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World commodity prices 1996 - 1998: Report
presented to the AIECE spring meeting, Venice, May
5 - 8, 1997

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Kiel Working Papers

Working Paper No. 810

ASSOCIATION D'INSTITUTS EUROPÉENS DE CONJONCTURE ÉCONOMIQUE

– Working Group on Commodity Prices –

WORLD COMMODITY PRICES 1996–1998

Report presented to the AIECE spring meeting
Venice, May 5-8, 1997

by
Jörg-Volker Schrader



Institut für Weltwirtschaft an der Universität Kiel
The Kiel Institute of World Economics

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April 1997

Members of the group are:

CPB	:	Centraal Planbureau, The Hague
COE	:	Chambre de Commerce et d'Industrie de Paris, Paris
ETLA	:	Research Institute of the Finnish Economy, Helsinki
FTRI	:	Foreign Trade Research Institute, Warsaw
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Abstract

World commodity prices increased in 1996 on aggregate by 7 percent. However, taking yearly averages, this was the result of heterogeneous developments: increasing oil prices, which have a dominant weight, and falling prices for industrial raw materials and food and beverages. Forecasts for 1997 and 1998 point in the opposite direction: oil prices are expected to fall slightly whereas industrial raw material prices are likely to increase, a process which already began at the end of 1996 and will level off through 1998. Prices for food and beverages will decline slightly after a pronounced increase during the first months of 1997.

1 Price developments in the past six months

Prices of primary commodities dropped modestly in the first quarter of 1997 after having increased by 7 percent in the fourth quarter of 1996. However, this was mainly due to a decrease of the price for crude oil. Excluding crude oil, quotations showed a slight increase (2 percent).

Looking at the different commodity groups (Table 1), the prices of energy raw materials in the fourth quarter increased more than expected due – among others – to very low oil stocks as a consequence of the long and hard winter 1995/96 and a below quota production of OPEC member countries. During the first quarter 1997 oil prices fell back to about before winter levels.

A considerable drop of prices for food and tropical beverages in the last quarter of 1996 has predominantly to be allocated to a fall in grain and oilseed quotations because of an unexpected pronounced recovery in the production of feed grains in the USA. Whereas grain prices remained on the reduced level in the first quarter of 1997, prices of soybeans and coffee rose significantly because of unexpectedly tight supplies pushing the average to 7 percent above the previous quarter.

Table 1 September 1996 – forecasts and realizations

Commodity group	1996 IV		1997 I	
	Forecast	Actual	Forecast	Actual
	percentage change over previous period			
HWWA-total	3	7	-1	-5
Total excl. crude oil	0	-2	1	2
Energy raw materials	5	11	-2	-8
Food and tropical beverages	-2	-9	-1	7
Industrial raw materials	2	1	2	2
Agricultural raw materials	2	1	2	-3
Non-ferrous metals	2	3	3	10
Iron ore, scrap	0	-3	4	0

Industrial raw material quotations changed little till the end of 1996 and developed differing tendencies for agricultural raw materials and non-ferrous

metals. Whereas rubber, woodpulp and softwood quotations weakened temporary because of a sluggish demand, prices for major non-ferrous metals recovered more than expected because of a strengthened demand and rather low LME stocks.

2 Price forecasts until end-1998

2.1 Assumptions

Economic growth in OECD countries gained momentum during 1996. Real GDP increased by an annual rate of more than 2 percent; that is the magnitude expected at the autumn forecast 1996 and significantly more than in 1995. Growth will accelerate slightly during 1997 and 1998 (Table 2). The recovery is supported by low interest rates and by the rapid growth in less developed and newly industrialized countries and by growth rates of 4 to 5 percent in some Eastern European Countries.

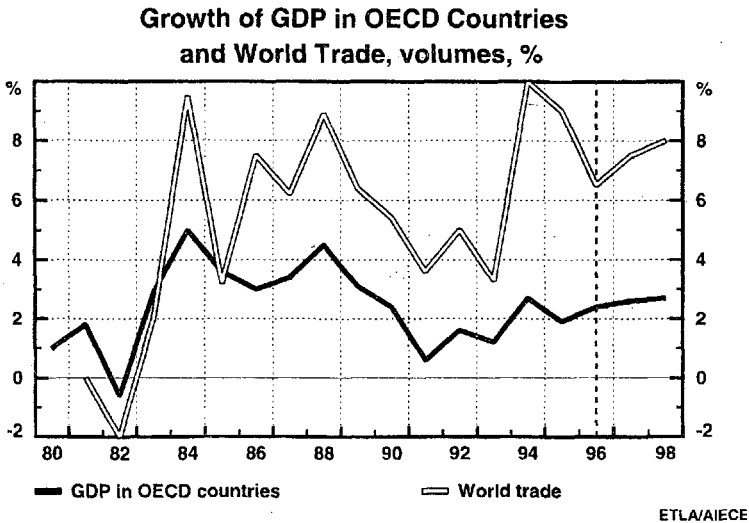
In the US the expansion will continue. In Japan financial policy will have restrictive effects in 1997 but this will dampen the recovery only temporary since other side conditions remain favorable, in particular the monetary policy. Growth of industrial production is expected to accelerate from 1.5 (1996) to 3 percent in 1997 and 1998.

Table 2 Framework assumptions, 1996–1998

	1996	1997	1998
	Annual percentage change		
OECD GDP, volume	2.4	2.6	2.7
World trade, volume	6.5	7.5	7.4
Export price of manufactures	-1.5	0	1
Exchange rate (DM/US\$)	1.51	1.70	1.70

After a low increase of 6.5 percent in 1996 world trade will expand with slightly higher rates during 1997 and 1998. Under the assumption that the DM/US\$ rate will remain at the level of 1.70 reached in march 1997. The export prices of manufactured goods will change little during 1997 and 1998 after having fallen slightly in 1996.

Chart 1



2.2 Aggregate price developments

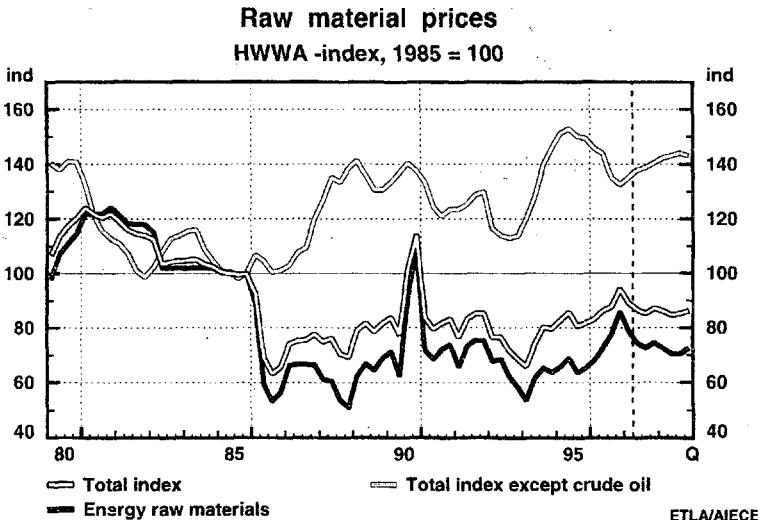
Prices of **food and tropical beverages** are expected to decrease during the forecasting period. Given a high elasticity of supply with respect to prices and – in a long-run comparison – still attractive prices for producers, supply of food commodities will surpass production and allow for a slight replenishment of stocks, which are still very low. On the other hand coffee prices will fluctuate around a rather high price level reached in spring 1997 and start to decline only in 1998.

