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Indonesia's Non-Oil/Gas Export Performance in 1998

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Ministry of Industry and Trade
August 10, 1999

Indonesian export performance is reported on continuously and systematically in a monthly report to the Government of Indonesia. This study is an effort to provide an overview of export performance in 1998, a year in which Indonesia experienced a major economic crisis. The paper attempts to provide a comprehensive review and to extract some possible strategic policy lessons.

A complex set of major events and elements shaped Indonesian export performance in 1998. Some of the more powerful were

- The collapse of the financial system, rapid acceleration of interest rates and the inflation rate, political and social turmoil;
- A large depreciation of the exchange rate;
- A significant fall in non-oil/gas export prices;
- The tripling of the Rupiah value limit on export document short forms for "Selected Export Declarations" (*Pemberitahuan Ekspor Barang Tertentu* or PEBT);
- Continuing weak demand in some major export markets;
- Constraints on some major exports such as palm oil and wood;
- Major changes in the structure and administration of some export industries such as wood panels.

1. Non-oil and gas exports and imports in 1998²

- ✓ Non-oil and gas (NOG) export values fell by 1.8 percent in 1998. Revenues from industrial exports were 0.4 percent less than in 1997 and primary export revenues decreased 14 percent. Food and agricultural export values expanded 5.3 percent relative to 1997. Tables 1 and 2 provide more detail.

¹ Prepared for a seminar during a PEG-sponsored conference on "The Economic Issues Facing the New Government," August 18-19, 1999, Jakarta, Indonesia. PEG is a USAID-funded Project with the Government of Indonesia. The views expressed in this report are those of the author and not necessarily those of USAID, the U.S. Government or the Government of Indonesia.

² Non-oil and gas export data excludes exports of petroleum and gas, electricity, and a variety of monetary commodity groups (SITC groups 33,34,35, 91,93 through 96). All trade data are from the Indonesian Ministry of Industry and Trade, Center for Data and Information (Pusat Data dan Informasi). Values are in current U.S. dollars.

TABLE 1

Table 1a: Annual Growth Rates of Non Oil/Gas Export Values by Major Groups (%)

Year	Total NOG	Industrial	Agriculture	Primary
1995 / 96	8.8	11.0	5.6	1.6
1996 / 97	8.0	12.9	-5.2	-5.8
1997 / 98	-1.8	-0.4	5.3	-14.0
1997 / 98*	-1.8	-3.2	7.0	-12.8
1996 / 98	6.1	12.4	-0.1	-19.0

*Growth rates based on estimated redistribution of PEBT exports to PEB export categories

Table 1b: Quarterly Growth Rates of Export Values (%)

Quarter	Total NOG	Industrial	Agriculture	Primary	PEBT
Q1 95					
Q 2	10.6	11.6	21.9	0.8	
Q 3	9.3	5.9	28.0	12.4	
Q 4	7.0	8.8	0.8	3.5	
Q1 96	-13.8	-13.4	-25.7	-7.3	
Q 2	13.3	13.3	17.4	10.9	
Q 3	3.1	5.8	13.6	-14.2	
Q 4	2.5	3.1	-0.4	1.9	
Q1 97	-10.2	-9.5	-22.2	-5.2	
Q 2	10.7	9.6	18.5	11.6	
Q 3*	9.6	14.3	1.5	-8.0	
Q 4	-1.1	0.8	-12.9	-3.8	
Q1 98	-8.0	-9.0	-4.0	-4.2	-45.0
Q 2	0.5	3.3	14.0	-25.1	-3.0
Q 3	5.9	-0.1	18.8	42.6	-22.5
Q 4	-10.8	-10.0	-15.2	-12.3	52.2

*Q3, 1997: PEBT Rupiah limit tripled to R.300 million/shipment

TABLE 2

Table 2a: Annual Growth Rates of Non Oil/Gas Export Volumes by Major Groups (%)

Year	Total NOG	Industrial	Agriculture	Primary
1995 / 96	-18.2	14.7	4.9	-22.9
1996 / 97	29.0	7.1	-5.2	28.8
1997 / 98	-3.4	20.5	11.9	-13.6
1996 / 98	24.6	29.0	6.1	11.3

Table 2b: Quarterly Growth Rates of Export Volumes (%)

Quarter	Total NOG	Industrial	Agriculture	Primary	PEBT
Q1 95					
Q 2	-19.3	21.8	7.8	53.9	
Q 3	13.7	-6.6	35.3	31.3	
Q 4	7.9	16.6	19.1	27.6	
Q1 96	-33.1	-12.2	-33.1	-54.2	
Q 2	22.8	9.6	15.7	66.8	
Q 3	-13.0	7.1	5.9	2.8	
Q 4	20.3	14.6	12.4	21.1	
Q1 97	-11.7	-24.7	-27.5	-48.9	
Q 2	11.3	31.1	9.6	39.2	
Q 3*	14.0	1.8	11.4	21.7	
Q 4	43.8	-7.8	-1.3	7.7	161.6
Q1 98	-21.2	-1.8	-13.4	-52.6	-9.7
Q 2	-18.4	24.4	23.5	115.0	-17.2
Q 3	1.1	8.0	7.5	-3.2	-10.3
Q 4	4.0	-4.7	-3.0	8.3	42.9

*Q3, 1997, PEBT Rupiah limit tripled to R.300 million/shipment

Table 3: Summary of Indonesian Imports (by value)

	1995	1996	1997	1998
Total Value US\$ Billion	40.6	42.9	41.7	27.3
Annual Change (%)	--	5.7	-2.9	-34.4
Quarter to Quarter Change (%)	Q1 98	Q2	Q3	Q4
	-27.2	-15.4	12.5	4.7

Table 3a: Sector Annual Import Growth Rates (%)

Sector	Industry	1996	1997	1998
Consumer goods	1. Plastic inputs	-17.6	-8.6	-29.8
	2. House hold durables	-43.1	18.9	-53.3
Capital goods	1. Textile machinery	-30.3	4	-3.8
	2. Metal machinery	12.3	-14.8	-28
	3. Electical equipment	-3.9	28.4	-43
	4. Bearings valves,prts	21	9.9	-24.9
Export inputs	1. Garment inputs	-5.9	-11.3	-9.3
Export & domestic use	1. Synthetic inputs	-18.7	-17.9	2.8
	2. Cotton inputs	6	-16	7
	3. Industrial chemicals	0.67	-4.2	-23.6
	4. Fertilizer	61	3	-54

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Figure 1: Imports for Textiles and Garments

