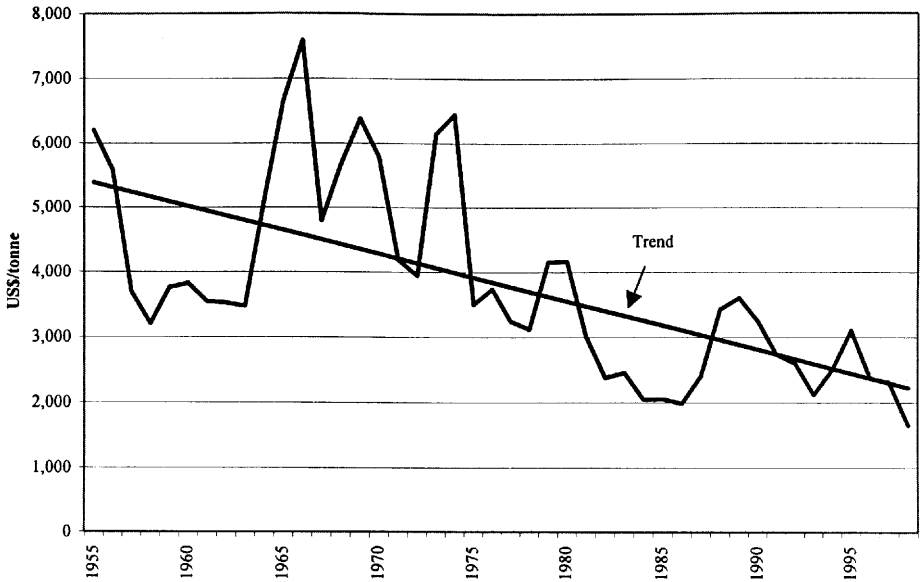


Figure 1 Annual average LME copper prices (real 1998 US\$) 1955–98

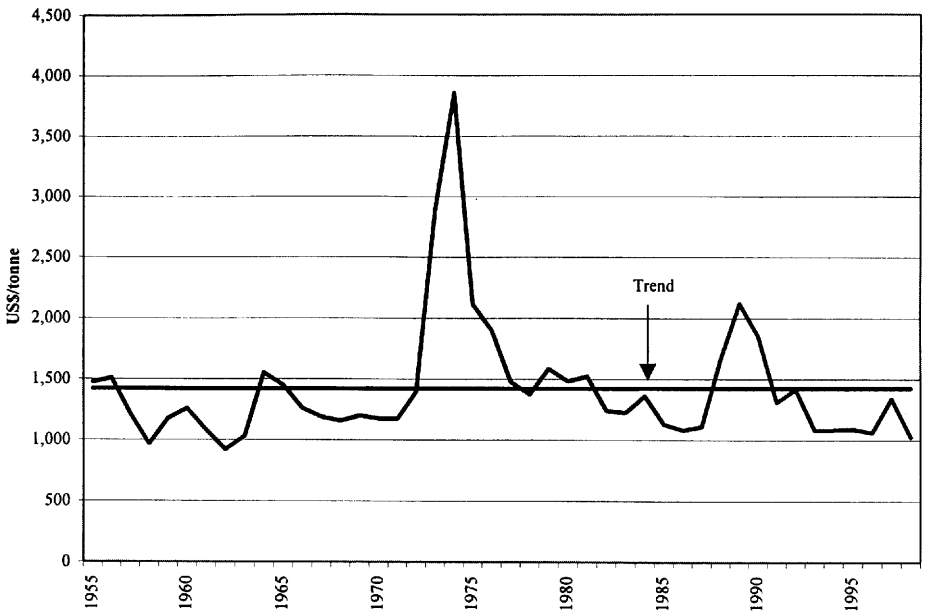


Figure 2 Annual average LME cash zinc prices (real 1998 US\$) 1955–98

Prices have been falling throughout 1998 (see figures 1–3) — well ahead of any real downturn in end-use consumption. Copper, lead and zinc prices are all well below their long-term trends expressed in real 1998 US\$ values.