Table 3 Forecasts: aggregates, 1997-1998

	1997 annual	1998 percentage change
Total	-1	-2
Total, excl. crude oil	-1	4
Food and tropical beverages	2	-2
Industrial raw materials	-1	7
- Agricultural raw materials	-5	8
- Non-ferrous metals	7	8
- Iron ore, scrap	-4	3
- Energy raw materials	-1	-5
- Crude oil	-1	-5

The continuing modest recovery of economic activity in industrial countries, together with significantly higher growth rates in some other regions, in particular in South East Asia and in several Central Eastern European Countries, will strengthen demand for **industrial raw materials** and push prices upward. On a yearly basis, because of a significant negative overhang, this will be seen only in the figure for 1998.

Chart 2



Energy prices will decline from a rather high level reached in the third quarter of 1996.

For the index in total these developments will result in a small decrease for 1997 and 1998. However, prices – except crude oil – point in the opposite direction since crude oil has a very high weight in the index.

2.3 Energy raw materials

Although **crude oil** production in OPEC countries was significantly higher than during 1995 and above quota in the fourth quarter of 1996 (26.28 million barrels per day compared to a quota of 25.033) and total non-OPEC production increased from 42.41 million barrels per day (1995) to 44.56 in the fourth quarter in 1996, quotations increased sharply during winter, peaking at US\$ 23.3 per barrel in January 1997. This was due to a partly unexpected strong demand, resulting from generally low stocks because of the cost-reducing just-in-time inventory practices at refineries, a long hard previous winter and – earlier in 1996 – a generally expected production surplus with declining prices. Moreover the demand in developing countries might have been understated.

Table 4 Energy raw materials, HWWA-index (1975=100 and percentage change on previous period)

Commodity	96 3	96 4	97 1	97 2	97 3	97 4	98 1	98 2	98 3	98 4	96	97	98
Energy raw materials	191	212	195	184	179	184	179	174	174	179	187	186	177
	7	11	-8	-5	-3	-3	-3	-3	0	3	15	0	-5
Coal ind.	205	203	196	196	196	196	196	200	200	200	207	196	199
	-2	0	-4	0	0	0	0	2	0	0	-3	-5	1
Crude oil	189	213	195	183	178	183	177	172	172	177	185	185	175
	7	12	-8	-6	-3	3	-3	-3	0	3	18	-1	-5

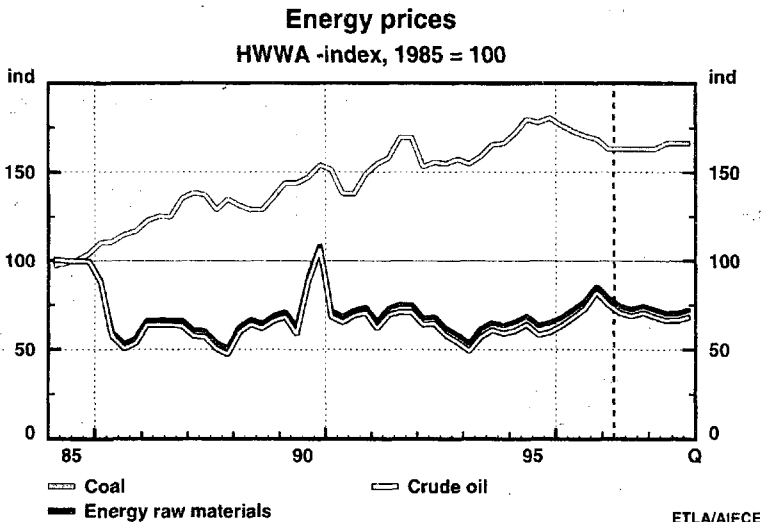
The price of about US\$ 23 per barrel in January has since declined. Taking seasonal effects into account this trend will hold on in the next two quarters, but with dropping rates. Assuming a normal winter period and no supply restrictions,

a moderate price increase is expected for the fourth quarter and that will lead to a small decrease for the 1997 average.

The IEA forecasts an increase in world oil demand of 2.6 percent in 1997 to 73.6 million barrel per day. However, demand figures are typically revised upward when the annual data are released. Therefore the projected large production surplus of 1997 resulting from a marked production increase of 4.6 percent (from 72.1 to 75.1 million barrel per day) from 1996 to 1997 might be somewhat overstated. Nevertheless quotations will remain under pressure and with the normal seasonal variation will reach about US\$ 19 at the end of 1998.

In 1996 the average coal prices proved virtually unchanged from the previous years' levels. The outcomes of just concluded contract negotiations indicate no major changes in 1997 either, with possible modest fall in steam coal price quotations and rollover prices for cooking coal. In the medium term, an expected rise in demand for imported coal will be covered by additional deliveries from new mine projects due to come on stream. Therefore, even with a pick up in consumption, only moderate price increases can be assumed for 1998.

Chart 3.



In the second half of 1996 the world **steam coal** market showed the signs of strengthening. Several factors contributed to the relatively firm balance in the market, including hydropower shortage in Scandinavia and a rise in German and the UK imports on the demand side, and a dip in exports from South Africa, industrial action in the Australian coal industry and a reduction in the exports of high-cost US coal on the supply side. In the period of June – November last year SA spot quotations increased by 3 US\$/mt.

However, at the end of 1996 the upward trend has been reversed under the impact of growing competitions from cheap Australian coal on the European market, in its turn a consequence of low freight rates and a shift in buying practices of the Japanese utilities, which reduced their contract purchase and raised the share of spot shipments. As a result of the changed mood of the market, SA steam coal exporters had to accept a 1 US\$/mt cut (to 32.60 US\$/mt) in ENEL benchmark contract price for 1997, instead of expected rise by 0.5–1.5 US\$/mt. The settled benchmark price corresponds to the recent level of spot quotations.

Demand prospects for 1997 appear to be less robust than previously predicted. In Japan and South Korea ten new power stations are to be put into operation this year, but the process of commissioning seems delayed. On the European market, the expected increase in the imports to Germany, Italy and Israel will exceed only marginally (by a 1.5–2.5 mt) the awaited cuts in French and Spanish import demand. Under these conditions, the period of the overall weakening of the market and a further fall in spot prices can last at least to May, June this year, following the last years pattern.

At the end of 1997 and in 1998 the world steam coal market can strengthen again, as a pick up in demand is generally awaited, both in the Pacific region and in Europe (mainly in Germany and in the UK, where reductions of subsidies for domestic coal producers foster more coal imports). However, as new production capacities (e.g. in Australia) should meet increased consumption, the price rise forecasted for 1998 is moderate (3 percent, after a fall of 3 percent expected this year).