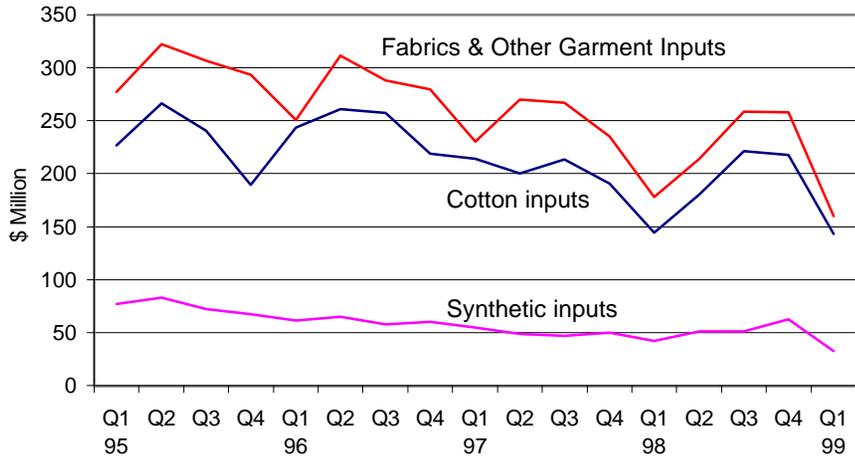


Figure 3: Capital Goods Imports

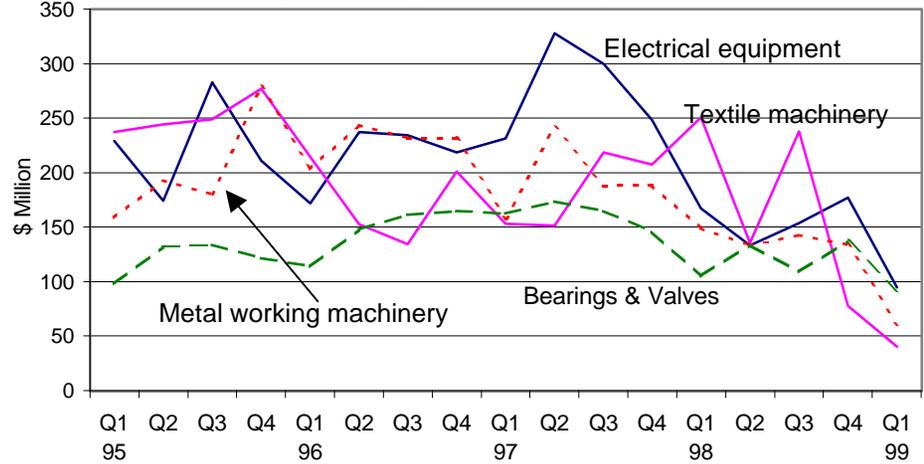


Figure 2: Industrial Raw Material Imports

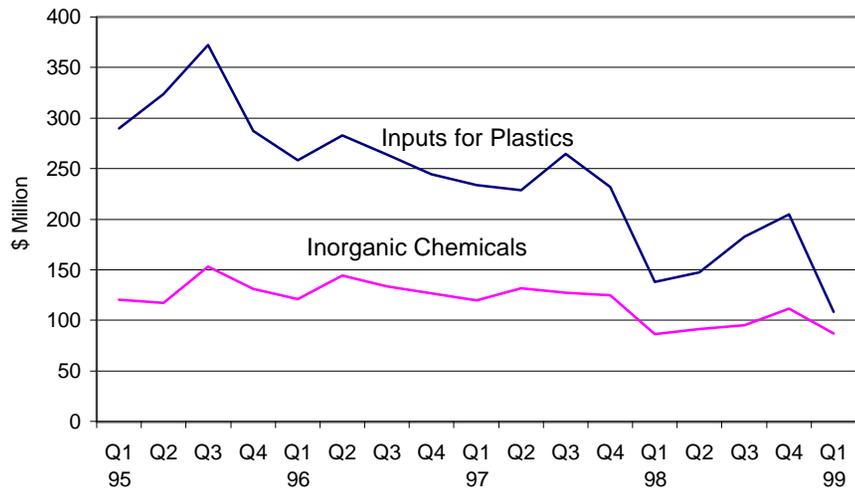
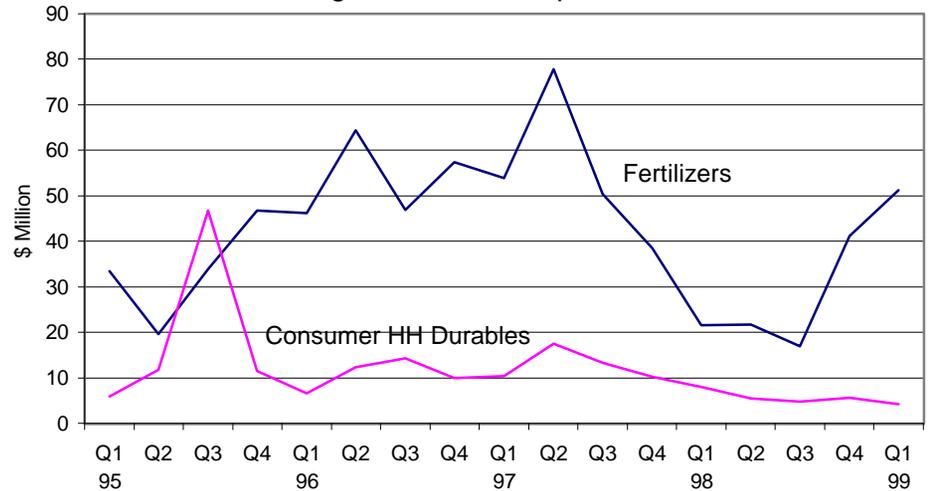


Figure 4: Other Imports



- ✓ Although 1998 was the first time in the last 23 years that growth in Indonesian exports has been negative, it adds some perspective to note that Indonesia's 1998 non-oil and gas (NOG) export earnings were six percent greater than the value of NOG exports in the pre-crisis year of 1996, suggesting that the fundamental capability of the export sector remained basically healthy in spite of the financial crisis.

The value of aggregate imports fell by over a third, from \$41.7 billion in 1997 to \$27.3 billion in 1998. Imports decreased 17 percent relative to 1996. In the first quarter of 1999, imports fell 23 percent relative to the first quarter of 1998. Tables 3, 3a and Figures 1 through 4 provide a schematic view of import compression in 1998.

- ✓ Imported household durables fell 53 percent and plastic raw materials declined 30 percent; capital goods such as metal working machinery declined 28 percent; electrical equipment imports fell 43 percent, and textile equipment imports declined 3.8 percent.
- ✓ Imported inputs for garments manufacture continued their downward trend in 1998, falling 9 percent compared to -6 percent in 1996 and -11 percent in 1997.
- ✓ In the first quarter of 1999, imports fell sharply in all categories relative to the first quarter of 1998 except for fertilizer. For import categories such as consumer goods, part of the decline may be attributable to import substitution starting to occur in response to the higher cost of foreign exchange.
- ✓ Evidence of the Rupiah depreciation can be seen in the reversal of the downtrend in imports of synthetic inputs (-18.7% in 1996 and -18% in 1997) as they expanded 2.8 percent in 1998. Imports of cotton inputs increased 7 percent after falling 16 percent in 1997.

The time series indices in Figures 5 through 5c show major subgroups of non-oil/gas export values, volumes and unit values during 1997 and 1998.³ Exports of cement, iron and steel, and non-ferrous metals are excluded from the industrial export series in Figure 1a to eliminate the distortion effect from the surge in exports of these low unit-value products in 1998.⁴

- ✓ There was a distinct upward trend in agriculture export volumes through the first semester (Figure 5b.) followed by a precipitous decline in November and December.
- ✓ Figures 5 and 5c illustrate that a surge in primary product export volume in the second semester of 1997 was the cause for the peak in total NOG export volumes in 1997.

2. Export unit values

A comparison of year-on-year value growth rates (Table 1b) and volume growth rates (Table 2b) shows that 1998 unweighted, average industrial and agriculture export unit values fell, but they increased slightly for primary commodity exports. Part of the decline in export

³ In this paper, unit value is simply the unweighted, average U.S. dollar export value divided by kilogram export volume.

⁴ The non-bulk industrial export group used in the unit value estimation and shown in Figure 1b excludes values and volumes for the iron, steel and non ferrous metals commodity groups (SITC 67 and 68) and cement, stone and brick exports from the non-metallic minerals group (SITC 66).

Figure 5: Non-Oil/Gas Export Value and Volume Indices

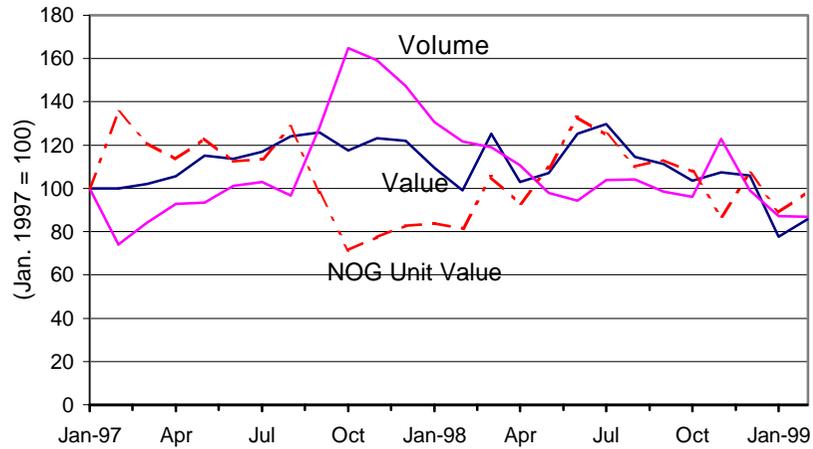


Figure 5b: Agriculture Export Value & Volume Indices

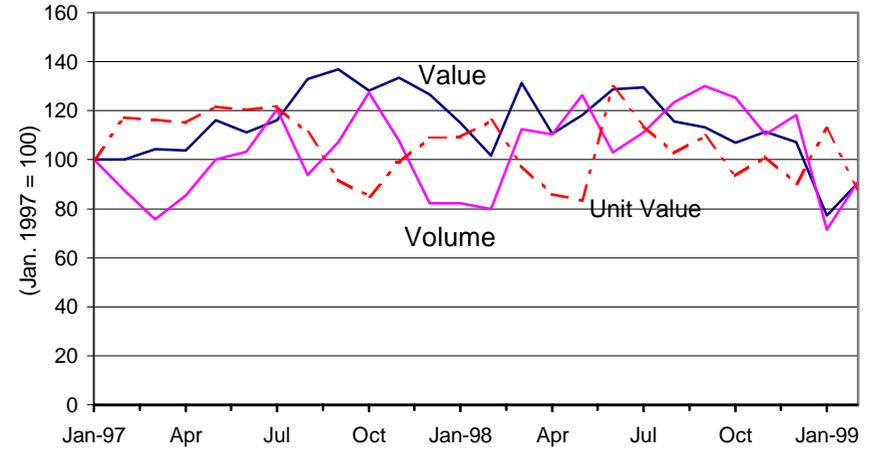


Figure 5a: Non-bulk Merchandise Export Value & Volume Indices

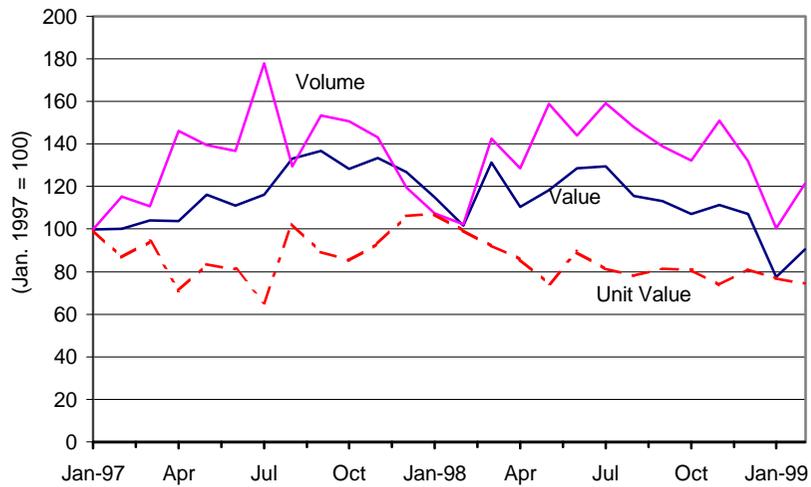
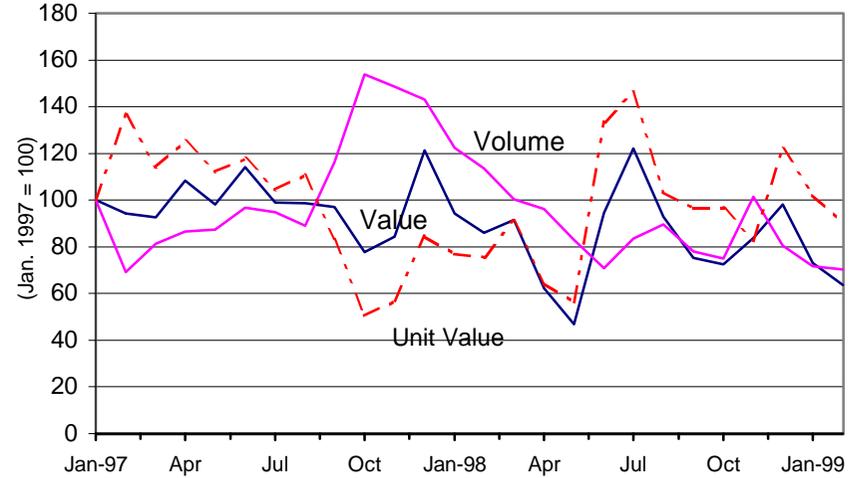


Figure 5c: Natural Resource-Based Export Val & Vol Indices



unit values is attributable to falling export prices in 1998, including those for plywood (42%), minerals (3 to 30%), rubber (36%), shrimp (32%) and cocoa (2.4%).

