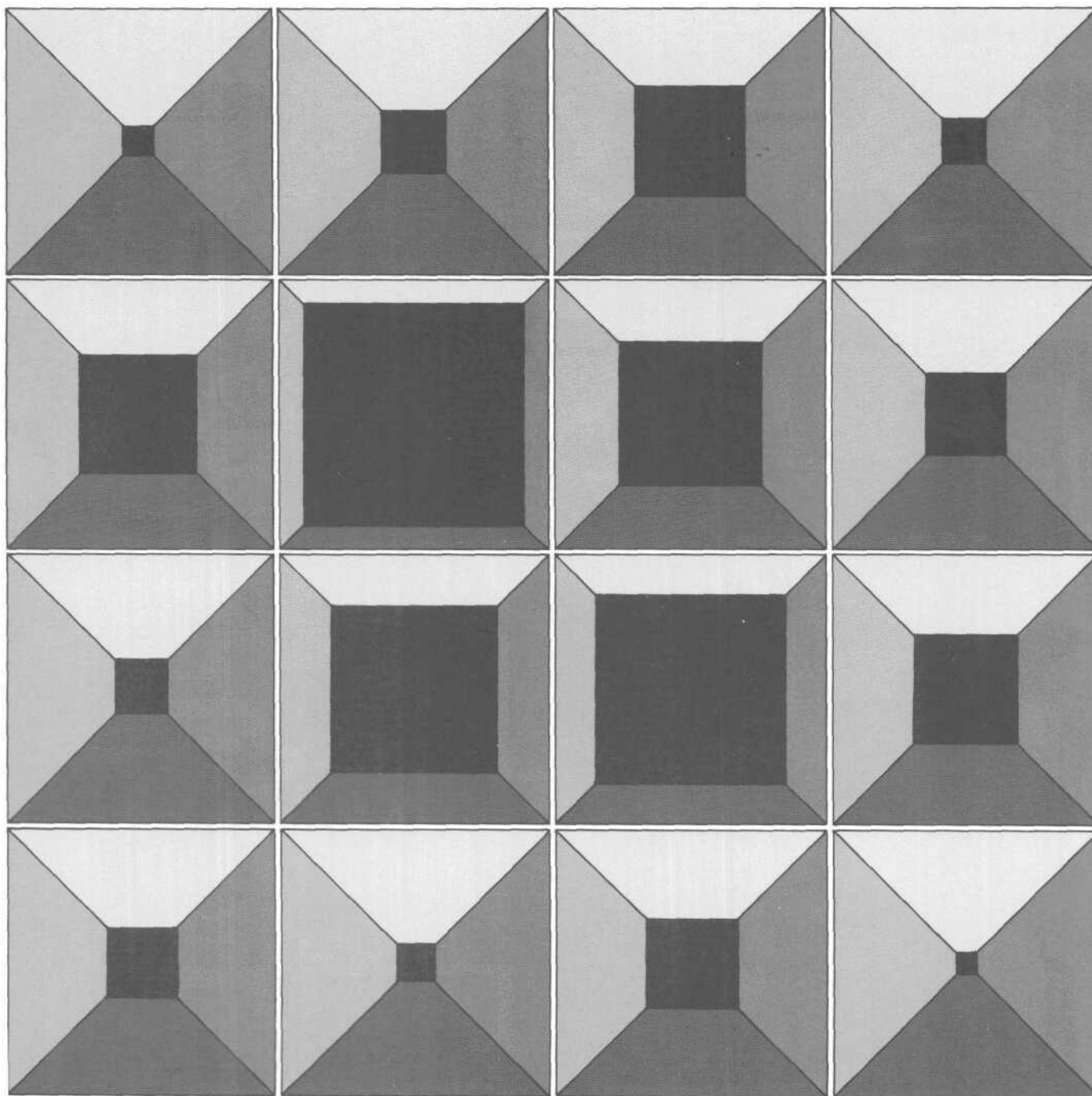


# The U.S. Balance of International Payments and the U.S. Economy: Developments in 1978 and Early 1979

November 1979



Congress of the United States  
Congressional Budget Office



THE U.S. BALANCE OF INTERNATIONAL  
PAYMENTS AND THE **U.S.** ECONOMY:  
DEVELOPMENTS IN 1978 AND EARLY 1979

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## PREFACE

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This paper, prepared at the request of the Subcommittee on Trade of the House Committee on Ways and Means, provides a discussion of developments in the U.S. balance of international payments during 1978 and the first half of 1979, with particular emphasis on the reasons for the marked improvement in the U.S. current account position during this period. **It** is an update of an earlier Congressional Budget Office report, The U.S. Balance of International Payments and the U.S. Economy, which provided a similar discussion for the years 1976 and 1977. In keeping with **CBO's** mandate to provide objective and nonpartisan analysis of issues before the Congress, this paper offers no recommendations.

This paper was prepared by C.R. Neu of the National Security and International Affairs Division of the Congressional Budget Office and by Robert Murphy, formerly of CBO and currently at the Massachusetts Institute of Technology. The paper was prepared under the general supervision of David S.C. Chu and Robert F. Hale. The authors wish to acknowledge the assistance of Nariman Behraves, Jane **D'Arista**, Donald Henry, Nathan Fagre, and Nancy Swope, all of the Congressional Budget Office. Professor Stanley W. Black commented on an early draft of this paper, and the final version has benefited greatly from his suggestions. Responsibility for any errors, of course, remains the authors'. Robert L. Faherty edited the manuscript, which was typed for publication by Janet Stafford.

Alice M. Rivlin  
Director

November 1979



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## SUMMARY

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Throughout 1978 and the first half of 1979, there were marked changes in both the U.S. balance of international payments and the value of the dollar in international currency markets. During that time, both the U.S. current account position and the U.S. merchandise trade position strengthened markedly. Also during this period, the value of the dollar declined sharply and subsequently recovered.

The prospects for further improvement in the U.S. balance of payments are uncertain. The developments that led to this recent improvement will probably not continue in the near future. New patterns are now beginning to emerge, but it is too early to foresee the full consequences of these developments. Essential to a useful forecast of the future of the U.S. payments balance, however, is an understanding of the recent past. This paper discusses the nature and causes of recent changes in the U.S. balance of payments and describes the effects of these changes on the U.S. economy. Its focus is primarily on the events of 1978 and the first half of 1979, with a brief discussion of developments in the second half of 1979.

## CHANGES IN THE U.S. BALANCE OF INTERNATIONAL PAYMENTS

The most noteworthy developments in the U.S. balance of payments during 1978 and early 1979 **were:**

- o A sharp improvement in the U.S. current account position. In deficit by \$27.7 billion (at annual rates) in the first quarter of 1978, the current account showed a small surplus of \$1.6 billion (also at annual rates) in the first quarter of 1979.
- o An improvement in the U.S. merchandise trade position. The improvement in the trade position was sufficient to account for most of the improvement in the current account position. A trade deficit of \$47.6 billion in the first quarter of 1978 was reduced to one of only \$24.4 billion a year later.

- o Large changes in both the overall position and the composition of the U.S. capital account. In 1978, the United States was a large net importer of capital, but by the beginning of 1979 net capital flows into the United States were close to zero. During this period also, flows of both official and private capital changed **significantly**. In 1978, large outflows of private capital from the United States were offset by large inflows of official capital. By the beginning of 1979, these flows had reversed.

#### THE REASONS FOR RECENT CHANGES IN THE U.S. BALANCE OF PAYMENTS

Most of the improvement in the U.S. current account position was caused by improvements in the U.S. merchandise trade position. These latter improvements were in turn brought about by a number of **events**.

- o More rapid economic growth abroad. During 1977, economic growth in most of the industrialized countries other than the United States slowed markedly. From the end of 1977 throughout 1978, however, this growth returned to earlier higher levels. With more rapid growth came increasing foreign demand for U.S. products and a subsequent rise in U.S. exports. Econometric simulations suggest that this more rapid growth abroad accounted for about 30 percent of the total improvement in the U.S. trade position between the first quarter of 1978 and the first quarter of 1979.
- o Increased competitiveness of U.S. products. Beginning in late 1977, the value of the dollar declined relative to most other major currencies. This reduction in the **dollar's** value more than offset increases in U.S. prices relative to prices in other countries and made U.S. goods relatively cheaper to foreign purchasers. The result was increased U.S. exports. Similarly, the **dollar's** decline made foreign goods more expensive to U.S. buyers and restrained somewhat the growth of U.S. imports. Simulations suggest that the improvement in the price competitiveness of U.S. goods accounted for about one-third of the improvement in the **U.S.** trade position during 1978 and early 1979.

- o U.S. petroleum imports. During 1978, oil production in Alaska increased significantly, reducing the volume of imported oil required by the United States. Further, in spite of major oil price increases announced by the Organization of Petroleum Exporting Countries (OPEC) at the beginning of 1979, oil prices did not rise as much as did U.S. consumer prices between the first quarter of 1978 and the first quarter of 1979. These two **factors--** increased Alaskan oil production and **OPEC's** failure to maintain the real price of **oil--accounted** for about 20 percent of the improvement in the **U.S.** trade balance.
- o Other factors. The remaining 20 percent of the improvement in the U.S. trade position is accounted for by a variety of other **factors:** economic growth and price changes in the developing countries, weather-related changes in the demand for and the prices of agricultural commodities, and, perhaps most likely, errors in the estimation of the contributions of the primary factors.

In view of the role played by foreign economic policies, the decline of the dollar, and the pricing restraint of OPEC, it is difficult to **attribute** much of the improvement in the **U.S.** trade position to successful **policies** adopted by the United States.

Recent changes in the overall U.S. capital account have been a reflection of changes in the current account. As the current account moved from deficit to near balance during 1978 and early 1979, the need for large net inflows of capital disappeared. Changes in the composition of capital flows were due mainly to changes in expectations concerning the future value of the dollar. In late 1977 and early 1978 and again near the end of 1978, there was widespread expectation that the dollar would decline in the near future. Private asset holders sought to reduce their net holdings of dollars, and consequently there were large outflows of private capital from the United States. Foreign central banks intervened in currency markets to support the dollar and returned their accumulated dollar holdings to the United States in the form of large inflows of official capital. After November 1978, expectations about the **dollar's** future were reversed and so were the flows of private and official capital. Also attracting private capital back into the United States were sharply increased U.S. interest rates beginning in the last quarter of 1978.

## THE VALUE OF THE DOLLAR

The growing U.S. current account deficits during 1976 and 1977 convinced many asset holders that the value of the dollar must eventually decline. Beginning in the last quarter of 1977, this fear was reflected in growing private capital outflows (initiated by both foreign and American agents), which precipitated the expected decline. This decline continued, with only momentary pauses, throughout most of 1978, despite the reduction in the U.S. current account deficit after the first quarter of that year. Apparently the continued decline of the dollar was due to concern over increasing inflation in the United States and to uncertainties over the course of future U.S. economic and energy policies.

In October 1978, the **dollar's** decline became very rapid, and on November 1, 1978, the Administration announced a set of policies designed to halt the dollar's fall. These policies were apparently successful, at least in the short run. The **dollar's** value rose sharply in the following few weeks and continued to rise throughout the first half of 1979.

## THE U.S. BALANCE OF PAYMENTS AND THE U.S. ECONOMY

The recent improvement in the U.S. current account position has served as a significant stimulus to U.S. income and employment. By the first quarter of 1979, the increased demand for U.S. goods and services reflected by this improvement resulted in a 2 percent increase, or roughly \$45 billion at annual rates, in U.S. gross national product (GNP) and in the creation of between 400,000 and 500,000 new jobs. Because GNP and employment respond to changes in the current account only after a lag, it is likely that the full effect of the most recent improvements will be somewhat greater than those estimated for the beginning of 1979.

The decline of the dollar has also raised the price of imported goods. As these price **increases--along** with price increases in similar, competing domestic **products--are** passed through the economy, the general U.S. price level will rise. If the dollar had remained at its low level of October 1978, the decline would, in time, have added between 1.1 and 1.7 percent to the general U.S. price level. The rise in the dollar after November 1978 has mitigated these price increases somewhat, but at least a part of U.S. inflation in early 1979 must be attributed to the earlier decline of the dollar.

## DEVELOPMENTS IN THE LAST HALF OF 1979 AND NEAR-TERM PROSPECTS

The current account surplus of the first quarter of 1979 had disappeared by the second quarter, primarily as a result of increasing oil prices. Although complete data are not yet available for the third quarter, all indications are that the current account deficit widened slightly as more of the effect of the oil price increases of early 1979 was felt. After June 1979, the dollar declined on average, and its performance varied greatly relative to specific foreign currencies. The apparent reasons for this decline were increasing inflation in the United States, higher interest rates abroad, **and** uncertainty over the course of U.S. energy and economic policies that followed the reshuffling of senior Administration officials during the summer of 1979. Some adjustment of European exchange rates in September and the adoption of a more restrictive U.S. monetary policy in early October have served, at least temporarily, to stabilize the dollar.

In the near future, the prospects for the U.S. balance of payments are uncertain. A number of influences are likely to be at work, some tending to worsen the U.S. trade and current account positions and others tending to improve them. The most immediate of these influences will be the oil price increases announced by OPEC in early 1979. Not fully felt in the United States until the latter half of 1979, these increases are expected to raise the value of U.S. oil imports in 1979 to about \$58 billion, up from only \$42.3 billion in 1978. In 1980, U.S. oil imports could reach \$70 billion, even if OPEC does not increase oil prices further.

Offsetting this oil-price-induced deterioration in the U.S. trade position will probably be the effects of the expected downturn in U.S. economic growth in late 1979 and early 1980. This downturn will reduce U.S. demand for foreign goods and thus act to improve the U.S. trade position. Quantitative estimates of the size of these effects are necessarily tentative, but recent **U.S.** Treasury forecasts show a **U.S.** current account deficit of \$3 billion or \$4 billion for 1979 and a surplus of about \$10 billion in 1980. If a current account surplus does appear in 1980, it will be the first since 1976. It will not, however, represent any improvement in the functioning of the U.S. economy. Quite to the contrary, it will arise **primarily as** a result of recession in the United States.