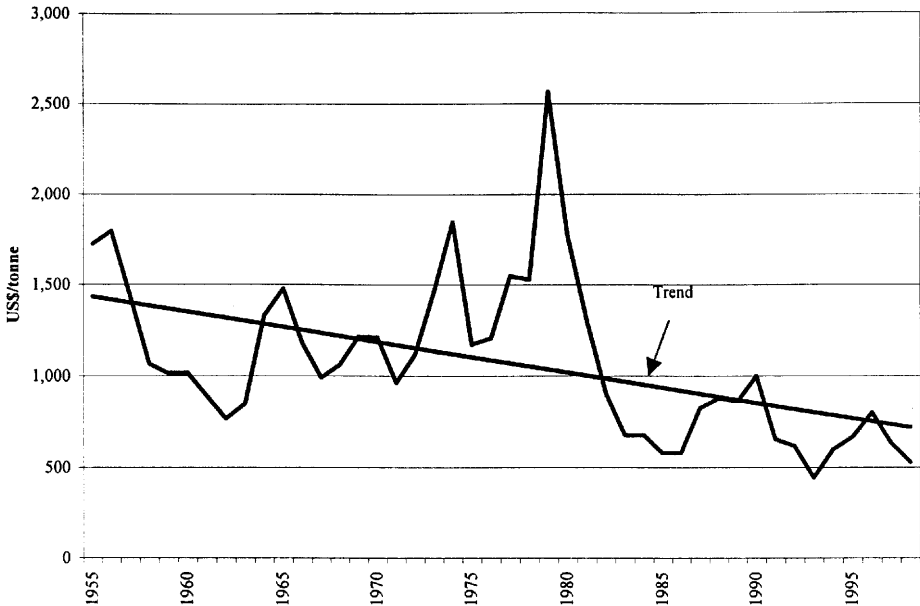


Figure 3 Annual average LME cash lead prices (real 1998 US\$) 1955–98

Until actual demand starts to fall, the underlying pressure should be up. Current base metals prices should be higher.

Prices do not appear to be moving in accordance with industry fundamentals. But is this really the case? We are following fluctuations in three volatile unknowns — the behaviour of funds managers, the Japanese and the Chinese.

2. Managed investment funds

There are some US\$120 billion in funds under management. They act like water in the hull of a sailboat. Their apparent movement will depend on the heel of the boat. In reality, they are seeking a level of return adequate to keep their managers in a job. The growth of these funds is partly the result of population demographics — the ageing of populations in industrialised countries, the drawdown of retirement benefits and the shift of funds out of conservative institutional management with long-term horizons into high performance management with short-term horizons.

This has added a new term to the lexicon of investors. We had YUPPIE and DINK — we now have WOOF, Well Off Old Folk. And these WOOFs require high absolute performance on their money. High relative performance of their fund is not good enough. You see it on the television

advertisements every night. They want a consistent 17–19 per cent return on funds invested or they hire a new manager.

The funds are therefore highly dynamic and highly volatile. But they are also very professional and there is a rationale. They lead the market. Prices today reflect the signals we would normally expect from stock levels and utilisation rates in the industry in six to nine months' time.

The funds are currently reflecting the crisis in Asia. Falls in Asian demand so far have had little effect on direct US and European trade. They do, however, impact on consolidated revenues of multinationals. This translates into Wall Street equity values and available finance, and that translates quickly into reductions in earnings on cash funds under management. The managed funds represent the conduit by which the Asian virus is contagious across the world.

3. Other regions

From a metals resource point of view, the Asian crisis must be viewed in a world context. Asian recovery must be ignited in an environment of low world metals prices. I want to make two points on US and European future demand that will keep metals prices low, before amplifying elements peculiar to Asia.

In the United States, the commissioning of new plant will be largely complete by the end of 1999. Installed capacity will be high and the pressure from recent high utilisation rates will be relieved. This inevitably means a fall or levelling off in the rate of new capital formation and a downturn in general demand for metals involved in non-residential construction, machine tools and new productive equipment.

