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May 16, 1983

To: Members of the Executive Board

From: The Secretary

Subject: Compensatory Financing Facility - Requests for Drawings by
Oil Exporters

Attached for consideration by the Executive Directors is a paper on requests for drawings by oil exporters under the compensatory financing facility. It is proposed to bring this subject to the agenda for discussion on Thursday, June 2, 1983.

If Executive Directors have technical or factual questions relating to this paper prior to the Board discussion, they should contact Mr. Kaibni, ext. 74162.

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INTERNATIONAL MONETARY FUND

Compensatory Financing Facility--Requests for
Drawings by Oil Exporters

Prepared by the Research Department

Approved by Wm. C. Hood

May 16, 1983

The purpose of this memorandum is to explore certain issues that arise in relation to a request for a CFF drawing by an oil exporter. While the issue of whether a shortfall can be said to be beyond the control of a member of the Fund who is also a member of OPEC is central, the discussion in this memorandum is not limited to this issue. An associated question pertains to the total extent of the potential requests for CF drawings from oil exporters. It is intended to take this latter matter up in the forthcoming memorandum on policy aspects of the CFF and BSFF programs.

The theme of this memorandum is that the details of the situation of an oil exporter which may request a CF purchase may vary widely from case to case in respect of a number of relevant considerations. These include the balance of payments situation, the degree of cooperation with the Fund, the importance of oil exports in the total of export earnings, the timing of the shortfall, the extent of the shortfall, whether the exporter was a member of OPEC and, whether member or not, the extent to which its policy actions were responsible for the shortfall. In the course of the exposition of this theme, it will be necessary to comment upon the actions of OPEC at various stages in the evolution of the events, past and prospective, that contribute to the existence of an estimated shortfall.

The memorandum first notes the probability of differences among countries in respect of balance of payments need, the degree of their cooperation with the Fund and the importance of oil in their export earnings. It then turns to the differences in respect of timing and extent of shortfalls. Then the relevance of OPEC policies and membership in OPEC is discussed. Finally, conclusions are presented for the consideration of Executive Directors.

1. Preliminary Discussion of Differences

It is the theme of this paper that the circumstances of potential users of the CFF among oil exporters may vary widely from one exporter to another and that to make meaningful generalizations in respect to oil exporters or some particular subset of oil exporters may not be possible.

In this section, occasion is taken to record the possibility of differences among oil exporters in respect of a number of considerations relating to a CF drawing. These are considerations for which no particular analysis is needed in order to establish the probability of differences.

The first such consideration is the requirement of need. The Fund should be satisfied that a member seeking to use the Fund's resources has a need to make the purchase because of its balance of payments or its reserve position or developments in its reserves. There could, of course, be differences among oil exporters in respect to their balance of payments need, and at any given time some exporters could be ruled out of eligibility for a CF drawing because of a lack of need.

A second consideration is that of cooperation. The decision establishing the CFF requires members seeking to use the facility to meet certain tests of cooperation. There are oil exporters that could meet such a test today; others could not. Oil exporters accordingly differ in respect of this matter and some would be excluded from use of the facility on grounds that have nothing to do with the fact of their being oil exporters or of having pursued particular policies in relation to their oil production or marketing.

Finally, it may be noted that oil exporters differ widely in the importance for them of earnings from the export of oil in the total of their export earnings. In Table 1, information on the share of oil in total export earnings is summarized for 23 oil exporting countries. (The detail is given in Table 1 of the Annex.) It will be noted that there is a considerable spread in the ratios pertaining to individual countries. Accordingly, from this point of view, it would be unwise to treat oil exporting countries as though the importance of earnings from oil exports were the same for all of them.

II. Differences Among Oil Exporters in Respect of the Timing and Extent of Shortfalls

In Chart 1, in the upper panel, the course of oil export earnings is shown for the total of the 12 OPEC members, apart from Saudi Arabia. For 1983, a price of \$28 per barrel is assumed (this is the working assumption in the forthcoming WEO publication) and the export value is assumed to decline by about 7 per cent in terms of SDRs. For 1984 through 1986, the value of exports is assumed to increase at an average annual rate of almost 9 per cent. These estimates are used for purposes of illustration; the effects of alternative assumptions will be discussed later.

CHART 1
OPEC MEMBERS (EXCLUDING SAUDI ARABIA):
OIL EXPORT EARNINGS AND SHORTFALLS

(In SDR billions)

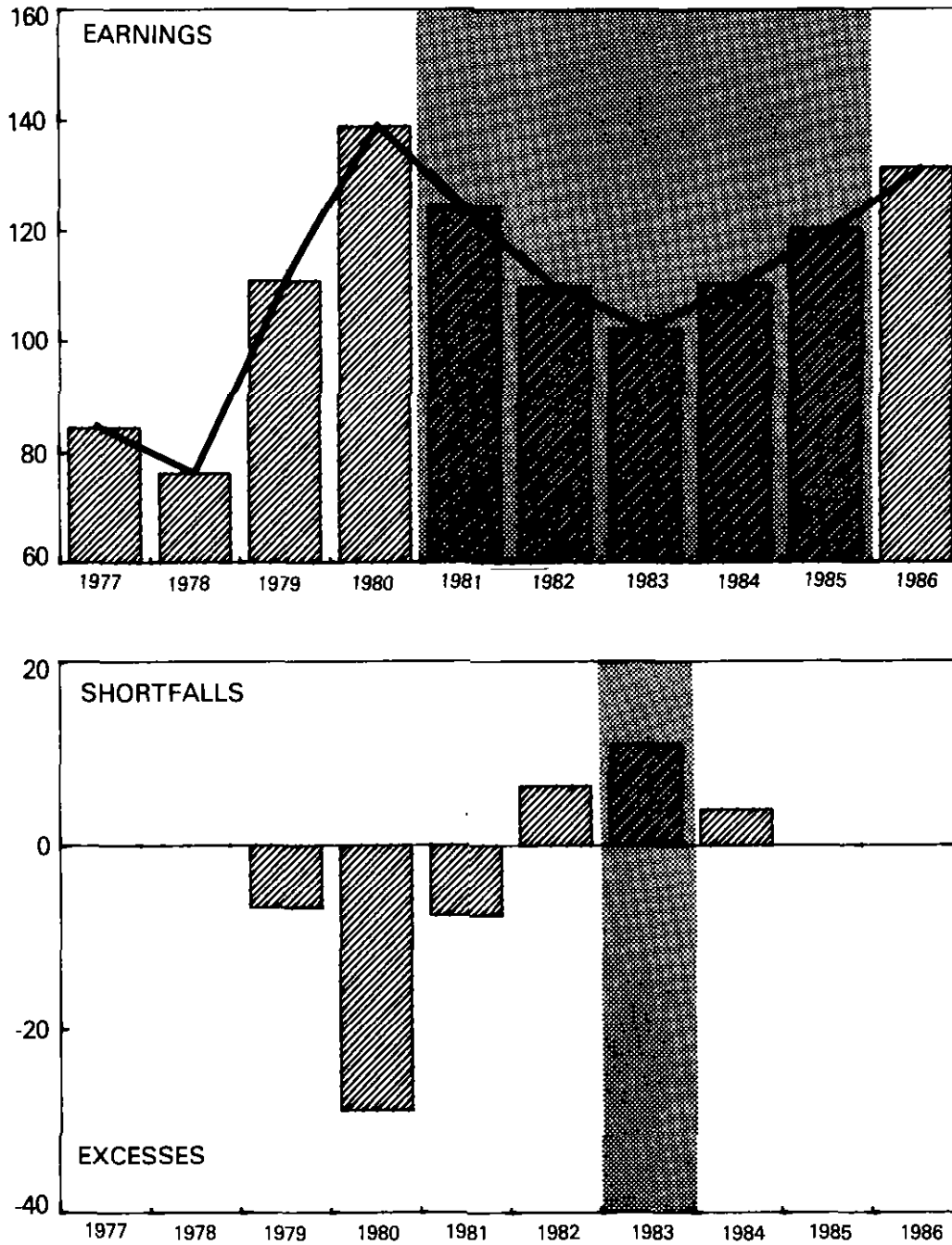


Table 1. Oil Exporting Countries: Share of
Oil in Total Merchandise Export Earnings

(In per cent)

	1977-78 Average	1981-82 Average
23 oil exporting countries	85	87
OPEC 1/	94	93
Highest share	100	100
Lowest share	45	67
Others 2/	32	59
Highest share	96	93
Lowest share	6	2

Source: Annex Table 1.

