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Economic Pause — Some Perspective and Interpretation

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THE economy began a recovery in the second quarter of 1975 and made significant advances in its first year. In the last two quarters, however, the pace of economic activity has been less robust. The economy's performance in this most recent period has triggered a great deal of concern over the sustainability of the recovery. These fears have probably been intensified by a number of considerations, including the fact that the unemployment rate has risen recently — a development not generally observed at this point in a recovery. In addition, concern over the economy was no doubt heightened by the political campaigns conducted in this election year where the release of any economic news, whether good or bad, sparked considerable public discussion.

Analysts have offered a whole host of explanations for the current economic lull. Some seem more credible than others, but when recent developments are placed in perspective, a less pessimistic economic picture is painted.

MEASURING THE DIMENSIONS OF THE SLOWDOWN

The term "pause" has been employed by analysts to describe the current state of economic activity. Although popular, use of the term is a bit misleading since it implies some degree of stagnation or inactivity. While developments of the last two quarters have not been favorably regarded by some analysts, the economy has not been inactive or stagnant. Its upward momentum, however, has moderated since the spring of 1976 and it is this period of slower growth to which the term "pause" refers.

Measures of aggregate output are often cited as evidence of this slowing. For example, real GNP expanded by more than 7 percent during the first year of the recovery from the 1973-75 recession. In the past two quarters this measure of aggregate output has slowed to about a 4 percent rate of growth. Industrial production, another measure of the nation's output, posted a substantial gain of about 15 percent during the first 12 months of the recovery which began in early 1975. Since March, however, this measure of real output has slowed to about a 5 percent pace.

The unemployment rate, after peaking at 8.9 percent in May 1975, responded to the forces of recovery and began a descent which carried it to 7.3 percent in June 1976. Since then, however, this rate has tended to rise and stood at 8.1 percent in November.

Personal income, which registered an 11.1 percent advance in the first year of the recovery, has since exhibited a more modest 8.6 percent rate of growth. Along with this slowdown in income, consumption expenditures have also displayed some signs of sluggishness. For instance, from first quarter 1975 to first quarter 1976, personal consumption expenditures rose by almost 12 percent, somewhat more robust than

the nearly 9 percent growth rate registered since the first quarter of this year. Growth of consumption expenditures adjusted for price changes fell from about 6 to 4 percent over the same time periods.

Retail sales have likewise mirrored the pattern of overall activity. During the first 12 months of the most recent recovery, retail sales grew by more than 16 percent. Since March of this year, retail sales have slowed to about a 6.4 percent rate of advance.

EXPLANATIONS FOR THE PAUSE

Monetary and Fiscal Policies

Both monetary and fiscal policies have been offered by various analysts as factors contributing to the pause.[1] Some monetary analysts have pointed to the relatively slow monetary growth in late 1975 and early 1976 as a causal factor. Money (M_1) grew at only a 2.5 percent rate in this period, after a rapid 7.4 percent rate in the previous two quarters. Studies have been conducted which show that marked and sustained fluctuations in money growth have important effects on variations in output growth, and it cannot be ruled out that some restrictive influence on the economy resulted from this period of slower money growth.

Another popular explanation for the current lull in economic activity is associated with fiscal policy — in particular, Federal Government spending. In the first three quarters of the year, the Government spent less than the amount budgeted. Estimates of the amount of this "shortfall" range from $4 billion to $17 billion. Proponents of this "underspending" viewpoint argue that the deviation of actual expenditures from planned or budgeted expenditures has acted to restrain activity and, in fact, is one of the key factors affecting the current economic slowdown.[2] This type of argument, however, is somewhat suspect. The concensus has usually been that economic activity is influenced by the "spent" government dollar. Now it appears as if economic activity is sensitive to the "unspent" government dollar as well.[3]

A less stimulative fiscal policy however, is evident from recent trends in *actual* Government expenditures. Over the past three quarters of this year, Federal expenditures have increased at a 5.4 percent rate, compared to a 12.8 percent rate in calendar 1975. To the extent that Government spending has an impact on economic activity independent of monetary actions, this measure of fiscal policy does imply a slowing in the pace of economic activity. But the extent of the implied slowing is less than that associated with the so-called "shortfall" argument above.

Business Confidence

Lack of business confidence is also said to have played some part in the current hesitation in economic growth, although this explanation is difficult to demonstrate.[4] Uncertainty about future economic policies always exists, but it is especially great in election years. Expectations of future government actions, such as tax policies regarding business, can greatly influence investment decisions made in the current period. One such consideration is the investment tax credit. Since current discussion suggests the possibility of increasing the amount of the credit, businessmen may be taking a wait-and-see attitude with regard to capital expansion programs, thus contributing to the more modest rate of economic expansion.

Inventories

The behavior of business inventories over the current recovery offers another explanation for the recent pause.[5] Movements in inventories in the current recession/recovery period have been very large by historical standards. Real inventory swings were quite severe in early 1975 with a $21 billion annual rate of decumulation in the second quarter. From the fourth quarter of last year to the first quarter of this year, inventories exhibited a large swing, from a run-off at a $5.5 billion annual rate to a $10.4 billion annual rate of accumulation. This sharp rebuilding of inventories boosted GNP growth in the first quarter to an unsustainable 9.2 percent rate. In the subsequent two quarters, inventories were accumulated at about the same rate as in the first quarter, thus providing no further impetus to GNP growth rates.[6]

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[1]"A Longer Pause Than Expected," *Business Week*, 18 October 1976, p. 36. Also, "Sagging 76 — Slowdown Surprises Most Analysts; Some Expect It To Persist," *Wall Street Journal*, 6 October 1976.

[2]See *The Federal Budget: Its Impact on the Economy*, The Conference Board, October 27, 1976.