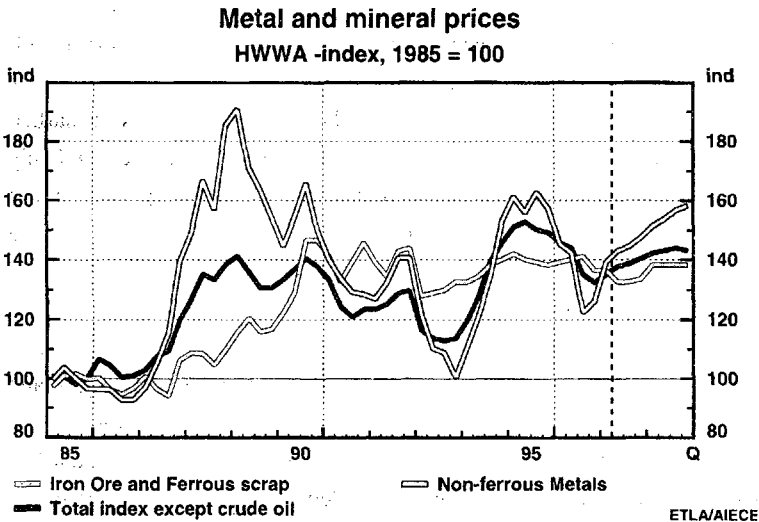
In 1996, the prices of internationally traded **coking coal** remained generally unchanged compared to the previous year. In view of recent contract settlements, the same picture can be expected in 1997. In the US deliveries to Europe rollover

pricing prevails, with changes no more than 0.5 US\$/mt up or down on last years levels, and price cuts accepted in exchange for a volume increase. On the Pacific market, the prices of Australian supplies to the Japanese steel mills increased only in the case of premium brands, and declined slightly for other brands.

Stagnant coking coal prices reflect the poor state of the world steel industry last year. However, steel production already shows signs of recovery. In January 1997 pig iron production in coking coal importing countries was higher by 4.8 percent than in the corresponding month last year. A substantial rise in the world steel production, forecasted for both 1997 and 1998 should fuel the demand for coking and, consequently, induce an upward movement in contract prices for 1998/99 by 2 percent.

2.4 Metals and minerals

Chart 4



The negative price trend for most non-ferrous metals ended in the fourth quarter of 1996. Quotations for major commodities increased during the first quarter of 1997. Beside more technical reasons (institutional hedging) this marked turn in price developments seems to reflect increased demand for stock building, which

are very low at the LME, and the general more lively demand because of the continuing increase in economic activity.

Despite higher production, **aluminum** prices recovered from their low in October as demand picked up. The slow stock buildup that had started in autumn 1995 finally came to an end. LME inventories lost about 100 000 tons since the beginning of this year. Compared to peak levels three years ago stocks have been reduced by 50 percent. Prices in the first quarter of 1997 were at the same level as one year ago. US consumption rose because of increased construction activities; in Japan construction as well as car sales were boosted in the fourth quarter 1996 because of the increase in the consumption tax rate announced for April 1997. Despite a temporary drop in Japan the general upward trend in consumption is expected to continue since economic growth in industrial countries will be based more broadly. European aluminum producers report a rise in orders. Aluminum demand will gain in particular from the transportation sector (aircraft, automobile). Total demand for aluminum in the Western world is likely to grow by 4 and 3 percent 1997 and 1998 respectively after a slight decrease in 1996. Aluminum production in the Western world will rise moderately as idle smelting capacity is still available and expansions are under way in several countries. Russia will continue to be a significant exporter and thus account for most of the remaining output gap. Deliveries from China will probably decline as indigenous consumption growth. All in all production and consumption are expected to be more or less in balance in 1997, and end up with a deficit in 1998. The scope for price increases will therefore be limited in the short run. On average prices are forecast to rise by 10 percent in 1997 and 1998 each year.

Copper prices recovered in the last months of 1996 after having reached their lowest level for more than two and a half years in the third quarter. They made up for most of the loss resulting primarily from the Sumitomo scandal and were only 6 percent lower in the first quarter of 1997 compared to the same period in 1996. The higher price resulted from higher consumption due to strong growth in North America and a widening recovery in Western Europe – Western copper consumption apparently grew by about 4 percent last year – and from decreasing stock levels. Speculative fund buying probably played an important part in the copper price rise as well. Prices may have reached their peak for the time being,

as stock development in London reversed at the end of 1996: World consumption is projected to further increase in 1997, above all due to stepped up South East Asian consumption, whereas copper use in the US is expected to rise more slowly than in 1996. In Europe, physical buying is reported to pick up, and a higher demand for construction purposes is widely expected. A crucial factor is the demand from China, which increased in 1996. Much of the debate over copper is about potential Chinese buying to replenish strategic stocks. China's strategic stockpile plays an increasing role in price stabilization, but as the buying pattern as well as the actual size are unknown, they are the subject of intense speculation. Unless China tips the balance, world copper supplies are likely to show a modest surplus this year. Copper prices are forecast to rise by 7 percent in 1997 and also in 1998 compared to a decline of 22 percent last year.

Table 5 Metals and minerals, HWWA-index (1975=100 and percentage change on previous period)

Commodity	96	96	97	97	97	97	98	98	98	98	96	97	98
	3	4	1	2	3	4	1	2	3	4			
Non ferrous- metals	161	166	183	188	190	194	199	202	206	208	176	189	204
Aluminium, GB	-14	3	10	2	1	2	2	2	2	1	-16	07	8
Lead, GB	209	207	231	237	242	249	257	260	265	273	218	240	263
Copper, GB	-7	-1	12	3	2	3	3	1	2	3	-16	10	10
Nickel, GB	194	174	165	170	174	179	183	186	186	186	188	172	185
Zinc, GB	-2	-10	-5	3	2	3	2	2	0	0	23	-8	8
Tin, GB	161	175	196	198	198	202	206	210	217	217	186	199	213
Iron ore, scrap	-20	9	12	1	0	2	2	2	3	0	-22	7	7
Iron ore, Can.	178	172	179	190	196	202	210	218	218	218	187	192	216
Steel scrap, USA	-10	-3	4	6	3	3	4	4	0	0	-9	3	13
Steel scrap, USA	135	139	158	169	171	174	178	178	178	178	138	168	178
Steel scrap, USA	-3	3	14	7	1	2	2	0	0	0	-1	22	6
Steel scrap, USA	90	87	86	88	88	88	90	92	92	92	90	88	92
Steel scrap, USA	-3	-4	-1	3	0	0	2	2	0	0	-1	-3	4
Steel scrap, USA	151	146	146	142	142	143	148	148	148	148	149	143	148
Steel scrap, USA	1	-3	0	-2	0	0	4	0	0	0	-1	-4	3
Steel scrap, USA	138	138	138	135	135	135	141	141	141	141	138	136	141
Steel scrap, USA	0	0	0	-2	0	0	0	0	0	0	0	1	3
Steel scrap, USA	190	173	187	181	181	185	189	189	189	189	192	184	189
Steel scrap, USA	-2	-9	8	-3	0	2	2	0	0	0	3	-4	3