1/ Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, Venezuela.

2/ Bahrain, Bolivia, Congo, Egypt, Malaysia, Mexico, Oman, Peru, Syria, Tunisia.

On the basis of this profile of earnings, one may calculate shortfalls or excesses in oil export earnings. These are shown in the bottom panel of Chart 1. It will be noted that in 1979, 1980, and 1981, excesses (-) are implied by the profile. Shortfalls (+) appear in 1982 and peak in 1983, and recede thereafter. 1/

The first point to be made in respect of this information is that oil exporters who present requests for the use of the CFF will differ from each other in respect of their profile of oil earnings. The information presented above pertains to the average of 12 OPEC countries. The profiles of their earnings are broadly similar, but they do differ. The point is discussed further below.

1/ The absolute amounts of the shortfalls should not in any sense be interpreted as a measure of the exposure of the Fund to requests from OPEC countries for the use of resources through the CFF.

The second point to be made is that for any oil exporter the amount of the shortfall in its export earnings depends upon the shortfall year on which the request is based. Thus the profile in the chart for the "average" (excluding Saudi Arabia) oil exporter indicates that the shortfall in oil export earnings would become successively smaller as the 12 months of the shortfall year move deeper into 1984.

In Chart 2, shortfall calculations based upon alternative sets of assumptions as to the outturns in 1983 through 1986 are exhibited.

One of these sets of assumptions retains the values for 1984-86 unchanged from the 1983 level. On this basis, the shortfall for 1983 would be cut by nearly a half and the shortfall for 1984 would be 62 per cent lower. Another set of assumptions leaves the projected values for 1983 and 1984 the same as in Chart 1, but assumes no growth in export values for 1985 and 1986; the shortfall for 1983 would be 18 per cent lower and the shortfall for 1984 would be transformed into an excess. For 1983, there would be a shortfall so long as any decline in the projected values for 1984-85 does not exceed 9 per cent a year. The final point to be made in the present context is that since calculated shortfalls depend upon the forecasts that are made of export earnings, the request from any oil exporter for CFF accommodation will reflect the forecasts extant at the time of the request which may of course be revised from time to time. Similarly, oil exporters who seek to draw under the CFF and whose circumstances differ only in the forecast that is relevant at the time of their request will differ in the amount of the shortfall underlying their request.

III. The Relevance of OPEC Policies and Membership in OPEC

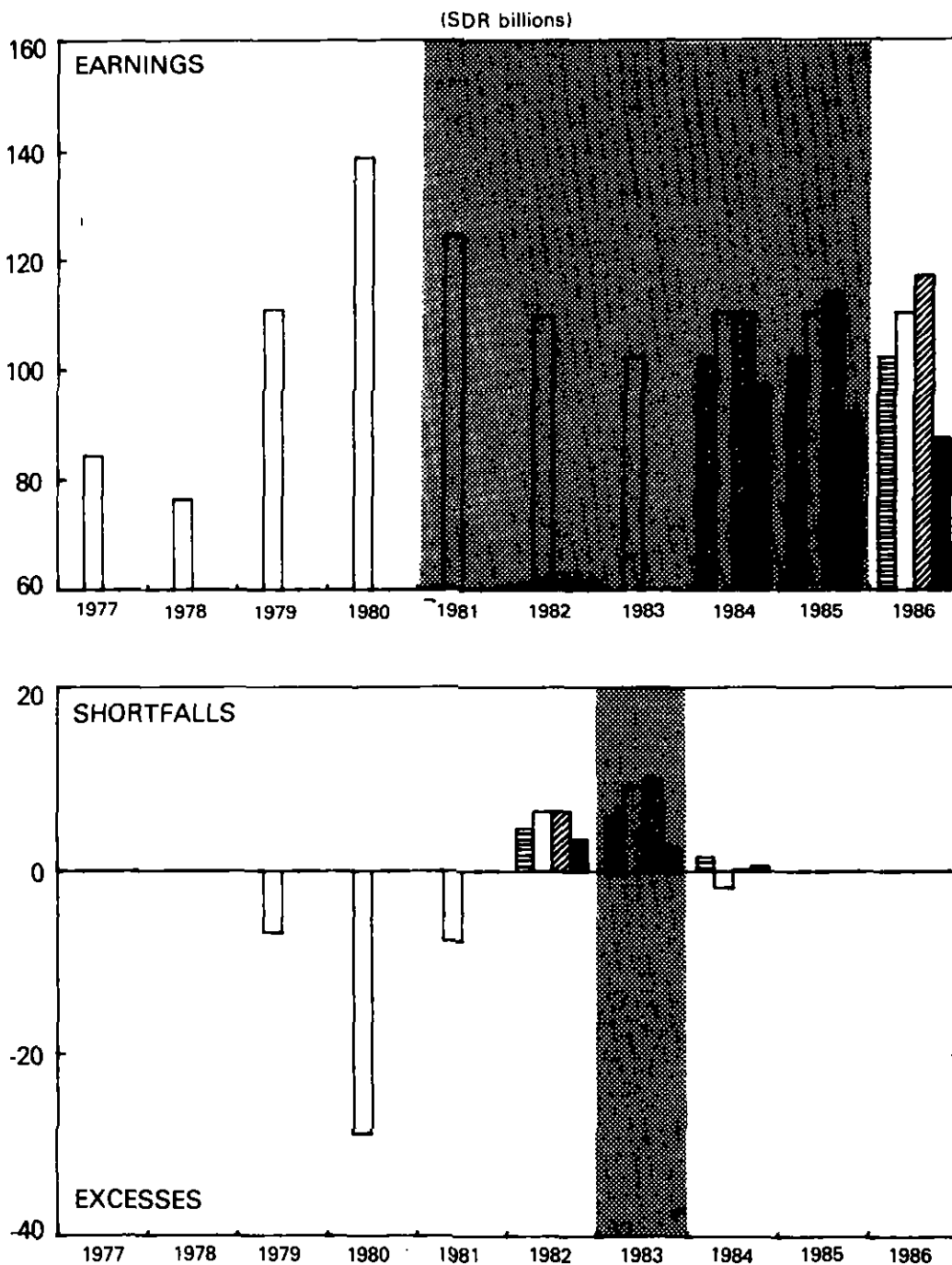
One of the important conditions to be met if a member is to draw under the CFF is that the shortfall in its export earnings shall be due to circumstances largely beyond its control. A natural question therefore is whether membership in OPEC would in and of itself create a presumption that the shortfall in oil export earnings, at least, was not beyond the control of the member.

The approach to be taken in dealing with this matter is first to review the role that OPEC played in generating the profile of export earnings of the type exhibited in Chart 1.

Secondly, attention will be directed to the diversity of policies regarding production, pricing, and marketing of oil pursued by OPEC members from time to time.

Finally, analysis will be made of the diversity in the policies of oil exporters who are not members of OPEC.

CHART 2
OPEC MEMBERS (EXCLUDING SAUDI ARABIA):
OIL EXPORT EARNINGS AND SHORTFALLS ON
ALTERNATIVE ASSUMPTIONS OF EXPORT GROWTH¹



¹On the basis of the staff estimate of 1983 earnings, the following scenarios are made for the export growth for 1984-86.