[3]To the extent that economic forecasts are based on planned expenditures, the shortfall in expenditures can serve as an explanation of why forecasts of economic activity differ from actual performance. But this is quite a different argument from the one advanced above.

[4]Statement by Arthur F. Burns, Chairman, Board of Governors of the Federal Reserve System, before the U.S. Senate, Committee on Banking, Housing and Urban Affairs, November 11, 1976.

[5]Burton G. Malkiel, Council of Economic Advisers, "U.S. Economic Outlook" (Speech delivered before the 1977 U.S. Outlook Conference, November 15-18, 1976).

[6]The arithmetic of how inventories affect the *level* of GNP in a given period and the *change* in GNP between periods is

Table I

The Pattern of Economic Growth in Recoveries

Recession Trough	REAL GNP (Compounded Annual Rates of Change)		CHANGE IN REAL INVENTORY INVESTMENT (Billions of Dollars)		REAL FINAL SALES (Compounded Annual Rates of Change)		MONEY SUPPLY (Compounded Annual Rates of Change)	
	First Year of Expansion	Second Year of Expansion	First Year of Expansion	Second Year of Expansion	First Year of Expansion	Second Year of Expansion	First Year of Expansion	Second Year of Expansion
II/1954	7.5%	2.6%	+$12.1	−$ 2.5	5.4%	3.0%	3.8%	1.2%
II/1958	8.7	1.7	+$19.2	−$ 8.1	5.8	2.9	4.5	−0.7
I/1961	7.0	3.2	+$14.4	−$ 3.0	5.0	3.7	3.0	1.7
IV/1970	4.6	7.3	+$ 0.4	+$ 7.1	4.6	6.7	6.7	8.4
Average	7.0	3.7			5.2	4.1	4.5	2.7
I/1975	7.3	4.1*	+$30.9	−$ 0.2*	4.6	4.2*	5.0	6.4*

*Measured from I/1976 to III/1976.

INVENTORIES AND THE PATTERN OF RECOVERY

All of the factors mentioned in the explanations above may have had some influence on the current period of slowing. Upon further investigation, however, the inventory pattern appears to have been the most influential factor.

In the first place, a moderation in the pace of economic activity is not an unusual development at this stage of the business cycle, as three out of the last four recoveries have displayed such a slowing. In general, the pattern of real GNP growth is one of acceleration in the early stages of recovery, followed by a period of deceleration and more moderate growth.

This pattern is depicted in Table I where the growth in real GNP during the first year of each of the last five expansions is contrasted with that in the second year of expansion. Except for the recovery which commenced in the fourth quarter of 1970, economic growth in the second year has been noticeably less rapid than in the first. On average, real GNP in the last four recoveries has increased at a 7.0 percent rate in the first year, followed by a 3.7 percent rate in the second year; this is very similar to the respective 7.3 and 4.1 percent rates of advance recorded in the recovery to date. The tendency for recoveries to exhibit some slowing at this stage suggests the possibility of a common set of factors which influence the pattern of economic recovery.

The acceleration of real output growth in the early stages of recoveries is influenced to a great extent by the pattern of inventory investment. As shown in Table I, changes in real inventory investment in the first year of most recoveries have provided a substantial boost to GNP growth in that year; by the second year, inventory stimulus to aggregate demand growth has generally disappeared. Table I suggests, however, that the influence of inventories on recent real GNP growth has been even greater than in other recoveries. The $31 billion swing in inventory investment in the first year of the current recovery is by far the largest of the postwar period. The magnitude of this swing largely reflects the sharp inventory decumulation which occurred in 1974. The stage was set for this decumulation in 1972 and 1973 when shortages, price controls, and accelerating inflation resulted in a speculative buildup of inventories. Therefore, at least a portion of current movements in inventory investment is a response to these excesses and is independent of more fundamental determinants, such as the stance of aggregate demand policies.

Additional evidence of the impact of inventories in the current period can be gleaned from an examination of real final sales, which is real GNP minus changes in real inventories. In the recoveries which began in 1954, 1958, and 1961, growth of real final sales decelerated in the second year of economic expansion, as did real GNP. This indicates that the eco-

sometimes confusing. This confusion stems from the fact that the *change* in the stock of inventories in a period adds to the level of GNP in that period. Perhaps more confusing is that the difference of the change in inventory levels from one period to another affects the change in GNP from one period to another. Thus a change in inventories levels of $10 billion in each of two quarters implies no change in GNP between the two quarters, given everything else equal.

nomic slowing extended beyond inventories and that more fundamental factors were impacting on the economy. Probably the most important factor operating during these periods was monetary growth. Table I shows that the slowing in real final sales in the second year of these expansions was accompanied by a lessening of the stimulus provided by monetary expansion. Only a very slight slowing in real final sales, however, is detectable in the current recovery. This suggests that aggregate demand policies have not played a dominant role in the current period of slower economic growth.

To sum up, the inventory pattern seems to have masked the underlying growth pattern of the recovery, as revealed by a fairly stable growth of final sales. In retrospect, the strength of real GNP growth experienced in the first year of recovery was based largely on the strong inventory rebuilding. The "pause" in the past two quarters, on the other hand, largely reflects the lack of *further* stimulus to GNP growth from inventory investment rather than lack of stimulus provided by stabilization policies.