During the last year and a half, the international economic position of the United States has changed markedly. From the first quarter of 1978 to the first quarter of 1979, the U.S. merchandise trade deficit was reduced by one-half, and the current account deficit disappeared entirely. The dollar declined by an average 8.5 percent relative to the currencies of the other developed countries between June 1 and November 1, 1978, and regained 85 percent of this loss by June 1, 1979, before beginning once again to decline. In the six months from August 1978 through January 1979, U.S. monetary authorities sold a net \$9.4 billion worth of foreign currencies in an effort to maintain the value of the dollar. 1/ From February through April 1979, these same authorities bought, on net, \$7.2 billion of foreign currencies, effectively restricting the rise in the value of the dollar. The strengthening of the U.S. current account and merchandise trade positions during this period is all the more noteworthy because it followed a period--from mid-1975 to early 1978--that saw an unprecedented weakening of these positions. Moreover, these recent developments have taken place during a period of unusual instability in international currency and financial markets.

This paper examines the nature and the causes of changes in the U.S. balance of international payments that occurred during 1978 and early 1979. It also discusses how these changes have affected and been affected by developments in the U.S. domestic economy and changes in the value of the dollar in international currency markets. In large part, the paper updates and continues the examination of these matters begun in an earlier publication of the Congressional Budget Office (CBO). 2/

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1/ "U.S. Paid Off 'Swap' Debt, Built Reserves of Foreign Currencies as Dollar Climbed," Wall Street Journal, June 5, 1979, p. 6.

2/ Congressional Budget Office, The U.S. Balance of International Payments and the U.S. Economy, Background Paper (February 1978).

Chapter II examines recent developments in the U.S. current account position. It is concerned with the nonfinancial international transactions of the United States (that is, transactions that do not involve the purchase or sale of financial assets), with particular attention paid to the merchandise trade account. Chapter III discusses the reasons for the marked **improvement** during 1978 of the U.S. trade position. Chapter IV considers developments in the U.S. capital account, which encompasses most U.S. international financial transactions. The chapter also discusses recent changes in the value of the dollar. Finally, Chapter V briefly examines the effects that changes in the U.S. balance of payments and in the value of the dollar have on the U.S. economy and the prospects for the immediate future. Two appendixes describe some technical aspects of estimates reported in the rest of the paper.

An attempt has been made to make the analysis in this paper as current as possible. In general, the discussion reflects events through the first half of 1979. Any discussion of recent developments in the international economy, however, is in danger of being quickly outdated as developments continue beyond the arbitrary date chosen for the end of the discussion. There is **evidence--although** it is too early to be **certain--that** the events and patterns of change discussed in this paper reached a sort of conclusion in early 1979. Since that time, new international economic patterns seem to be emerging. Some of these new developments are likely to strengthen the U.S. **balance-of-payments** position and others to weaken **it**. Unfortunately, the necessary data are not yet available for a complete analysis of these more recent **developments**. A short section in Chapter V points out the most significant of these **developments**, but the primary focus of the paper remains on the events of 1978 and early 1979.

A country's international transactions can be grouped into those made on current account and those made on capital account. Each includes several components. The current account comprises payments and receipts from imports and exports of merchandise, payments and receipts from service **transactions**, and unilateral transfers of funds.

#### THE COMPONENTS OF THE CURRENT ACCOUNT

In 1977, the U.S. merchandise trade **balance**--the difference between total merchandise exports and merchandise imports--was in deficit by some \$31 billion (see Table 1). In 1978, the excess of merchandise imports over merchandise exports grew to \$34 billion. 1/ During 1979, the merchandise trade account has moved back toward balance; figures for the first half of the year (adjusted for predictable seasonal variations) 2/ show a

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1/ U.S. payments balances are calculated by a number of methods, and the balances derived by one method differ somewhat from those derived by other methods. Generally, the differences involve the valuation of imports and exports (for instance, whether shipping charges are included), the treatment of transactions involving U.S. territories like the Virgin Islands, and the treatment of military **transactions**. The figures given here are so-called balance-of-payments basis figures as reported by the Bureau of Economic Analysis of the Department of Commerce. Unless otherwise noted, all figures in this paper will be balance-of-payments basis.

2/ Because imports and exports of some products fluctuate in regular seasonal patterns, trade figures for only a part of a year can sometimes be misleading. For some purposes, it is useful to adjust trade data to eliminate these seasonal variations. Such "seasonally adjusted" figures provide a better measure of the underlying trends in trade than do unadjusted figures, which reflect both underlying trends and seasonal variations.

TABLE 1. U.S. CURRENT ACCOUNT BALANCE, 1975-1979: IN BILLIONS OF DOLLARS

	1975	1976	1977	1978	1979 <u>a/</u>
Merchandise Trade					
Merchandise exports	107.1	114.7	120.8	141.9	168.3
Merchandise imports	<u>98.0</u>	<u>124.1</u>	<u>151.7</u>	<u>176.1</u>	<u>195.9</u>
Trade Balance	9.0	-9.2	-30.9	-34.2	-27.7
Services					
Income on foreign assets, net <u>b/</u>	27.1	31.9	35.2	43.3	57.0
Fees and royalties, net	3.8	3.9	4.3	5.3	5.3
Military transactions, net	-0.7	0.7	-1.7	0.5	-0.1
Other services, net	<u>-16.3</u>	<u>-17.6</u>	<u>-19.8</u>	<u>-23.7</u>	<u>-29.8</u>
Services Balance	13.9	18.9	21.4	25.4	32.0
Net Unilateral Transfers	-4.6	-5.0	-4.7	-5.1	-5.4
Current Account Balance <u>c/</u>	18.3	4.6	-14.1	-13.9	-1.1

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

NOTE: All figures are **balance-of-payments** basis. Detail may not add to totals because of rounding.

a/ Figures for first half of 1979 at annual rates.

b/ Prior to 1978, income from foreign assets did not include reinvested earnings of incorporated foreign affiliates. All figures in this table have been adjusted to the present reporting basis and thus reflect these reinvested earnings.

c/ Sum of trade balance, services balance, and net unilateral transfers.

trade deficit at annual rates of around \$28 billion, an amount that is still very large compared to past U.S. experience. In 1976, the U.S. trade deficit was only \$9.4 billion; in 1975, the United States had a trade surplus of \$9.0 billion. In all but three other years since World War II (1971, 1972, and 1974), the United States has had a merchandise trade surplus.

The large U.S. trade deficits of recent years have been partially offset by surpluses on the services account. Included in the services balance are international payments for the purchase of nontangible, or "invisible," traded items. Examples of service transactions are international payments of fees and royalties, international interest payments, income from foreign investments, payments for travel and transportation services, and payments for other services provided by individuals or businesses for foreign clients. (U.S. sales of military equipment, payments for the use of foreign military bases, and payments for the support of U.S. military forces stationed abroad are also included in the services account.) In 1978, the U.S. surplus on the services account was \$23 billion, up from \$21 billion in 1977. During the first half of 1979, the U.S. services surplus was running at an annual rate of about \$32 billion.

The United States also makes net unilateral, or "unrequited," transfers to the rest of the world, payments for which the United States receives nothing directly in return. These **transfers--**mostly in the form of government grants to foreign countries, pension payments to foreign residents, and various private payments to foreign **residents--have** accounted for a net outflow of about \$5 billion per year over the past few years. Figures for the first half of 1979 show such payments to be continuing at about that rate.

A summary of international **nonfinancial** transactions (transactions that do not involve the purchase or sale of financial assets) is obtained by combining these three payments **measures--**trade balance, services balance, and net unilateral **transfers--**into one measure, the current account balance. A deficit on current account indicates that the residents of a country have paid out more to foreigners for goods and services and in transfers than they have received from them for these same purposes. In order to make up the difference, a country in current account deficit must receive net inflows of capital from abroad. Specifically, it must reduce its holdings of foreign currencies, using these holdings to meet its obligations abroad; it must borrow foreign currencies to meet these obligations; or foreigners

must increase their holdings of the deficit **country's** currency, usually by buying assets or making bank deposits denominated in that currency.

#### THE RECENT HISTORY OF THE U.S. CURRENT ACCOUNT POSITION

For most of the postwar period, the United States has had surpluses on current account. These surpluses have reflected the U.S. position as a net supplier of goods and services to the rest of the world. In the 1970s, though, this pattern became mixed. In 1971 and 1972, the United States had small current account deficits, but moved again into surplus in 1973 through 1976. In both 1977 and 1978, the United States ran current account deficits of about \$14 billion. Figures for the first half of 1979 show the deficit to have nearly disappeared, running at an annual rate of only about \$1.1 billion. Table 1 provides a summary of the main components of the **U.S.** current account balance in recent years.

The annual figures presented in Table 1 give a general picture of the relative sizes of the main components of the U.S. current account. They do not, however, give a clear view of the changes that have taken place in these accounts, particularly during 1978. Table 2 gives a more detailed account, showing quarterly values (at annual rates) for the current account balance and for its three principal components.

Although the current account and merchandise trade deficits for the entire year of 1978 were similar to those for 1977, the quarterly values of these accounts improved dramatically during the course of 1978. From a peak of \$47.6 billion (at annual rates) in the first quarter of 1978, the merchandise trade deficit declined by half by the first quarter of 1979. <sup>3/</sup> The improvement in the current account was even more marked; in the first quarter of 1979, the deficit had actually become a small surplus.

Throughout 1978 and the first half of 1979, net unilateral transfers remained relatively stable. The services surplus grew

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<sup>3/</sup> From October 1 through November 30, 1977, U.S. Atlantic and Gulf ports were closed by a **longshoremen's** strike. The very large deficit of the first quarter of 1978 probably reflects the backlog of shipping created by the strike.

TABLE 2. U.S. CURRENT ACCOUNT BALANCE BY QUARTERS, 1977-1979: IN BILLIONS OF DOLLARS AT SEASONALLY ADJUSTED ANNUAL RATES

	1977				1978				1979	
	I	II	III	IV	I	II	III	IV	I	II
Merchandise										
Trade Balance	-30.7	-26.3	-29.8	-36.8	-47.6	-31.6	-32.0	-25.5	-24.5	-30.9
Services										
Balance	21.4	21.6	23.1	19.7	24.8	23.2	24.1	29.5	31.4	32.5
Net Unilateral										
Transfers	<u>-4.5</u>	<u>-5.1</u>	<u>-5.0</u>	<u>-4.1</u>	<u>-4.9</u>	<u>-5.3</u>	<u>-4.9</u>	<u>-5.3</u>	<u>-5.3</u>	<u>-5.5</u>
Current Account										
Balance <u>a/</u>	-13.7	-9.8	-11.6	-21.2	-27.7	-13.7	-12.9	-1.3	1.6	-3.9

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

NOTE: All figures are **balance-of-payments** basis. Detail may not add to totals because of **rounding**.

a/ Sum of merchandise trade balance, services balance, and net unilateral transfers.



steadily and rapidly, accounting for nearly a quarter of the total improvement in the U.S. current account position. By far the largest part of the improvement, however, resulted from changes in the U.S. merchandise trade position. This is perhaps not surprising, since it was a deterioration in the merchandise trade balance throughout 1976 and 1977 that led to the growth of large U.S. current account deficits in the first place. The primary explanation, then, for the recent marked improvement in the U.S. current account position should be sought in the movements of the merchandise trade account.

#### THE U.S. MERCHANDISE TRADE BALANCE

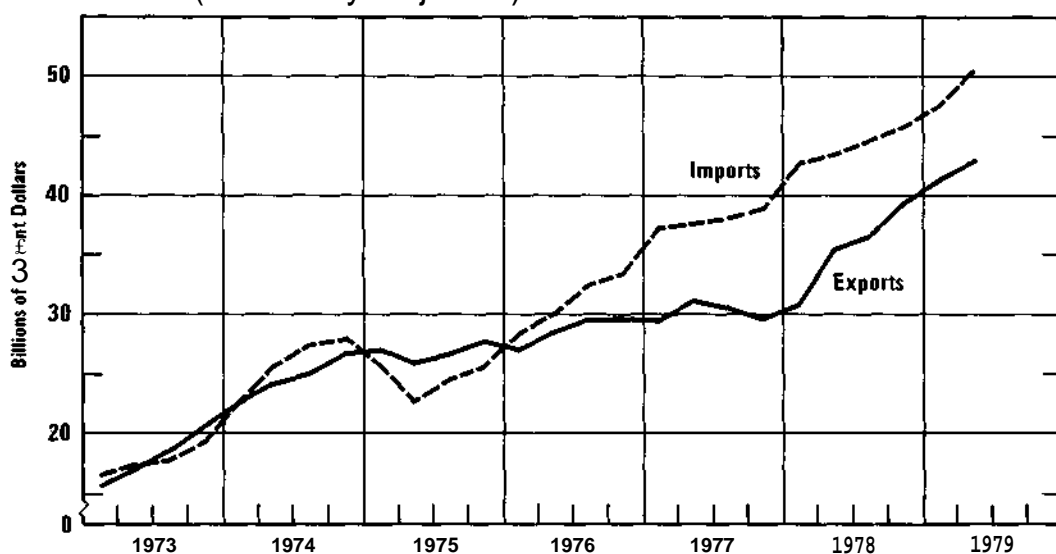
Near the end of 1974, recession in the United States began to weaken consumer demand and to slow the growth of industrial production. As demand for all goods weakened, so did demand for imports. During the first half of 1975, the value of U.S. merchandise imports declined by nearly 20 percent. (Figure 1 shows the levels of U.S. merchandise imports and exports from 1973 to the **present**.) Demand for imports began to recover in the second half of 1975 as the U.S. economy moved out of recession. Since the second quarter of 1975, the value of U.S. merchandise imports has grown steadily and **rapidly--at** a rate of about 22 percent per year.