- ✓ Changing export composition, biased toward high volume commodities also contributed to the decline in unit values. Figure 6 shows that unit values of all three major commodity subgroups (cement, iron and steel, and non-ferrous metals) tended downward together after July 1997. Agriculture and primary product unit values continued to move together though most of 1998, peaking in June-July 1998 when both agriculture and primary commodity export values rose against falling volumes for those commodity groups.⁵

The potential for much higher Rupiah earnings from exporting along with weak domestic demand tended to expand the list of potentially viable exportable goods to include commodities that would not have been commercially viable with a higher valued Rupiah. For export-oriented industries, the prospect of higher Rupiah earnings alone would tend to encourage more exports. For some domestic oriented, capital-intensive industries, the carrot of higher Rupiah earnings and the stick of falling domestic demand inspired them to export in 1998.

- ✓ The export volume of non-metallic minerals, iron, steel, and non-ferrous metals (SITC 67, 68 and part of 66) increased 188 percent in 1998 over 1997; the corresponding export value increased 31 percent. The compositional change attributable to the three product groups accounted for 86 percent of the nominal decline in 1998 industrial unit values in 1998.
- ✓ A regression of industrial export volumes (consisting of the high volume components in the SITC 66, 67 and 68 commodity groups specified in footnote 3) on the real exchange rate from mid 1997 to the end of 1998 explains 87 percent of the volume change of these high volume exports over the period.⁶
- ✓ The impact of falling prices on industrial export values in 1998 is estimated by controlling for the compositional shift in industrial exports and applying 1997 export unit values to 1998 export volumes. The result is a loss of \$1.3 billion, or 3.2 percent, attributable to lower prices for 1998 industrial exports.⁷

3. Review of exports by destination

Export growth rates in 1998 were lower to all of the major export markets relative to 1997. Indonesian export growth was negative for three out of seven major markets, with the fall in exports to Japan being the largest at \$1.6 billion or 92 percent of the three negative growth destinations (Table 4). That export growth was lower to all markets, not just to economies in

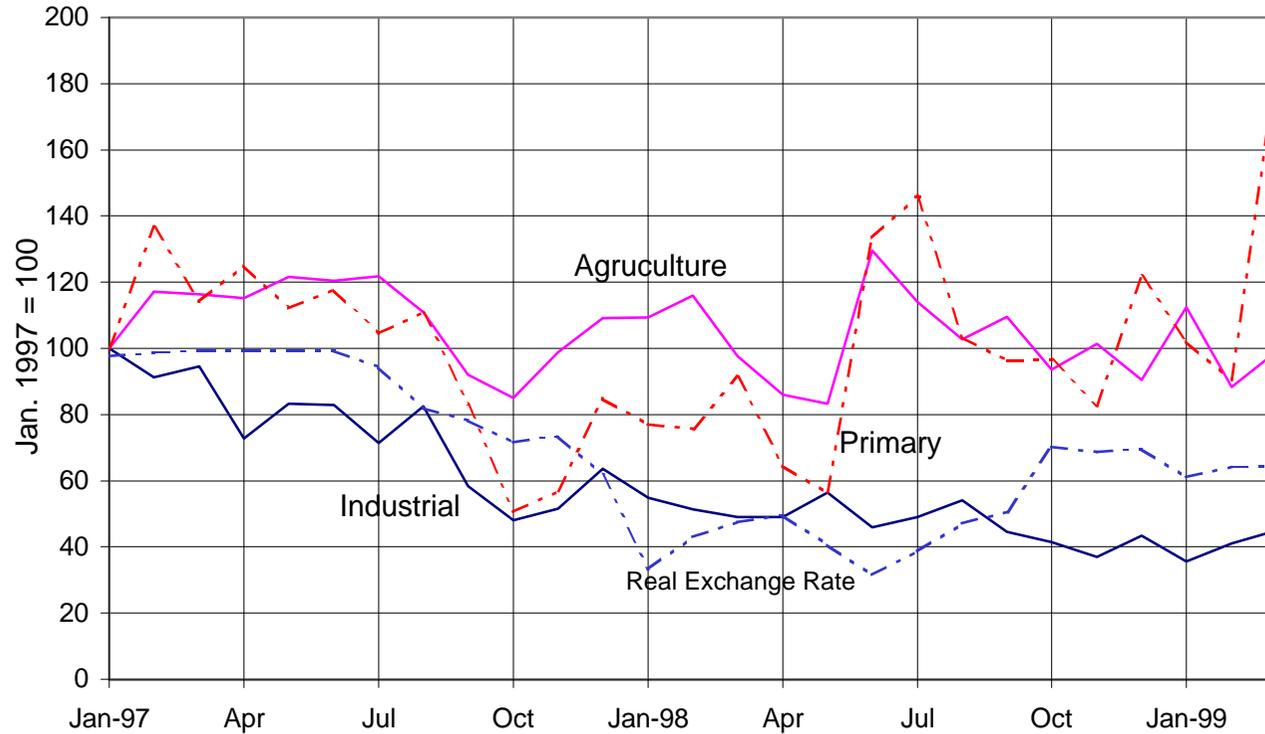
⁵ The correlation coefficient for agriculture and natural resource-based export unit values for the period April 1997 and August 1998 is 0.77.

⁶For industrial export volume (3 month lag, moving average) on the RER:

$$Y = 51.9 + .61(RER); R^2 = .873 \text{ and } f = 110.4; \text{ at } 95\% \text{ confidence level.} \\ (2.6) \quad (10.5)$$

⁷The estimate controls for compositional change between 1997 and 1998 by excluding heavy industrial exports (SITC 66 partial, 67, 68) from 1997 and 1998 industrial export values and volumes and the unit values are re-calculated. 1998 industrial export values are then valued at 1997 unit values.

Figure 6: Unit Value Indices and the Real Exchange Rate*



* Unit value is the unweighted, average U.S. dollar export value divided by export volume (kilograms). The real exchange rate is the nominal US Dollar:Rupiah exchange rate adjusted for relative movements in producer prices in Indonesia and the U.S.

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Table 4: Indonesian Exports to the World Ranked by 1998 Growth Rates

Country/Region	1997		1998		1996 - 1998
	Share	Growth	Share	Growth	Growth
Singapore	11.2	22.1	12.4	9.4	33.5
Asia	24.8	10.7	26.1	3.7	14.8
Rest of World	7.8	21.5	8.1	2.7	24.8
U.S.	16.1	5.3	16.6	1.3	6.7
Oth. Americas	3.3	17.0	3.3	-1.0	15.8
Europe	20.2	3.4	20.2	-1.6	1.8
Japan	16.8	-1.9	13.2	-22.9	-24.3

Table 4a: Indonesian Exports to Regional Markets Ranked by 1998 Growth Rate

Country/Region	1997		1998		1996 - 1998
	Share	Growth	Share	Growth	Growth
Australia & N.Z.	8.8	27.6	10.3	20.0	53.1
P.R. China	14.8	32.6	15.8	10.5	46.5
Thail, Phil, Maly	29.5	9.2	30.1	5.2	14.9
Hong Kong	19.1	6.1	19.3	4.1	10.4
Taiwan	13.9	15.4	13.7	1.5	17.1
South Korea	14.1	-16.2	10.8	-20.6	-33.4

Figure 7: Indonesian Exports to the World

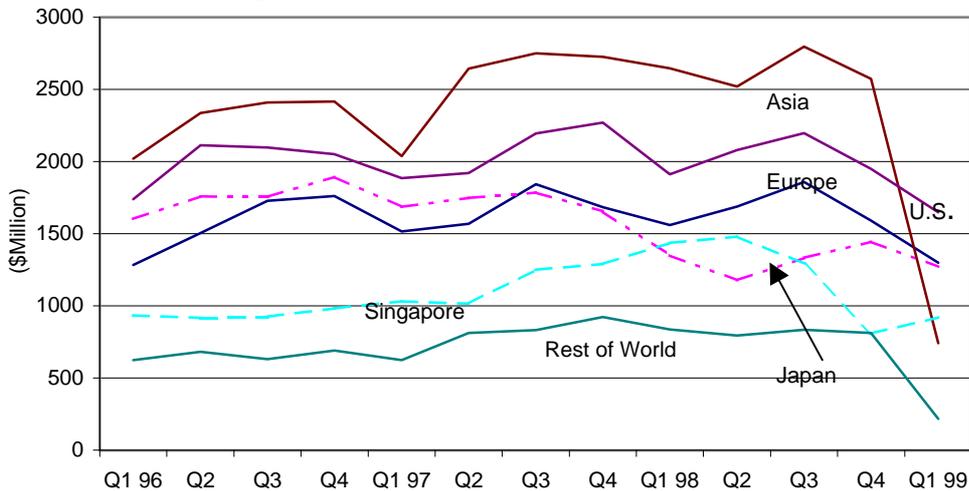
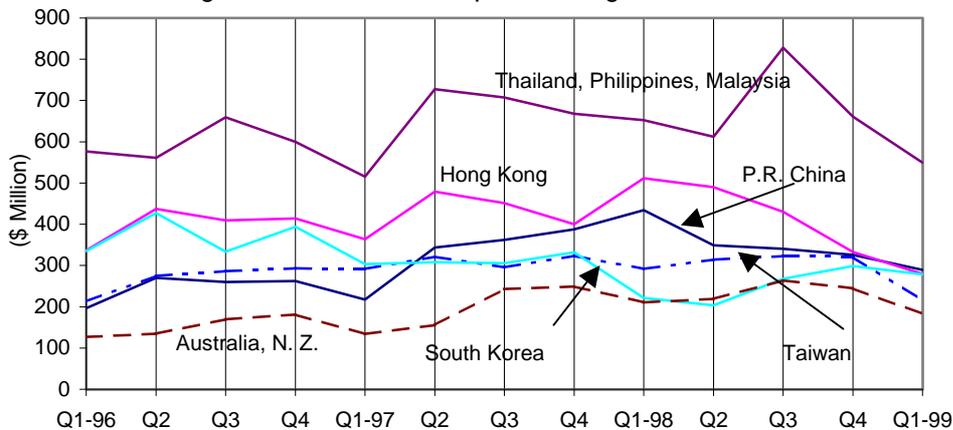


Figure 7a: Indonesian Exports to Regional Markets



recession such as the Asian crisis economies and Japan, suggests that the lower export growth rate was primarily attributable to Indonesian performance rather than to weak foreign demand. Although world import growth in 1998 was negative 2.5 percent, and growth in industrial country imports was a modest two percent.