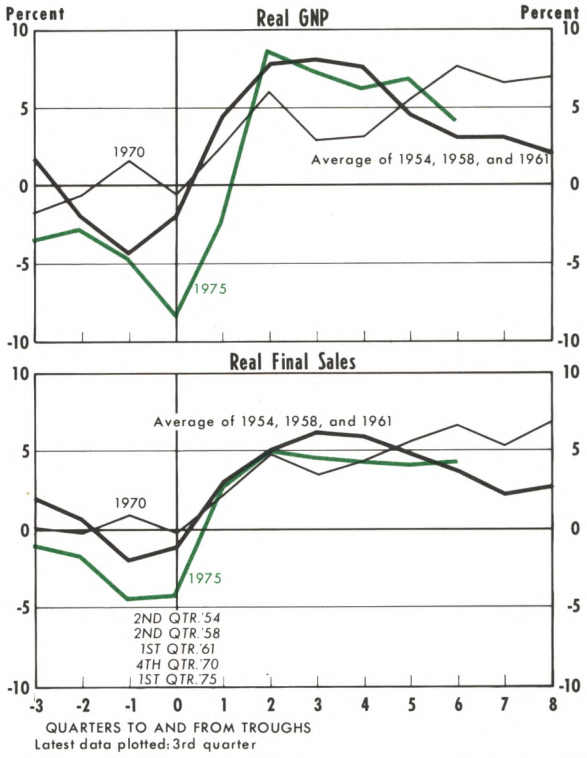
UNEMPLOYMENT RATE PATTERN — A DISTINCT FEATURE OF THE CURRENT RECOVERY

The high and recently rising unemployment rate is a feature of the current recovery which has been most disconcerting. The unemployment rate fell from a high of 8.7 percent in the second quarter of 1975 to 7.6 percent in the first quarter of 1976. With the period of slower real GNP growth this year, the unemployment rate has reversed its downward course, averaging 7.8 percent in the third quarter.

This recent upward movement in the unemployment rate is especially curious on two counts — it is contrary to historical patterns and it occurred despite relatively strong employment gains. The unemployment rate historically has registered its largest declines during the first year of recovery. In the second year this measure of labor market conditions has tended to stabilize or fall somewhat further. In addition, total employment has risen rapidly in the past two quarters when compared to the average growth in the second year of several other recoveries (see Table II). This suggests that the demand for labor has not been the primary factor affecting the rise in the unemployment rate.

The recent rise in the unemployment rate appears to reflect atypical labor supply developments. Again,

The Pattern of Economic Growth in Recent Recoveries
(Two-Quarter Annual Rates of Change)
Seasonally Adjusted



referring to Table II, the labor force has expanded at an unusually rapid rate in this recovery, especially in the past two quarters. In the first year of recovery, the labor force increased 1.9 percent — significantly greater than the 0.9 percent average rate observed in the first year of other recoveries. In the last two quar-

Table II

Labor Market Developments in Recoveries

Recession Trough	Civilian Employment Growth, Compounded Annual Rates of Change: First Year of Expansion	Civilian Employment Growth, Compounded Annual Rates of Change: Second Year of Expansion	Civilian Labor Force Growth, Compounded Annual Rates of Change: First Year of Expansion	Civilian Labor Force Growth, Compounded Annual Rates of Change: Second Year of Expansion
II/1954	2.8%	3.4%	1.3%	3.2%
II/1958	3.2	2.0	0.8	2.1
I/1961	1.0	1.2	—0.3	1.3
IV/1970	1.7	3.2	1.7	2.7
Average	2.2	2.5	0.9	2.3
I/1975	2.5	3.5*	1.9	3.9*

*Measured from I/1976 to III/1976.

ters, labor force growth accelerated to a 3.9 percent rate — noticeably higher than the 2.3 percent average in the second year of previous recoveries. This unusual growth of the labor force reflects both demographic factors which have worked to increase the number of teenagers of working age and the increased participation of those of working age, particularly among teenagers and women.

The impact on the unemployment rate from the increased supply of labor is magnified by the composition of this supply. Women and teenagers who are entering the labor force in greater numbers tend to have had a higher degree of unemployment among their ranks. Chronic unemployment for these groups is, in part, the result of a number of structural barriers including minimum wage laws, discrimination, and the lack of suitable work skills. As a result, demand-oriented policies, unless accompanied by appropriate structural reforms, are not likely to reduce unemployment to levels attained in other expansions without accelerating inflation.

OUTLOOK

Although some degree of moderation has set in, the expansion has not run its course. Some recent indicators of economic activity suggest that GNP growth in the fourth quarter of 1976 may be somewhat less than the growth recorded in the third quarter. But fundamental forces affecting demand and supply suggest that such growth should be interpreted as chiefly a random fluctuation and not indicative of the likely future direction of economic activity.

Demand Forces

Monetary developments are a particularly important determinant of fluctuations in economic activity, as was discussed above. Table I showed that the three recoveries which slowed in the second year were accompanied by slower monetary growth. In the recovery beginning in early 1971, economic growth accelerated in the second year, apparently reflecting the acceleration in money growth.

The current stance of monetary policy appears to be moderately expansive. In the past nine months, M1 has increased at a 6 percent annual rate, above the 4.9 percent growth observed in the first year of economic expansion. While this growth of money, if sustained over the long-term, is too rapid to make progress in reducing inflation, such growth increases the likelihood of some acceleration in the pace of economic advances in 1977 from currently prevailing rates.

Supply Conditions

While growth of aggregate demand is likely to accelerate in 1977, a fundamental consideration is the ability of the economy to translate these demands into real goods and services. Measures of the utilization of manufacturing capacity give some indication of this capability.

A recent major revision of the Federal Reserve Boards' capacity utilization rate in manufacturing has reduced substantially the amount of excess capacity which was previously thought to exist. According to the revised figures, manufacturing capacity utilization is estimated to be at about 81 percent in the third quarter, not significantly different from the utilization rate achieved after six quarters in the previous three recoveries.

The comparability of utilization rates in both the current and previous expansion periods is noteworthy, since at the depths of the 1973-75 recession, manufacturing capacity utilization was less than in any previous postwar recession. The recent 10 percentage point gain in this utilization rate, however, was the result of a slower-than-average increase in manufacturing capacity, rather than a greater-than-average increase in output. This slower growth in capacity is quite disconcerting since it has an effect on the ability of the economy to quickly absorb all of the unemployed labor resources at prevailing prices and wages and to sustain the increases in real income achieved over the past 30 years.