U.S. merchandise exports have followed a very different course. In 1975, U.S. exports declined slightly as a result of recession abroad, which weakened foreign demand for American goods. (That the decline in U.S. exports was not as great as the decline in U.S. imports reflects the fact that the 1974/1975 recession was more severe in the United States than it was in most other countries.) U.S. merchandise exports began to grow again at about the same time as did **imports**, but more sporadically and at a much lower rate. This disappointing performance by merchandise exports gave rise to the large trade and current account deficits of 1977 and 1978. At the beginning of 1978, however, exports began to grow **rapidly--much** more rapidly than **imports--and** the trade deficit began to narrow quickly. From the second quarter of 1975 to the first quarter of 1978, the value of U.S. merchandise exports grew at an annual rate of only about 6.5 percent; between the first quarter of 1978 and the second quarter of 1979, it grew by 30 percent.

Just as changes in the U.S. merchandise trade position account for most of the recent changes in the U.S. current account

Figure 1.

U.S. Merchandise Imports and Exports by Quarters,  
1973-1979 (Seasonally Adjusted)



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

position, changes in the U.S. balance of trade in manufactures account for the largest part of recent changes in the U.S. merchandise trade position. Trade in manufactured goods constitutes more than 60 percent of total U.S. trade, and the balance of trade in manufactures has swung widely in the recent past. During 1977, U.S. exports of manufactures grew hardly at all, while imports of manufactures grew rapidly. As a result, the traditional U.S. surplus in manufactures trade deteriorated sharply in 1977, becoming a deficit of \$12 billion (at annual rates) by the first quarter of 1978 (see Table 3). Throughout 1978, however, U.S. manufactured exports grew more swiftly than did manufactured imports; by the last quarter of 1978, the United States once more had a surplus in manufactures trade.

Also contributing importantly to changes in the U.S. merchandise trade position were changes in U.S. imports of oil. After declining slightly during the recession of 1974/1975, the volume of U.S. oil imports grew rapidly throughout 1976. Price increases compounded the effects of these volume increases, so that the increased value of U.S. oil imports was responsible for a large

TABLE 3. QUARTERLY U.S. TRADE IN SELECTED TYPES OF MERCHANDISE, 1977-1979,  
SEASONALLY ADJUSTED: IN BILLIONS OF DOLLARS

	<u>Manufactures a/</u>		<u>Agricultural Products b/</u>		<u>Fuels c/</u>		<u>Other Merchandise d/</u>	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
1977								
I	19.7	17.6	4.3	3.8	0.9	11.6	5.3	2.7
II	19.8	18.8	4.5	4.0	1.1	10.8	5.4	2.9
III	20.6	19.7	4.6	3.4	1.1	11.2	5.5	2.9
IV	20.1	20.5	4.0	3.5	1.0	11.0	5.6	<b>3.2</b>
1978								
I	20.7	23.7	4.7	4.1	0.6	10.3	4.9	<b>3.2</b>
II	23.0	24.9	5.9	4.1	1.0	10.2	5.8	3.3
III	24.4	25.7	6.0	3.8	1.0	10.8	5.8	<b>3.3</b>
IV	26.4	26.1	5.5	4.3	1.2	10.8	6.5	3.6
1979								
I	27.2	<b>26.7</b>	<b>5.2</b>	4.4	1.4	11.7	7.2	3.5
II	27.8	27.7	6.2	<b>4.7</b>	1.3	12.9	7.5	4.0

SOURCE: U.S. Department of Commerce, Bureau of the Census.

NOTE: All figures in this table are census-basis figures, **f.a.s.** (free alongside ship), seasonally adjusted.

a/ Products in sections 5 through 8 of Schedule A of the Statistical Classification of Commodities Imported into the United States. These include chemicals and related products (section 5), manufactured goods classified chiefly by material (section 6), machinery and transport equipment (section 7), and miscellaneous manufactured articles (section 8).

b/ Products in sections 0 (food and live animals), 1 (beverages and tobacco), and 4 (animal and vegetable oils and fats) of Schedule A.

c/ Products in section 3 (mineral fuels, lubricants, and related materials) of Schedule A.

d/ Products in sections 2 (crude materials, **inedible** except fuels) and 9 (commodities not classified elsewhere) of Schedule A. Also included are re-exports of imported goods.

part of the growth in U.S. merchandise imports and the deterioration in the U.S. trade position in 1976. Between the second quarter of 1975 and the first quarter of 1977, increases in the value of imported oil accounted for 42 percent of the total increase in the value of U.S. merchandise imports.

But the volume of U.S. oil imports peaked in the first quarter of 1977, and oil imports have not reached that level since (see Figure 2). Because the Organization of Petroleum Exporting Countries (OPEC) held its prices for exported oil constant from January 1977 to January 1979, this reduction in volume was also reflected in the value of U.S. oil imports. <sup>4/</sup> (Because the OPEC price increase in January 1977 was widely anticipated, many oil consumers placed large orders in November and December of 1976. These orders did not actually arrive in the United States until the first quarter of 1977, making imports in that period particularly high.) With increased prices, the value of U.S. oil imports rose sharply in early 1979; by the second quarter of 1979, it had regained the level of early 1977. Between the beginning of 1977 and the beginning of 1979, however, the growth in U.S. merchandise imports was accounted for entirely by growth in non-oil imports. Table 4 shows the volumes, values, and average prices of U.S. oil imports for recent years.

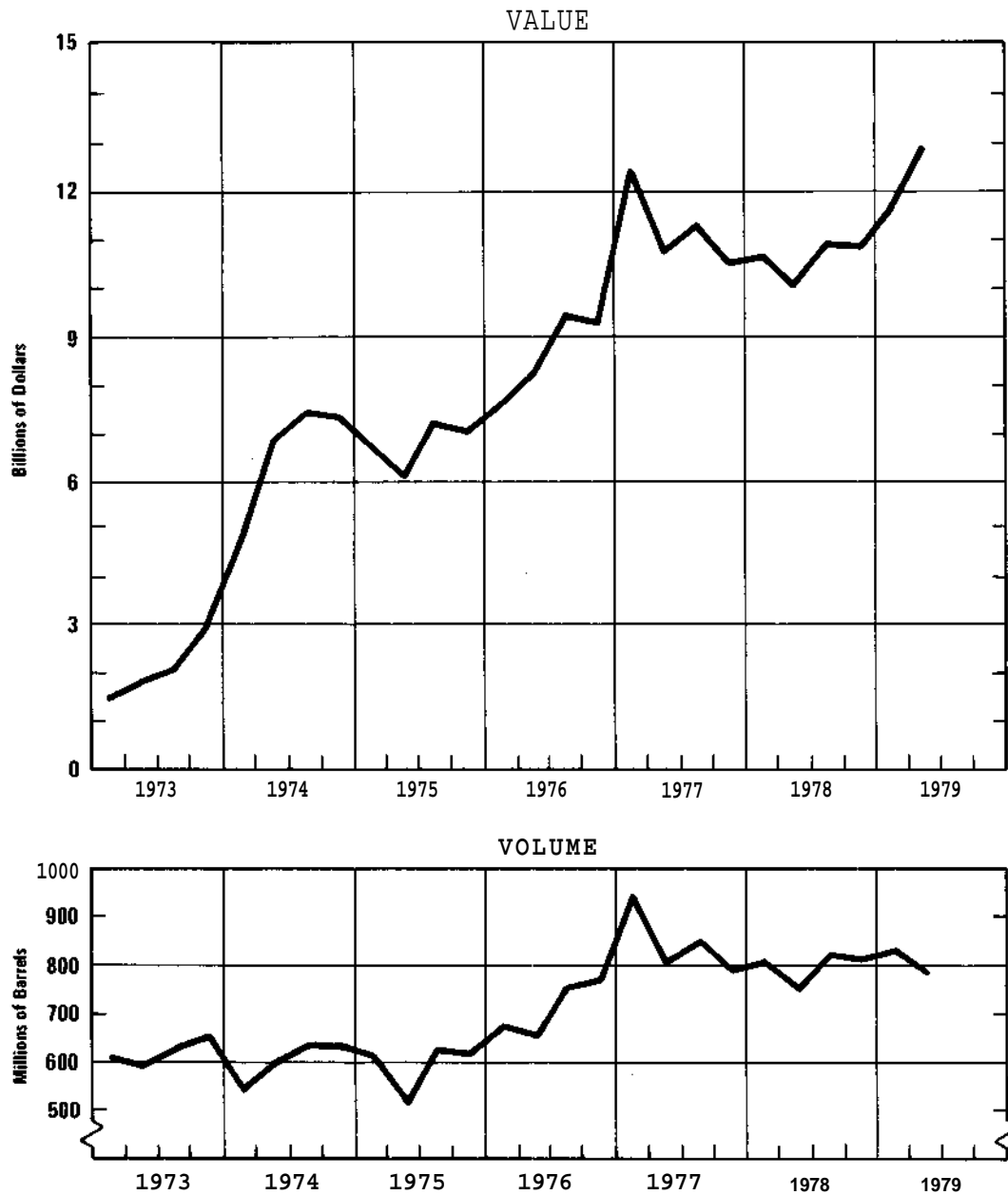
The value of U.S. agricultural exports also grew only sluggishly during 1977. This was primarily because of bumper crops in much of the rest of the world and the lower prices for agricultural commodities that resulted. Agricultural exports recovered somewhat in 1978.

In summary, then, the past four years have seen a sharp deterioration in the U.S. current account and merchandise trade positions, followed by an equally sharp recovery. U.S. trade in manufactures has accounted for much of this history, with the manufactures balance declining during 1977 and recovering in 1978. The improvement in the U.S. merchandise position was also aided by reductions in 1977 and 1978 in the value and volume of U.S.

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<sup>4/</sup> In one sense, OPEC prices were constant only from July 1977 to January 1979. Although OPEC officially raised prices by 10 percent effective January 1, 1977, Saudi Arabia raised its prices for crude oil only 5 percent. On July 1, 1977, Saudi Arabia raised its prices another 5 percent to bring them into line with prices in other OPEC countries.

Figure 2.  
Value and Volume of U.S. Oil Imports by Quarters, 1973-1979  
(Seasonally Adjusted)



SOURCE: U.S. Department of Commerce, Bureau of the Census.

oil imports and by increases in U.S. agricultural exports. The next chapter examines in more detail the reasons for the recent improvement in the U.S. merchandise trade position.

TABLE 4. VOLUME, VALUE, AND AVERAGE PRICE OF U.S. IMPORTS OF PETROLEUM AND SELECTED PETROLEUM PRODUCTS, 1973-1979

	Volume (millions of barrels per day)	Value <u>a/</u> (billions of dollars)	Average Price (dollars per barrel)
1973	6.83	8.3	3.33
1974	6.60	26.4	10.60
1975	6.49	27.0	11.40
1976	7.81	34.6	12.14
1977	9.28	45.0	13.29
1978	8.70	42.2	13.29
1979	8.84 <u>b/</u>	48.8 <u>b/</u>	15.13

SOURCE: U.S. Department of Commerce, Bureau of the Census.

a/ Free alongside ship (f.a.s.).

b/ First half of 1979 at annual rates.



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CHAPTER III.     THE REASONS FOR IMPROVEMENTS  
                     IN THE U.S. TRADE POSITION

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A number of factors seem to have been at work in producing the marked improvement in the U.S. merchandise trade position that occurred during 1978. Most important among these were increases in the rate of economic growth among the major U.S. trading partners, a marked improvement in the price competitiveness of U.S. manufactured products, and a significant reduction in U.S. demand for imported oil. This chapter discusses each of these factors in more detail.

MORE RAPID ECONOMIC GROWTH ABROAD

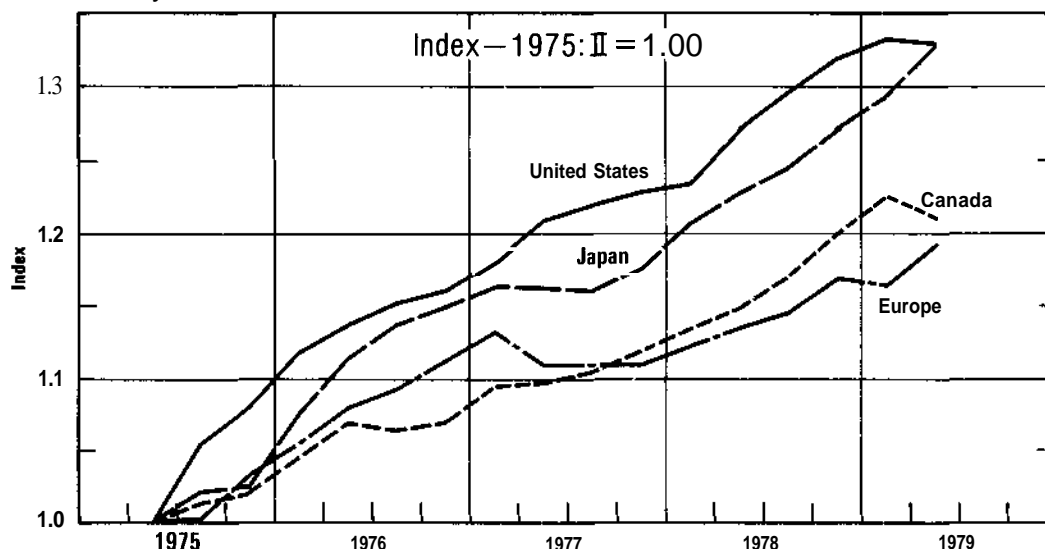
The other industrialized nations are the primary customers for U.S. exports. In 1978, Japan, Canada, and the industrialized countries of Western Europe accounted for nearly 60 percent of all U.S. merchandise exports. In general, when economic growth is rapid in these countries, so will be the growth in their demand for U.S. products. Conversely, when these countries grow only sluggishly, their demand for U.S. products will weaken.

After the recession of 1974/1975, the economies of all of the industrialized nations grew rapidly for about a year. In late 1976, however, **Canada's** recovery faltered, followed in early 1977 by similar interruptions in the recoveries in Japan and Western Europe (see Figure 3). In the United States, recovery continued at a rapid pace. As a result, U.S. demand for foreign products remained strong while foreign demand for U.S. goods weakened, and the **U.S.** merchandise trade position deteriorated dramatically. By the beginning of 1978, economic growth had resumed in the other industrial nations, demand for U.S. products had increased, and the **U.S.** trade deficit began to shrink.