- ✓ The rate of decline of exports to Japan accelerated from negative 1.9 percent in 1997 to negative 22.9 percent in 1998 (Table 4). After six quarters of negative growth, exports to Japan started to rise in the second quarter of 1998 (Figure 7).
- ✓ Singapore was the most dynamic major export market in 1998, although, because of re-export, much of the expansion of Indonesian exports to Singapore would be more appropriately attributed to other countries.
- ✓ The timing of the bulge in exports to Singapore coincides with the Indonesian financial crisis. “Pulp and waste paper” (SITC 25) was the fastest growing export to Singapore during the period. Pulp and wastepaper exports to Singapore, valued at \$40,000 in 1997, increased by 34,734 percent to \$140 million in 1998.
- ✓ The other leading export to Singapore in 1998 was “gold and silver jewelry and wares” (SITC 8973) which doubled in 1998. Singapore imported about 83 percent of total Indonesian worked gold and silver exports in 1998.
- ✓ No major export market was importing significantly less in late 1998 than it was in 1995-96 except for Japan.
- ✓ The downturn of exports to South Korea reflects the onset of the Asian Financial Crisis. Within the SE Asia-Australia Pacific region, the percentage fall in exports to South Korea was largest, at negative 16 percent in 1997 and negative 21 percent in 1998. Exports to the South Korean market started to recover in the second quarter of 1998.
- ✓ Indonesian exports to the Malaysia, Thailand and the Philippines group expanded by five percent in 1998 and were 15 percent higher than before the crisis. In 1998, exports in value terms to all of Indonesia’s markets in the S E Asia, Australia Pacific region, except to South Korea, were well above their pre-crisis levels in 1996

4. Interpreting Export Performance: the Selected Export Declaration short form (PEBT)

PEB refers to the standard *Pemberitahuan Ekspor Barang* (PEB) export form; PEBT refers to export of goods using a simplified documentation arrangement, the “Provision on Selected Export Declarations” (*Pemberitahuan Ekspor Barang Tertentu* or PEBT). Up to August 1997, the PEBT classification system allowed individual shipments of goods valued up to Rupiah 100 million to be exported using the PEBT short form. PEBT exports use one of nine, special nine-digit HS codes instead of using one of several thousand nine-digit Harmonized System (HS) codes. The agglomeration of diverse commodities into one of nine special PEBT codes makes it more difficult to obtain a precise picture of export performance of specific sectors or industries. In January 1999, the Indonesian Ministry of Finance modified the PEBT system by requiring the use of standard Harmonized System reporting

requirements so that PEBT-classified exports will be identified using the same HS codes used for PEB-classified exports. The revision was implemented in April 1999.

- ✓ When the PEBT shipment ceiling value was increased in August 1997, to Rupiah 300 million, the allowable U.S. dollar ceiling increased from \$33,949 to \$98,847 per shipment at the prevailing exchange rate.
- ✓ In the same month, PEBT exports responded by increasing to \$948 million in August 1997, from \$163 million in July, and peaked at \$1.4 billion the next month.
- ✓ Simultaneous with the rise in PEBT exports, PEB industrial exports fell sharply in mid-1997 (Figure 8). Figure 9 illustrates the results of using a set of estimated coefficients to reallocate exports from the PEBT classification back to the PEB classification under which they would have been recorded if they had used the standard export document form.⁸

5. The Exchange Rate, PEBT and Standard PEB industrial Exports

Figure 12 combines the monthly value of PEBT export values and the exchange rate adjusted for inflation effects. Because PEBT-classified exports would otherwise have been classified as PEB exports, PEB exports (Figure 13) were also linked through the PEBT mechanism to the exchange rate during the November 1997 - January 1998 time period.

- ✓ There is a significant correlation between PEBT export values and the real exchange rate and as well as between PEB export values and the real exchange rate.⁹
- ✓ Total PEBT export values decreased as the Rupiah depreciated, causing the foreign exchange limit on PEBT shipments to fall as well. There was a direct relationship because as the foreign exchange value of individual export shipments fell, it became less cost effective for exporters to ship smaller volumes because shipping rates tend to penalize smaller shipments, especially containerized freight. As the Rupiah depreciation continued, the shipping cost penalty began to offset the advantage of the PEBT short form and the total value of PEBT exports fell as exporters switched back to the standard PEB documentation method to save on transportation costs.

6. Review of Selected Indonesian Exports in 1998

Table 5 provides rankings of 61 two-digit SITC classifications by their 1998 growth rates. The rankings are based on the PEBT-adjusted values of the two-digit SITC commodity

⁸ The reallocation of PEBT exports to their Standard Industrial Trade Classification Code (SITC) used reallocation coefficients estimated from 1996 company export records. ("Revised Indonesian Export Statistics for 1997," August 1998, William James and Peter Minor. The problem posed by the use of non-specific HS codes under the PEBT system is explained in William James, "A Problem With Indonesia's Export Statistics," *Bulletin of Indonesian Economic Studies*, December 1998.

⁹ The real exchange rate (RER) is the nominal US Dollar-Rupiah exchange rate adjusted for relative movements in producer prices in Indonesia and the U.S. For PEBT on the real exchange rate:
 $Y = -14.6 \text{ billion} + 16.8 \text{ million (RER)}$; $R^2 = .849$; $f = 67.55$; at 95% confidence level.

(-1.3) (8.2)
 For PEB on the real exchange rate: $Y = 134.54 + -0.69 \text{ (RER)}$; $R^2 = .62$; $f = 22.0$; 95 % confidence level.
 (15.97) (-4.69)