Utilization rates in recent peacetime expansions have peaked at rates which have ranged from the middle to the upper 80's. Thus the excess capacity implied from the current operating rate of 81 percent should allow the economy in 1977 to generate increases in output at rates greater than the long-run trend rate. But the extent of this excess capacity may be less than is implied by a comparison of the currently reported operating rate with previous peak rates. In particular, analysts have noted that events of the last few years, such as the quadrupling of oil prices, have reduced the economy's potential output. Given the uncertainty of whether or not such events have been fully captured by the recently revised capacity data, the economy may be closer to an effec-

tive capacity constraint than is indicated by reported data.[7]

CONCLUSION

Fluctuations in inventory investment have been an important influence on the recovery pattern to date. Upon reflection the "pause" seems to be little more than the economy's reaction to the lack of further inventory stimulus in the past two quarters, not a reflection of insufficient stimulus to aggregate demand. Existing demand and supply conditions now seem set for further economic expansion next year.

The relatively high unemployment rate continues bothersome. This high rate, however, largely reflects labor supply factors and is not necessarily indicative of weak aggregate demand. Part of the unemployment is of a chronic nature which can only be solved by structural reforms in the labor markets. As such, adopting demand policies designed to reduce the unemployment rate to levels achieved in other recoveries is likely to be frustrated by accelerating inflation. Instead, policies designed to promote a favorable environment for much needed capital investment seem in order.

[7]For further articulation of this view, see Denis S. Karnosky, "The Link Between Money and Prices — 1971-76," this *Review* (June 1976), pp. 17-23. Whether the recent capacity revision reflects this type of analysis is unclear. The revision does not *directly* incorporate any adjustment factor for the effects of the oil price change on economic capacity, but it may *indirectly* reflect such events through the incorporation of a recent McGraw-Hill survey of capacity utilization rates.

U.S. International Trade and Financial Developments in 1976

DONALD S. KEMP

THE purpose of this article is to review U.S. international trade and financial developments for the year 1976. However, because much of the data relating to these developments are not available beyond the second quarter of 1976, the review is limited in this respect. Since this same limitation was encountered in the *Review* article which examined international transactions for the year 1975, the events of the last half of 1975 will be briefly recounted here.[1] Of particular importance is the pattern of international transactions, their impact on the U.S. economy, and consideration of the movement of exchange rates between the U.S. dollar and other major currencies. In this regard attention will be devoted to the Italian lira, the British pound, and the Mexican peso.

U.S. INTERNATIONAL TRANSACTIONS IN 1976

What Happened?

Reference to the figures presented in Table I indicates that merchandise exports increased during the third and fourth quarters of 1975 by $711 million and $1.1 billion, respectively.[2] However, during the first quarter of 1976 merchandise exports declined by $821 million. This decline was evenly divided between agricultural and non-agricultural goods. A decrease in capital goods exports, led by a decrease in the export of civilian aircraft, accounted for most of the decline in non-agricultural exports. However, merchandise exports registered a significant turnaround during the second quarter of 1976, increasing by $1.6 billion. While both agricultural and non-agricultural exports increased during this quarter, the latter category accounted for about two-thirds of the total increase. This was primarily the result of a large increase in capital goods exports, led again by civilian aircraft.

Merchandise imports increased during each quarter from III/75 to II/76. During both the first and second quarter of 1976 the major part of the increase occurred in the industrial supplies and materials component. While petroleum imports increased in both quarters, the second quarter increase in these imports was particularly large, accounting for nearly all of the increase in merchandise imports in that period.

Preliminary data indicate that both merchandise exports and imports increased during the third quarter of 1976, with the latter increasing substantially more than exports. Indications are that these increases were broadly based across virtually all categories of imports and exports.

The flow of direct investment between the United States and the rest of the world changed significantly between II/75 and II/76. Over this four quarter period, U.S. direct investment abroad increased in two quarters ($924 million in IV/75 and $63 million in I/76) and decreased in two quarters ($1.6 billion in III/75 and $2.2 billion in II/76) relative to the levels recorded in the respective preceding quarter. Direct investment in the United States also decreased during two quarters ($828 million in III/75 and $2 billion in I/76) and increased in two quarters (about $1.3 billion during IV/75 and II/76) relative to their respective levels in the preceding quarter. In fact, during III/75 and I/76 foreign direct investment in the United States was actually negative. The $728 million disinvestment recorded in I/76 was a record decrease for the post-war period. However, during II/76 the flow of direct investment into the United States increased to record a net inflow of $547 million. At the same time, U.S. direct investment abroad decreased relative to its first quarter rate, to register a net decline of $463 million. This was the first quarter since at least the early 1960's during which there was a net U.S. direct disinvestment abroad. Thus, during the first half of 1976 there was a significant shift in direct international investment from a net U.S. outflow in the first quarter to a net U.S. inflow in the second quarter.

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[1] See Hans H. Helbling, "Foreign Trade and Exchange Rate Movements in 1975," this *Review* (January 1976), pp. 9-14.

[2] For a description of the various categories of international transactions discussed in this article, see any issue of *U.S. International Transactions and Currency Review*, published quarterly by this Bank.