A similar pattern of demand for U.S. goods can be found among some of the larger developing countries. For the most part, growth in the less developed countries (**LDCs**) was not interrupted by the recession of 1974/1975. The recession did, however, reduce demand for their exports, and many of these



Figure 3.  
Industrial Production in Major Industrialized  
Nations by Quarters, 1975-1979



SOURCES: U.S. figures: Board of Governors of the Federal Reserve System, *Statistical Release G.12.3*; foreign figures: U.S. Department of Commerce, Bureau of Economic Analysis, *Business Conditions Digest*.

countries were forced to borrow heavily in order to finance continued imports and in order to pay greatly increased bills for imported oil. <sup>1/</sup> In 1976, two major LDCs--Brazil and Mexico--sharply reduced their spending on imports. Between 1975 and 1977, U.S. merchandise exports to these two countries declined by nearly \$1 billion. In 1978, Brazil and Mexico once again increased their imports. U.S. exports to these countries rose by more than \$2 billion in 1978, and this growth appears to be continuing in 1979.

Estimates of how much of the improvement in the U.S. trade position can be attributed to more rapid economic growth abroad

<sup>1/</sup> Testimony of Anthony M. Solomon, Undersecretary for Monetary Affairs, U.S. Department of the Treasury, The Trade Deficit; How Much of a Problem? What Remedy?, Hearings before the Subcommittee on International Economics, Joint Economic Committee, 95:1 (October 1977), pp. 43-53.

are necessarily only approximate. It is nonetheless possible to get some rough measures of what the U.S. trade position might have been had economic growth not picked up in the other developed countries. Simulations performed by CBO suggest **that**, if economic growth in Canada, Japan, and Western Europe had continued at the slow rate observed during the year ending in the third quarter of 1977, **U.S.** exports of manufactures by the first quarter of 1979 would have been about \$4.5 billion less (at annual rates) than they actually were. Further, U.S. exports of agricultural products and raw materials would have been lower by roughly \$2 billion. <sup>2/</sup> In total, then, the more rapid growth of the other industrialized economies beginning at the end of 1977 increased U.S. merchandise exports by somewhere in the neighborhood of \$6.5 billion to \$7 billion. Some additional increase in U.S. merchandise exports has probably come about as a result of increased growth in at least some of the developing countries. Unfortunately, available data are not adequate to quantify the contribution of LDC growth.

#### COMPETITIVENESS OF U.S. PRODUCTS IN WORLD MARKETS

As the U.S. trade position deteriorated in 1976 and 1977, some observers suggested that U.S. products were not as competitive in world markets as they once had been. The fact that the decline in the trade position was much more marked for manufactures than it was for agricultural products and nonfuel raw materials seemed to support this view.

Agricultural products or raw materials from one country are generally indistinguishable from similar products from other countries. As a result, one world price, determined by worldwide supply and demand conditions, generally prevails for these products, and goods are traded at that price in world markets more or less independently (at least in the short run) of variations in the costs of production from one country to another. In the short run, a **nation's** ability to export such basic commodities depends not so much on relative costs of production as on other factors, such as weather, size of harvest, level of world economic activity, and so on. Imports and exports of these commodities will vary from year to year, but these

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<sup>2/</sup> A technical discussion of these simulations is found in Appendix A.

variations are seldom thought to be indicative of the general health or **competitiveness** of industrialized economies. 3/

The case with manufactured goods is somewhat different. In many cases, products of one country differ from those of **another--** in style, performance, reliability, and so on. As a result, prices even for similar products can vary depending on the country of origin, and these prices are generally thought to be closely related to production costs. **If** costs in one country rise relative to those in other countries, its manufactures are likely to be placed at a disadvantage in world markets. Further, because nonprice characteristics can be assumed to play an important role in the choice of one manufactured good over another, a **country's** ability to produce newer, better, or more attractive goods should, it is generally believed, be reflected in its ability to export manufactured products.

The slow growth of U.S. manufactured exports during 1976 and 1977 and the simultaneous rapid growth of U.S. imports of manufactures suggested that foreign manufactures were replacing U.S. products, both in foreign markets and in domestic U.S. markets. Rising labor costs, increased prices for industrial supplies, and the costs of complying with new environmental, health, and safety regulations were all blamed for increasing costs of U.S. goods relative to foreign goods and subsequently for causing reduced U.S. exports and increased competition from foreign imports. More disturbing were fears that U.S. industry had lost some intangible quality that in the past had promoted rapid innovation. Other nations, it was argued, had taken the lead in developing new products and production processes. With the improvement of the U.S. trade position in 1978, these fears were quieted somewhat, but two key questions remain: Are U.S. industries as competitive in world markets as they once were? What are the future prospects for U.S. international **competitiveness**?

A **country's** competitiveness in world markets is determined by a wide variety of **factors**: price, quality, shipping costs,

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3/ Changes in exchange rates can bring about changes in exports and imports of agricultural products and raw materials. These changes will be particularly pronounced in the value (as opposed to the volume) of trade flows, since they will act to change commodity prices as measured in particular currencies.

financing **arrangements**, suitability of the product to local **requirements**, level of effort devoted to marketing, and so on. There is no simple measure of competitiveness that can combine such diverse elements. Certain fairly simple measures can, however, shed some light on a country's relative competitive position.

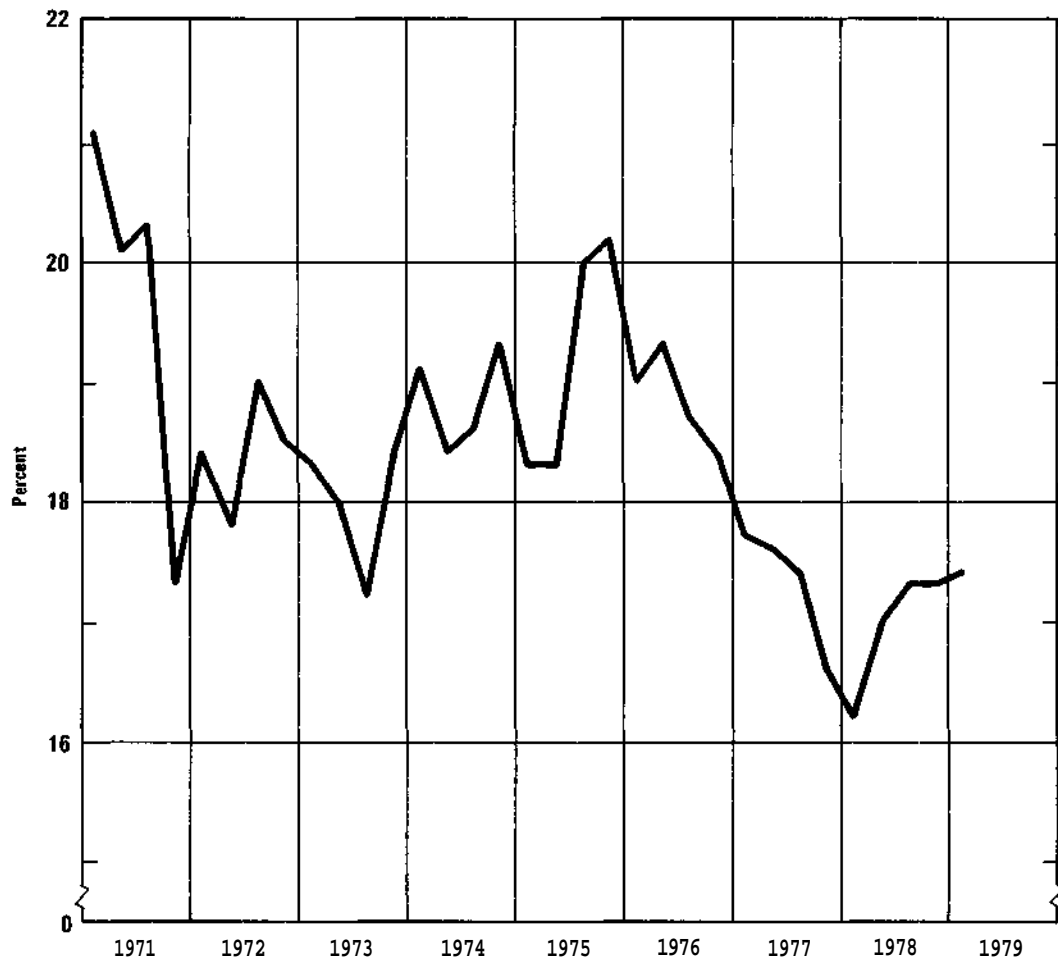
The simplest and most direct of these measures is provided by the share of total world manufactured exports accounted for by a particular country. Figure 4 shows the U.S. share of total manufactured exports from 1971 through the first quarter of 1979, the latest quarter for which data are available. Throughout 1976 and 1977, foreign countries succeeded in capturing a larger share of world export markets, leading to a decline in the U.S. share of total manufactured exports. After the first quarter of 1978, just as the U.S. trade position began to improve, the U.S. share of manufactured exports began to rise again. As Figure 4 illustrates, this share is subject to considerable variation, and the upturn that began in 1978 is not conclusive evidence that the United States is regaining its earlier competitive position. Nonetheless, the fact that movements in the U.S. share of manufactured exports coincide closely with movements in the U.S. trade balance suggests that at least a part of these trade balance movements is caused by changes in U.S. competitiveness. 4/

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4/ A number of important **qualifications** must be noted in regard to Figure 4.

Because of the way the figures are calculated, changes in the value of the dollar can affect the measured U.S. share even if real trade flows are unchanged. **Specifically**, a decline in the value of the dollar can reduce the apparent U.S. share. **Thus**, the U.S. share of exports could suggest a loss in U.S. competitiveness during a period when U.S. competitiveness is actually improving because of dollar devaluation. Declines in the U.S. share, however, during such periods as 1976 and early 1977, when the dollar was relatively stable, can properly be interpreted as indicating a loss in U.S. competitiveness. A calculation of U.S. shares of all merchandise exports by industrial countries, taking into account exchange rate changes, shows a roughly similar pattern. The U.S. share of world exports declined throughout 1975, 1976, and most of 1977. It began to improve

Figure 4.  
U.S. Share of World Exports of Manufactured Goods by Quarters,  
1971-1979 (Seasonally Adjusted)



SOURCE: U.S. Department of Commerce, Industry and Trade Administration.

NOTE: World exports are defined as exports of 15 major industrial countries, accounting for 80 percent of all exports of manufactures, excluding shipments to the United States. All export values are converted into dollar terms using prevailing exchange rates. The 15 countries used for these calculations are: Austria, Belgium-Luxembourg, Canada, Denmark, the Federal Republic of Germany, France, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and the United States.

Other measures of U.S. competitiveness in world markets are provided by comparisons of the costs of production in the United States with similar costs abroad. To reflect accurately changes in international **competitiveness**, changes in relative production costs must be adjusted to account for changes in exchange rates. If, for example, production costs in the United States rise by 5 percent relative to costs in other countries simultaneously with a fall in the value of the dollar by 5 percent relative to other currencies, the costs of U.S. goods to foreign buyers and of foreign goods to U.S. buyers remain the same and no change in the relative competitive positions results. If changes in costs and exchange rates do not exactly offset each other, competitive positions will change.

Ideally, only the production costs of potentially tradable manufactured commodities should be used for comparisons of competitiveness. Unfortunately, no measure of these costs is readily available. Import and export prices indirectly reflect changes in production costs of commodities that are actually traded, but they do not reflect changes in the costs of nontraded domestic products that may compete with imports. Wholesale prices, on the other hand, reflect production costs throughout an economy, but they are too broad; they reflect the costs of many products that could never enter into international trade. Unit labor **costs--the** cost for labor required to produce one unit of **output--provide** a direct measurement of an important element of total production costs, but other elements such as capital costs,

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in the first quarter of 1978, one quarter earlier than the shares shown in Figure 4.

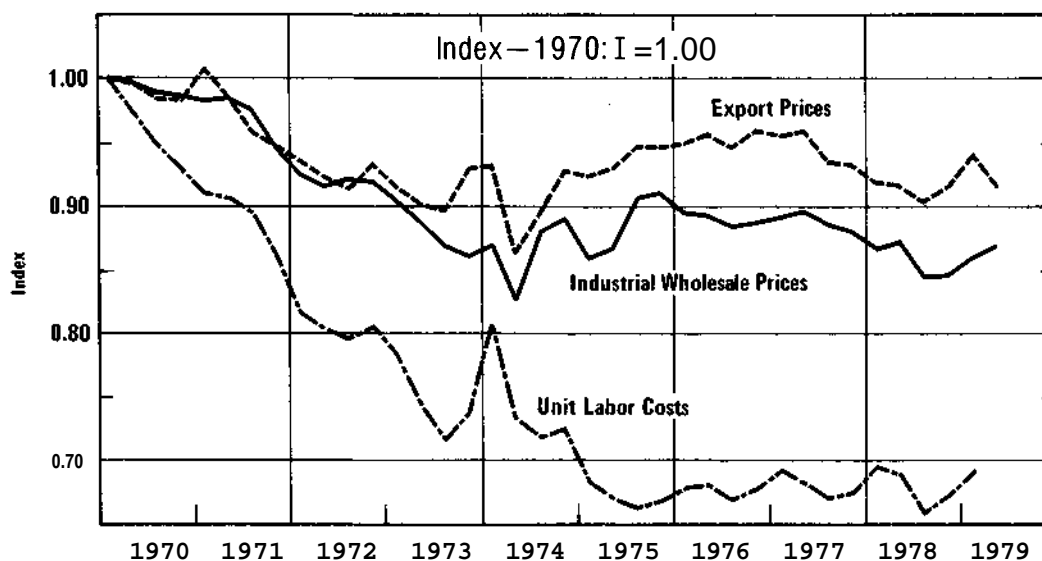
Figure 4 is restricted to exports of industrial countries. During the period covered, however, manufactured exports of the more advanced developing countries have grown rapidly. If these exports were included in the figure, the U.S. share would presumably decline more steeply.