Prices of **lead** had been depressed in recent months due to slow demand from battery manufactures, fund selling and general destocking. Stock levels are relatively low by now but still falling. Global consumption presumably rose slightly in 1996, with demand being particularly strong in Western Europe and the US. Consumption will strengthen further in 1997 also because there is a potential for re-stocking by the industry. The western supply gap in 1996 was filled greatly by Chinese exports. In 1997 these exports might fall short of the needs as indigenous consumption will absorb a growing share of available volumes. Furthermore the discontinuation of production at several mines will limit the availability of concentrate and thus also restrict Chinas ability to export refined metal. Therefore prices are expected to rise again moderately during 1997 and will stabilize at a level of about 770 US\$/ton in the mid of 1998. Due to the negative overhang the yearly average will decline by 8 percent in 1997 and increase by 8 percent in 1998.

Nickel prices were highly volatile in recent months. After having fallen to their lowest level in two and a half year in December due to slow demand, prices have recovered strongly since then. LME inventories have modestly increased from their mid 1996 low, but are still at only one third of their peak at the end of 1994. Recent price fluctuations might have been aggravated by speculative activities. Consumption in the Western world fell by 10 percent in 1996, while output figures show an increase of 2.5 percent. Demand will strengthen this year, particularly in Western Europe as well as in Asia, while increases might be smaller in the US pointing at an overall rise in consumption of 4 percent in 1997.

Production increases will be slightly less. A continuing theme for rumors regarding nickel production are the problems of the Norilsk Nickel complex in Siberia. This year, as last year, it has payment arrears. According to some traders, a major supply disruption could result from a strike there, but others doubt the seriousness of the effects on the nickel market should such a strike happen. Experiences up to now lead to the conclusion that foreign currency needs will finally ensure the continuity of production. Disregarding these uncertainties, the market will tighten only slowly. The upward pressure on prices will be more marked only in 1998. The average price is expected to be up 3 percent in 1997 and 13 percent in 1998 compared to the respective previous year.

Western world **tin** consumption in 1996 has totaled about 175 000 t according to the latest WBM statistics, a slight decrease from 1995, while western production was expanded last year by 6 percent. The still resulting supply deficit was obviously widely compensated by exports from China and a drawdown of US strategic stocks. The high tin prices that prevailed from late 1995 until spring of 1996, reaching 6400 US\$/t in the second quarter, were receding accordingly. Until the first quarter of 1997 they had come down 8 percent, with recoveries now and then in recent months that hint at speculative influences. Demand will rise in 1997 as consumption in industrialized countries will be resumed in line with the broadening economic growth, though increases, in line with a general rule, will again be lower than for other metals.

Information on tin supply is scarce as statistics are incomplete or not very reliable. Production supposedly will be expanded as well, as producers seem to have acquiesced with lower prices, though the expansion might slow down compared to 1996. Expectations of Chinese deliveries being postponed until prices tighten again have yet to be confirmed. The tin price is supposed to have reached its lowest level for the time being and to rise again slowly. As prices came down from a high level in the first half of 1996, they will, on the average, be 3 percent lower in 1997 and 4 percent higher in 1998. The future of the tin export quota system that ended in June 1996 is still dark. The ATPC executive committee will present a proposal regarding the renewal in May. Producing countries Australia and Thailand left the Association of Tin Producing Countries (ATPC) last December.

World **zinc** consumption was at record levels in 1996 and outpaced refined production for the second year as the market struggled to absorb large surpluses from previous years and cope with relatively low prices. Only in February prices began to rise sharply when diminishing stocks pointed at a tightening of the market. LME stocks in March were down by 30 percent compared to the beginning of 1995, and prices reached their highest level for four and a half years. Western world consumption of zinc in 1996 presumably was about 3 percent lower than in 1995. The slight fall followed two years of growth. While demand fell in Western Europe and the US and more significantly in Japan, it remained strong in Korea. Metal output in the Western world was expanded by 2 percent, while increases in America and Europe being partly balanced by decreases in

Asian countries. Western production of refined zinc was substantially below consumption. The resulting supply deficit was largely compensated, mostly by deliveries from China, but also from East European sources. Demand is set to rise in 1997 and 1998, with production following at a similar level. Therefore it is expected that the Western Market will remain in deficit. Consequently the upward pressure on prices will increase. An important assumption in this scenario is that China with its high smelting capacities will not be able to increase metal exports due to shortages of concentrate supplies from the West. Prices are forecast to rise by 22 percent in 1997 and 6 percent in 1998.

World **crude steel** production fell by 0.2 percent in 1996, according to estimates by the United Nations Economic Commission for Europe. Production decreased by 4.8 percent in Europe, EU production decreased by 5.3 percent and CIS production by 3.3 percent. Production increased in all Asian countries with the exception of Japan, where it decreased by 2.8 percent. China overtook Japan to become the worlds largest steel producing country. US production increased by slightly under 1 percent.

1996 was characterized by surplus stock levels in the beginning of the year, which took until the third quarter to clear fully. Prices bottomed out in the third quarter of 1996, and recovered slightly in the fourth quarter. Rebar prices have now been stable since October 1996.

The outlook for 1997 points to an increasing demand, particularly in Europe. Inventory levels are down to normal, and economic growth is expected to be stronger, as Europe recovers from last years „mini recession“ and construction activity increases. Asian demand is expected to continue to grow strongly, and the IISI predicts that apparent consumption will reach its all time high this year. However, capacity will continue to increase this year, particularly in Asia, potentially leading to a situation of over supply. This should keep excessive price rises in check. The strength of the dollar favors European exports and has already led to rising domestic prices in the German sections market.

The appreciation of the dollar will keep dollar denominated price rises in check, as domestic prices have risen although dollar denominated prices have remained stable. All in all, prices are expected to remain fairly stable in the second quarter. As construction demand picks up there may well be room for a price increase in the third quarter which will be further reinforced in the fourth quarter.

In 1998 GDP growth is expected to accelerate as is residential construction demand. However, capacity will continue to expand, although CIS exports are expected to steadily decline due to increasing transport costs and strengthening domestic demand. Prices should remain fairly stable as improved demand conditions are offset by increasing supply, with maybe a slight rise in the last quarter.

The price of **steel scrap** increased last year by around three percent. However, the price fluctuated heavily on a high level as was already foreseen in our previous forecasts. During the last quarter of 1996 the price of heavy melting scrap in the USA declined heavily as supply increased due to the more than normal intense scrap collection because of the mild winter. In the beginning of this year, the prices recovered. The strengthening of the US dollar against most other main currencies makes the US exports more difficult and puts some pressure on the price in the short-term.

The **iron ore** contract prices for this year fell by around one percent depending on the quality of the ore. The Brazilian pellet prices for Europe declined by 0.57 percent to 52.1 cents per metric ton unit.