Europe is wrestling with the launch of a common currency. There are rules for eligibility to join the new currency club, and rules for maintenance of membership (the '*stability pact*'). Maintenance of national qualification requires prudence in government spending. The limit on government deficits, for example, is 3 per cent of GDP. Prudence in spending means a postponement of infrastructure development which has a direct impact on base metals demand. Aligned with this is a fairly uniform installation of left-of-centre governments across Western Europe with stated objectives of relieving social pressures that come from industry rationalisation. We expect a slowdown in restructuring, particularly in labour institutional restructuring, resulting in a slowing of both efficiency improvements and general economic growth.

Eastern Europe is oriented towards export to satisfy demand parameters in other regions. Domestic demand will be a small contributor to world totals in our forecast horizon. Metal working and machine building have almost uniformly plunged to below 15 per cent of their pre-1990 levels.

Particularly worrying is the decrease in core industries that pre-determine the technology level of the whole sector — instruments, machine tools, electrical engineering and electronics. The contraction rate of these core activities was triple that of the sector as a whole. This will extensively constrain the rate of future recovery.

4. Asia

In discussing Asia, it is worth noting that the fundamental problems of corporate governance, lack of transparency, poor regulatory institutions and over-leveraging have existed for a long time. They didn't stop the great economic leaps of the past. They need not stop the recovery. The pace of recovery will depend on the effectiveness of commercial decisions, not on the timetable for institutional reform.

Problems arose from excess optimism and insufficient weight given to downside risk. There was a highly leveraged concentration of capital — notably in property — leading to over-capacity and low returns. As Japanese currency devalued in terms of the US dollar, there was a general fall in the rate of Japanese capital shift into Asia as the Japanese competitive position improved. At the same time there was a rise in the Chinese orientation to export, placing additional competitive pressure on South East Asia.

There were balance of payments and currency management problems. Current account deficits were financed by short-term capital inflows. High weighting was given to the US\$ in local currency management — higher than justified by current trade relations. Industries were subject to competitive deterioration when the US\$ appreciated in 1995 (notably against Japanese yen).

The Thai baht depreciation in July 1997 was the trigger. There were so many open foreign exchange positions, and such a rush to hedge or close them when depreciation set in, that the rate of fall was exacerbated and there was a domino effect throughout South East Asia. The risks are now all too obvious. For the next three years, Asia could drag its feet in structural reform and could retreat into protectionism and traditional economic policy. This is based on fears arising from:

- the crises in Russia and Latin America, with implications both as to supply source for raw materials and competitor for output;
- a weak political government in Japan and an aggressive stand by Japanese bureaucracy to achieve recovery by export promotion (including currency devaluation) in competition with the rest of Asia;
- the risk of losing control of resources and enterprises to cashed-up Western bargain hunters.

5. Japan

The key driving economies are Japan and China. Japanese banking problems are immense. Japanese bank exposure to the five crisis countries (Korea, Indonesia, Malaysia, Philippines, Thailand) was US\$271 billion at the end of 1997. Exposure to the total emerging market was US\$292 billion (compared with US\$118 billion of US and US\$572 billion of European Union bank exposure). For Japan, the exposure to the total emerging nation market represented some 118 per cent of bank capital (compared with 34 per cent in the United States and 78 per cent in the European Union).

In Japan, the amount of non-performing loans to be disposed of is estimated at 20 trillion yen (US\$14 billion). This assumes all the impossible, half the difficult and 20 per cent of the careful loan assets will be lost (in accordance with US regulatory classifications and assumptions). Self-assessment by the Japanese banks admits that 77 trillion yen (15 per cent of GDP) are sub-standard questionable loans. This does not include the bad loans of credit co-operatives.