Finally, the declining share of U.S. exports does not necessarily indicate lack of U.S. competitiveness. To the extent that U.S. exports are concentrated in slower growing markets, the U.S. share of all manufactured exports would decline even if the United States remained highly competitive. Unfortunately, the data do not allow a calculation of the U.S. share of particular markets.

taxes, and so on generally cannot be measured. <sup>5/</sup> Lacking an ideal measure of production costs, one is forced to rely on some combination of those measures that are available.

Figure 5 shows three different indexes of U.S. international price competitiveness, based on export prices, industrial wholesale prices, and industrial unit labor costs, respectively. Each of these indexes is formed by computing the ratio of U.S. prices (after adjusting for changes in exchange rates) to a composite measure of prices in the other industrial countries that are the primary customers for U.S. exports and the chief rivals of the

Figure 5.  
Some Measures of U.S. International Competitiveness by Quarters,  
1970-1979 (Seasonally Adjusted)



SOURCE: Appendix B.

<sup>5/</sup> For a useful discussion of the advantages and shortcomings of these various measures and for an attempt to compute directly some nonlabor costs of production, see "The International Competitiveness of Selected OECD Countries," OECD Economic Outlook, Occasional Studies (July 1978), pp. 35-52.

United States in the production of industrial goods. 6/ The higher these indexes are, the higher are U.S. prices relative to prices in other countries and the less competitive are U.S. products.

These measures of relative costs seem to confirm the conclusion that changes in competitiveness are responsible for at least some of the last few years' movements in the U.S. trade position. All three indexes show large gains in U.S. competitiveness between 1970 and 1973, due primarily to changes in exchange rates. In 1971, and again in 1973, the dollar was devalued, lowering the price of U.S. goods relative to foreign goods. The Arab oil embargo, the rapid increases in the price of oil, the shift to a system of floating exchange rates in 1973, and the onset of recession in 1974 produced a period of erratic movements in these competitive indexes. (The sharp peak in the unit labor cost index coincides roughly with the onset of recession in the United States. At such times, output is usually reduced faster than employment, producing a temporary rise in unit labor costs.) Recovery from recession proceeded more rapidly in the United States than in the other industrialized countries. As a result, output in the United States **grew** more rapidly than did employment (in relative terms), and U.S. unit labor costs declined relative to foreign unit labor costs. The rapid U.S. recovery also produced increases in wholesale and export prices relative to those in other countries. (It was precisely to avoid such price increases that a number of other industrialized countries chose to recover less quickly from the recession.) Beginning in 1977, relative U.S. prices eased somewhat, helped by a declining dollar after the last quarter of 1977. This dollar-related gain in competitiveness is also evident in the unit labor cost index. As the dollar strengthened in late 1978, all of the indexes turned up, indicating some erosion in the U.S. competitive position.

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6/ The composite measures of foreign wholesale and export prices are weighted geometric averages of industrial wholesale price indexes and export unit value indexes in 11 industrial countries: Canada, Japan, Germany, the United Kingdom, France, Italy, Belgium, the Netherlands, Australia, Switzerland, and Sweden. The composite foreign unit labor cost index is computed in a similar manner, with the exception that Switzerland and Australia, for which the necessary data are not available, were excluded. For a detailed discussion of how these indexes are constructed, see Appendix B.



Because both the arrangement of international transactions and the subsequent international shipment of traded goods can be time-consuming processes, there is generally a delay between the decision to import or export a particular commodity and its actual arrival at its destination. Thus, changes in relative prices lead to changes in recorded trade flows only after a considerable lag. Most estimates suggest that the full effects of changes in prices will not be reflected in trade flows until a year or a year and a half have passed.

Although the movements of the three indexes **differ somewhat**, all show a loss of U.S. competitiveness during 1975 and 1976, and this could account for a part of the deterioration in the U.S. trade position during 1977. Each index peaks in early or mid-1977, then (with the exception of a temporary rise in the unit labor cost index) declines until late 1978. This improvement in the U.S. competitive **position--mostly** due to a decline in the value of the **dollar--provides** part of the explanation for the improved U.S. trade performance in 1978.

As was the case with more rapid growth abroad, the effect of the improvement in U.S. competitiveness can be estimated only very roughly. Simulations performed by CBO suggest that the improvement in the U.S. competitive position that occurred after the third quarter of 1977 is responsible for an improvement in the U.S. balance of trade in manufactures that amounted to about \$7.5 billion (at annual rates) by the first quarter of 1979. 7/ Despite the fact that the strengthening of the dollar that began in late 1978 has eroded U.S. **competitiveness** somewhat, the effects of the improved competitive position in 1977 and early 1978 should continue to be felt for some time. Indeed, because of the lag in the trade-flow response to changes in prices, the full effects of that improvement in competitive position were probably not felt by the first quarter of 1979. 8/

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7/ Details of this simulation are provided in Appendix A.

8/ In addition, the devaluation of the dollar probably brought about some increase in the (dollar) value of U.S. exports of agricultural products and raw materials. Unfortunately, the estimation of such effects is a fairly complex matter and beyond the scope of this paper. As a result of this omission, the effects ascribed in this paper to the devaluation of the dollar represent a lower bound.

The indexes employed here are deficient in that they do not reflect the growing competition to U.S. producers from industrialization programs in some developing countries. For the most part, these programs have concentrated on the development of light industry (clothing, textiles, shoes, and electronic components, for example) and have contributed to the decline of similar industries in the United States. **Unfortunately**, reliable data on manufacturing costs in developing countries are not available, and no systematic comparisons with these costs in the United States can be made.

Despite this deficiency, the indexes provide fairly clear evidence that, to a significant extent, the recent strengthening of the U.S. trade position was due to an increase in the price competitiveness of U.S. **products** in world markets. The indexes also suggest, however, that, if the recent loss in U.S. competitiveness associated with the strengthening of the dollar continues, the **U.S.** trade position may weaken again as the effects of these exchange rate changes on trade flows are felt.

#### U.S. PETROLEUM IMPORTS

Also contributing to the recent improvement in the U.S. merchandise trade position has been a decline in both the value and the volume of oil imports during 1977 and the very moderate growth of both throughout 1978. The most important factor in the relative stability of oil imports during this period has been the growth of oil production in Alaska. During the first quarter of 1977, Alaskan oil production was proceeding at a rate of about 170,000 barrels per day. With the opening of the Alaska pipeline in June 1977, this production increased dramatically. By the end of 1977, Alaskan production had reached 850,000 barrels per day, and in late 1978 it increased again to 1.35 million barrels per day. Thus, from the first quarter of 1978 to the first quarter of 1979, Alaskan oil production increased by about 500,000 barrels per day. Without this increase, the United States would presumably have had to import an equal amount of foreign oil. At prevailing prices for oil, these extra imports would have added approximately \$2.5 billion to the U.S. trade deficit.

During the period from the first quarter of 1978 to the first quarter of 1979, OPEC pricing policies also helped to restrain increases in the value of U.S. oil imports. The OPEC price increases that went into effect in January 1979 were only partially reflected in the value of oil imported to the United States

in the first quarter. (Much of the imported **oil** arriving in the United States in the first quarter of 1979 left OPEC countries before January.) Because OPEC had not increased its prices since January 1977, the real price of oil had fallen. From the first quarter of 1978 to the first quarter of 1979, the average price of U.S. imported oil rose by 5.2 percent, while U.S. consumer prices rose by 9.8 percent. Had OPEC kept the real price of oil constant during this period, the value of U.S. oil imports and the U.S. trade deficit would each have been some \$2 billion larger (at annual rates) in the first quarter of 1979.

### CONCLUSION

Between the first quarter of 1978 and the first quarter of 1979, the U.S. merchandise trade deficit (measured at annual rates) shrank by about \$23 billion. Roughly one-third of this improvement was apparently due to an improvement in the competitiveness of U.S. products in world markets. This improved competitiveness resulted primarily from a decline in the value of the dollar that began in late 1977. About 30 percent of the improvement can be accounted for by more rapid economic growth during 1978 in the other major industrialized countries. An additional 20 percent can be explained by increased production of Alaskan oil and by **OPEC's** failure to maintain a constant real price for oil. The remaining 20 percent of the improvement is probably accounted for by a variety of factors, including economic growth and price changes in the developing countries, the effects of exchange rate changes on the value of U.S. agricultural and raw materials exports, weather-related changes in the demand for and the prices of agricultural commodities, and, perhaps most likely, errors in the estimation of the contributions of the primary **factors**.

Having identified the factors primarily responsible for the improvement in the U.S. trade position, one can ask to what extent U.S. policy initiatives contributed to the improvement. U.S. policy presumably had little to do with the acceleration of growth in other industrialized countries; to the extent that this accelerated growth was responsible for an improved trade position, the improvement came about as a result of foreign rather than U.S. economic policies. U.S. policies may have had more to do with the gain in U.S. **competitiveness**, but here it is **diffi-**cult to count U.S. policies as successful. The gain in competitiveness came about primarily as a result of a decline in the value of the dollar, which was in turn widely seen as a reflection

of concern over the efficacy of U.S. economic and energy policies. Finally, one might argue that U.S. diplomatic initiatives and energy policies played some role in restraining the rise of oil prices. While this possibility cannot be discounted, there is little in the way of solid evidence that it is true. The conclusion seems to be that the recent improvement in the U.S. trade position results partly from the success of foreign economic policies, partly from distrust of U.S. economic policies, and partly with the forbearance of OPEC.



The current account, which reflects the flow of goods and services into and out of a country, describes only a part of that **country's** international transactions. Not reflected in the current account position are international flows of capital and financial assets. These transactions are recorded in what is generally known as the capital account. 1/

Whenever a **country's** international payments for goods and services and transfers exceed its receipts (that is, whenever a country runs a current account deficit), the difference must be made up by the export of financial assets. In other words, it must borrow the difference from abroad (issuing financial assets in the form of **IOUs** to foreigners) or it must transfer reserve currencies or other monetary assets to foreigners. In either case, this transaction is recorded in the capital account. As a result, a **country's** net capital account position must exactly cancel its net current account position in the same time period.

During its years of current account surplus, the United States had a deficit on its capital account, exporting capital to (or, put differently, importing financial assets from) the rest of the world. This was the natural position for the United States in the postwar world: as a nation relatively rich in capital, it exported capital to other countries less well endowed. In a few postwar **years--most** recently and dramatically in 1977 and 1978--**this** traditional situation was reversed as the United States ran current account deficits and became a net importer of capital.

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1/ The term "capital account" takes on different meanings in different contexts. In some cases, it refers only to international flows of **nonmonetary** financial assets, excluding international transfers of currencies, international reserves, or monetary gold. In other cases, it refers to the totality of international financial transactions. In this paper, the term is used in this latter, broader sense.

Although the total net flow of capital in any period must offset the current account position, the individual components of the capital account can vary greatly. Because these component flows are controlled by a variety of economic actors who respond to a variety of stimuli, they are indicative of different economic situations. Further, these flows can be highly volatile, with particular components showing large net inflows in one quarter and large net outflows in the next. In this they differ from the elements of the current account, which tend to change only gradually. This volatility allows capital flows to serve as a barometer for changes in economic conditions and in expectations about future economic conditions.

#### RECENT DEVELOPMENTS IN THE U.S. CAPITAL ACCOUNT

The simplest division of the elements of the capital account is into private and official capital flows. Private flows include all international financial **transactions** initiated by private individuals or firms or by governments in their normal financial operations. Official flows include transactions initiated by national monetary authorities or by governments in pursuit of policy objectives. Both private and official flows are measured as changes in foreign assets held by domestic agents and in domestic assets held by foreign agents. A net decrease, for example, in U.S. private assets held by foreigners signifies a net outflow of private capital from the United States. Similarly, an increase in foreign official holdings of U.S. assets signifies an inflow of official capital. Table 5 summarizes the major components of the U.S. capital account for the last few years.

#### Private Capital Flows

Because private capital flows reflect the decisions of economic **actors--banks, corporations, individual asset holders--** whose primary interests lie in maximizing profits or minimizing losses, these flows are generally thought to be highly sensitive both to relative rates of return in various countries and to expected changes in exchange rates. Capital flows into nations where interest rates are high and out of countries whose currency is expected to decline. Few of the delays that characterize international transactions involving goods and services are found in international capital transactions. As a result, changes in capital flows generally follow changes in relative interest rates or expectations quite rapidly, and private capital flows are

TABLE 5. U.S. CAPITAL ACCOUNT, 1975-1979: IN BILLIONS OF DOLLARS,  
SEASONALLY ADJUSTED

	1975	1976	1977	1978	1979 <u>a/</u>
<b>Private Flows</b>					
Change in U.S. private assets abroad, net	-35.4	-44.5	-31.7	-57.0	-35.5
Change in foreign private assets in United States, net	<u>8.6</u>	<u>18.8</u>	<u>14.2</u>	<u>30.0</u>	<u>49.6</u>
Total Private Flows, Net	-26.7	-25.7	-17.6	-27.1	14.1
<b>Official Flows</b>					
Change in U.S. official reserve assets, net	-0.8	-2.6	-0.4	0.7	-6.5
Change in foreign official assets in United States					
Industrial countries <u>b/</u>	0.9	8.4	28.8	34.3	N/A
OPEC	7.1	9.6	6.4	-0.7	N/A
Others	<u>-1.2</u>	<u>-0.4</u>	<u>1.5</u>	<u>0.2</u>	<u>N/A</u>
Total Official Flows, Net	5.9	15.0	36.3	34.5	-44.3
Change in U.S. Government Assets Other than Official Reserve Assets, Net	-3.5	-4.2	-3.7	-4.7	-4.2
Statistical Discrepancy <u>c/</u>	<u>5.9</u>	<u>10.3</u>	<u>-0.9</u>	<u>11.1</u>	<u>33.2</u>
Total Flows, Net <u>d/</u>	-18.3	-4.6	14.1	13.9	1.2

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

NOTE: Negative entries indicate capital outflows. Detail may not add to totals because of rounding.

a/ Based on figures for the first half of 1979, at annual rates.

b/ Australia, Canada, Japan, New Zealand, South Africa, and Western Europe.

c/ For an **explanation** of statistical discrepancy figures, see p. 32.

d/ Sum of net total private flows, net total official flows, change in net nonofficial U.S. government assets, and statistical discrepancy.



generally the most volatile element of a **country's** entire balance of international payments. The annual figures presented in Table 5 obscure this volatility somewhat. Table 6, which shows the principal components of the **U.S.** capital account by quarters from 1977 to mid-1979, reveals the size of the swings from one quarter to the next.