Table I

U.S. INTERNATIONAL TRANSACTIONS[1]
Seasonally Adjusted

(Millions of Dollars)

	1975				1976		
	I	II	III	IV	I	II	III
Merchandise Exports	27,018	25,851	26,562	27,657	26,836	28,450	29,678P
Agricultural Goods	6,053	4,886	5,563	5,740	5,321	5,876P	
Foods, Feed and Beverages	5,268	4,109	4,836	4,984	4,543	4,989P	
Nonagricultural Goods	20,965	20,965	20,999	21,917	21,515	22,574P	
Industrial Supplies and Materials	8,096	7,589	7,488	7,624	7,655	8,003P	
Petroleum and Products	245	257	247	255	249	243P	
Capital Goods, except Automotive	8,580	8,880	8,987	9,394	9,116	9,583P	
Automotive Vehicles, Parts, and Engines	2,249	2,682	2,803	2,897	2,828	3,046P	
Consumer Goods (nonfood), except Automotive	1,562	1,527	1,651	1,802	1,918	1,969P	
Merchandise Imports	25,570	22,568	24,483	25,437	28,510	29,735	32,553P
Agricultural Goods	2,306	2,276	2,491	2,445	2,625	2,736P	
Foods, Feed and Beverages	2,306	2,312	2,585	2,475	2,671	2,827P	
Nonagricultural Goods	23,264	20,292	21,992	22,992	25,885	26,999P	
Industrial Supplies and Materials	13,796	12,232	12,710	12,636	14,116	15,924P	
Petroleum and Products	6,552	6,338	7,183	6,945	7,399	8,539P	
Capital Goods, except Automotive	2,442	2,343	2,358	2,543	2,587	2,637P	
Automotive Vehicles, Parts, and Engines	2,594	2,684	3,233	3,337	3,982	4,074P	
Consumer Goods (nonfood), except Automotive	3,409	3,204	3,386	3,736	4,210	4,427P	
Service Exports	9,925	9,919	10,488	10,945	11,748	11,781P	
Service Imports	8,765	8,118	8,302	8,808	9,016	8,922P	
Unilateral Transfers Abroad (net)	1,976	2,348	1,100	1,428	1,168	967P	
Direct Investment Abroad	1,510	2,334	770	1,694	1,757	−463P	
Direct Investment in U.S.	476	780	−48	1,229	−728	547P	
Portfolio Investment Abroad	1,928	979	938	2,361	2,525	1,448	2,808P
Portfolio Investment in U.S.	344	385	738	1,038	1,030	160	78P
Deposits Abroad (demand, time)	−433	−289	450	445	452	720	
Deposits in U.S.[2] (demand, time)	40	−387	1,423	−1,357	1,715	−711	
Monetary Base Effect	42	−12	141	12	580	560	−381P

P — Preliminary

[1]The signs in this table do *not* indicate whether a particular transaction is an inflow or outflow, as is the case in standard balance-of-payments tables. In this table a negative sign indicates that there was a reduction in the stock of a particular class of assets during a particular time period. For an explanation of some of the terms used see any issue of *U.S. International Transactions and Currency Review*, published by this Bank.

[2]Deposits in U.S. only available for deposits payable in dollars.

Sources: Board of Governors of the Federal Reserve System, U.S. Department of Commerce, U.S. Treasury Department

U.S. portfolio investment abroad followed the same general pattern as U.S. direct investment, rising during IV/75 and I/76 and declining during III/75 and II/76. However, unlike U.S. direct investment abroad, there was still a net increase in portfolio investment abroad of about $1.4 billion in the second quarter. On the other hand, foreign portfolio investment in the United States slowed during the first three quarters of 1976 after increasing during the last two quarters of 1975. However, as was the case with portfolio investment abroad, there was a net increase in portfolio investment in the United States during all three quarters of 1976.

United States ownership of bank deposits abroad increased during each quarter after the second quarter of 1975. However, while foreign owned bank deposits in the United States increased significantly during III/75 and I/76, there was a decline in these deposits during IV/75 and II/76.

What Does It All Mean?

In spite of many attempts to do so in the past, it is almost impossible to glean an overall picture of the impact of international transactions on the U.S. economy from the data discussed in the preceding section.

The data are partial in coverage and are, therefore, a very incomplete guide to an assessment of the overall impact of international transactions on economic activity. However, the data can be very useful in an assessment of international investment trends and a more specific breakdown of the merchandise trade accounts could be useful for specific industry studies.

In order to assess the overall impact of international transactions on the U.S. economy, it is necessary to compute the net impact of these transactions on the U.S. money stock. Under a system of "managed" exchange rates, the primary channel by which international trade and capital transactions can have an impact on aggregate economic activity is via international reserve flows and their subsequent impact on the money supply.[3] However, one is unable to gauge the magnitude of this impact by looking at either the trade or the capital account separately. For example, the effects on aggregate economic activity of a deficit in the merchandise trade account alone could be partially or fully neutralized by a surplus in one of the capital accounts. If such a situation arose, the negative aggregate demand (for domestic output) effects resulting from an increase in imports of goods would be partially or fully offset by an inflow of capital and a resulting increase in investment demand. If the two effects fully offset each other, there would be no gain or loss of international reserves and the money supply would not be affected by the international trade and capital transactions.

Of all international transactions, the only ones that affect the money stock are those that affect some component of the monetary base. Official U.S. holdings of gold and foreign currency balances (primary reserve assets) and foreign deposits at Federal Reserve Banks are the only components of the monetary base that are affected by international transactions. Thus, the entire impact of these transactions on the money stock can be captured by observing changes in these items.[4]

The computations described above have been performed and the results are presented in Table I under the heading "Monetary Base Effect". These figures indicate that the net impact of international transactions during each quarter from III/75 to II/76 was to exert upward pressure on the monetary base and, therefore, on the money stock. During the third quarter of 1976 these transactions exerted downward pressure on the monetary base on the order of $381 million. However, when these figures are compared with the overall changes in the monetary base over these periods, their significance is brought into better perspective. In the four quarters from III/75 to II/76, the monetary base effect amounted to 6.6, 0.6, 34.6, and 21.4 percent, respectively, of the total increase in the monetary base. In the third quarter of 1976, the negative impact on the base amounted to 19.4 percent of the total change.