- 1984-86 (no growth):
- 1984 (8 per cent), 1985 and 1986 (no growth):
- 1984 (8 per cent), 1985 and 1986 (3 per cent per year):
- 1984-86 (5 per cent per year):



1. The role of OPEC

Before turning to the role of OPEC in relation to earnings profiles that generate shortfalls of current relevance, it is useful to review very briefly events that took place early in the 1970s. There were several developments coming to maturity in the early seventies that may now be seen to have been converging to generate an increase in oil prices. There was growing dependence of the industrial countries, and the United States in particular, on Middle Eastern oil. In a number of the oil producing countries of the Middle East, governments were increasingly exercising their bargaining power in dealings with the oil companies operating within their borders. Finally, Middle East producers were all producing at or near their then-existing capacity levels. In the face of these developments, upward pressure on prices built in the spot markets and spot prices overtook official selling prices at the end of the summer of 1973.

With the renewal of hostilities in the Middle East on October 6, 1973, a series of actions relating to the production, export, and pricing of oil took place, which had a most profound effect on the world, and which continued to affect attitudes in and about the oil market for the next decade.

On October 17, 1973, a conference of Arab oil ministers in Kuwait agreed to reduce their exports by a minimum of 5 per cent compared with September output and to follow this reduction with further cuts of 5 per cent per month. The conference recommended an embargo against unfriendly states. On October 19-20, the Arab producers announced a doubling of the cutbacks in production and an embargo of exports to the United States, and later to the Netherlands and certain other countries. On November 4-5, the Arab oil ministers agreed to cut production by 25 per cent of the September level. These various production cuts were eliminated by mid-March 1974. The embargo on exports to the United States was lifted on March 17, 1974, and on exports to the Netherlands on July 11, 1974.

It is to be noted that these production cuts and embargoes were not actions of OPEC as such. They were actions taken by individual states.

The price actions of the last quarter of 1973 began with a decision of the six ministers representing the six Gulf oil states of OPEC to increase the posted prices for crude oil by 70 per cent: from \$3.011 per barrel to \$5.119 in the case of light Arabian crude. The action by the governments involved followed recent unsuccessful efforts to negotiate higher prices with the oil companies. There is no record in OPEC's officially published compendium of resolutions and press releases that this October action was an official action of OPEC. On December 23, 1973, there was an official decision by OPEC to raise the posted price to \$11.651 per barrel. The official press release reads in part as follows:

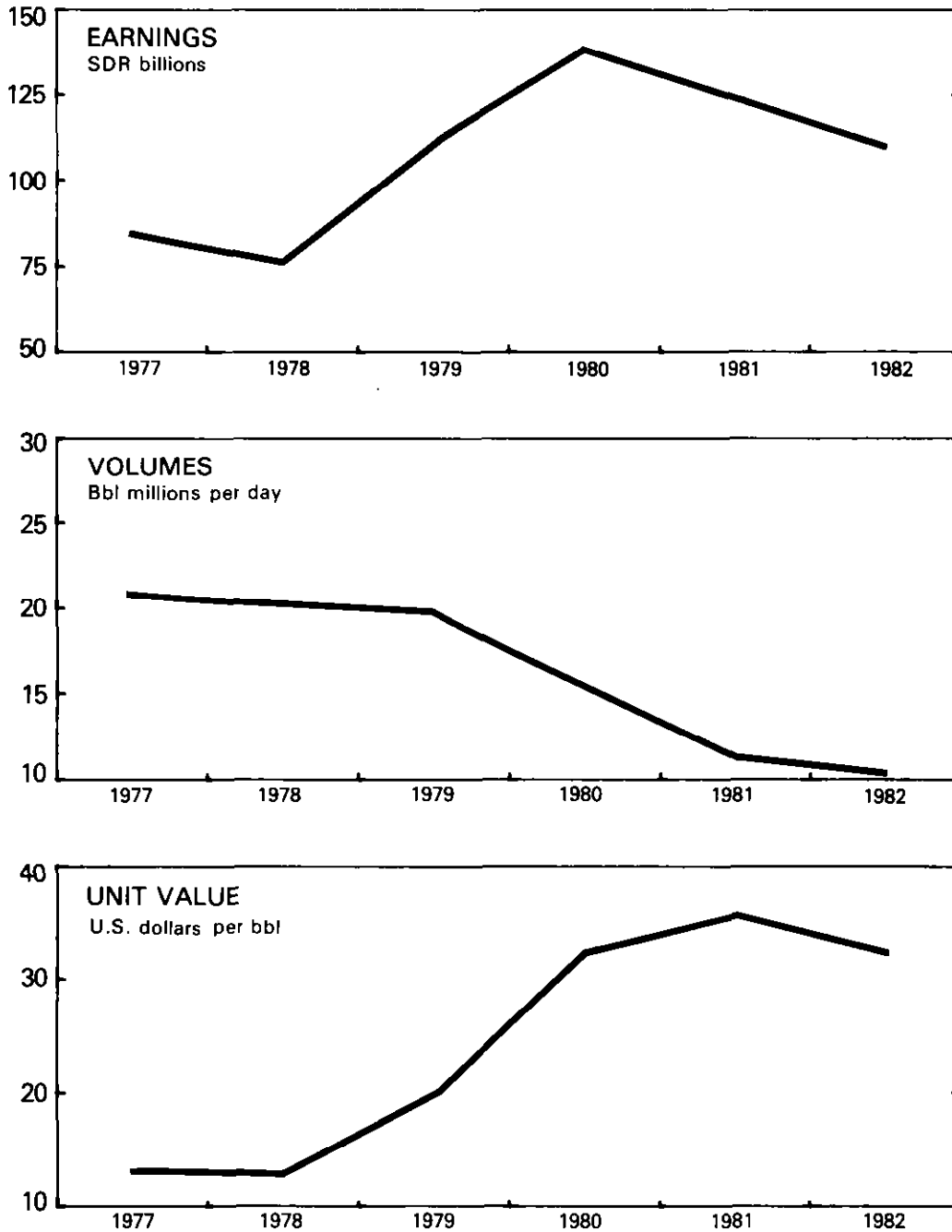
The Ministers of the Six Gulf Member Countries met in Teheran on 22nd and 23rd December, 1973. The meeting was also attended by other OPEC Delegations, Algeria, Indonesia, Libya and Nigeria, and Venezuela as an observer. The Ministers reviewed the report prepared by the Economic Commission Board held in Vienna between December 17th and 20th, 1973. Although the findings of the Economic Commission Board, as well as direct sales realized by some of the Member Countries, indicated a price in excess of Dollars 17 per barrel, the Ministerial Committee decided to set government-take of Dollars 7 per barrel for the marker crude, Arabian Light 34 degree API. The relevant posted price for this crude will, therefore, be Dollars 11.651 per barrel. The effective date for this posted price shall be January 1st, 1974.

These various actions affecting supply and price galvanized the entire consuming world into actions to conserve energy, to find alternative sources for oil, to substitute other forms of energy for oil, and to promote national self-sufficiency in energy supply. The recollection of the powerful effect that action on supply and prices by major producers could have in certain circumstances conditioned reactions to oil market developments from that time to the present.

In considering the role of OPEC in relation to current shortfalls, it will be convenient to refer to the shortfall for the year 1983 that is exhibited in Chart 1. The quinquennium of direct interest embraces the years 1981 through 1985. However, developments in 1979-80, which strongly influenced subsequent events, also need to be examined. What is exhibited in the chart is basically a period of increasing earnings, followed by a period of falling earnings and a subsequent period of renewed rise in earnings. ^{1/} (Background information on the profiles of export volumes and export unit values is given in Chart 3 and Annex Table 2.) The question to be addressed then is: what was or will be the role of OPEC in influencing the time profile in Chart 1?

^{1/} As noted in the last paragraph of Section 2, a decline in earnings on average in 1984 and 1985 of up to 9 per cent per annum would still leave a shortfall in 1983 given the profile from 1981 through 1983.