The price of benchmark ore for the group, Brazilian fines to Europe, was not settled. The price is assumed to have declined somewhat more than the price of pellets. The price decline was expected to a great extent due to the decline in world production of steel last year and strengthened US dollar, which increased the export prices in domestic prices e.g. in Brazil.

The increasing production of steel implies slower increase in the demand for ore as the technology in the steel industry is developing into scrap using direction. However, the price of scrap is nowadays regarded as high and its profitability advantage against iron ore has narrowed markedly. This will diminish the structural pressure towards slow growth of demand for ore. In addition the increasing use of scrap substitutes like pig iron, direct reduced iron and even iron carbide will increase the demand for ore.

Next year the increase in demand is expected to exceed that of supply. As a result a small increase in the price is expected. However, the price of 29 US cents will still be well below the peak price in 1991 of 31.6 cents per metric ton.

Demand for **manganese ore** was virtually static last year, in line with global steel production, which decreased by 0.2 percent according to the United Nations

Commission for Europe. The contract price for manganese was established in March/April 1996.

Prices of manganese alloys such as ferro-manganese and silico-manganese slipped during the year due to subdued demand in the steel industry and oversupply. Some traders expect the market to pick up slightly in the second quarter of 1997. Manganese alloy prices also appear to be recovering slightly.

Last year, the price of manganese rose for the first time since 1991. This year, steel reduction is expected to increase, thereby increasing demand for manganese ore. However, it seems likely that prices will fall this year, since high stock levels and the depreciation of the yen against the dollar exercise downward pressure on prices.

Next year economic fundamentals point to stronger demand for steel than in 1997, which should in turn lead to increased demand for manganese. This together with a possible appreciation of the yen should make room for a slight price increase from the 1997 level.

There is a clear trend among manganese producers to vertically integrate and to refine ore rather than merely producing ore. This is, however, a highly energy intensive process requiring considerable capital investments, and its viability is dependent on plentiful cheap energy.

The price development for **tungsten** has been very volatile during the last few years. It depends heavily on the production of China. China produces currently two thirds of world tungsten concentrates. About 45 percent of tungsten reserves are situated in China as well.

The price of tungsten metal has fallen to a level where many producers cannot cover their costs. The recent fall in the prices has been due to the depletion of stocks, the mine production even decreased. Stock levels should now be low world wide. The producers restricted production slightly already last year in order to push prices upwards. As a result the price of ore is expected to have reached the bottom in March 1997. However, the average price for this year will be still below the last year's level. In 1998 the price will surpass the level of 1997 by 15 percent.

2.5 Agricultural raw materials

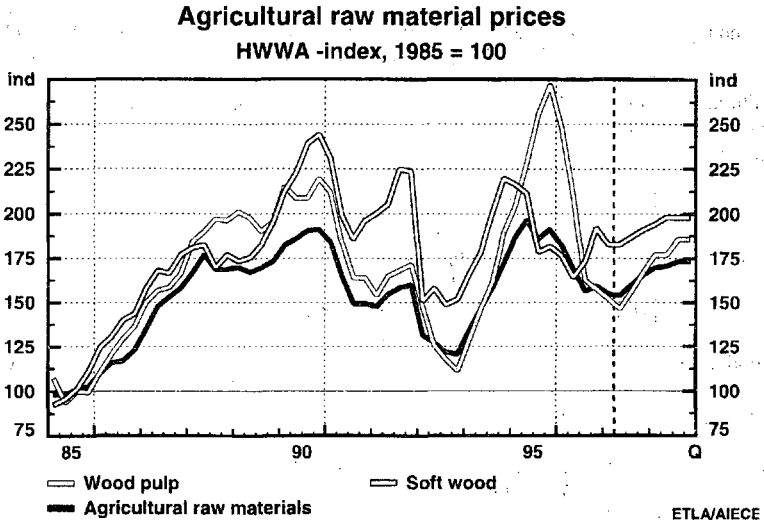
About a year ago **woodpulp** prices crashed. The NBSK benchmark grade fell from an all-time high of 1000 US\$/ton in October 1995 to a trough of 490 US\$ in April 1996, the sharpest decline on record. Since then woodpulp prices struggled to recover despite the pick-up in economic growth in OECD countries. On several occasions producers have announced and tried to push through price increases that have so far failed to materialize. Last December woodpulp prices were around 550 US\$ announced in May 1996 to be effective June 1. By the end of December a new announcement was made to push prices up to 620 US\$ effective January 1. But prices actually declined in the first quarter to 530 US\$ in March, up only 8 percent from April 1996.

A year ago, the first announcement of price increases led to a reduction in NORSCAN stocks from 2.5 million tons in April 1996 to 1.6 in June by spurring speculative buying. But since July 1996, NORSCAN stocks have edged up to reach 2.0 million tons in December preventing any solid upturn in prices. The main factor behind this trend is that producers have not backed their announcements with substantial reductions in production. Especially North American producers kept producing flat out.

Looking ahead better growth prospects in OECD countries (especially a resilient US economy and a pick up in the European recovery) should foster a strengthening in woodpulp prices. NORSCAN stocks could fall in the coming months and a level around 1.5 or 1.6 million tons would trigger a sustained rise in woodpulp prices. In 1998 a leveling out is expected brought about by a slowdown in the US economy.

Softpulp prices declined in 1996 in terms of annual average, but they reached a trough around spring. Some firming took place from then on, thanks mainly to a strong recovery in the US housing market. On the other hand housing permits remained on a downward trend in other major European countries especially in Germany. The price decrease in the beginning of 1997 seems to be mainly weather related, and prices are expected to rise in the second half of 1997.

Chart 5



The further prospects hinge on the impact of lower long term interest rates on the housing industries in Continental Europe. At least in the UK a monetary tightening is quite likely to be implemented in the wake of the May elections to stem inflationary pressure that are now building especially in the labor market.

Prices for **tropical timber** have risen sharply since May 1996. This rise seems mainly due to a growth of the housing market in Japan in the face of a relative scarcity of supply. Some of the rise may be related to currency shifts, especially the strong appreciation of the Sterling versus the DM and the Dollar.

Looking to the future the main uncertainty is the impact of the implementation of a restrictive fiscal policy on housing demand in Japan. It may well undercut the current recovery in housing permits.

The price for **cattle hides** will slightly increase further because of economic growth and a relatively high income elasticity for leather. This tendency is strengthened by more or less stagnating supplies, a consequence of the stagnation in cattle slaughtering and - to a smaller extent - of the destruction of hides mainly in the UK, resulting from the BSE caused killing program for cattle.