EXCHANGE RATE MOVEMENTS IN 1976

The year 1976 has been a watershed in the annals of international monetary reforms. The events of 1976 represent a de facto as well as a de jure defeat for the advocates of artificially pegged exchange rates. For those who have long recognized the futility and folly of such policies, the events of 1976 were evidence of an ideological triumph.

The de facto defeat of the advocates of fixed exchange rates is represented by the precipitous decline in the international value of the Italian lira, the British pound, and the Mexican peso. These events are a grim testimony to the unacceptability of fixed exchange rates between countries which pursue differing domestic economic policies. This unacceptability was further demonstrated during 1976 by the recurrence of exchange market crises that plagued efforts to hold together the European Currency Snake. The de jure defeat of the fixed rate advocates came in the form of a proposed amendment to Article IV of the Articles of Agreement of the International Monetary Fund (IMF). The proposed amendment to Article IV not only legalizes floating exchange rates, but also requires that IMF members avoid manipulating exchange rates.[5]

The depreciation of the pound, the peso, and the lira can be explained in terms of relative rates of

[3]A system of "managed" exchange rates is one in which exchange rates are managed through limited official market intervention rather than rigidly pegged or left alone to float completely free in response to nongovernmental market influences. This type of arrangement is descriptive of the approach taken by the United States since March, 1973.

[4]For a more thorough exposition of this view, see Donald S. Kemp, "A Monetary View of the Balance of Payments," this *Review* (April 1975), p. 16 and "Balance-of-Payments Concepts — What Do They Really Mean?" this *Review* (July 1975), p. 16.

[5]By allowing exchange rates to float, most IMF members have been acting in violation of Article IV for some time. In its current form, Article IV prohibits the current international monetary arrangement of managed floating. However, the amended Article IV, which allows floating, is more representative of the sentiments of most IMF members and will probably, therefore, be ratified in the near future.

inflation.[6] In other words, movements in exchange rate can be thought of as a means of adjusting price levels for the effects of differing actual or expected rates of inflation between two countries. As one country inflates faster than another, the value of that country's currency falls (depreciates) relative to the value of the low inflation country's currency. Under a system of freely floating or loosely managed exchange rates, necessary adjustments to differing rates of inflation are permitted to occur gradually. However, when exchange rates are narrowly fixed (as was the case with the Mexican peso prior to September 1976) or tightly managed (as has been the case with the Italian lira and the British pound since March 1973) exchange market pressures are not relieved in a slow and orderly fashion. However, once market participants sense the presence of pent-up market forces which favor realignment, exchange market pressures surge and result in "currency crises" and sudden large jolts in exchange rates. Thus, while the relationship between exchange rates and relative rates of inflation may not be strong in the short run, the longer the time frame, the stronger this relationship becomes.

The Lira

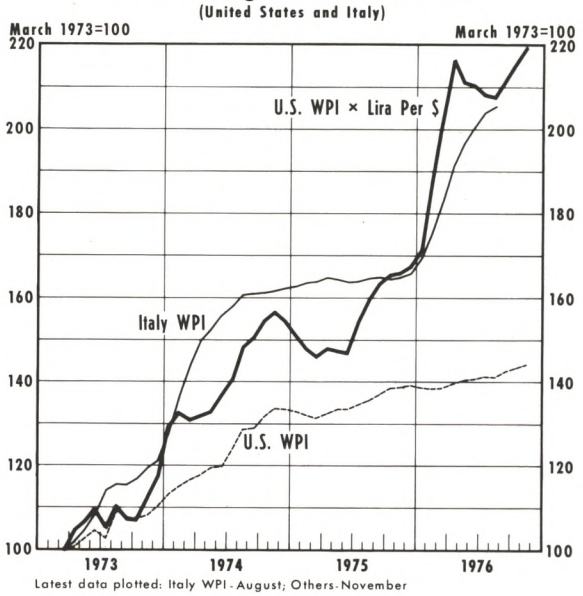
The exchange rate between the Italian lira and the U.S. dollar provides a good example of the affects of differing rates of inflation among trading partners. Chart I attempts to illustrate this point graphically. Using March 1973 as a base, an index of the level of wholesale prices is plotted for the United States (labeled U.S. WPI) and for Italy (labeled Italy WPI). The divergence of these two lines over time indicates that inflation has been greater in Italy (105 percent) than in the United States (44 percent) since March 1973. If the lira/dollar exchange rate were to change enough to compensate for these differing rates of inflation, the result would be a depreciation of the lira vis-a-vis the U.S. dollar by an amount equal to the spread between the two wholesale price lines (about 61 percentage points).[7]

To see if this has been true, the following computations were performed. First an index of the exchange

Chart I

Price Levels and the Adjustment for Differing Rates of Inflation

(United States and Italy)



Latest data plotted: Italy WPI - August; Others - November

rate (expressed as lira per dollar) was constructed using March 1973 as a base. The U.S. wholesale price index was then multiplied by the exchange rate index in each month through November 1976. The resulting product series was then plotted on Chart I (labeled U.S. WPI × lira per $). If exchange rates changed to compensate for differing rates of inflation, then this line (henceforth referred to as the product line) should trace along the Italy WPI line. On the other hand, if the exchange rate did not change at all, the product line would trace along the U.S. WPI line.

Chart I indicates that over the long run the product line has traced the path of the Italy WPI line. As mentioned previously, this relationship should not be expected to hold up in the short run. Inflationary pressures become established only in the long run and the full impact of differing inflation rates can be resisted by governments in the short run. However, with isolated incidents acting as catalysts to precipitate short-run surges in exchange rates, inflation rate differentials will exert themselves in the long run.[8]

In the case of Italy, the product line traces the rise in the Italy WPI line fairly closely, with the most

[6]For a more complete specification of the relative inflation rate explanation of exchange rate changes, see Donald S. Kemp, "The U.S. Dollar in International Markets: Mid-1970 to Mid-1976," this *Review* (August 1976), p. 12.