CHART 3
OPEC (EXCLUDING SAUDI ARABIA)
OIL EXPORT EARNINGS, VOLUMES AND UNIT VALUES



a. The years 1979-80

The relative calm, characterized by falling real oil prices, that had prevailed in world oil markets from 1974 was broken in the winter of 1978. The Iranian revolution led to a cut in production in that country from just under 6 million barrels per day (mbd) in the third quarter of 1978 to about 1 mbd in the first quarter of 1979. The winter of 1978 to 1979 was relatively severe in parts of the developed world, and this factor added to consumption. These factors generated a tight situation in the oil markets. World production increased after the first quarter of 1979, particularly in Saudi Arabia and in some non-OPEC countries, and the increase in the consumption of oil slackened, but the oil markets remained tight. A major reason for the tightness was the inventory situation. There was a need to replenish inventories that had been drawn down as a result of the loss of Iranian production and the severe winter. There was also a continuing felt need to increase inventories beyond normal replenishment. This wish to expand inventories derived to a large extent from changed practices in the marketing of oil which led the major companies and other buyers to be much more apprehensive as to the security of their supply. To a degree, the apprehension was a legacy of the events in 1973 and 1974. It also resulted from the growth in the number of buyers in the market and from the growing practice of governments of the producer countries to market their oil directly. 1/

As a result of the tight conditions in the market, prices rose rapidly (see Chart 4 and Annex Table 3). The spot market price for Mid-East Light crude oils rose from less than \$13 a barrel in October 1978 to about \$34 a barrel in May 1979 and by November was close to \$40 a barrel. Contract prices also rose very sharply in this period.

In 1980, there was a considerable decline in oil consumption in the world, of the order of 4-5 per cent. This was owing to the slowdown of economic growth in the industrial countries, to the switching of industry to non-oil energy sources, to the increasing efficiency in industrial uses of oil, and to the mounting response of other consumers to higher oil prices. Nevertheless, inventory demand remained strong during most of the year. Spot prices slackened somewhat in the first three quarters of the year and then stiffened sharply with the onset of the Iran-Iraq war in September 1980. Contract prices continued to rise through 1980.

The activities of OPEC in this period of price rise were the following.

OPEC made no decisions affecting production of its members in 1979 and 1980.

1/ The apprehension as to security of supply led buyers to diversify their sources of supply and this accounts in part for the growing share of non-OPEC suppliers in the world oil markets.

Following the increase in spot prices in the last quarter of 1978, as well as the strengthening of contract prices charged by non-OPEC members, OPEC decided in December 1978 to raise the price of the benchmark or "marker" crude by 5 per cent to \$13.34 per barrel effective January 1, 1979 and to raise it further at the beginning of each of the next three calendar quarters to reach a level of \$14.55 per barrel by October 1, 1979. In the fast-moving market situation, OPEC decided at the end of March to bring forward to April 1 the price increase to \$14.55 a barrel, and they announced that "it is left for each country to add to its price market premia which they deem justifiable in the light of their own circumstances". Almost all OPEC members other than Saudi Arabia introduced such premia. Between September 1978 and May 1979, price increases for crude oils occurred as follows:

Average OPEC price	29 per cent
Average non-OPEC price	31 per cent
Average spot price	168 per cent

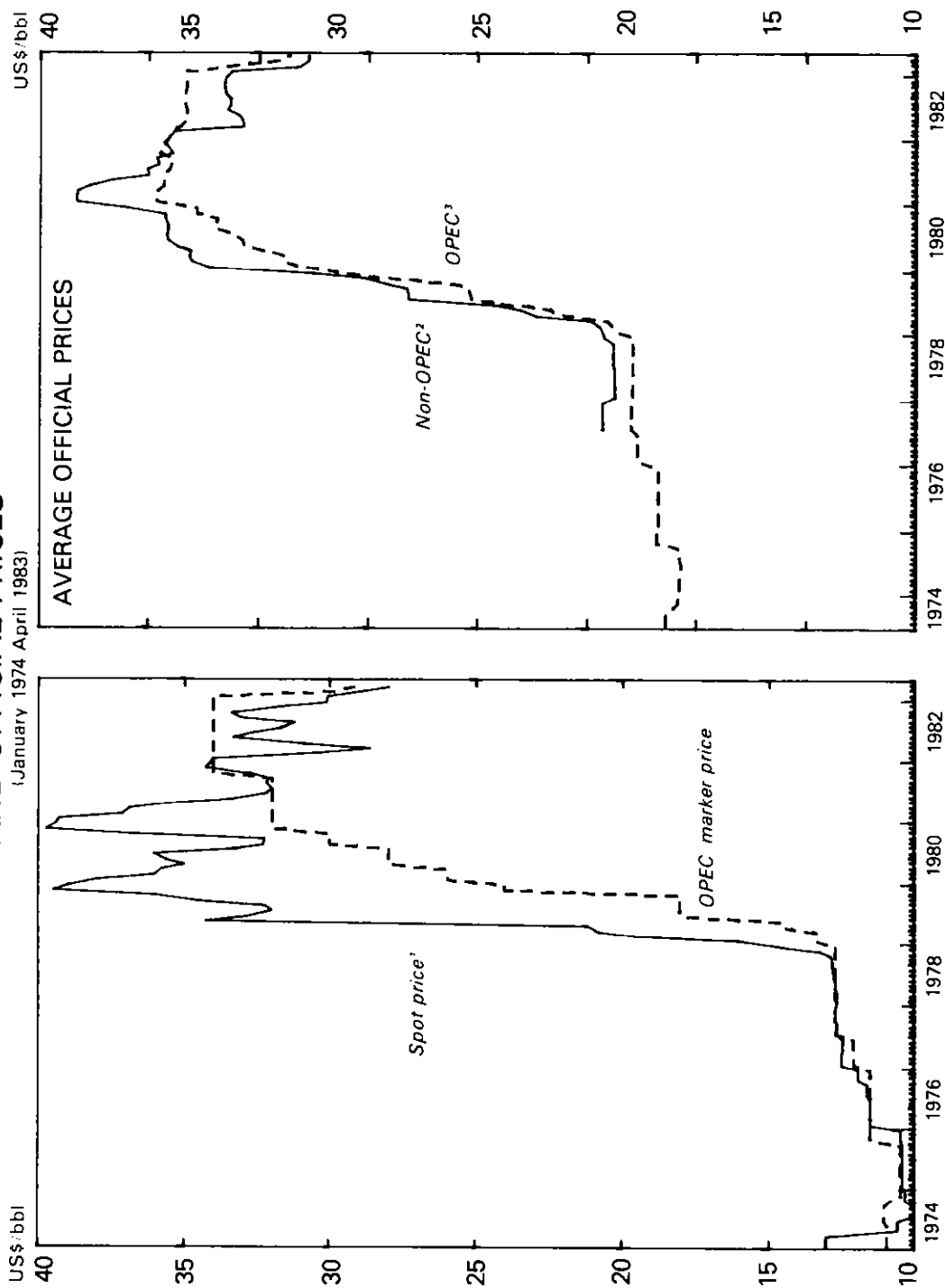
At a meeting toward the end of June 1979, OPEC raised the marker price to \$18.00 a barrel and introduced price ceilings in the face of its inability to agree on a uniform price structure. Individual OPEC members were given explicit sanction to introduce premia over the marker price within a ceiling of \$23.50 a barrel. Saudi Arabia continued to base its prices upon the marker price, but most other members of OPEC charged a variety of premia and in some instances the ceiling was breached. The market continued to be strong. Saudi Arabia increased its price for the marker crude by \$6 to \$24 a barrel with effect from November 1979 and at the end of January 1980 it increased this price again to \$26 a barrel. But the December 1979 meeting of OPEC did not reach agreement on prices. From May 1979 to January 1980, price changes were as follows:

Average OPEC price	69 per cent
Average non-OPEC price	79 per cent
Average spot price	11 per cent

Saudi Arabia's marker price was raised on three further occasions in 1980 in \$2 jumps to bring it to \$32 a barrel in November 1980. Efforts at OPEC meetings in June, September, and December 1980 to achieve a unified price failed. At the December meeting the concept of a "deemed marker price" of \$36 a barrel (which was the average price currently being charged by non-OPEC members) was established and the ceiling price for OPEC crude oil was set at \$41 a barrel. By December 1980, the average OPEC price was about \$32.80, the average non-OPEC price was about \$36.00, and the spot market price was \$39.35.

The following observations may be offered about OPEC actions in relation to market developments in the period 1979 and 1980.