The periods of largest private capital outflow (the last quarter of 1977 and the first and last quarters of 1978) were also periods during which the **dollar's** foreign exchange value declined sharply. The major factor inducing these movements of capital out of the United States appears to have been the expectation that the dollar would fall further. These outflows reflected attempts by asset holders to convert their holdings of dollars into currencies that were expected to appreciate. (Since assets denominated in currencies other than dollars must, in most cases, be bought abroad, this required an outflow of capital from the United States.) To some degree, the attempt to flee from dollar-denominated assets was self-reinforcing; as dollar-denominated assets were sold, the value of the dollar fell, reinforcing expectations of further declines and thus inducing further efforts to "get out of dollars." During the middle of 1978 and at the beginning of 1979, the dollar strengthened temporarily, and asset holders took advantage of the situation to reverse some of their earlier transactions. The result during both periods was an inflow of private capital.

Another important component of private capital flows is found in the statistical discrepancy term reported as part of the total balance of payments. This discrepancy term is derived by comparing the current account position with all capital flows reported elsewhere. By definition, the net flow of capital must exactly balance the current account position. Reported capital flows, however, rarely satisfy this requirement, and hence the existence of a statistical discrepancy.

Some part of this discrepancy is accounted for by simple reporting errors and omissions. Also reflected in the statistical discrepancy are some intracompany transfers of multinational corporations. But by far the largest part consists of unreported flows of private capital. Usually these are in the form of "leads" and "lags," short-term loans extended by international traders. A lag will develop when an importer receives his goods but delays payment for them for the month or so that is generally allowed by his agreement with the exporter. In essence, the exporter makes a short-term loan to the importer. A lead

TABLE 6. U.S. CAPITAL ACCOUNT BY QUARTERS, 1977-1979: IN BILLIONS OF DOLLARS, SEASONALLY ADJUSTED

	1977				1978				1979	
	I	II	III	IV	I	II	III	IV	I	II <u>a/</u>
Private Flows, Net	-3.1	-5.1	0.2	-9.6	-11.8	1.8	1.9	-19.0	7.9	-0.9
Official Flows										
Change in U.S. official reserve assets, net	-0.4	0	0.1	0	0.2	0.2	0.1	0.2	-3.6	0.3
Change in foreign official assets in United States										
Industrial countries	2.4	5.5	7.2	13.8	13.1	-2.0	6.4	16.8	N/A	N/A
OPEC	2.9	1.2	1.5	0.8	2.0	-2.7	-1.8	1.8	N/A	N/A
Others	<u>0.2</u>	<u>1.1</u>	<u>-0.4</u>	<u>0.6</u>	<u>0.5</u>	<u>-0.5</u>	<u>0.1</u>	<u>0.2</u>	<u>N/A</u>	<u>N/A</u>
Official Flows, Net	5.1	7.7	8.4	15.1	15.8	-5.0	4.8	18.9	-13.0	-9.2
Change in U.S. Government Assets Other than Official Reserve Assets, Net	-1.1	-0.9	1.0	-0.7	-1.0	-1.3	-1.4	-1.0	-1.1	-1.0
Statistical Discrepancy <u>b/</u>	2.5	0.7	-4.7	0.5	3.9	8.0	-2.1	1.3	4.6	12.0

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

NOTE: All figures are **balance-of-payments** basis. Negative numbers indicate capital outflows. Detail may not add to totals because of rounding.

a/ Figures for 1979:II are preliminary. The size of the statistical discrepancy in this quarter reflects many transactions unreported in preliminary figures.

b/ For an explanation of statistical discrepancy figures, see p. 32.

represents prepayment for imports. Like other loans, these short-term loans are sensitive to exchange rate expectations. If an importer expects the currency of the exporting country to **fall**, he has an incentive to delay payment for as long as possible. Because such loans are so easy to arrange (indeed, to produce a lag, the importer must do literally nothing), they are generally thought to be the most rapid and volatile of capital movements and are widely seen as the earliest indicators of changes in the market's expectations for exchange rate movements. Examination of Table 6 shows that throughout 1977 and 1978 the net flows reported in the statistical discrepancy generally foreshadowed movements in bank-related flows in the following quarter.

While leads or lags can be quite substantial, as evidenced by the statistical discrepancy of \$4.7 billion in the third quarter of 1977, they cannot persist for more than a couple of quarters. This happens because, as deliveries arrive or payments become due (they cannot be postponed **indefinitely**), they are recorded in some other account and are thus reflected negatively in the statistical discrepancy, offsetting any current leads or lags.

#### Official Capital Flows

The pattern of official capital flows has been quite different from that of private flows. These official flows reflect the actions of various central banks in pursuit of their respective monetary policy objectives. As such, these flows often respond to very different stimuli than do private flows.

Simply because of the size of their transactions, the monetary authorities of a few major industrialized countries are the most important actors in determining worldwide official capital flows. Each of these countries has the power to influence international currency and financial markets by its actions, and each has an interest in acting to maintain some order and stability in these markets, even if its actions result in a short-term loss in the value of its official asset holdings.

For the most part, official capital flows reflect attempts by central banks to counteract large or sudden movements of exchange rates. (These official flows also reflect how far removed the present international monetary system is from one of freely floating exchange rates. If exchange rates were determined purely by market forces, there would be no central bank intervention in

currency markets, and hence no official capital flows.) During periods in which the dollar is falling, for example, these banks will often purchase dollars in an effort to maintain the currency's value. The central bank will then use these dollars to buy U.S. government securities, thus returning the dollars to the United States. During times of relative dollar strength, these transactions may be reversed as central banks sell dollar-denominated securities and subsequently sell the dollars so obtained. The first quarter of 1979 provides an example of such a reversal.

Developing countries and the smaller industrial countries also contribute to net official capital flows, but in much smaller quantities and with somewhat different motivations than do the major industrialized countries. Individually, the transactions of these countries are too small (those of Saudi Arabia may be an exception) to influence world markets, and these countries--unlike the larger industrial countries--are free to act purely for their own financial advantage. In this regard, they are often seen as resembling private asset holders, buying dollar assets when the dollar is expected to rise and selling when it is expected to fall. In the aggregate, however, the official transactions of these smaller countries can affect the value of the dollar. During 1978, a period of dollar decline, such transactions resulted in a small net outflow of capital from the United States. 2/

Of particular concern to some was the net outflow attributed to OPEC countries during the second and third quarters of 1978. It was feared at the time that this outflow might represent the first stage of an attempt by the OPEC countries to diversify their asset holdings by exchanging dollar-denominated assets for assets denominated in other currencies. Motivation for such action could come from a desire by OPEC countries to dampen fluctuations in the worldwide purchasing power of their asset holdings, caused by wide variations in the value of the dollar.

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2/ This outflow of capital was part of a general diversification of official reserve assets. At this same time, the smaller countries were converting some of their dollar-denominated Euromarket reserve holdings into Euromarket assets denominated in other currencies. For more on this, see the Bank for International Settlements, Forty-Ninth Annual Report (March 1979), pp. 153-58.

It was feared that an attempt by OPEC to dispose of a significant fraction of its dollar-denominated holdings would seriously disrupt financial **markets--at** least in the short run. 3/

Whether or not OPEC countries have in fact sought to diversify their holdings to any significant degree is impossible to know. The necessary data are simply not available. There are, however, reasons to speculate that any diversification that has taken place has been and must remain quite limited. First, a number of the major industrial **countries--Germany** and Switzerland are obvious **examples--maintain** barriers (or at least strong disincentives) to capital inflows. Second, the nature of international financial markets is such that large sales of dollar assets would depress the **dollar's** foreign exchange value, reducing the foreign currency value of remaining dollar assets held by OPEC. **OPEC's** holdings of dollars are so large that they cannot all be sold at once.

It is possible that the reduction of OPEC holdings in the United States during 1978 was not an attempt to diversify, but rather was a transfer of some dollar holdings in the United States to other dollar assets in the Eurodollar market. 4/ Such a transfer would put no downward pressure on the dollar. Two possible motivations have been suggested for such transfers. First, the Eurodollar market generally has less stringent capital requirements and interest rate controls than the domestic U.S. market, allowing greater freedom of action for **OPEC's** investors. Second, some observers have suggested that, under circumstances of a major crisis in the Mideast, the United States might freeze **OPEC's** assets. Fear of such action would make the Eurodollar market an attractive alternative for OPEC holdings.

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3/ OPEC dollar-denominated holdings were estimated to amount to about \$96 billion at the end of 1977; see Odeh Aburdene, "1 Petrodollar = 72 Cents," Euromoney (May 1978), p. 36.

4/ Eurodollars are deposits of dollars in dollar-denominated bank accounts (or in other dollar-denominated financial instruments) in financial institutions outside the United States (but not necessarily in Europe). The dollars so deposited are available for lending in the so-called Eurodollar financial market. Arrangements of this type are not unique to the dollar. German marks could, for example, be deposited in an English bank, thereby creating a Euromark.

## THE VALUE OF THE DOLLAR

The value of the dollar is closely related to the international flow of capital, and concern over the value of the dollar underlies much of the concern over the entire U.S. balance of international payments during the last two years. At any moment, the value of the dollar relative to other currencies is determined by the supply of and the demand for dollar-denominated assets in foreign exchange markets. Whenever the supply of such assets available in world markets exceeds the amount that will be willingly held, the dollar's value will fall. Deficits on the U.S. current account and private outflows of capital represent net additions to the supply of dollar-denominated assets available to world financial markets and therefore place downward pressure on the **dollar's** value.

Because the current account position changes only gradually, private capital movements are the immediate cause of most short-term fluctuations in exchange rates. Often, however, these capital flows occur in response to developments in the current account position or to changes in relative interest rates. A constantly growing current account deficit, for example, may convince asset holders that the dollar will eventually lose value. To avoid losses, asset holders may dispose of dollar-denominated assets, precipitating the fall in the value of the **dollar--and** perhaps an even greater **fall--that** would have been caused by the continuation of the current account deficit.

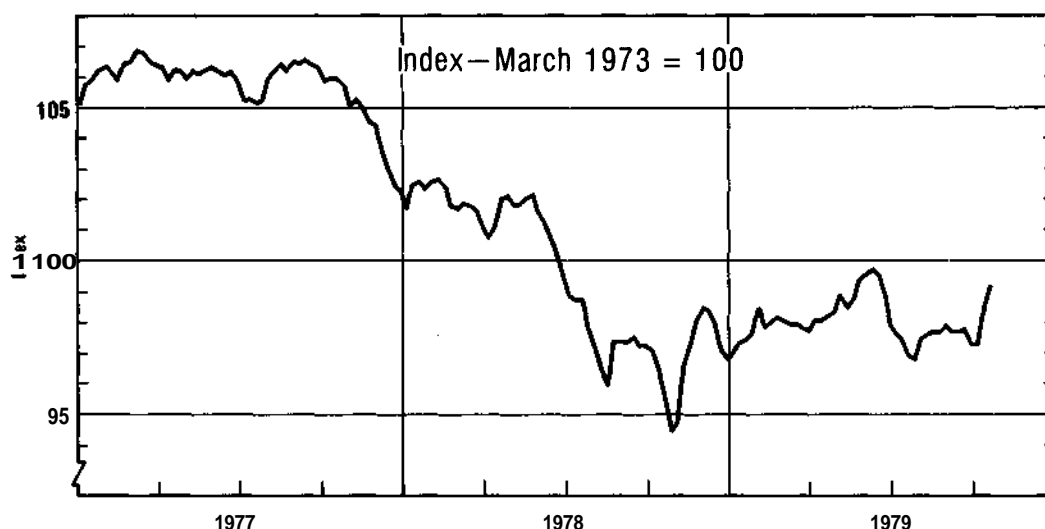
Such a pattern of events occurred in 1977 and 1978. A persistently worsening U.S. current account position in 1976 and 1977 prompted a widespread flight from dollar-denominated assets beginning in the last quarter of 1977. Over the period from September 1977 to March 1978, the so-called effective exchange rate of the dollar (a weighted average of the value of the dollar relative to other major currencies) declined by about 4.4 percent. 5/ After the first quarter of 1978, the U.S. current

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5/ A number of different measures of the effective exchange rate of the dollar are available, varying principally in the choice of other currencies used in computing the average. The effective exchange rate used in this paper is that computed by Morgan Guaranty Trust Company. Changes in this rate are the weighted geometric averages of changes in the value of the dollar vis-a-vis the currencies of 15 major industrialized

account deficit began to **shrink**, and for a short period the value of the dollar stabilized. But in June 1978, the dollar again began to decline. By the end of October, the effective value of the dollar had declined by a further 7.5 percent, bringing the total decline from September 1977 through October 1978 to 11.3 percent. Figure 6 shows movements in the effective value of the dollar during the last few years.

Figure 6.  
Effective Exchange Rate of the Dollar, 1977-1979



SOURCE: Morgan Guaranty Trust Company, *Effective Exchange Rate Index*, data published weekly.