Table 6 Agricultural raw materials, HWWA-index (1975=100 and percentage change on previous period)

Commodity	96	96	97	97	97	97	98	98	98	98	96	97	98
	3	4	1	2	3	4	1	2	3	4			
Agricultural raw materials	176	179	174	173	180	186	191	192	195	195	187	178	193
	-7	1	-3	0	4	4	2	1	1	0	-12	-5	8
Cotton, USA	154	156	157	158	160	161	161	161	161	161	164	159	161
	-10	1	0	0	0	0	0	0	0	0	-16	-3	1
Sisal, GB	123	123	123	123	123	123	117	117	117	117	119	123	117
	3	0	0	0	0	0	-5	0	0	0	20	3	-5
Wool, Aus	184	174	177	178	182	187	193	199	199	199	174	181	197
	7	-5	1	1	2	3	3	3	0	0	-5	4	9
Hides, USA	404	410	404	408	420	429	429	429	429	429	375	415	429
	11	1	-1	0	3	2	0	0	0	0	-1	11	3
Softwood, Swe	169	187	178	178	182	186	189	193	193	193	172	181	192
	5	11	-4	0	2	2	2	2	0	0	-10	5	6
Woodpulp, Fra	149	144	139	134	143	153	162	162	170	170	178	142	166
	-23	-3	-3	-4	7	7	6	0	5	0	-19	-20	17
Rubber, USA	245	227	220	229	241	253	253	253	253	253	250	236	253
	-6	-7	-3	4	5	5	0	0	0	0	5	-6	7

The prices for **cotton** - taking the yearly average - decreased in 1996 by about 17 percent. However, a slight recovery started during winter 1996/97. World production 1996/97 is estimated at 18.9 mill. tons, a decrease of 6.3 percent compared to the previous year. Consumption, on the contrary, is expected to increase by 2 percent and will reach the same level as production. Therefore, the price recovery has to be seen as an adaptation to a globally balanced supply/demand situation, which is following a production surplus in the previous year. The stock/consumption ratio for the World(excluding China) will slightly fall from 39 to 37 percent. The outlook for 1997/98 points again to a rather balanced supply/demand situation with increases in consumption and production of nearly 3 percent. Therefore quotations will fluctuate around the level of 76 US-cents/pound (A-index).

Except from a temporary recovery in the third quarter, **wool** prices decreased throughout 1996. This was the consequence of still rather high stocks and high supplies and a temporary depressed demand in major consuming countries. Prices rose sharply in January 1997, due to temporarily increased buying from China. For 1997 and 1998 a recovery in world wool consumption is expected, with particular increases in China and Western Europe. Since production will increase

by only 1 percent, the first increase since 1992/93, prices will rise even if selling from stocks will be resumed.

Natural rubber prices continued to decline until February 1997; since a slight stabilization could be observed. The world demand for 1997 is estimated at 6.34 mill. tons, an increase of 3.8 percent over 1996. This is due to the strengthening of economic activity in Europe and the continuing growth in the USA and Asia, where China is the most important importer of natural rubber. Since production in 1997 might slightly fall short of consumption, prices will rise moderately. However, because of the negative overhang, the annual average for 1997 will remain below the previous year. The planned reactivation of the international rubber agreement wouldn't have any market effect at the time being, because there are no stocks in the buffer and market prices remain well above the buy-trigger price.

2.6 Food and tropical beverages

After reaching a peak at the end of the economic year 1995/96 the international **wheat** quotations declined sharply because of a major production increase in 1996/97 outmatching the estimated utilization by about 8 mill. tons. However, the stock/consumption ratio will increase only slightly to 19.5 percent at the end of 1996/97, a still extremely low level in the long term view. The expansion in production resulted from both: an increase of 5 percent in the area harvested and an increase in yield of nearly 4 percent. With the only exception of Eastern Europe production increased in all major growing areas. The relative increase was largest in Argentina with nearly 70 p.c., roughly doubling exports from 5 to more than 10 mill. tons. Global utilization is estimated to increase by about 20 mill. tons, which will materialize not only in the far east countries but also to a large extent in the US and the EU. In the EU this is a consequence of the change in price relations between home grown wheat and imported cereal substitutes.

During the most recent weeks (march 1997) prices started to increase again, in spite of a strong US-Dollar. This reflects the risk of supply shortages because of still low stocks not only for wheat but also on the markets for coarse grains and oilseeds and because of reduced sowing of winter wheat in the USA. Expecting „trend yields“ for 1997/98, which means roughly the same level as in the

previous year and a further moderate increase in area harvested – because of profitable prices and a reduction of set aside requirements in the EU from 10 to 5 percent – production should rise again and allow for a further small increase in the stock/consumption ratio. The quotations on the international wheat markets will turn downwards with the start of the new harvest in the northern hemisphere and reach a level of 160 US\$/t in 1998.

The price fluctuations on the international **coarse grain** markets were similar to the wheat market. However, the downturn in the mid of 1996 was even more pronounced than on the wheat market, since the upswing in production (11 percent) was even stronger. However, similar to wheat, the stock/utilization ratio will remain very low in the long term perspective. Production and utilization proved to react very elastic on price movements reflecting still unused capacities and reduced administrative interventions on the one side and rather limited possibilities to pass price increases for the intermediate product „feed grain“ on to the ultimate consumer of livestock commodities on the other side. The same is true for industrial uses as e.g. the production of alcohol from maize in the US. Specific for the EU is the ongoing substitution of grain substitutes (manioc, soya meal) by coarse grains in the EU.

Production increases were largest in the US with 58 mill. tons (28 percent), the EU 16 mill. tons (15 percent), China 6 mill. tons (4.5 percent) and Argentina 3.4 mill. tons (31 percent). Demand will remain strong because of growing incomes in particular in South East Asia. Prices for coarse grains started a slight recovery since march 1997 reflecting risks in the grain-oilseed sector because of low stocks. Given the stated high supply elasticity, not the least because of the greatly reduced administrative interventions in the US and – to a lesser extent – in the EU, production is expected to increase again and to surpass slightly the growing utilization. Therefore, coarse grain quotations will start to decrease with the new harvest in the northern hemisphere in autumn 1997 reaching a level of 120 US\$/t in 1998.

With a moderate production increase in 1996/97 **rice** prices dropped slightly in the last quarter of 1996. Since on the global scale the market is expected to be balanced, price movements will be rather limited.

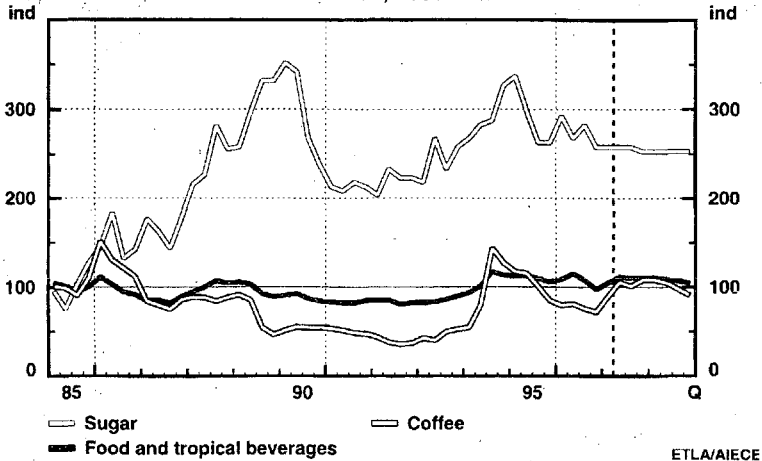
Table 7 Food and tropical beverages, HWWA-index (1975=100 and percentage change on previous period)