CHART 4
CRUDE PETROLEUM PRICES: SPOT PRICES, OPEC MARKER PRICES
AND OFFICIAL PRICES
(January 1974 April 1983)



¹Spot market price of the comparable type of oil (Mid-East light) used for marker pricing.
²Weighted average of the official oil prices of non-OPEC countries, including the 11 countries defined either as "oil exporting" or as "non-oil developing" countries in IFS and other net oil exporters, such as U.K., China, and U.S.S.R.
³Weighted average of the official oil prices of OPEC countries

(1) The market was strong throughout the period. Even though consumption declined in the second year, the demand for inventories and later the Iran-Iraq war kept pressure on prices.

(2) OPEC imposed no production restraints. OPEC production rose somewhat in 1979 but fell in 1980. Saudi Arabia's production rose substantially in both years; various patterns prevailed among other OPEC producers. There was an increase in production in non-OPEC countries and the share of OPEC in total production and exports declined, even though OPEC prices were lower than non-OPEC prices. (See Table 2.)

(3) The change in average OPEC prices over this period about matched the change in average non-OPEC prices and was distinctly below the change in spot prices. ^{1/}

(4) There were continuous attempts in OPEC to achieve agreement on uniform prices, but such agreement was not achieved. However, agreement on price ceilings was achieved beginning with the meeting in June 1979. These facts reflect the diversity of view within the organization, and indeed price behavior varied among the members, and some members breached the ceilings.

b. The years 1981-82

There was a progressive weakening of market conditions in the years 1981-82. In 1981, real GNP in the industrial countries grew at only 1.2 per cent; in 1982 there was a decline of 0.3 per cent. This slowdown of economic activity adversely affected the demand of oil. In addition, the demand for oil suffered in relation to other forms of energy because of the continuing efforts to be more efficient in its use and to substitute other forms of energy for it in response to its rising relative price. Moreover, inventories peaked in mid-1981 and were subsequently reduced substantially. As a result, production declined in the world. However, it continued to grow in the non-OPEC countries and their share of world production reached about two thirds in 1982 (from a figure of less than one half in 1974).

Prices in the spot market were sharply softer in the first quarter of 1981, and moved erratically lower through the end of 1982. In December 1982, they were about one fourth lower than in December 1980. Contract prices charged by non-OPEC producers rose sharply in the first month of 1981, but then began a decline that, apart from a temporary stabilization in the latter part of 1982, lasted through March 1983.

^{1/} From December 1978 to December 1980, average OPEC prices rose 155 per cent, average non-OPEC prices rose 153 per cent, and spot prices rose 171 per cent.

Table 2. Oil Production and Exports

	Production			Exports			Share of OPEC in Total	
	Total	OPEC	Saudi Arabia	Total	OPEC	Saudi Arabia	Production	Exports
	(In million barrels per day)						(In per cent)	
1974	58.2	30.7	8.5	29.9	29.4	8.5	52.7	98.6
1975	55.2	27.2	7.1	26.7	25.9	7.1	49.2	97.2
1976	59.9	30.8	8.6	30.5	29.5	8.6	51.4	96.9
1977	61.9	31.3	9.2	30.5	29.5	9.1	50.4	96.6
1978	62.7	29.8	8.3	29.7	28.3	8.2	47.5	95.3
1979	64.9	30.9	9.5	31.7	28.8	9.3	47.5	90.6
1980	62.3	26.9	9.9	28.4	25.0	9.7	43.2	88.1
1981	58.3	22.5	9.8	24.4	20.6	9.6	38.6	84.4
1982	55.2	18.5	6.5	20.8	16.3	6.2	33.5	78.5

Sources: Petroleum Economist and IFS.

The principal OPEC actions in this period were as follows:

There were no restrictions on production in 1981. At the March 1982 meeting of OPEC, members, except for the Islamic Republic of Iran, agreed on production quotas. (Saudi Arabia did not formally participate in the agreement, but announced before the meeting a limit of 7.5 mbd and after the meeting a limit of 7.0 mbd on its production.) The agreement on quotas was reached in a situation of sharply declining demand. During the second quarter of 1982, most members of OPEC kept their production within or close to the quotas. At the July meeting of OPEC, differences over price differentials and quotas were not resolved, and the quota system effectively lapsed.

On prices, no definitive action was taken until October 1981, when a broad agreement on price unification was achieved. It was agreed to increase the Saudi Arabian marker price to \$34 from \$32, to resume its use as the benchmark price, and to establish temporary differentials respecting various grades of oil. In December 1981 a revised set of differentials was agreed. In 1982, the decline in the spot market and non-OPEC contract prices, together with increasing financial strains experienced by several OPEC members, contributed to increased discounting from the official prices. Accordingly, there was variation among OPEC members in the prices they charged.

The following observations may be made about the actions of OPEC in relation to market developments in the period 1981-82:

(1) The outstanding characteristic of the market in this period was the weakness of oil demand deriving from the world recession, gains in energy efficiency, and the continuing substitution of other forms of energy for oil and the large drawdown of inventories after mid-1981. These were the main factors that led to the decline in export earnings of oil exporters in these years.

(2) OPEC did impose production restraints. However, they were not observed by all members and were de facto applied for only about one quarter in 1982.

(3) The average official prices charged by OPEC members were below those charged by non-OPEC members through most of 1981, but in 1982 did not keep pace with the decline in prices of non-OPEC oil exporters. Accordingly, non-OPEC prices moved below the OPEC prices. When account is taken of the discounting from the official prices by several OPEC members, however, which became more prevalent as the period progressed, it is doubtful whether there was much difference between the average price charged by OPEC members (other than Saudi Arabia) and non-OPEC prices.

(4) There continued to be considerable variation among OPEC members in the prices they charged for comparable grades of oil, even after the agreement on price unification in October 1981.

(5) Considering the years 1979 through 1982 in relation to the 1983 shortfall, there is some basis for the view that the actions of OPEC may have had some effect in stabilizing export earnings in that period. It will be recalled that in the period of price rise, average non-OPEC prices rose more rapidly than did average OPEC prices, and conversely during the period of price fall. Had it not been for the resistance to upward pressure on prices by some OPEC members, particularly Saudi Arabia in the first half of the period (which was reflected in the ceilings on prices agreed upon at various OPEC meetings), and the resistance to downward pressure in the second half of the period, the peak of oil export earnings might have been higher than it was. In this case the fall in earnings in the pre-shortfall years as well as in 1983 might have been more rapid. In addition, it is the case that Saudi Arabia in the period of price increase increased its production quite substantially and some other OPEC members continued to produce close to capacity. It is therefore arguable that OPEC actions combined with the production policy of Saudi Arabia and some other OPEC members led to a smaller shortfall in 1983 than would otherwise have emerged.

c. The year 1983

As the year 1983 opened, the oil market was weakening substantially and the downward pressure on prices was intensifying. The decline in oil consumption in the industrial countries continued and the rate of inventory liquidation accelerated markedly in the face of widespread anticipations of a reduction in oil prices. Total oil production of OPEC countries declined substantially during the winter months, contrary to the normal seasonal pattern.

Prices in the spot market for crude oils fell from about \$33 a barrel in October 1982 to less than \$28 a barrel in early March 1983. Several non-OPEC producers reduced their contract prices in the early months of 1983. The United Kingdom announced a \$3 per barrel reduction in its price to \$30.50 a barrel effective February 1, and this move was followed shortly after by the announcement by Nigeria (an OPEC member) of a reduction of \$5.50 a barrel to \$30 a barrel.

OPEC sought during the first several weeks of the year to agree on its price and production policy. This agreement was finally reached on March 14, 1983. There were several dimensions to the agreement:

--Production by OPEC members would be limited to 17.5 million barrels per day with individual quotas assigned to all members save Saudi Arabia which would adjust its production so as to assure that total production for the group did not exceed the overall production ceiling.

--The marker price was lowered by \$5 to \$29 per barrel with a special differential for Nigeria of \$1 over the marker price.

--All members would refrain from price discounting.

The following observations may be made about the actions of OPEC in relation to market developments in the first quarter of 1983.