Figure 8: Export Values by Major Groups

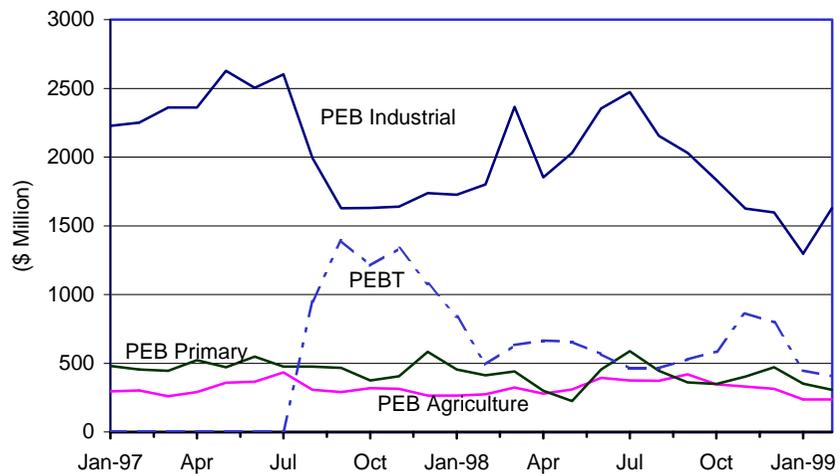


Figure 10: Agriculture Exports: PEB Adjusted for PEBT

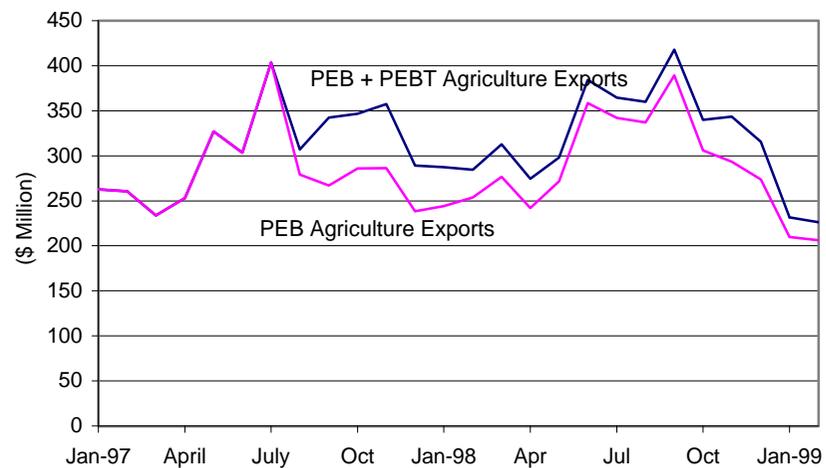


Figure 9: PEB Export Values Adjusted for PEBT

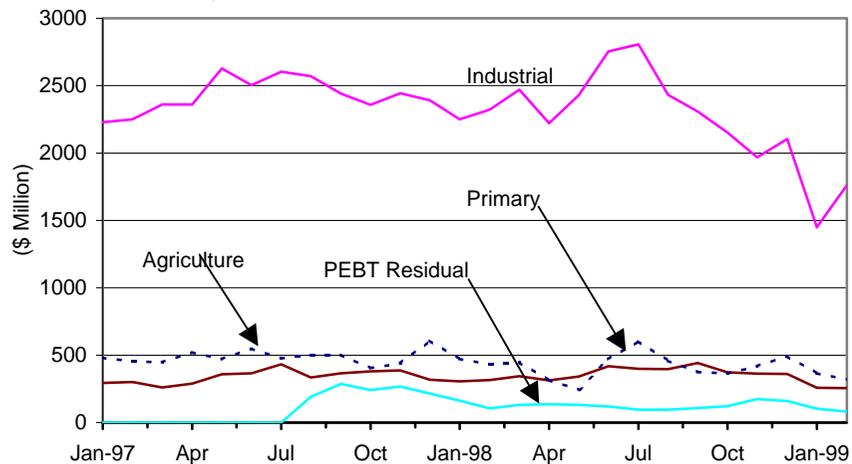


Figure 11: PEB and PEB-Adj. Exports: Seafood & Coffee, Tea

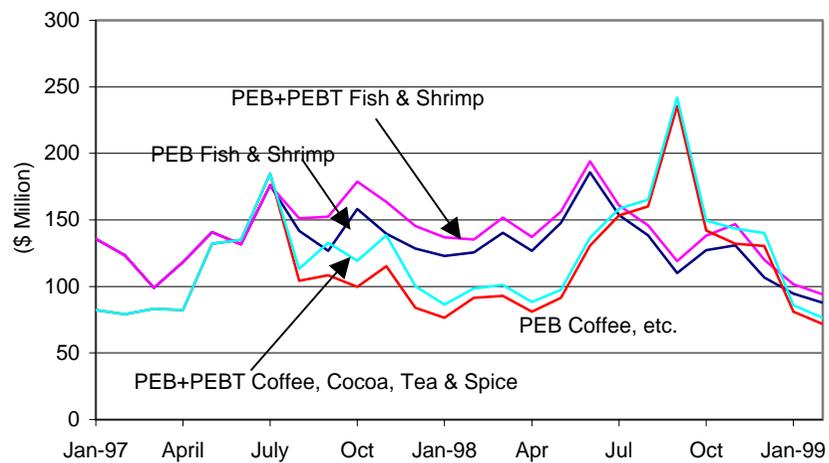


Figure 12: PEBT Export Value & USD:Rp Real Exchange Rate

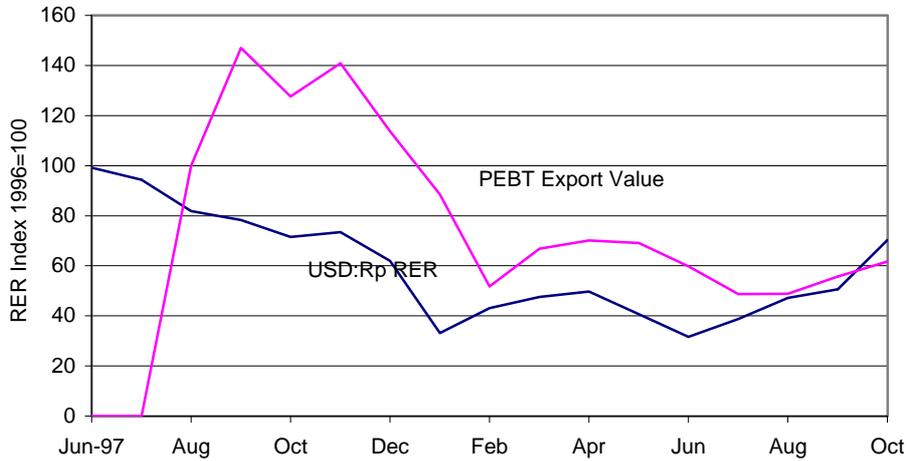
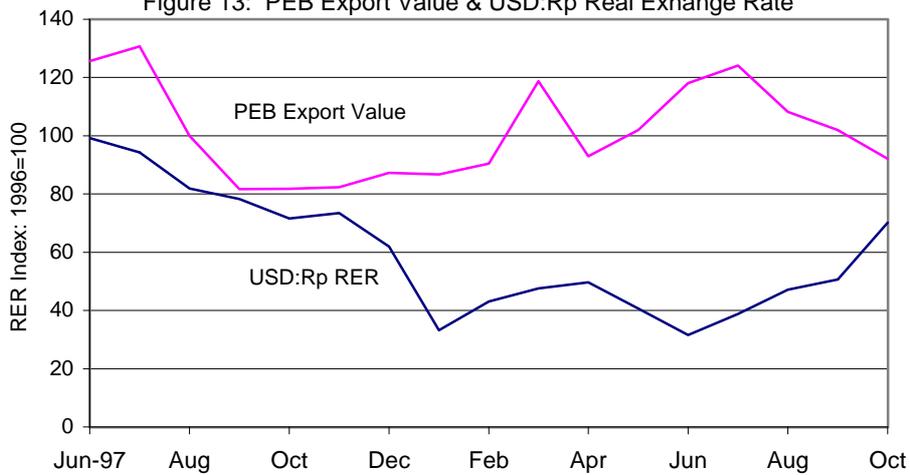


Figure 13: PEB Export Value & USD:Rp Real Exchange Rate



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OLS regression of PEBT export value against the Rupiah:US\$ real exchange rate from September 1997 to January 1998, lagged one month, yields an R square statistic of 0.85 ($t = -8.2$, 95% confidence level).

The R square for PEB exports on the real exchange rate is 0.62 ($t = -4.7$).

Table 5: 1997 and 1998 Exports Ranked by Annual Growth Rate (value)

SITC No.	Description	1997				1998			
		(Percent)			Rank	(Percent)			Rank
		Share	Growth Rate	Contribution to Growth		Share	Growth Rate	Contribution to Growth	
00	Live animals for food (other than animals of div. 03)	0.1	-10.0	-0.1	40	0.1	-9.1	0.0	41
01	Meat & preparations	0.0	-32.9	-0.2	56	0.1	37.3	0.2	17
02	Dairy product and bird's eggs	0.0	-37.0	-0.1	57	0.0	65.8	0.1	13
03	Fish, crust., molluscs and aquatic invertebrates and prep. thereof	4.3	2.3	1.4	30	4.4	1.6	0.6	34
04	Cereals & preparations	0.1	-20.2	-0.3	50	0.2	115.5	2.1	5
05	Vegs & fruit	0.8	-16.2	-1.8	47	0.7	-6.7	-0.5	40
06	Sugars, preparations and honey	0.1	-5.7	-0.1	35	0.1	-51.5	-0.3	61
07	Coffee, tea, cocoa, spices and manufactures thereof	3.4	8.4	4.0	26	4.2	18.6	7.1	20
08	Feeding stuff for animals (not including unmilled cereals)	0.4	-31.7	-1.6	55	0.3	-20.8	-0.5	50
09	Misc. edible products and preparations	0.3	52.1	1.8	7	0.3	10.2	0.3	28
11	Beverages	0.0	-37.3	-0.1	58	0.0	-37.8	0.0	57
12	Tobacco & mnfgs	0.7	24.8	2.4	15	0.7	5.2	0.3	32
21	Hides, skins and furskins, raw	0.0	1141.1	0.6	1	0.0	130.5	0.1	10
22	Oil seeds and oleaginous fruits	0.0	86.3	0.3	2	0.1	84.2	0.4	4
23	Crude rubber (including syntetic and reclaimed)	3.8	-21.0	-11.1	51	2.9	-25.8	-6.8	52
24	Wood & cork	0.8	-3.3	-0.4	34	0.7	-17.7	-1.1	46
25	Pulp & waste paper	1.2	13.4	2.3	22	1.8	40.9	6.6	16
26	Textile fibres and their wastes (not manufactured into yarn or fabric)	0.3	-7.5	-0.4	38	0.4	8.0	0.3	29
27	Crude fertilizer and crude minerals (exc. coal, petroleum and precio	0.6	72.8	5.9	3	0.4	-35.0	-1.2	56
28	Metalliferous ores and metal scrap	4.3	-14.6	-8.8	45	3.8	-15.1	-5.2	45
29	Crude animal and vegetable materials, n.e.s.	0.2	-21.6	-0.5	52	0.1	-30.6	-0.3	53
32	Coal, coke, briquettes	3.7	32.7	16.9	10	3.4	-9.5	-3.0	42
41	Animal oils and fats	0.0	65.1	0.0	4	0.0	87.2	0.1	9
42	Fixed vegetable fats and oils, crude, refined or fractionated	5.5	63.4	48.3	5	2.9	-47.5	-12.8	60
43	Animal or veg. fats and oils, proc., waxes, and edible mixtures or p	0.2	-63.2	-1.9	60	0.9	327.2	28.0	1
51	Organic chemicals	1.7	32.6	7.6	11	2.0	16.5	3.0	24
52	Inorganic chemicals	0.2	-16.7	-0.6	48	0.3	7.3	0.2	30
53	Dyeing, tanning and colouring materials	0.2	13.7	0.4	21	0.2	12.1	0.2	27
54	Medical and pharmaceutical products	0.1	-15.8	-0.2	46	0.1	30.8	0.4	18
55	Ess. Oils,perfume mat., toilet,polishing and cleaning prep.	0.5	3.1	0.2	29	0.6	18.3	1.0	21
56	Fertilizers	0.8	15.4	1.7	20	0.4	-46.0	-1.8	59
57	Plastics in primary forms	0.8	6.7	0.8	27	1.3	47.7	5.5	15
58	Plastic in non-primary forms	0.2	-10.9	-0.3	42	0.2	6.3	0.1	31
59	Chemical materials and products, n.e.s.	0.3	-13.5	-0.5	44	0.3	14.6	0.4	26
61	Leather, leather manufactures, n.e.s. and dressed furskins	0.1	23.3	0.4	16	0.2	89.9	1.8	7
62	Rubber manufactures, n.e.s.	0.9	18.3	2.2	17	0.9	-4.9	-0.4	39
63	Plywood, wood mnfgs (excluding furniture)	11.9	-0.7	-1.2	31	8.4	-31.6	-24.4	55
64	Paper, paperboard and art. of paper pulp, of paper or paperbord	2.7	17.5	6.7	19	4.4	54.6	21.9	14
65	Textile yarn, fabrics, made-up articles, n.e.s., and rel. product	7.9	12.1	13.3	23	8.5	4.7	3.7	33
66	Non-metalic mineral manufactures, n.e.s.	1.3	24.9	4.4	14	1.5	15.0	2.1	25
67	Iron and steel	0.8	-2.2	-0.2	33	1.6	87.4	12.6	8
68	Non-ferrous metals	1.6	-1.8	-0.4	32	1.6	-4.4	-0.6	37
69	Mfg. metals	1.6	44.7	9.7	8	1.4	-12.4	-1.6	44
71	Pwr gen mach	0.5	30.2	2.0	12	0.9	82.0	6.6	11
72	Mach specializes for particular industries	0.2	-29.2	-0.9	54	0.5	108.3	4.8	6
73	Metal working machinery	0.0	-7.9	0.0	39	0.0	142.0	0.4	3
74	Gen machinery and equipment, n.e.s., and machine parts	0.5	-7.0	-0.5	37	0.6	17.2	0.9	23
75	Ofice machines and automatic data processing machines	2.3	18.0	5.9	18	2.1	-12.2	-2.4	43
76	Telecom, electronics	4.6	-10.6	-6.8	41	3.8	-19.3	-6.8	47
77	Elec machinery, apparatus and appliances, n.e.s.	2.9	9.2	3.7	25	3.0	0.7	0.2	35
78	Road vehicles (including air-cushion vehicles)	0.8	-6.7	-0.8	36	0.8	-4.0	-0.3	36
79	Other transport equipment	0.2	-57.4	-1.9	59	1.0	314.2	29.1	2
81	Prefab. buildings; sanitary,plumbing,heating and lighting, fix. and.	0.1	56.7	1.0	6	0.1	-20.5	-0.2	49
82	Furniture, parts thereof; bedding, mattresses and similar stuffed	2.5	5.4	1.9	28	1.9	-23.9	-4.3	51
83	Travel goods, handbags, cushions and similar containers	0.2	-12.8	-0.4	43	0.2	18.0	0.4	22
84	Apparel, clothing accessories	9.9	10.7	14.7	24	9.6	-4.8	-4.3	38
85	Footwear	3.9	-27.8	-15.3	53	3.2	-20.4	-6.0	48
87	Professional, scientific and controlling ins. and apparatus	0.1	26.0	0.4	13	0.1	-31.0	-0.2	54
88	Photographic app., equip. and supplies and optical goods, n.e.s;wac	0.8	35.5	4.1	9	0.5	-41.0	-1.9	58
89	Misceleneous manufactured articles, n.e.s.	3.2	-18.1	-8.0	49	5.5	69.7	35.2	12
92	PEBT	n.a.	n.a.	n.a.	n.a.	3.9	28.0	10.1	19