Permeating the entire question of institutional reform is the decision methodology in Japan. Much has been said in favour of the political stability that has existed in that country for the last 40 years. Since 1955, a single party has almost continuously held a sufficient number of parliamentary seats to form a government. Though essentially conservative and oriented towards business and agriculture, it has been able to function as a broadly based 'catch all' party, with sufficient flexibility to attract new categories of support when this proved necessary. It has existed alongside a bureaucracy which itself existed before the war with the bulk of its powers intact. That bureaucracy operated for many years under the mantle of US protection, allowing it to focus on economic development and forge extensive co-operative links with private enterprise.

The result is a maze of compromises between competitive interest groups, most of which must be addressed before institutional change can be achieved. It is simply not enough for world leaders to limit their persuasive efforts to the Prime Ministerial level of government. That office is relatively weak and largely symbolic. The relative power of the Japanese Prime Minister is less than the relative government power of the US or French Presidents, or the British or Australian Prime Ministers within their domestic environments. The Japanese even have a term for it: they refer to the office as 'Kei Tai Yo Sha — the portable shrine'. It is trotted out whenever the public image needs polishing. To achieve change, the negotiation of new compromises must be thorough, and at multiple levels of the society. It takes time.

6. China

Of the three volatile unknowns affecting minerals — the funds, the Japanese and China — the Chinese are currently the most active in institutional change that will ultimately affect the Australian minerals industry. A new nonferrous metals government instrumentality — the State Nonferrous Metals Industry Administration (SNMIA) — started operations early in 1999. It is a replacement for the old China National Nonferrous Metals Industry Corp (CNNC) which was dissolved in April 1998. At that time, the old CNNC had some 285 enterprises under its jurisdiction with some 58 per cent in loss positions. Only 25 were quoted as profitable in 1997. The focus of the SNMIA will be industry rationalisation.

The new SNMIA is structured into five groups representing aluminium, copper, lead, zinc and rare earths. The groups will gradually take responsibility for all production decisions and control all assets of the state enterprises within the industry. I want to use aluminium as an example of how all this restructuring will affect Chinese exports.

The aluminium group will have ten major smelters under its control and total assets of about US\$5 billion. The aluminium industry must be a principal target for the nation's overall goal of rationalisation. The country has five alumina refineries with a combined annual capacity of 3.3Mt, built near bauxite resources in Henan, Shandong, Guixhou and Shanxi provinces. Total smelter capacity is 1.9Mt in 75 plants, with eleven major plants (combined 1.0Mt) and 58 other smelters averaging less than 10kt. The balance is in small units as low as 800t. Many are well away from the refineries that supply them, and this adds to transport costs.

In the general atmosphere of decentralisation that has prevailed, most of the smaller smelters are controlled not by the state, but by provincial governments or local private enterprises and foreign investors in joint ventures. Before the current round of restructuring, all the refineries were owned by the old CNNC but only 40 per cent of the smelters were within its jurisdiction. The old CNNC was not in a position to control aluminium production on a national scale. The new structure under SNMIA may change all this.

Domestic demand was stable for the first half of 1998, up 1.8 per cent on 1997, with an increase in packaging, vehicle, refrigerator and can production offset by a fall in construction. This will change in response to a government policy of stimulating infrastructure development and housing to absorb the unemployed and ease the pain of institutional restructuring. It will take some time, however, for this policy to be reflected in end-use tonnage demand. In the meantime, domestic offtake will be less than production, leading to increased exports and downward pressure on international prices. Metal

output in 1998 was 2.4Mt, up 19 per cent on plan and up 16 per cent on 1997. The net impact of restructuring currently under way will be rationalisation and consolidation, an improvement in efficiency and an increase in exports.

7. Conclusion

We still don't know what will happen next. The timetable for Asian recovery, however, will be slow — the better portion of two years through 2000. That timetable is for slow institutional reform, deferral of infrastructure investment, nervousness in capital investment, rationalisation and consolidation of enterprise, slow recovery in domestic demand, an improvement in productive efficiency, increased exports and lower metal prices. The three volatiles — funds, Japan and China — will ensure that the impact of this realisation will spread quickly throughout the world. It will lead metals price movement well ahead of physical movement in output, consumption and market balances.