(1) A weak market prevailed in the period and conditioned the price actions by various participants.

(2) Declines in the spot prices, in contract prices by non-OPEC producers and discounts by some OPEC producers from the OPEC marker-based prices, preceded the production and price decisions arrived at by OPEC in mid-March.

(3) Oil prices stabilized in the weeks immediately following the OPEC agreement and spot prices as well as non-OPEC contract prices appear broadly to have conformed to the levels defined in the OPEC agreement.

(4) It may be the case that had the OPEC producers not achieved agreement in mid-March, the price of crude oil would have fallen substantially further. It is arguable that the fall might have been sufficiently large that even allowing for consequent increases in export volumes, the export earnings in 1983 would have been lower than indicated in the profile in Chart 1. Depending then upon the projected developments in the two subsequent years, the shortfall might have been greater than that implied in Chart 1.

d. The years 1984 and 1985

The profile of earnings for the years 1984 and 1985 set out in Chart 1 is of course based on the assumptions described earlier. They envisage some recovery of oil demand as a consequence of the stepping up of output in the industrial world and the termination of the inventory liquidation. It may be noted that if the average unit price of oil were to remain at \$28 (on the basis of a marker price of \$29) and if the output of the 12 members of OPEC other than Saudi Arabia were exactly the quota amounts provided for in the March 1983 agreement, there would be no progression of oil export earnings in the years 1984 and 1985 and the shortfall for 1983 would be substantially reduced (from SDR 11 billion to SDR 5.7 billion).

2. The diversity among OPEC members

The experience of OPEC members in relation to export earnings and the volume and unit value components of export earnings have shown considerable diversity in the last five years. The rates of change of oil export earnings of the 13 members of OPEC in these years are set out in Table 3. It will be noticed that the earnings were predominantly rising in 1979 and 1980, more mixed in 1981, and predominantly falling in 1982. The rates of increase of earnings in 1979 and 1980 vary substantially, however, as do the rates of decrease in 1982.

Table 3. OPEC Members: Profiles of Changes in
Oil Export Earnings: 1978-82

(Growth rate in per cent) 1/

Country:	1	2	3	4	5	6	7	8	9	10	11	12	13
1978	-14	0	-11	4	-11	0	-14	-12	-18	-2	-11	-9	-10
1979	52	77	46	55	57	104	-10	52	74	45	20	76	35
1980	73	9	50	47	46	16	-35	33	43	49	56	34	51
1981	21	-20	6	11	-22	-56	10	15	-23	9	25	20	1
1982	-30	-30	-18	-19	-16	0	28	-14	-18	-14	-12	-6	7

Sources: National sources and staff estimates.

1/ In SDR terms.

Turning to the volume and price components of the variations in earnings, attention is drawn to Charts 5 and 6. The upper panels in these charts show, respectively, percentage changes in volume and percentage changes in unit values of oil exports of selected OPEC countries in the years 1978 through 1982. On examining the blocks of bars for individual years, it may be noted that the volume changes (Chart 5) are widely dispersed, although after 1979 they are predominantly negative. Similarly, in Chart 6 it will be noted that the percentage changes in the unit values of oil exports within any individual year show considerable diversity, although of course from year to year there is broad similarity in the strength and direction of change.

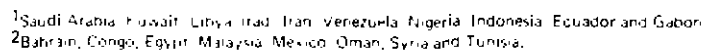
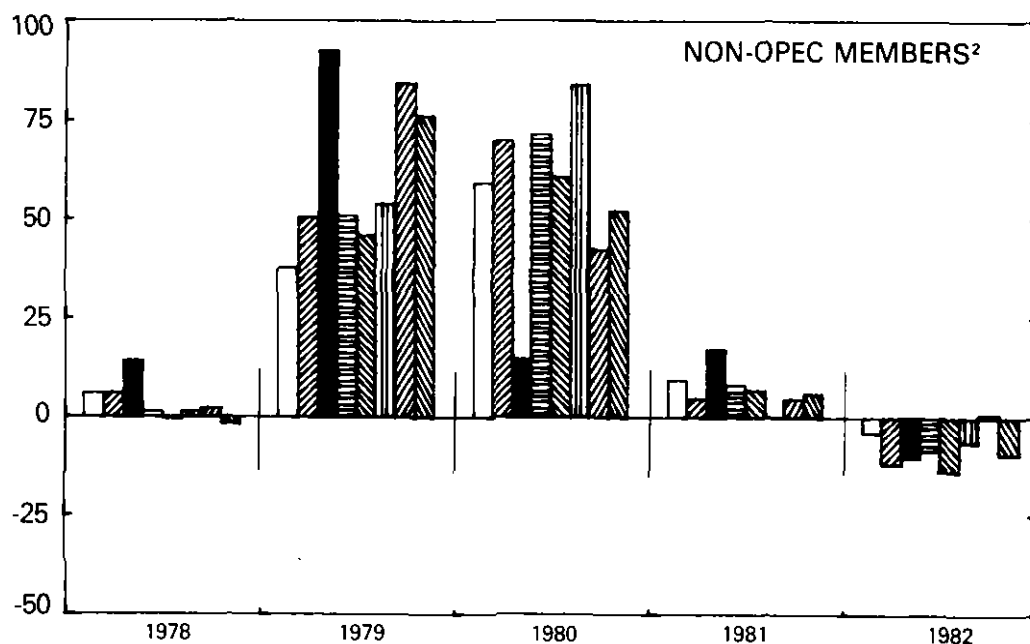
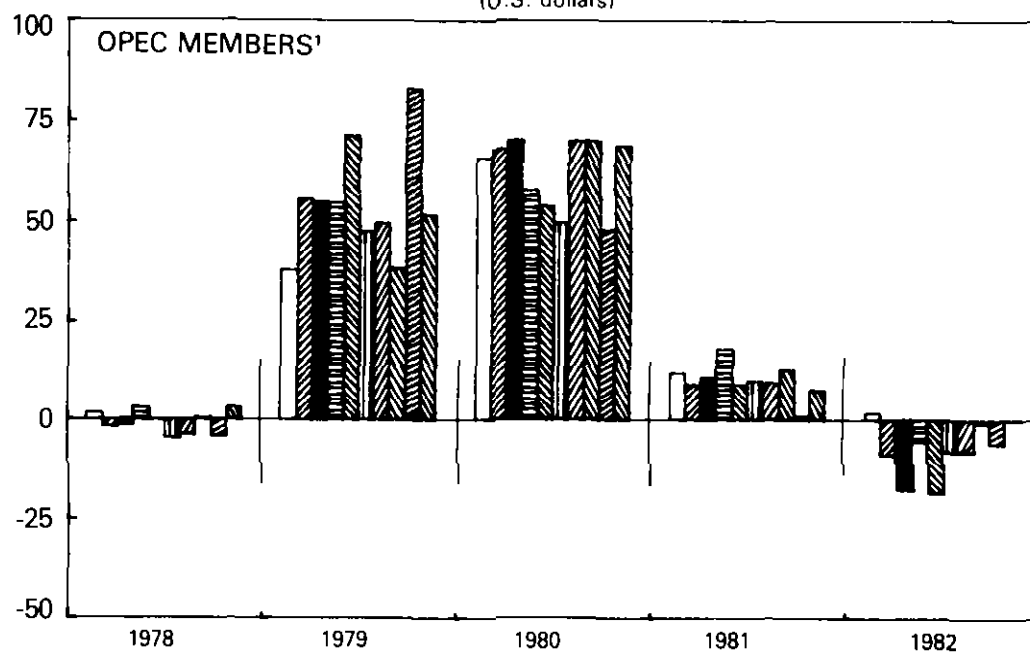


CHART 6
RATES OF CHANGE IN EXPORT UNIT VALUE OF OIL:
SELECTED COUNTRIES

(U.S. dollars)



¹Saudi Arabia, Kuwait, Libya, Iraq, Iran, Venezuela, Nigeria, Indonesia, Ecuador and Gabon.

²Bahrain, Congo, Egypt, Malaysia, Mexico, Oman, Syria and Tunisia.