Commodity	96	96	97	97	97	97	98	98	98	98	96	97	98
	3	4	1	2	3	4	1	2	3	4			
Food and tropical beverages	115	104	112	119	118	118	118	116	114	112	114	117	115
	-6	-9	7	7	-1	0	0	-1	-2	-2	-3	2	-2
Cereals	126	101	101	105	103	97	97	96	96	96	126	101	96
	-14	-20	0	4	-2	-6	0	-1	0	0	21	-19	-5
Barley, Can.	105	93	91	95	91	88	88	84	84	84	109	91	85
	-14	-11	-2	4	-4	-4	0	-4	0	0	16	-17	-7
Maize, USA	122	94	98	105	105	96	96	96	96	96	124	101	96
	-19	-23	4	7	0	-8	0	0	0	0	29	-19	-5
Rice, Thai	100	90	91	91	91	91	91	91	91	91	98	91	91
	1	-10	0	0	0	0	0	0	0	0	12	-8	0
Wheat, USA	124	107	102	103	97	94	94	91	91	91	129	99	92
	-17	-13	-5	1	-6	-3	0	-3	0	0	12	-23	-7
Beverages, tobacco, sugar	101	98	109	119	117	120	121	119	115	111	101	116	117
	-2	-3	11	9	-2	3	1	-1	-3	-3	-19	15	0
Coffee, USA	140	133	165	195	187	200	200	194	181	168	142	187	186
	-7	-5	24	18	-4	7	0	-3	-7	-7	-26	31	0
Cocoa, ICCO	120	118	115	124	128	124	124	124	124	124	117	123	124
	0	-1	-3	8	3	-3	0	0	0	0	2	5	1
Tea, GB	123	138	141	145	147	147	147	148	148	150	129	145	148
	-2	12	2	3	1	0	0	0	0	0	8	13	2
Tobacco, USA	116	126	131	131	131	131	136	136	136	136	118	131	136
	0	9	4	0	0	0	4	0	0	0	-28	11	4
Sugar, USA	57	52	52	52	52	51	51	51	51	51	55	52	51
	5	-9	1	0	0	-2	0	0	0	0	-5	-6	-2
Oilseeds and oil	137	127	137	143	145	145	142	141	139	139	133	142	140
	-2	-7	8	5	1	0	-2	-1	-1	0	13	7	-2
Soybeans, USA	144	128	142	149	151	151	148	146	145	145	138	148	146
	0	-11	11	5	1	0	-2	-1	0	0	23	8	-2

Chart 6

Food and tropical beverages prices

HWVA -index, 1985 = 100



Beef prices decreased in 1996 compared to the annual average of 1995. However, the cyclical expansion of cattle herds reached its peak at the beginning of 1996. Therefore, the lasting growth in the production of beef and veal will more or less come to an end in 1997. Even with only a slow expansion in demand, prices will increase during the forecasting period.

During the past six months swings in **soybean** prices have been somewhat larger than was forecast at our previous meeting. Upward revisions of the size of the 1996 harvest in the United States, which is by far the largest soybean producer of the world, exerted a downward pressure on prices in the last quarter of 1996. During this period average soybean prices fell to a level (slightly) below the US\$ 300 per ton. However, in the first quarter of 1997 it became increasingly clear that demand for soybean meal was much higher than most market analysts had expected earlier. So, despite the higher than expected harvest in the United States, soybean stocks remained at their historically low level. Although the price effect of the increased demand was partly offset by lower prices for soybean oil, on balance bean prices rose significantly. In the beginning of the year, soybean prices surpassed the US\$ 300 per ton threshold again. In the middle of March, they amounted to over US\$ 320.

In the coming months the soybean crop of the Southern Hemisphere countries will enter the market. Reports from Brazil and Argentina, which take the bulk of the Southern Hemisphere soybean production for their account, point to a record production. On the other hand, it is also expected that demand for meal in both South American, the United States and in Asian countries will remain strong. Together with relatively small stocks, this will probably result in a tight market for beans. In terms of prices this means that the current level will be more or less maintained in the coming months.

In the second half of the year expectations with respect to the US-crop will dominate the price situation. Given the current, relatively high price level, we expect that, if normal weather conditions prevail, the US crop will expand relative to this year's crop. However, the increase will not be enough to seriously replenish the current small stocks. As a consequence there will not be much room for large price decreases in the remainder of this and the beginning of next year either. In our projections we have proceeded from slightly decreasing prices from the fourth quarter of this year onwards.

Global consumption of **soybean meal** has, on average, risen by nearly three million tons per year in the nineties. By far the greatest part of this increase took place in Asia, with China as the single most important consumer of soybean meal. In the past five years consumption of soybean meal has more than doubled in China. The coming years demand for vegetable meals is expected to continue its growth pattern of recent years. Apart from China, consumption increases are expected in Northern Africa, the Middle East and Latin America.

Prices of soybean meal are at a higher level than was expected at our meeting in September last year. The larger production was overshadowed by a stronger than expected demand. In March soybean meal prices fluctuated around the US\$ 300 per ton.

The pig and poultry industries are the main consumers of soybean meal. Due to a growing population, growing incomes and high income elasticities of demand for meat in low and middle income countries, demand for pig and poultry meat will increase. Moreover, stocks for meal are not particularly high and, even more important, stocks of beans are low. Therefore, despite an increase in production, prices of soybean meal are expected to remain at their current high level in the coming months. On the other hand, since the price ratio of soybean meal to corn

has developed in favor of feedgrains in recent months, there will be a tendency to decrease the share of soybean meal in feed rations. This substitution will prevent soybean meal prices from rising to much higher levels.

Soybean oil and soybean meal are joint products of soybean crushing. This means that an increased demand for bean crushing due to, say, an increase in demand for soybean meal will, *ceteris paribus*, have a downward effect on oil prices. This mechanism is partly responsible for the price decrease in the last quarter of 1996. On the other hand, it appeared that the cool temperature of 1996 in the US, lessened the oil content of soybeans. So, the increase in soybean crushings did not result in a parallel increase in oil supply. This did not only prevent a too steep a price fall, but it also led to a downward revision of global oil production. Despite this, this year's global crush is expanding, albeit that the increase will not be enough to replenish stocks to normal levels. As a reaction to the somewhat 'tighter than expected' supply situation, prices started to rise in the beginning of this year. In the second week of March they reached a level of US\$ 550 per ton., which is not a particularly high level.

Due to a growth of incomes and population, global consumer demand for vegetable oil will increase by about 1 or 2 percent this year and next year. Production will increase by more or less the same percentage. Therefore, if weather conditions are normal, the supply-demand situation will not fundamentally change during our forecasting period. For soybean oil this means that prices will more or less maintain their current level. Since stocks are not particularly high at the moment, the oil market will be volatile to supply disruptions.