groups. The commodity exports at the four-digit level, discussed below, are not PEBT-adjusted. The last column under each year in Table 5 is the commodity group's contribution to total export growth over the year.¹⁰

Wood panel and worked wood exports (excluding furniture) (SITC 6343)

- ✓ In Figure 14, earnings from the PEB wood panel commodity group fell 33 percent between July and December 1997. Adjusted PEB exports fell 55 percent between November 1997 and January 1998. Earnings from specific, major wood panel export categories (SITC 6343 & 6344, plywood) dropped precipitously in January 1998 to end the year 86 percent below their level in 1997. (Figure 15)
- ✓ Exports of veneer and densified wood products sharply increased simultaneous with an abrupt decrease in plywood exports in November 1998. The same plants produce plywood and veneer.

A possible partial reason for the fall in export earnings from wood panel exports is the severe downturn in construction because of the Asia financial crisis.

- ✓ Export of wood panel exports (plywood, veneer, densified wood) to Japan and South Korea, about one-third of total Indonesian wood panel exports in 1998, declined by about 60 percent.

The level and composition of wood panel exports to Japan and South Korea conforms closely to the level and composition of aggregate wood panel export patterns depicted in Figure 11.

- ✓ Plywood exports fell more than 90 percent while there were large increases in veneer exports to Japan (1,600 %) and densified wood exports to Japan and Korea (292 and 197 % respectively).

But there is a strange aspect to this story: The pattern of Indonesian wood panel exports to Japan and South Korea was not unique. The patterns of Indonesian wood panel exports to the U.S. and to major European importers are strikingly similar to those of Japan and South Korea. While recession in Japan and South Korea was an important factor, the U.S. and European markets were not in recession, nor would recession cause an abrupt and uniform switch from importing plywood panels to importing veneer and densified wood panels. A possible explanation for the uniform international demand response is a change in prices by Indonesian exporters. Such a reduction would exert a strong signal to the international market. The Indonesian Wood Panel Association (Apkindo) reportedly ceased functioning as a plywood export cartel in early 1998. Apkindo governed exporters' output levels and prices. The retirement of Apkindo therefore would tend to improve the linkage between plywood producers' supply responses and world plywood prices. The reduced role of Apkindo alone, even if the preceding supposition is correct, does not explain the similarity in export composition patterns of the major importing countries. A change in classification of wood panel types is another possible explanation. Wood panel exports will be examined in more detail over the next few months.

¹⁰ The contribution to total export growth is the proportional value of product of the percentage share of total export values for the year multiplied by the commodity group's growth rate for the year.

Figure 14: Plywood Exports: PEB & PEB Adjusted for PEPT

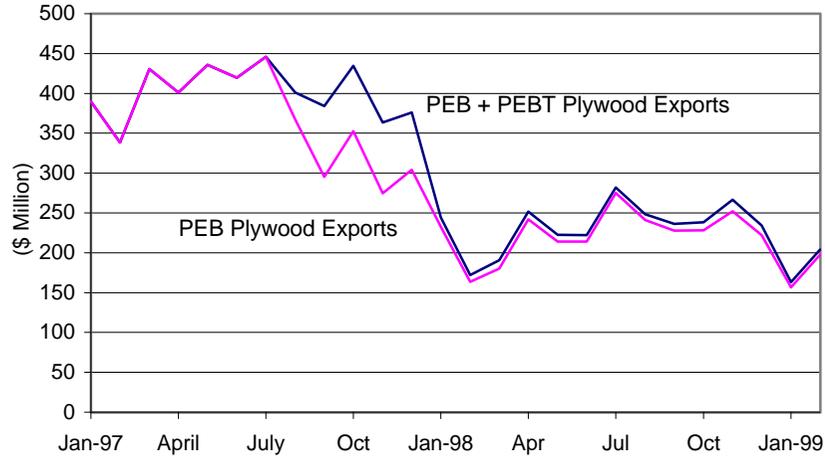


Figure 16: Unit Values of Veneer & Plywood Exports

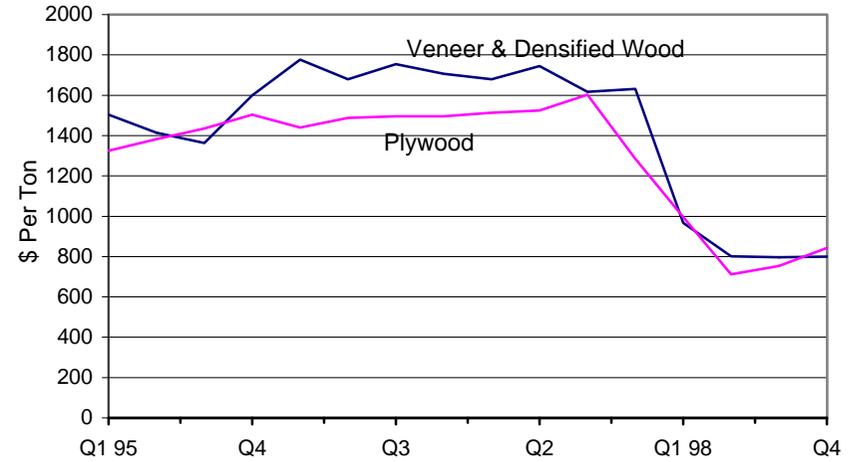


Figure 15: Plywood & Processed Wood Exports

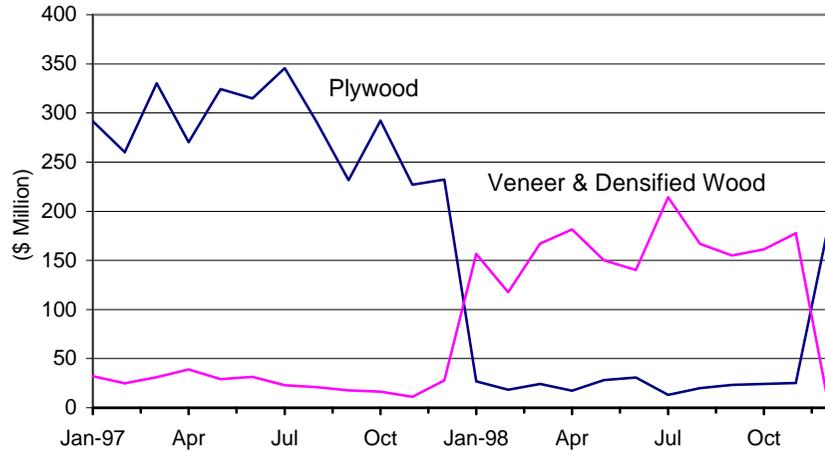
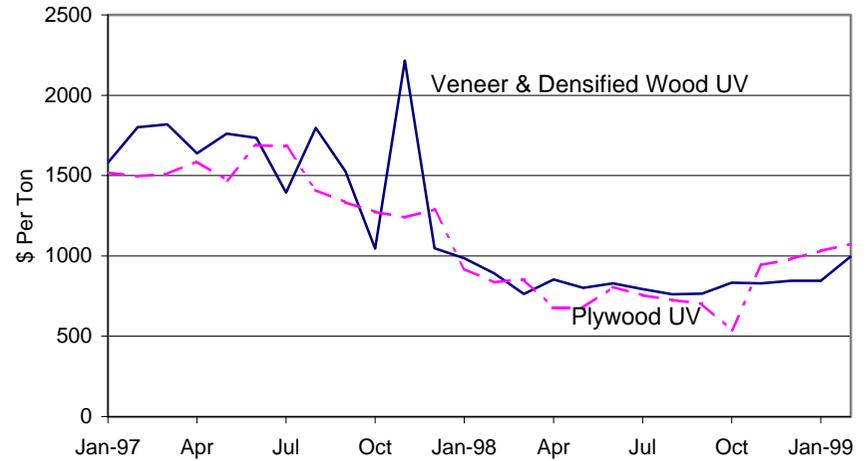


Figure 17: Veneer & Plywood Export Unit Values



Furniture (SITC 8215,17,18)

In principle, one would expect to see wood and other furniture exports expand significantly in 1998 given their high value added content and the Rupiah depreciation. Instead,

- ✓ Exports of the furniture group fell 24 percent in 1998. Figure 18 shows that adjusted exports from the furniture commodity group increased as the Rupiah started to depreciate in July 1997, but fell back to end the year at about one-half the typical monthly level of \$80 million.
- ✓ Wood furniture (SITC 8215, 44 % of the 82 commodity group in 1997) fell precipitously in October 1997. The gap between PEB and PEBT exports in Figure 18 suggests that much of the October 1997 decline can be attributed to use of the PEBT short form. But by January 1998, the gap between PEB and PEBT furniture exports had closed to about \$10 million per month and wood furniture exports dropped to zero (in Figure 19) from a previous level of about \$30 million per month. Even if all 1998 wood furniture exports were classified as PEBT, this would only account for about \$10 million of the \$30 million drop in monthly levels.
- ✓ Wood furniture exports that typically would have earned about \$360 million, were insignificant in 1998.