[7]Such a depreciation of the lira would mean that the purchasing power of the lira was the same in both the United States and Italy. If the lira did not depreciate in the face of the higher Italian inflation, then the purchasing power of the lira would be higher in the United States than it would be in Italy.

[8]Many of the specific events mentioned as affecting exchange rate movements during the period of interest are discussed at length in a series of reports titled, "Treasury and Federal Reserve Foreign Exchange Operations." These reports are published in the March, June, September, and December issues of the Federal Reserve *Bulletin*.

notable exception occurring between November 1974 and June 1975. This temporary divergence is primarily attributed to a rise in the dollar value of the lira during this period in light of encouraging economic news. In particular, during this period there were three significant developments in Italy: a slowing of the rate of inflation (as evidenced by the flattening out of the Italy WPI line), a decline in the balance-of-trade deficit, and an increase in capital inflows.

However, the situation changed during the last half of 1975 and into 1976. Renewed downward pressure on the lira mounted throughout this period as a result of increased uncertainty about Italy's political and economic outlook. There were signs that inflation was intensifying, merchandise imports began to rise, and the country was unable to induce any capital inflows. On top of this, the coalition government appeared increasingly fragile and was forced to resign on January 7, 1976. In the face of all of these events, the lira was supported in foreign exchange markets via massive official intervention by the Bank of Italy. However, the Italian government was unable to sustain its intervention measures beyond January 21 and on that date the lira was set free to float on the open market.

Uncertainty over Italy's economic and political outlook was continually nourished through April by an outpouring of bleak economic and political news. This situation is reflected in Chart I by the steep rise in the product line which began after mid-1975.

However, in early May 1976 the Italian government imposed sweeping exchange restrictions — including a 50 percent deposit scheme on nearly all purchases of foreign currency. The lira appreciated somewhat relative to the dollar as a result of these moves and the product line moved back into alignment with the Italy WPI line. By the beginning of September the effects of the import deposit scheme had begun to dissipate and, in the absence of any further policy initiative by the government, the lira began to move again in a direction consistent with its relatively high rate of inflation; that is, it depreciated against the dollar. As a result, the product line in Chart I began to rise again along a path similar to that traced by the Italy WPI line.

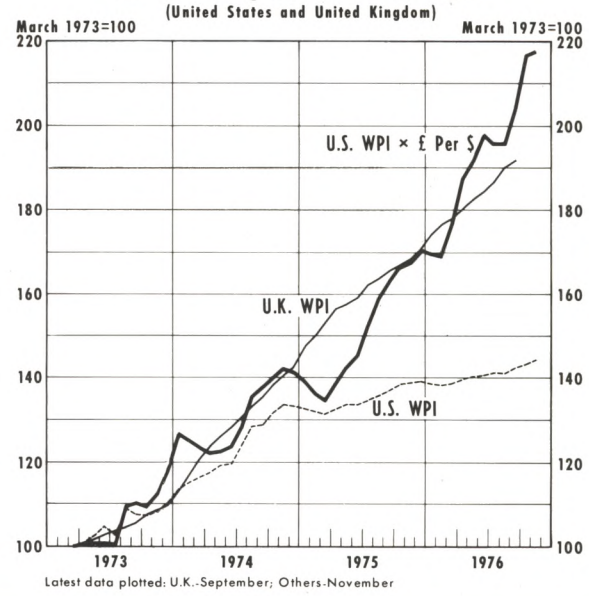
The Pound

The same three series that were plotted for Italy in Chart I are plotted for the United Kingdom in Chart II. The product line (labeled U.S. WPI × £ per $) follows the same general pattern as the product line

Chart II

Price Levels and the Adjustment for Differing Rates of Inflation

(United States and United Kingdom)



Latest data plotted: U.K.-September; Others-November

for Italy prior to 1976. That is, it traces the rise in the United Kingdom wholesale price line fairly closely, with the major deviation occurring between November 1974 and March 1975. This divergence reflects a relatively stable pound-dollar exchange rate in the face of a slowdown in the rate of inflation in the United States and unabated inflation in the United Kingdom. The steadiness of the pound vis-a-vis the dollar during this period is primarily attributable to the poor performance of the U.S. economy, the anticipation of an accelerated decline in U.S. interest rates, and an improvement in Britain's trade account in early 1975.

However, the pound began to depreciate vis-a-vis the dollar during April 1975. This was the result of new evidence of continued high rates of inflation in the face of continually rising unemployment in the United Kingdom. Moreover, concern mounted that a continuing trend of lower British interest rates would generate large capital outflows. The result of this renewed depreciation was a closing of the gap between the product line and the U. K. WPI line.

The pound stabilized in late 1975 and showed little change in early 1976. The voluntary wage restraint program was having its desired effect and hence was helping to curb the reported rate of inflation. During this period an apparent shift in priorities within the government began to emerge. That is, the government began to talk more about bolstering productivity and

less about broad social welfare programs. In addition, during this period large interest rate differentials stimulated significant inflows of capital. The resulting stability of the pound during this period can be seen in Chart II as a flattening of the product line and its subsequent divergence from the U. K. WPI line.

However, developments in late February 1976 precipitated new doubts about the future of the pound. Economic indicators showed little evidence of a recovery and indicated a likelihood of continuing inflation and still rising unemployment. In addition, interest rates began to decline and thus the differential favoring investments in the United Kingdom began to erode. Given the already uncertain economic and political environment, these factors resulted in renewed depreciation of the pound in early March 1976. As a result, the product line in Chart II surged upward to reach a point considerably above the U. K. WPI line by June.