Due to a production surplus and an increase in stocks at the end of the year 1995/96, **sugar** prices declined during 1996. According to the main analysts, the global sugar production in 1996/97 will again surpass consumption. The stock/consumption ratio will increase further and approach 41 p.c., an extremely high level in the long term view. Basically in line with these fundamentals sugar quotations decreased slightly during winter but showed again some strength in march 1997. With a slightly reduced price level the incentives for a further expansion of production in the main producing countries are rather limited. In the EU the GATT commitment to reduce export subsidies might force the EU to reduce production quotas. On the other hand the greatly depressed sugar

production in countries of the former Soviet Union and Cuba might recover in the medium term, a process which could already be observed in the main transformation countries in Central and Eastern Europe.

With a steady growing global demand stock accumulation is expected to come to an end. However, due to the very high stocks there will be no room for upward movements of prices.

Despite the low stock levels in both the coffee-producing and the coffee-importing countries, average coffee prices have decreased by 26 percent in 1996 as compared to 1995. In December 1996 prices had reached a level well below the 100 cts/lib. The main factor behind the downward price trend, which started in the middle of 1995, is the anticipation of buyers on a considerable improvement of the supply situation.

However, in January it became clear that there is much uncertainty whether there will actually be an improvement in 1997. New estimates of the 1996/97 coffee harvest point to a lower crop than was estimated earlier in the year. And due to the economic recovery, (high quality) coffee consumption in Brazil is increasing rapidly, which means that less coffee is available for exports. Finally, first estimates of the Brazilian crop for 1997/98 are settling at a significantly lower level than was generally expected.

As a reaction to these supply-demand figures, coffee prices started to rise in January, very soon they reached a level well above the 100 cts/lib. Labor unrest in Columbia caused even sharper price rises in February. Early in March coffee prices passed the 130 cts/lib.

There is a general agreement that the supply-demand situation on the coffee market is very tight at the moment. Therefore prices will most likely remain high in the coming months. Whether they will decrease in the second half of the year depends to a large extent on the size of the Brazilian coffee crop. In our projection we have taken a 'middle-of-the-road' position: Brazilian's coffee crop is estimated at 25 million bags in 1997/98. This still means however that global consumption will outrun global production next coffee year. Since stocks are very low, one may expect therefore that in 1997/98 a fluctuating, but basically upward price trend will prevail.

Cocoa prices slipped from 68 cents/lib. in the third quarter of 1996 to 63 cents/lib. in February this year. Due to the all time record cocoa crop in 1995/96,

the stocks-to-grinding ratio reached a level slightly over 50 percent. This level was thought to be high enough to meet the 1996/97 production deficit which was estimated early in the year at about 50,000 tons.

However, in March production figures were revised downwards while consumption figures underwent an upward revision. Production in Cote d'Ivoire and Ghana, the two main cocoa producing countries appears to be significantly lower than was expected earlier. At the same time consumption in a number of countries is increasing quite rapidly. For example, due to an intensive campaign, pointing to the seemingly positive health effects of chocolate, consumption in Japan has risen by 30 percent last year.

The cocoa market reacted upon the new figures with a price increase. In the second week of March, prices fluctuated around 70 cents/lib. However, although the supply-demand situation is somewhat tighter than was thought earlier, stocks are still large enough to easily meet consumer demand. Therefore we do not expect that prices will continue to rise in the coming months. On the other hand, since the stock-to-grinding ratio will probably go down also next year, there seems not to be much room for price decreases either.

Thanks to favorable weather and a larger use of modern agricultural inputs, tea production did increase last year. However, the increase was not enough to meet the growing demand without a price effect. Consequently, tea prices have risen significantly in recent months. Average prices in the first quarter of this year are estimated to be 11 percent higher than two quarters earlier. The increase in demand from countries of the former Soviet Union was the single most important factor contributing to the price rise. Despite the price rises, tea prices are, seen from an historical perspective, not particularly high at the moment.

World market prices in the remainder of this year are especially dependent on three variables: (i) demand from the former countries of the Soviet Union; (ii) consumption in India and (iii) consumption in China. In our projections we have assumed that 'no particular surprises' with respect to these variables will take place. The moderate increase in global consumption can be met then by the increase in production due to higher yields per hectare. On balance this will result in tea prices fluctuating around the current level.

2.7 Shipping rates

Tanker freight rates are given in worldscale = 100 in DM equivalents. The worldscale index is revised at the beginning of every year, e.g. on the basis of changing costs for oil bunker and harbor duties. Therefore comparisons of different years are of limited value.

For the 4th quarter of 1996 a decrease (-10 percent) of tanker rates was assumed. But higher transportation costs on behalf of an increasing oil price had stabilizing effects. However, on average the rate increase of 24 percent forecasted for 1996 was roughly correct.

The rate shows a distinct seasonal fluctuation. The current forecast tries to take this into account. It is assumed that decreasing oil prices (1997: -3 percent) will no longer have a 'cost push' effect on tanker rates. Therefore, the relatively high rate level of 1996 will probably decrease in 1997 by about 7 percent. However, it is assumed that an increasing demand for oil in 1998 will lead again to a slight rise of tanker rates of 3 percent on average.

In contrast to the expectations in last autumn German overall sea freight rates of **liner** trades have increased. The higher US-Dollar is one explanatory factor.

Structural competition problems of liner trade, some EU regulation measures and better growth prospects on the world market in 1997 will have a positive effect on the stabilization of liner freight rates. Therefore, an increase of about 3 percent in 1997 can be expected. However, for 1998 a slight decrease is assumed because of a lower oil price.

In 1996 the decline of **tramp** freight rates (yearly average) was higher than expected because of the postponement of the expected increase to the 4th quarter.

For 1997 only a slight increase of 3 percent of tramp rates is expected. But a further rise of shipping costs driven by a further increasing world trade volume freight rates could increase by about 10 percent in 1998, on average.

Table 8 Commodities not included in the HWWA-index (percentage change over the previous period)

Commodity	96 3	96 4	97 1	97 2	97 3	97 4	98 1	98 2	98 3	98 4	96	97	98
Beef	-1	4	1	2	6	0	6	0	0	0	-6	7	9
Soybean meal	3	-1	5	4	2	0	1	-1	-2	-2	30	9	1
Soybean oil	-3	-7	3	3	1	-1	-1	-1	0	0	-12	-1	-1
Tropical hardwood	2	5	1	2	2	2	1	1	-1	0	1	8	3
Steamcoal	1	2	-3	-2	0	2	2	0	0	2	-1	-3	3
Manganese	3	0	0	-4	-2	0	0	4	0	0	3	-2	1
Tungsten	-10	-12	5	6	0	10	0	0	9	0	-18	-3	14
Steel	-4	4	0	0	1	2	4	0	0	3	-8	2	7
Shipping rates													
Tankers	-8	1	-1	-10	15	1	-1	-10	15	-1	24	-7	3
Tramps	-4	3	7	2	2	3	0	-2	2	2	-14	3	10
Liners (DM)	3	2	1	-3	0	2	0	-3	0	1	4	3	-1