Exactly what caused the continued fall of the dollar in the latter part of 1978 is not clear. The economic "**fundamentals**" that underlie exchange rate movements did not appear to warrant a

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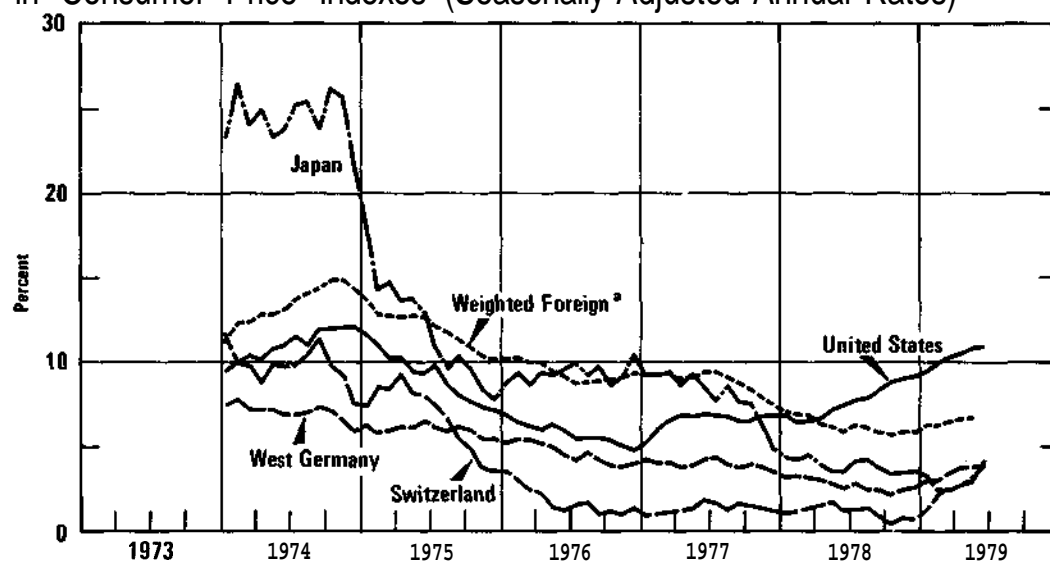
countries. The weights used in this computation, intended to reflect the relative importance of each country in the international transactions of the United States, are proportional to the value of bilateral trade in manufactures between each country and the United States in 1976.

further decline. The **U.S.** current account position was improving, and U.S. interest rates had moved higher relative to foreign rates. Yet the outflow of private capital did not cease.

The one discouraging economic "fundamental" was the U.S. inflation rate. In early 1978, U.S. inflation began to accelerate both in absolute terms and relative to inflation in other countries. These price increases reduced the purchasing power of the dollar and depressed its value. Increasing U.S. prices also boded ill for the future competitiveness of U.S. products in world markets and led some to expect a renewed deterioration in the U.S. current account position. By mid-1978, the U.S. inflation rate was significantly higher than the weighted average of inflation rates in the rest of the industrialized world (see Figure 7).

Also contributing to the outflow was some uncertainty about the direction and effectiveness of **U.S.** macroeconomic and energy policies. The **Administration's** anti-inflation program announced on October 24, 1978, did nothing to ease fears of continued U.S. inflation. (Indeed, in the last two weeks of October, the effective value of the dollar declined by 2.8 percent.) Proposals for

Figure 7.  
U.S. and Foreign Rates of Inflation, 1973-1979: Percent Changes  
in Consumer Price Indexes (Seasonally Adjusted Annual Rates)



<sup>a</sup> "Weighted Foreign" index is a geometric average using GNP weights of consumer price indexes in Belgium, Canada, the Federal Republic of Germany, France, Italy, Japan, the Netherlands, Sweden, Switzerland, and the United Kingdom.



energy-related programs were stalled both in the Congress and in the Administration. Throughout much of 1978, the Federal Reserve experienced repeated difficulties in keeping the growth of U.S. monetary aggregates within announced target ranges. And for most of 1978, U.S. monetary authorities showed little willingness to intervene in currency markets to support the dollar. This uncertainty concerning the major elements of U.S. economic policy made the dollar a more risky and hence a less attractive asset, and the value of the dollar continued to fall.

On November 1, 1978, the Administration announced a series of actions to bolster the dollar. The United States mobilized up to \$30 billion worth of foreign currencies to intervene in foreign exchange markets. In addition, the Federal Reserve tightened monetary policy by raising the discount rate (the rate at which member banks may borrow from the Federal Reserve) from 8.5 percent to 9.5 percent, by imposing a 2 percent supplementary reserve requirement on large time deposits, and by slowing the rate of money supply growth.

The primary motivation for the November dollar support program, according to the Administration, was "the judgment that, whereas some of the earlier 1977-1978 dollar decline had been necessary to correct the external disequilibrium, the continued decline of the dollar had become disorderly and was not justified by fundamental economic conditions." <sup>6/</sup> Also contributing were fears that the fall of the dollar was increasing inflation in the United States and pressure from other developed countries, which saw the competitive positions of their domestic industries eroded by the declining dollar.

That the Administration viewed much of the pressure on the dollar as psychological rather than strictly economic is suggested by the timing of its actions to support the dollar. These moves came on November 1 (All Saints Day), a bank holiday in Europe. Further, the announcement of the moves was delayed until after the Tokyo financial markets had closed for the day. Consequently, with only the New York markets open, Federal Reserve intervention had maximum effect. The intention was that a bold move would break the cycle of self-fulfilling expectations for continued decline of the dollar.

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<sup>6/</sup> Economic Report of the President 1979, p. 155.

The November 1 actions were apparently successful, at least in the short run. The dollar rose sharply in the week immediately following, gaining 2.8 percent in effective value. With the help of continued tight monetary policy, this strengthening continued throughout the first two quarters of 1979 despite increasing U.S. inflation, OPEC price increases, and political turmoil in Iran. By the end of June 1979, the dollar stood 12.5 percent above its October 30 low. So strong was the dollar that by mid-1979 the United States had been able to repay all \$6.1 billion of official borrowings from foreign central banks that had supported the currency market interventions of late 1978. 7/

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7/ Wall Street Journal, June 5, 1979, p. 6.



Ultimately, the reasons for concern over movements in the various accounts of the balance of payments lie in the effects of these movements on the U.S. economy and in how the accounts respond to domestic economic **developments**. Hidden in the aggregate figures of the payments balance are reflections of numerous structural changes affecting particular industries or financial markets. The following discussion, however, is restricted to the most aggregate macroeconomic effects.

#### INCOME AND EMPLOYMENT

The most direct effect of large trade and current account deficits is the restraining influence they exert on domestic economic growth. If the needs of **U.S.** businesses and consumers are met by foreign suppliers rather than by domestic production, total income and employment in the United States decline. Similarly, if foreign needs are met by foreign production rather than by exports from the United States, income and employment in the United States also suffer. This **is** not to suggest that all imports reduce employment and income in the United States; imports of commodities that cannot be produced efficiently or in sufficient quantity in the United States (oil is an obvious example) are necessary for the continued functioning of the economy. When imports are not counterbalanced by exports, however, the result will be some reduction of the flow of income within the U.S. economy. Inasmuch as the current account balance is a measure of the net flow of goods and services into the United States, it is also an indication of whether the net foreign transactions of the United States are adding to or subtracting from the flow of income in the United States.

The relationship between the current account balance and domestic income and employment operates in the other direction as well. All other things being equal, an improvement in the **U.S.** current account position will stimulate employment and income in the United States. But an improvement in the U.S. current account position can also be brought about by a lagging U.S. economy as U.S. demand for foreign goods and services falls off. **Thus**, an

improvement in the current account position should not always be viewed as a salutary development. If the improvement occurs as a result of foreign **events--such** as the more rapid growth in the rest of the industrialized world during **1978--it** represents a clear benefit to the United States. If, on the other hand, it occurs as a result of recession in the United **States--** as happened in 1975 and as many observers expect will happen again in **1980--it** is merely a symptom of slow domestic economic growth.

The recent improvement in the U.S. current account position (due mostly to foreign developments and exchange rate changes) has provided a significant stimulus for the U.S. economy. The increased demand for U.S. goods and services reflected by this improvement resulted (after secondary, "ripple" effects are counted) by the first quarter of 1979 in a 2 percent real increase (roughly \$45 billion per year at current prices) in U.S. gross national product (GNP). If the current account deficit had remained at **its** level of the first quarter of 1978, the unemployment rate in the United States by the first quarter of 1979 would have been higher by 0.4 or 0.5 percent. This amounts to a saving of between **400,000** and 500,000 jobs. Because GNP and employment respond to changes in the current account only after a lag, the full effect of the strengthened current account position was not felt by the beginning of 1979, and its final contribution to GNP and employment is likely to be even greater than these estimates suggest.

### PRICES

Other effects of recent international economic developments have not been so welcome. As Chapter III **demonstrated**, a major part of the improvement in the U.S. current account position resulted from a decline in the value of the dollar. As the dollar declines in value, the prices of U.S. imports rise; and, as these price increases are passed through the economy, the overall price level rises. Further, as the prices of imported products rise, U.S. producers of similar products will feel less competitive pressure from imports and may take the opportunity to raise prices on domestically produced goods.

The process of price determination in the U.S. economy is extremely complex, and there is no way of knowing for certain how a given change in exchange rates will affect the general level of

prices. 1/ Some rough estimates are, however, possible. It is generally thought that, for each percentage point increase in the price of U.S. imports, the U.S. consumer price index rises by about one-fifth or one-sixth of a percentage point. Because, however, foreign producers may not adjust their prices to reflect fully changes in exchange rates and because the prices of some imported commodities do not change when exchange rates change, a 1 percent decline in the value of the dollar does not bring about a full 1 percent increase in the price of imports. (The most important commodity whose price is not affected by exchange rate changes is oil, the price of which is set by OPEC in dollar terms. OPEC is, of course, free to raise the price of oil in response to a decline in the value of the dollar, and indeed the possibility that OPEC may do exactly that has served, along with other factors, to encourage active U.S. support of the dollar. Such compensating oil price increases, however, are not without political cost to the members of the OPEC cartel, and recent history suggests that there is no direct link between the value of the dollar and OPEC pricing policies.)

Oil accounted for about one-quarter of the value of U.S. imports in 1978. If it is assumed that the prices of all other U.S. imports are affected by exchange rate changes and that about 90 percent of exchange rate changes are "passed through" in the form of changed import prices, then each percentage decrease in the effective value of the dollar will bring about a rise in total import prices of about 0.6 or 0.7 of a percentage point and a rise of 0.11 to 0.15 percent in the consumer price index. The decline of the dollar from September 1977 through October 1978 was 11.3 percent (on a weighted-average basis). If the dollar had remained at this level, the decline would, in time, have added between 1.1 and 1.7 percent to the general U.S. price level. The rise of the dollar after November 1, 1978, helped reduce the exchange-rate-induced price increase. Because it takes time for these price effects to work their way through the economy, however, the full effects of the recent strengthening of the dollar have probably not yet been felt, and some of the inflation of early 1979 can be attributed to the decline in the value of the dollar throughout most of 1978.

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1/ For a survey of various estimates of these effects, see Peter Hooper and Barbara R. Lowery, Impact of the Dollar Depreciation on the U.S. Price Level, Board of Governors of the Federal Reserve System, Staff Study 103 (April 1979).

#### DEVELOPMENTS IN THE THIRD QUARTER OF 1979 AND NEAR-TERM PROSPECTS

During the third quarter of 1979, the general patterns of the preceding year and a half began to change. As the full effects of the most recent oil price increases were felt, the U.S. trade position moved more into deficit both because of higher oil import bills and because of strong U.S. demand for **fuel-efficient** imported automobiles. Figures are not yet available for the entire third quarter, but it is expected that the current account deficit in that quarter will be somewhat larger than in the second quarter.

Beginning in mid-June, the dollar once again came under strong downward pressure, particularly relative to the German mark. Between the middle of June and the end of July, the dollar declined by 2.8 percent on a weighted-average basis. Accelerating inflation in the United States, continued uncertainty over U.S. economic and energy policies, and the reshuffling in July of senior officials within the Administration all served (at least temporarily) to reduce asset **holders'** willingness to hold dollar-denominated **assets**.

The dollar was not the only currency that asset holders tried to dispose of. Late in the third quarter, rising inflation throughout the industrialized world contributed to an apparently widespread flight from nearly all currencies. (The German mark was the one notable exception.) Asset holders sold currency-based assets and bought commodities. This led to sharp rises in commodity prices, with gold and silver prices leading the way. In September alone, the price of gold rose by 31.6 percent and the price of silver by 69.7 percent; nearly all currency and commodity markets were marked by large fluctuations during this month.

Near the end of the quarter, two major policy initiatives were undertaken to return some stability to these markets. On September 23, the German mark was officially revalued upward relative to the other currencies in the European Monetary System **and--because** neither U.S. nor German monetary authorities acted to counter this **movement--against** the U.S. dollar. 2/ Such action

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2/ The currencies of the European Monetary System are the German mark, the French franc, the Belgian franc, the **Luxembourgian** franc, the Dutch guilder, the Italian lira, the Danish krone, and the Irish pound.

had been rumored for some time, and these rumors accounted for much of the strength of the mark in currency markets during September.

On October 6, the United States announced a series of measures aimed at reducing inflation in the United States and maintaining the value of the dollar in foreign exchange markets. The discount rate was raised, higher reserve requirements were imposed on some bank borrowings, and the Federal Reserve shifted the announced focus of its monetary policy from management of interest rates to management of bank reserves. The immediate results of these actions were a sharp rise in **U.S.** short-term interest rates and some strengthening of the dollar on foreign exchange markets. These actions appeared to have the effect also (after a short period of adjustment) of restraining the rapid advances in commodity prices that had marked September.

The near-term prospects for the **U.S.** balance of payments are extremely uncertain. Little consensus has developed on what the effects of the most recent oil price increases are likely to be or on whether further price increases are likely. Various national economic policies appear also to be in a state of flux. A number of major industrialized **countries--including the United States--have** in recent months taken steps toward more restrictive monetary policies. How long these countries will adhere to such restrictive policies if recessions materialize in late 1979 or 1980 remains a major source of uncertainty. Neither is there any clear indication of how exchange rates may move in the near future. In the last year, these movements have strongly influenced trade but have been very difficult to predict or even to explain after the fact. Among the factors that are likely to affect the U.S. balance of payments in the near future, some will act to strengthen the U.S. position and others to weaken it. The net result of these opposing tendencies is still open to question.

What does seem clear is that the factors that led to improvements in the U.S. position in 1978 and 1979 should not be expected to continue. Most forecasts see a period of slowing economic **growth--perhaps even recession--abroad** during the next year and a half. Concerted efforts are apparently being made to prevent any further decline in the value of the dollar, and therefore further sharp improvements in the U.S. competitive position seem unlikely. Finally, oil prices have risen substantially in 1979, and there are indications that they may go higher in late 1979 and 1980.