At least two factors contributed to the fall in furniture exports, the difficulty of obtaining export finance in 1998 and the combination of the Rupiah depreciation and regional government constraints on movement of furniture-grade logs within Indonesia.

- ✓ With respect to export finance, exports of non-wood furniture and related parts (in Figure 19), fell along with wood furniture exports (with the possibility that some exports might have continued under the PEBT system) suggesting an industry-wide problem. A recent survey of effects of the Asian Financial Crisis on Indonesian industry reports that the smaller, domestically owned export firms tended to experience significant difficulties in the 1998 economic environment.¹¹
- ✓ Producers of wood furniture exports faced the additional constraint of obtaining furniture-grade logs when the Rupiah depreciation significantly increased the premium on exporting logs. At the same time there were plentiful rules preventing interprovincial log movements. The sum effect would have been to severely reduce the supply of raw material to wood furniture producers.

Palm and Coconut Oil (SITC 4222, 4223)

- ✓ Exports of palm and coconut oil and fractions ranked fifth from the top growth group in 1997 with a 63 percent growth rate. These edible oils contributed almost half the gains in

¹¹National Development Planning Agency of Indonesia (BAPPENAS), "Country Report: Indonesia," in Conference on Asian Corporate Recovery: Corporate Governance & Government Policy, Bangkok, March 1999.

Figure 18: Furniture PEB & PEB Adjusted for PEBT

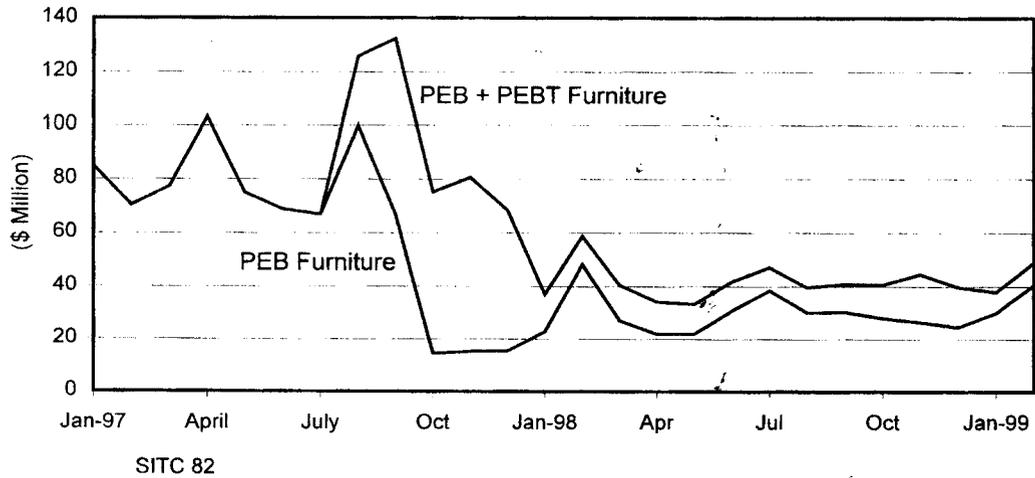
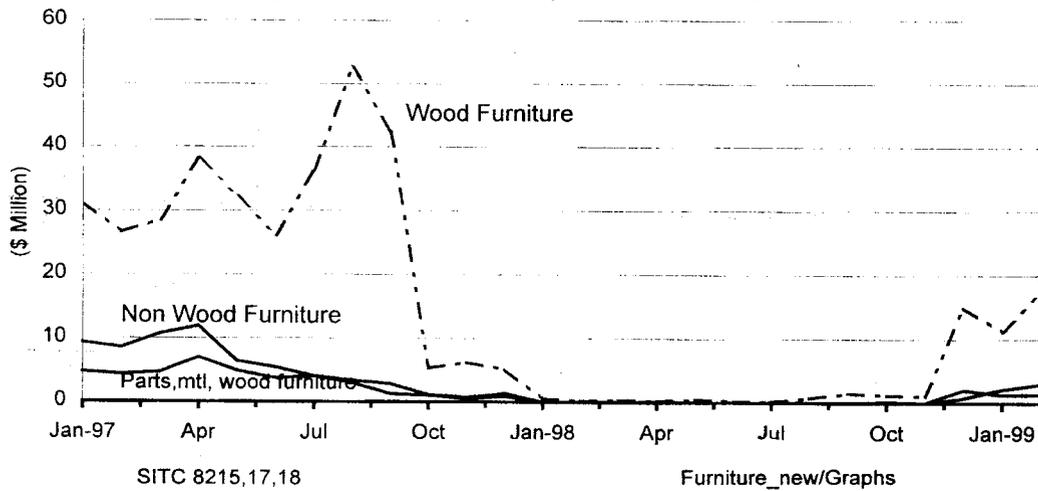


Figure 19: Furniture Exports (selected 4 digit PEB)



Furniture_new/Graphs
from PEBconvs_New2.xls/Graphs2

Indonesian export growth in 1997 in spite of an export tax on crude palm oil and fractions (that was introduced in 1994 and revised to an *ad valorem* tax in July 1997).¹²

- ✓ The supply response to the large Rupiah depreciation that started in July 1997, is evident in Figures 21 and 21. The Government's imposition of a ban on exports of crude palm oil (CPO), fractions and palm kernel oil (not shown) in January 1998, response to the 1997 export surge is also evident. In April 1998, the Government replaced the export ban with a 40 percent export tax and added crude and refined coconut oil to the list: recorded coconut oil exports dropped below \$10 million per month.
- ✓ The consequence of efforts to stem the outflow of edible oils in 1998 was a 48 percent reduction in exports for the two-digit commodity group, causing edible oils to fall from the 5th ranking by growth rate in 1997, to the 60th rank in 1998. A conservative estimate of total foreign exchange losses in 1998 from foregone palm and coconut oil exports is \$426 million.¹³

Steel and Portland Cement (SITC 6761, 6762 and 6612)

- ✓ Steel exports contributed almost 13 percent to Indonesian export growth in 1998, fueled by an 87 percent expansion over 1997 levels. The value of Portland cement exports from Indonesia increased 123 percent in 1996 and 78 percent in 1997. (Figures 22 and 23)
- ✓ In 1998, the value of cement exports jumped 161 percent while volume increased almost fourfold, implying a large drop in cement export prices.
- ✓ The combination of growing excess capacity and higher Rupiah earnings from exporting were incentives for increasing cement and steel exports in 1998. Growth in exports of these capital-intensive products is likely to decline as demand in the domestic market revives and the Rupiah appreciates.

Gold and Silver Jewelry and Wares (SITC 8973)

- ✓ The SITC 89 export group expanded 70 percent in 1998, contributing more than one-third of total export growth for the largest contribution by a two-digit export group.
- ✓ The expansion of gold and silver jewelry exports appears to have been driven by events during the financial crisis. Figure 24 shows the monthly time series (not PEBT adjusted) for worked gold and silver, and imitation jewelry exports. The gold and silver jewelry export peak in the first quarter of 1998, coincides with the time of the most rapid Rupiah depreciation. The second peak of gold and silver jewelry coincides with the time immediately following the May-June disturbances.

¹² Marks, Stephen; Larson, Donald; and Pomeroy, Jacqueline. "Economic Effects of Taxes on Exports of Palm Oil Products," Bulletin of Indonesian Economic Studies, December 1998.

¹³ Both of the trend options chosen are conservative. The estimate for 1998 coconut oil and fractions exports is based on a (downward sloping) linear regression trend line of 1997 monthly export values. The estimate for 1998 palm oil and fractions exports is based on the simple average monthly value (pre Rupiah depreciation) between January 1996 and June 1997. If 1997 total values for the two commodity groups were used to estimate foregone foreign exchange the loss would be \$717 million.