3. The diversity among non-OPEC members

The diversity in the experience of OPEC members in relation to oil export earnings and the volume and unit value components of export earnings is matched by the experience of the non-OPEC producers. The rates of change of oil export earnings of 10 non-OPEC oil exporters in the years 1978 to 1982 are set out in Table 4. It will be noted that, even setting aside the very large numbers which in some instances reflect very special circumstances, there is considerable spread in the rates of change among countries for any particular year.

Table 4. Non-OPEC Members: Profiles of Changes in
Oil Export Earnings: 1978-82 1/

(Growth rate in per cent) 2/

Country:	1	2	3	4	5	6	7	8	9	10
1978	-3	-41	99	20	17	67	-11	221	-1	3
1979	30	1	57	117	92	106	38	248	73	96
1980	57	-49	110	33	59	149	73	22	38	51
1981	34	-84	45	40	8	56	30	-3	21	16
1982	-22	732	0	12	16	25	0	11	-11	-30

Sources: National sources and staff estimates.

1/ In SDR terms.

2/ Selected net oil exporters.

The variations among selected countries in respect of volume of exports within particular years are depicted in the lower panel of Chart 5. The chart gives an impression of rather less diversity among the non-OPEC countries than among the OPEC countries.

Diversity of unit values for the selected non-OPEC countries is shown in the lower panel of Chart 6.

The patterns exhibited by rates of change of unit prices of oil exports of OPEC and non-OPEC countries in the years 1978 through 1982 are shown in Chart 7. The chart displays not only the diversity within the groups of OPEC and non-OPEC oil exporters, as do the upper and lower panels of Chart 6, but by comparing the upper and lower panels of Chart 7 one may note that the performance of some non-OPEC members more closely resembles that of some OPEC members than that of other non-OPEC members. To express the same point another way, it would be possible to choose two groups of oil exporters from the total of the 23 OPEC and non-OPEC members whose record is reviewed here in such a way that the diversity in respect of changes in unit values of exports within each such specially chosen group would be lower than that within the OPEC or the non-OPEC group.

IV. Conclusions

A. One of the important questions addressed in this paper is the question of the influence of OPEC actions on the movement of oil export earnings. Particular attention was paid to the years 1979 through 1982 in relation to a calculated shortfall for the calendar year 1983.

It is the case that OPEC took specific actions in this period and it may be presumed that these actions had an effect on earnings from time to time both as a direct consequence of the actions themselves and perhaps because of expectations in the market that OPEC actions might occur and be effective.

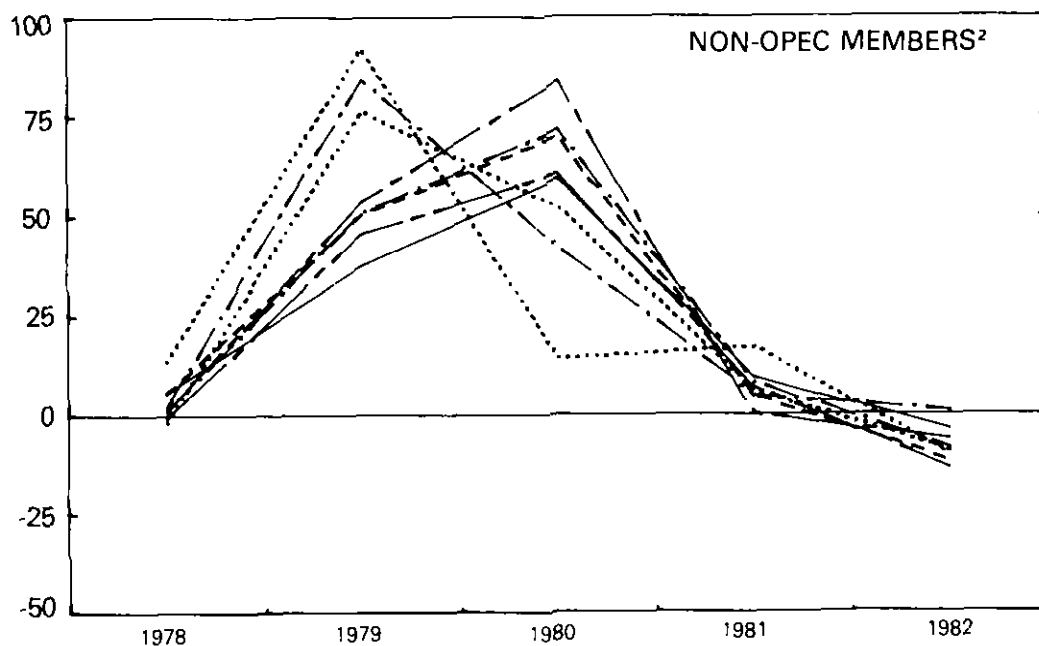
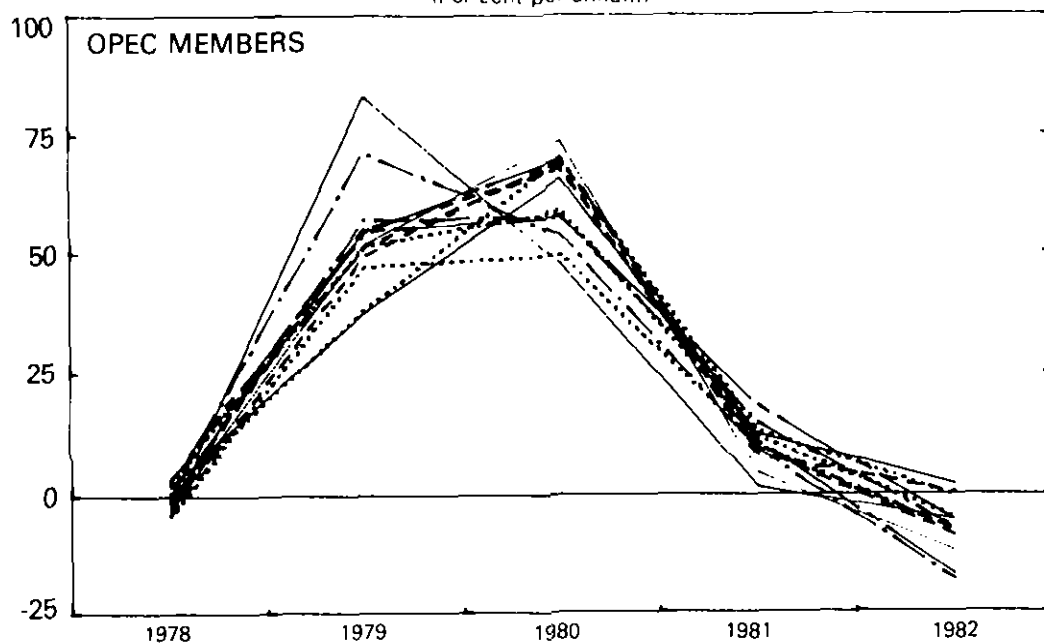
A number of considerations would, on the other hand, lead to doubts as to whether OPEC actions have been consistently determining in respect of export earnings.

First, there were substantial changes in market conditions in this period; in particular there was the buying pressure in 1979 and 1980 and the downward movements in demand in 1981 and 1982. These developments would be expected to raise prices in the former period and to lower them in the latter period.

Second, OPEC price decisions consistently followed market price movements which were led by the spot market, by the non-OPEC sellers or by some individual members of OPEC.

Third, OPEC, until March 1983, exercised no controls on production with the exception of a brief period lasting about one quarter in the first half of 1982.

CHART 7
RATES OF CHANGE IN EXPORT UNIT VALUE OF OIL¹
(Per cent per annum)



¹In U.S. dollars.

²Includes 8 net oil exporters classified as either "oil exporting" or "non-oil developing" countries in the IFS.

Fourth, OPEC did not always have a price policy in this period. When it did have a policy it was characterized to a large extent by the establishment of price ceilings in the earlier period and was eroded by a considerable discounting from agreed prices by individual members of OPEC in the latter period. Thus uniformity of prices among OPEC members has been conspicuous by its absence.