These oil price increases, which since December 1978 have raised the average price of U.S. imported oil by 40 percent, will have a strong negative effect on the U.S. trade position. During the first half of 1979, the value of U.S. oil imports rose to \$49.1 billion (at annual rates) from a 1978 level of \$42.3 billion, mostly as a result of price increases. The value of these imports will be even higher in the second half of 1979, as the full effects of recent price increases are felt. Estimates of U.S. oil imports for the whole of 1979 go as high as \$58 billion. 3/ Even if the volume of U.S. oil imports does not grow in 1980 and oil prices do not rise further, the total value of U.S. oil imports in 1980 could reach \$70 billion. 47

The effect of increased oil prices on the U.S. current account is likely to be offset by an improvement in the U.S. nonoil merchandise trade account. Most forecasts see a recession in the United States beginning in late 1979. International forecasts suggest that other industrialized nations may also experience reduced growth in the near future, but beginning somewhat later than the downturn in the United States. The result is likely to be reduced U.S. demand for imports in late 1979 and early 1980, with foreign demand for U.S. products remaining strong, at least for a time. Estimates of the magnitude of these effects are necessarily highly speculative, but the U.S. Treasury has recently forecast a current account deficit of between \$3 billion and \$4 billion for the whole of 1979 and for a current account surplus of about \$10 billion in 1980. 5/ If the projected current account surplus is realized, it will not represent any major success for U.S. policy. Quite to the contrary, it will most likely be the result of a recession, representing a significant failure of U.S. policy.

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3/ "U.S. Oil Imports and the Balance of Payments," World Financial Markets (July 1979), p. 3.

4/ Ibid.

5/ Press Briefing by Anthony M. Solomon, Undersecretary for Monetary Affairs, U.S. Department of the Treasury (September 24, 1979; processed).

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## A P P E N D I X E S

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APPENDIX A. EFFECTS OF MORE RAPID FOREIGN GROWTH AND IMPROVED  
U.S. COMPETITIVE POSITION

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The contributions of more rapid growth abroad and an improved U.S. competitive position to the overall improvement in the U.S. trade position reported in Chapter III were estimated by a two-step process. First, the income and price elasticities for U.S. imports and exports were estimated. Second, these elasticity estimates were used to simulate the pattern of U.S. imports and exports if foreign economic growth had not increased and if the U.S. competitive position had not improved.

ELASTICITY ESTIMATES

Income and price elasticities were estimated by ordinary least squares regressions of real U.S. manufactured imports and exports on current and lagged measures of relative costs in the United States and abroad and on a variable measuring the current level of economic activity. In the import equation, the activity variable was real U.S. GNP; in the export equation, the activity variable was a weighted average of Canadian, Japanese, and Western European industrial production indexes. The weights for this average were proportional to 1976 GNP. Each equation was estimated using two alternative measures of relative costs: the ratio of U.S. wholesale prices for industrial commodities to similar prices abroad and the ratio of U.S. unit labor costs to foreign unit labor costs, both corrected for changes in exchange rates. (The construction of these relative cost measures is detailed in Appendix B.) For the relative cost variables, an eight-quarter, third-degree polynomial distributed lag scheme was estimated. All equations were estimated in logarithmic form; thus, coefficients can be interpreted as elasticities. All regressions were quarterly, from 1970:I to 1979:I.

Table A-1 summarizes the results of the regressions. For the relative price variables, the sum of the coefficients of the entire lag structure is presented. Note that in both import and export equations the relative cost variables are the same: the ratio of U.S. costs to foreign costs. This explains the positive sign for the price elasticity of U.S. manufactured imports.

TABLE A-1. SUMMARY OF REGRESSION RESULTS

Dependent Variable	Independent Variables						D.W.
	Constant	USGNP	FIP	WPI <u>a/</u>	ULC <u>a/</u>	$\bar{R}^2$	
(1) EX	4.6 (59.5)		1.1 (3.9)	-2.2 (-5.0)		0.92	2.2
(2) EX	4.7 (46.5)		0.5 (1.5)		-1.1 (-5.8)	0.87	1.3
(3) M	-17.8 (-12.5)	2.6 (12.8)		1.06 (3.1)		0.91	1.5
(4) M	-20.0 (-10.0)	2.9 (10.2)			0.64 (3.8)	0.89	1.3

VARIABLES: EX = real U.S. manufactured exports  
M = real U.S. manufactured imports  
USGNP = real U.S. gross national product  
FIP = weighted average of Canadian, Japanese, and Western European industrial production  
WPI = ratio of U.S. wholesale prices for industrial commodities to similar foreign prices (see Appendix B)  
ULC = ratio of U.S. unit labor costs to foreign labor costs (see Appendix B)

NOTE: Figures in parentheses are **t-statistics**.

a/ Sum of coefficients of eight-quarter, **third-degree**, polynomial distributed lag.

The low Durbin-Watson statistics for the equations using unit labor costs suggested that the elasticities estimated using wholesale prices would provide a better basis for simulations. Therefore, the simulations reported in the text are based on equations (1) and (3).

## SIMULATIONS

The elasticity estimates derived above were used to simulate real U.S. imports and exports of manufactures assuming that:

- o During the period **1977:IV** through **1979:I** industrial production in each of Japan, Canada, and Western Europe continued to grow at the relatively slow rates of the year ending **1977:III**; and
- o Wholesale prices of industrial goods in the United States remained constant relative to similar wholesale prices in the rest of the industrialized world, after correction for changes in exchange rates.

The difference between the simulated trade flows and the actual trade flows provides a measure of the effects of more rapid foreign growth and of the improved U.S. competitive position.

These simulations are of a partial equilibrium nature. No attempt is made, for example, to link an increase in foreign economic activity through increased U.S. exports to a rise in U.S. GNP, which in turn brings about a rise in U.S. imports. The difficulties inherent in estimating a fully linked set of structural equations are formidable, and the effort required to do so does not seem justified for the simple results desired for this paper. Properly interpreted, these simulations represent what trade flows might have been if growth abroad had not speeded up and if the U.S. competitive position had not improved, assuming that neither of these developments affected U.S. GNP. Because a lack of growth abroad and a stagnation in the U.S. competitive position would have had a restraining effect on the growth of U.S. GNP, and consequently of U.S. imports, the trade effects of these developments are **overestimated**.

Table A-2 shows actual trade flows and the simulated trade flows that would have resulted if foreign economic growth had not picked up. Only changes in U.S. exports are shown, since, consistent with the partial equilibrium nature of these simulations, decreased growth abroad would have no effect on U.S. imports.

Table A-3 shows actual trade flows and the simulated trade flows that would have resulted if **U.S.** competitiveness had not improved. In these simulations, some ambiguity is inherent in the

TABLE A-2. SIMULATED EFFECT OF LESS RAPID FOREIGN ECONOMIC GROWTH ON U.S. EXPORTS OF **MANUFACTURES:** BY QUARTERS, IN BILLIONS OF DOLLARS

	1978:I	1978:II	1978:III	1978:IV	1979:I
Actual Exports	20.7	24.1	23.3	26.4	27.2
Simulated Exports	<u>20.4</u>	<u>23.6</u>	<u>22.7</u>	<u>25.4</u>	<u>26.1</u>
<b>Difference</b>	<b>0.3</b>	<b>0.5</b>	<b>0.6</b>	<b>1.0</b>	<b>1.1</b>

SOURCE: CBO estimates.

NOTE: All entries in this table are quarterly figures. For annual rates, multiply by four.

conversion of real trade flows into nominal trade flows. The simulations were based in part on an assumption that U.S. prices did not change relative to foreign prices. This could have come about because U.S. prices rose at the slower foreign rate or because foreign prices rose at the faster U.S. rate, or anything in between. Real trade flows were converted to nominal flows using both U.S. and foreign prices on the assumption that these two estimates would serve as bounds on the range of reasonable estimates. In practice, the net effects of changes in competitiveness are not very sensitive to which set of prices is used, but the values of the component import and export flows are quite different.

#### Agricultural Products and Raw Materials

For simulation purposes it was assumed that the income elasticity of U.S. exports of agricultural products and raw materials is one. Changes in relative costs in the United States and abroad were assumed to have no effect on trade in these commodities, since they are generally traded in world markets at prices not affected by relative costs in various countries. As noted in the text, exchange rate changes should be expected to affect the value of agricultural and raw materials trade, but such effects were not included in these simulations.

TABLE A-3. SIMULATED EFFECT OF UNIMPROVED U.S. COMPETITIVE POSITION ON U.S. IMPORTS AND EXPORTS OF MANUFACTURES: BY QUARTERS, IN BILLIONS OF DOLLARS

	1978:I	1978:II	1978:III	1978:IV	1979:I
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Using U.S. Prices					
Actual Exports	20.7	24.1	23.3	26.4	27.2
Simulated Exports	<u>20.8</u>	<u>24.2</u>	<u>23.5</u>	<u>26.5</u>	<u>26.7</u>
Difference	-0.1	-0.1	-0.2	-0.1	0.5
Actual Imports	22.8	25.2	24.8	26.1	25.3
Simulated Imports	<u>23.1</u>	<u>25.9</u>	<u>25.6</u>	<u>26.9</u>	<u>26.6</u>
Difference	-0.3	-0.7	-0.8	-0.8	-1.3
Using Foreign Prices					
Actual Exports	20.7	24.1	23.3	26.4	27.2
Simulated Exports	<u>20.5</u>	<u>23.5</u>	<u>22.6</u>	<u>25.4</u>	<u>25.1</u>
Difference	0.2	0.6	0.7	1.0	2.1
Actual Imports	22.8	25.2	24.8	26.1	25.3
Simulated Imports	<u>22.8</u>	<u>25.1</u>	<u>24.6</u>	<u>25.8</u>	<u>25.1</u>
Difference	0.0	0.1	0.2	0.3	0.2
<hr/>					

SOURCE: CBO estimates.

NOTE: All entries in this table are quarterly figures. For annual rates, multiply by four.



2. Methodology

3. Results

RELATIVE WHOLESALE AND EXPORT UNIT VALUE PRICES

The relative wholesale price index for the United States is computed as the weighted geometric average of quarterly industrial wholesale price indexes in 11 industrialized countries relative to the U.S. wholesale price index for industrial goods. The relative export unit value index is a similarly computed average of foreign export unit value indexes relative to the U.S. index of export unit values. Each foreign index is expressed in local currency units and then is adjusted for changes in the bilateral exchange rate between the U.S. dollar and local currency. Formally, the relative wholesale price index in each period,  $P_t$ , is given by the formula:

$$P_t = \prod_i \left( \frac{WPI_{us,t}}{WPI_{i,t}} \cdot X_{i,t} \right)^{W_i}$$

where

$WPI_{us,t}$  = wholesale price index in the United States in period  $t$

$WPI_{i,t}$  = wholesale price index in country  $i$  expressed in local currency units in period  $t$

$X_{i,t}$  = an index of the number of local currency units per U.S. dollar for country  $i$  in period  $t$

$W_i$  = weight for country  $i$ .

The relative export unit value index is computed in an exactly analogous manner.

Data on wholesale prices, export unit values, and exchange rates are from International Financial Statistics, published by the International Monetary Fund. The weights used for this calculation are proportional to each country's share of total U.S. trade in manufactures in 1976. These shares are published in World Financial Markets, May 1978, p. 5. The countries included in this computation and their respective weights are given in Table B-1.

TABLE B-1. WEIGHTS FOR RELATIVE WHOLESALE PRICE AND EXPORT UNIT VALUE INDEX CALCULATION

Country	Weight
Canada	0.407
Japan	<b>0.205</b>
Germany	0.092
United Kingdom	0.078
France	0.051
<b>Italy</b>	0.039
Belgium	0.032
Netherlands	0.031
Australia	0.027
Switzerland	0.021
Sweden	0.018

#### RELATIVE UNIT LABOR COSTS

The index of relative unit labor costs for the United States was computed as the weighted geometric average of quarterly unit labor costs in nine industrialized countries relative to U.S. unit labor costs. Each national index of unit labor costs was expressed in local currency units and then adjusted for changes in the bilateral exchange rate between the U.S. dollar and the local currency. Formally, the relative unit labor cost index in each period,  $C_t$ , is given by the formula:

$$C_t = \prod_i \left( \frac{ULC_{us,t}}{ULC_{i,t}} \cdot X_{i,t} \right)^{W_i}$$

where

$ULC_{us,t}$  = unit labor cost index for the United States in period t

$ULC_{i,t}$  = unit labor cost index for country i in period t expressed in local currency units

$X_{i,t}$  = an index of the number of local currency units per U.S. dollar for country i in period t

$W_i$  = weight for country i

The weights used for this calculation are proportional to each country's share of total U.S. trade in manufactures in 1976. These shares are published in World Financial Markets, May 1978, p. 5. The countries included in this computation and their respective weights are given in Table B-2.

TABLE B-2. WEIGHTS FOR RELATIVE UNIT LABOR COST CALCULATION

Country	Weight
Canada	0.427
Japan	0.215
Germany	0.097
United Kingdom	0.082
France	0.053
Italy	0.041
Belgium	0.034
Netherlands	0.033
Sweden	0.018

Reliable unit labor cost figures computed on a consistent basis for the industrialized countries are available on a yearly basis from the U.S. Department of Labor. For each country, a synthetic quarterly unit labor cost index was computed by regressing the annual Department of Labor data on a related proxy variable and on time. The resulting coefficients were then applied to quarterly values of the proxy variable, and the residuals from the annual regressions were added to this value to produce a quarterly series having annual averages equal to the annual Department of Labor unit labor cost figures. Where possible, the quarterly proxy variables used were national-source unit labor cost figures. In other cases, the proxy variable was formed by multiplying an index of wages by an index of employment and dividing by an index of output. Where possible, this ratio was further adjusted by multiplying by an index of average weekly hours worked. In all cases, the annual regressions produced good fits of the Department of Labor figures to the proxy variables; in no case was the  $R^2$  (adjusted) of the regression lower than 0.99.

Quarterly data were derived from Main Economic Indicators, published by the Organization of Economic Cooperation and Development, and in all cases data referred only to the manufacturing or the mining and manufacturing sectors. Data on exchange rates are from International Financial Statistics, published by the International Monetary Fund.

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