Figure 20: Palm Oil & Fractions Exports

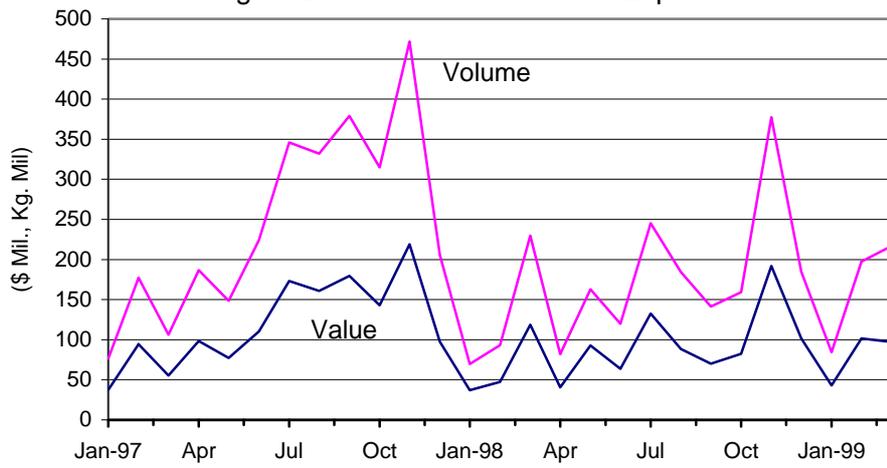


Figure 21: Coconut Oil & Fractions Exports

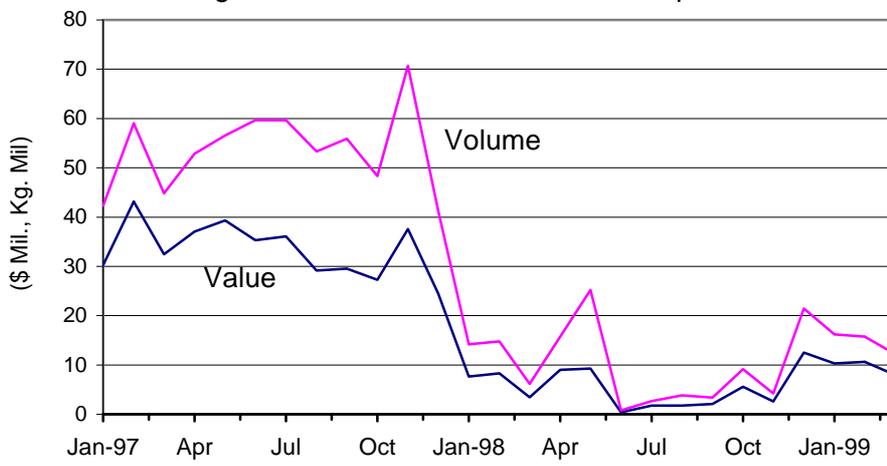


Figure 22: Iron & Steel Exports

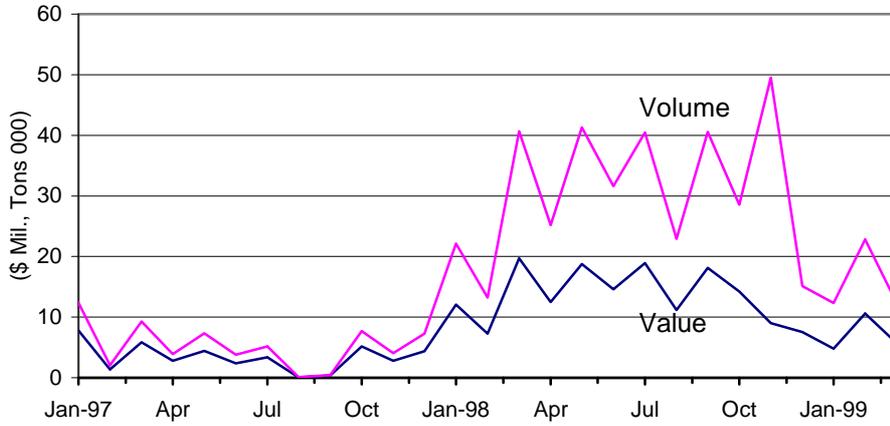


Figure 23: Portland Cement Exports

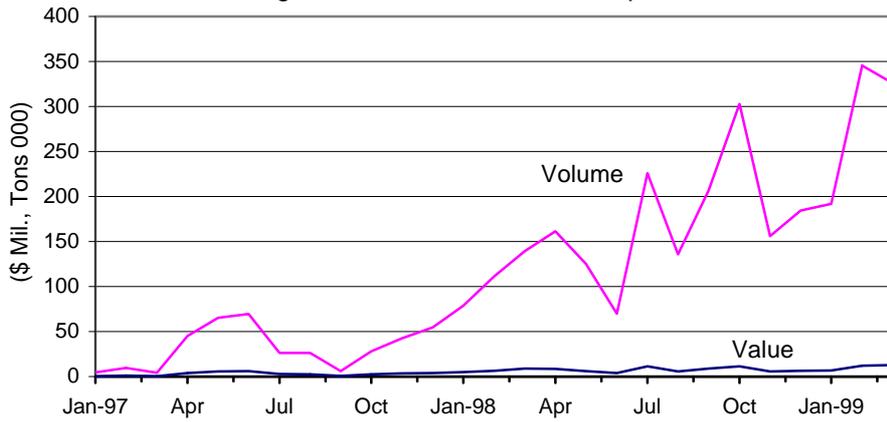
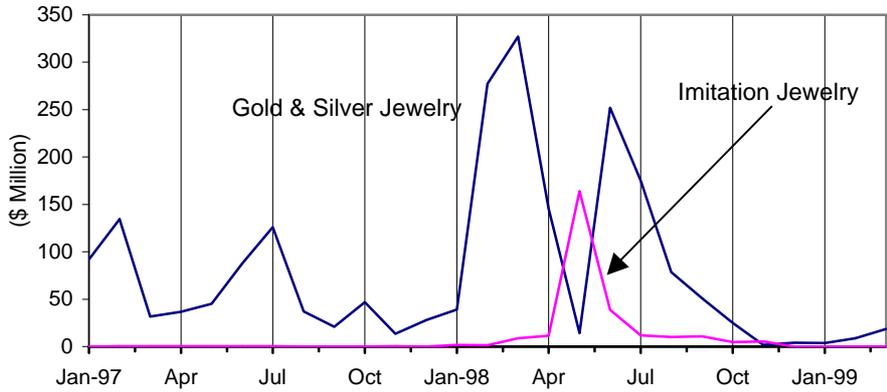


Figure 24: Gold, Silver, Imitation Jewelry & Wares Exports



- ✓ About 83 percent of total Indonesian worked gold and silver exports went to Singapore in 1998.
- ✓ Although imitation jewelry exports were negligible in 1997, in 1998, they achieved a 12 percent share of the SITC 89 export group total revenues as the result of a single \$160 million spike in May 1998. Fifty-eight percent of Indonesia's total imitation jewelry exports went to Singapore in the second quarter of 1998.

Other transportation equipment (SITC 7932 ships, boats and other vessels, 7935 special purpose vessels, 7931 yachts and sports vessels)

- ✓ Transportation equipment exports in the form of maritime vessels constituted 33 percent of NOG export growth, the second fastest growing export group in 1998 and the second largest contributor to export growth.
- ✓ Exports of "ships and boats" and "special purpose vessels" constituted 92 percent of total value in the group and had annual growth rates of 637 percent and 346 percent respectively. Ninety-one percent of total special purpose vessel exports went to Thailand in 1998.

If the exported yachts and sports vessels were newly produced, the large increase could be a supply response to the Rupiah depreciation, i.e., a demonstration of what happens when there is a significant decrease in the selling price (the Rupiah depreciation would have allowed producers to cut prices) in a market that is price sensitive. If this is the case, it suggests that there is potential for expansion of this type of export product. The bunching of the vessel exports with respect to time remains unexplained. A second possible explanation is that the vessel exports were simply assets that were moved out of Indonesia as a form of capital flight. Both explanations may have played partial roles in the rapid growth of vessel exports in 1998.

5. **Concluding Observations**

Indonesia's 1998 export performance can be evaluated from several different perspectives. In terms of aggregate exports using reported trade data, total exports did contract after many years of two-digit growth rates. The decline however was not profound in that 1998 export values were well above the pre-crisis year of 1996. Not surprisingly, domestic probably contributed more to the decline in Indonesian exports in 1998 than did external factors.

On the domestic side, the impact of the financial crisis and Rupiah depreciation expressed itself in a variety of ways:

- ✓ Exports of some low value industrial goods expanded because of the Rupiah depreciation and weak domestic demand. The high 1998 export levels of products such as cement and steel are unlikely to be sustained as domestic demand revives and the Rupiah appreciates from its 1998 level.
- ✓ Some exports fell to near zero levels partially because the producers were hampered by an increase in the outflow of raw materials in response to the large Rupiah depreciation, e.g., logs for furniture, and supply constraints in the form of prohibitions on inter-provincial movement of some raw materials such as logs for furniture.

- ✓ It is possible that some exports increased for financial defense reasons: the unusually high levels of jewelry and some vessels exports may have been a form of capital flight.
- ✓ The economic crisis and near cessation of routine trade finance and working capital by commercial banks disrupted some firms although most exporting firms, and especially foreign owned firms' operations were not significantly impaired.
- ✓ The 48 percent drop in edible oil exports was an anti inflation effort unique to the 1998 crisis situation and is not likely to reoccur.
- ✓ Domestic political turmoil and changes in forestry policy were probably a factor in the marked decline of wood panel exports.
- ✓ The PEBT system remained an element in 1998. The rush to migrate from PEB to PEBT exports in 1997 suggests that the PEBT system exerted a positive influence to exports as well as an incentive to under-report the value of some exports, thereby creating the impression that some exports were lower when they were rising or not declining.

External factors also depressed Indonesian export growth in 1998.

- ✓ Falling international commodity prices in 1998 included some of Indonesia's most important export commodities such as plywood (-42%), rubber (-36 %) and shrimp (32%). However, the effect may have been partially offset in cases where the supply of commodities such as wood panels was reduced for domestic reasons. An estimate of the magnitude of falling prices on industrial export values in 1998 is \$1.3 billion, or 3.2 percent of 1998 industrial exports.
- ✓ Export growth rates in 1998 were lower to all of the major export markets relative to 1997.
- ✓ 1998 was the third year that world and industrial country imports have fallen. World import growth was negative 2.5 percent in 1998 and industrial countries' imports grew only 2.2 percent in 1998. U.S. import growth dropped from 9.4 percent in 1997 to 5 percent in 1998.
- ✓ Aside from lower commodity prices, the fall in NOG exports to Japan (13% share of total Indonesian NOG exports) and South Korea (2.4% share) is the largest external factor influencing Indonesian exports. In 1998, total NOG exports to Japan fell by \$1.57 billion and by \$257 million to South Korea compared to a net total fall in Indonesian NOG exports of \$734 million between 1997 and 1998.

Concluding Observations and Implications: Export Sector-Led Recovery

The combination of three points suggests that the Indonesian export sector can assume a central role in Indonesia's economic recovery:

1. Exports have been the engine of growth since the mid 1980s.

2. The export sector performed well during the severe economic crisis, serving as a lifeboat for the economy, in spite of the collapse in the financial sector.
3. The robustness of the export sector's performance under duress is attributable to the years of liberalization that preceded the 1997 crisis.

Three key elements will enable exports to lead an economic recovery in Indonesia.

- The retention of the real exchange rate at a level competitive with other economies in the region (which have also seen their real exchange rates fall) is critical if Indonesian exports are to regain double-digit growth rates. In addition to stimulating the existing set of exports, new exports could be expected to arise from the diverse Indonesian economy.
- Although the virtual cessation of credit for working capital and letters of credit in 1997 does not appear to have seriously impaired exports, over time, the extreme scarcity of routine commercial trade credit will invariably reduce the competitiveness of Indonesian exporters and reduce export growth prospects. Resumption of commercial credit to exporters is essential to achieving broad participation of Indonesian exporters.
- Now is the ideal time to extend liberalization of the export sector environment as a means to accelerate export growth. Measures such as those that reduce administrative burdens or decrease exporters' transactions costs will increase the competitiveness of exporters and increase potential investors' interest in the export sector. Liberalization need not impose any additional costs on the Government.