If there are doubts as to whether the actions of OPEC were consistently determining in respect of export earnings in the period germane to a current shortfall, it follows that there must be doubts as to whether membership in OPEC may reasonably be held to create a presumption that a shortfall in the export earnings of an OPEC member arises from factors within that member's control.

B. The memorandum has placed considerable emphasis on the diversity of the circumstances affecting the oil export earnings profiles of oil exporters. There is diversity among members of OPEC in respect of the volumes of their production and exports and in relation to the changes in the unit values of their exports. This diversity should be taken into account in considering the eligibility of a member of OPEC to use the CFF; indeed it is the specific policies pursued by each country rather than the role of OPEC itself that is relevant.

It has been observed that among the oil exporters that are not members of OPEC there has also been a diversity in respect of the changes in their production and export volumes and in the unit values of their exports.

Note has also been taken of the diversity among all oil exporters in relation to balance of payments need, degree of cooperation with the Fund, the proportion of total export earnings deriving from oil exports, the timing of shortfalls, the forecasts underlying shortfalls, and the extent of shortfalls.

If there is great diversity among all oil exporters in relation to the circumstances surrounding their use of the CFF, it would be better to deal with requests from them for such use on a case-by-case basis, as is the practice in respect of exporters of other commodities.

Table 1. Oil Exporting Countries: Shares of Oil
in Total Merchandise Exports

(In per cent)

	1977	1978	1979	1980	1981	1982
23 oil exporting countries	85.9	83.9	85.7	87.9	88.0	85.5
OPEC	93.7	92.6	93.2	94.0	93.9	92.2
1. Algeria	93.8	92.3	92.2	92.9	92.1	83.3
2. Ecuador	47.7	42.4	54.7	62.3	67.8	65.3
3. Gabon	73.3	70.4	70.8	77.3	81.2	86.3
4. Indonesia	66.8	62.6	56.5	61.7	69.1	67.9
5. Iran, I.R. of	97.1	97.8	99.0	98.1	97.4	98.1
6. Iraq	98.9	98.4	99.2	99.1	98.2	98.1
7. Kuwait	91.5	91.8	93.8	92.4	86.9	80.3
8. Libya	97.9	97.9	98.1	99.4	99.1	98.9
9. Nigeria	92.9	90.5	93.8	96.0	98.2	97.8
10. Qatar	98.3	96.6	95.1	94.6	94.0	91.3
11. Saudi Arabia	99.7	99.6	99.7	99.8	99.9	99.8
12. United Arab Emirates	90.2	87.4	87.5	89.7	87.3	84.0
13. Venezuela	95.5	94.9	95.2	94.9	95.1	95.0
Others	31.5	33.1	40.9	51.8	58.7	59.9
1. Bahrain	78.5	79.4	83.2	86.2	88.0	83.1
2. Bolivia	10.6	6.7	5.8	2.4	0.4	3.2
3. Congo	37.4	69.1	69.4	79.9	87.6	87.8
4. Egypt	31.8	38.6	63.7	61.5	74.0	75.6
5. Malaysia	12.8	13.3	17.9	23.9	25.7	27.5
6. Mexico	19.0	26.3	38.1	55.8	63.6	70.3
7. Oman	97.6	94.6	94.7	96.3	94.1	92.2
8. Peru	3.0	9.3	18.5	20.3	21.3	22.3
9. Syrian Arab Republic	58.4	62.8	71.1	77.3	80.1	65.0
10. Tunisia	50.1	46.2	56.5	73.4	66.0	52.4

Sources: Data from national sources and staff estimates.

Table 2. OPEC (Excluding Saudi Arabia):
Oil Export Earnings, Volumes, and Unit Values

(1977-82)

	<u>Earnings</u>	<u>Volumes</u>	<u>Unit Values</u>	
	SDR Billions	Million bbl/day	US\$/bbl	SDRs/bbl
1977	84.30	20.70	13.02	11.16
1978	76.22	20.22	12.93	10.33
1979	111.02	19.72	19.93	15.42
1980	138.67	15.33	32.25	24.78
1981	124.21	11.29	35.54	30.14
1982	109.99	10.32	32.25	29.21

Sources: National sources and staff estimates.

Table 3. Crude Oil Prices
(In U.S. dollars per barrel)

	Mid-East Light	OPEC Marker	Average of	
	Spot Price		OPEC Members	Non-OPEC Members
	(1)	(2)	(3)	(4)
<u>1978</u>				
Jan.	12.66	12.70	12.93	13.75
Feb.	12.66	12.70	12.93	13.75
Mar.	12.66	12.70	12.93	13.75
Apr.	12.68	12.70	12.89	13.70
May	12.70	12.70	12.89	13.70
June	12.73	12.70	12.89	13.70
July	12.77	12.70	12.88	13.82
Aug.	12.79	12.70	12.88	13.82
Sept.	12.80	12.70	12.88	13.82
Oct.	12.85	12.70	12.88	13.82
Nov.	13.20	12.70	12.88	13.82
Dec.	14.50	12.70	12.88	14.20
<u>1979</u>				
Jan.	15.95	13.34	13.57	14.26
Feb.	19.50	13.34	13.75	14.44
Mar.	20.80	13.34	14.05	14.81
Apr.	21.20	14.55	15.98	17.33
May	34.25	14.55	16.61	18.04
June	32.85	18.00	18.26	19.09
July	32.00	18.00	20.31	23.14
Aug.	32.25	18.00	20.33	23.20
Sept.	34.50	18.00	20.42	23.25
Oct.	36.00	18.00	21.15	24.15
Nov.	39.50	24.00	24.44	25.16
Dec.	39.00	24.00	26.09	27.55
<u>1980</u>				
Jan.	38.00	26.00	28.02	32.30
Feb.	36.00	26.00	28.78	33.05
Mar.	35.75	26.00	28.75	33.20
Apr.	35.00	28.00	29.60	33.10
May	35.60	28.00	30.68	33.72
June	36.00	28.00	30.75	34.12
July	33.35	28.00	31.09	34.19
Aug.	32.30	30.00	31.90	34.14
Sept.	32.25	30.00	32.00	34.14
Oct.	36.80	30.00	31.86	34.24
Nov.	39.75	32.00	32.80	34.25
Dec.	39.35	32.00	32.81	35.98

Table 3 (Concluded). Crude Oil Prices

(In U.S. dollars per barrel)

	Mid-East Light Spot Price (1)	OPEC Marker (2)	Average of Official Prices	
			OPEC Members (3)	Non-OPEC Members (4)
<u>1981</u>				
Jan.	39.25	32.00	34.66	38.36
Feb.	37.10	32.00	34.66	38.33
Mar.	36.85	32.00	34.65	38.28
Apr.	35.55	32.00	34.37	37.75
May	33.38	32.00	34.36	36.68
June	32.17	32.00	33.32	34.58
July	31.96	32.00	34.09	35.09
Aug.	32.17	32.00	33.98	34.58
Sept.	32.06	32.00	33.93	34.69
Oct.	32.68	34.00	34.53	33.94
Nov.	34.24	34.00	34.29	34.13
Dec.	34.12	34.00	34.29	34.32
<u>1982</u>				
Jan.	34.00	34.00	34.08	34.06
Feb.	30.40	34.00	34.02	33.86
Mar.	28.60	34.00	33.58	30.68
Apr.	30.88	34.00	33.28	30.76
May	33.35	34.00	33.29	30.91
June	32.65	34.00	33.29	31.42
July	31.70	34.00	33.38	31.31
Aug.	31.20	34.00	33.40	31.31
Sept.	33.05	34.00	33.40	31.54
Oct.	33.40	34.00	33.32	31.56
Nov.	31.75	34.00	33.30	31.56
Dec.	30.10	34.00	33.31	31.54
<u>1983</u>				
Jan.	30.05	34.00	33.28	31.26
Feb.	29.00	30.00	31.50	28.17
Mar.	28.00	29.00	29.04	27.70
Apr.	n.a.	29.00	28.58	27.70

Source: Petroleum Intelligence Weekly.

n.a. = not available.