The economic news coming out of the United Kingdom began to improve in early July. There were indications that both exports and real output were increasing at a faster than anticipated rate and that wholesale price increases were slowing. In addition, there were reports that the government was formulating plans for substantial public expenditure cuts. These factors combined to stabilize the pound-dollar exchange rate during July and August and thus the product line flattened out during that period.

However, a number of factors came to light in late August which precipitated a return of the pound to its downward trend. The release of figures showing increased unemployment during July led to fears that the government's commitment to reduce public spending might be abandoned. In addition, a sharp increase in the U. K. money supply in July was announced. In the face of these developments, the United Kingdom was beginning to feel the effects of the severe summer drought, and the possibility of further employment and production cutbacks increased as a result. The resulting depreciation of the pound caused the product line to move upward again to a level significantly above the U. K. WPI line.

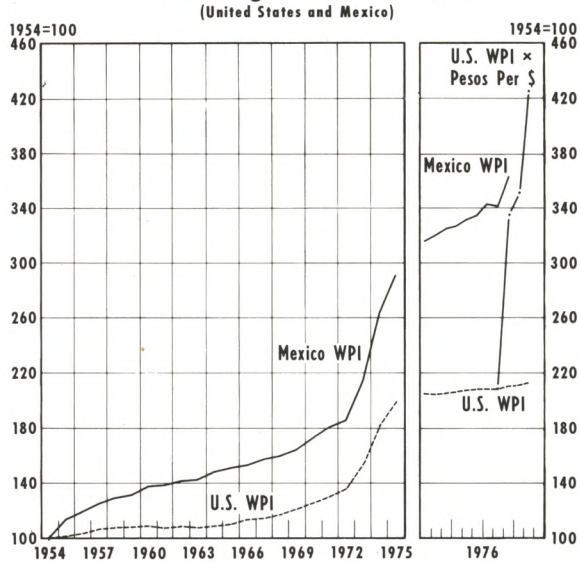
The Peso

The data series presented in Chart III are similar to those presented in Charts I and II. One difference, however, is that the indices presented in Chart III are on a 1954 base rather than a March 1973 base. Another difference between Chart III and Charts I and II is that it has two different horizontal scales. The left hand portion of the chart is made up of annual observations (1954 - 1975) while the right hand portion plots monthly observations (January 1976 - November 1976). The absence of a product line in the left side (annual data side) of Chart III reflects the fact that the peso/dollar exchange rate was not allowed to change between 1954 and August 31, 1976.

Chart III

Price Levels and the Adjustment for Differing Rates of Inflation

(United States and Mexico)



Note: From 1954 through August 1976 the U.S. WPI line and product line (U.S. WPI × Pesos Per $) were identical. This reflects the fact that over this time period the exchange rate between the dollar and the peso was rigidly fixed. However, in September 1976 these lines diverged, reflecting the fact that the exchange rate between the dollar and the peso was allowed to change.

Latest data plotted: Mexico WPI-September; Others-November

The performance of the Mexican peso in the past few months is a grim testimony to the effects of attempts by a government to peg the external value of its currency in the face of an inflation rate which differs significantly from that of a major trading partner. The peso/dollar exchange rate was rigidly pegged at 12.5 pesos/dollar between 1954 and September 1976. However, as indicated by Chart III, the overall amount of inflation experienced by Mexico between 1954 and 1975 far exceeded that experienced by the United States during this period.

Between 1964 and 1969 the gap between the two WPI lines in Chart III stabilized, indicating that the inflation rate was about the same in the United States as in Mexico during this period. However, since 1973 Mexico's rate of inflation has greatly exceeded that experienced in the United States. As a result, import growth began to far outstrip export growth during the early 1970's and Mexican debt to foreigners began to rise alarmingly. It has been estimated that interest

costs on this debt amount to at least $1.8 billion per year, while total Mexican merchandise export earnings in 1975 were only $2.9 billion (versus an import bill totaling $6.6 billion). Thus, the ability of Mexico to service any increased foreign debt came into question and their access to international financial markets was restricted accordingly.

The distressing economic outlook described above, coupled with the political uncertainties surrounding the impending change of governments on December 1, precipitated ever increasing downward pressure on the peso. As a result, on September 1, 1976 the Mexican government decided that it had no choice but to allow the peso to float freely on the open market.

The immediate response of the peso was a precipitous decline from 12.5 pesos/dollar to about 20 pesos/dollar. This decline is indicated by the sharp rise in the product line (labeled U.S. WPI $\times$ peso per $) in the right hand section of Chart III. The Bank of Mexico began to intervene in the peso market to peg it at 19.7 pesos/dollar on September 13, 1976. However, continued uncertainty over the political and economic outlook in Mexico resulted in an intensification of capital outflows and downward pressure on the peso. As these pressures mounted, the intervention activities of the Bank of Mexico led to a significant loss of official reserves.

With Mexico's application for a medium-term IMF loan still under negotiation, the authorities decided to allow the peso to float freely again on October 27. The immediate response was a further depreciation of the peso to about 26 pesos/dollar. This second decline in the value of the peso is indicated by a further rise in the product line in Chart III to a level considerably above the Mexico WPI line.

Throughout November the Bank of Mexico intervened frequently in an attempt to stabilize the peso/$ exchange rate. However, a series of events, ranging from government expropriation of private land to rumors of a military coup, fueled political uncertainty during this period. Because of reserve losses, and the prospect for even greater losses in the near future, the Bank of Mexico decided to cease all intervention activities as of November 22. At the same time, temporary regulations which strictly limited commercial bank dealings in foreign exchange were enacted. In the weeks immediately following these actions, the peso reversed its downward trend and rose in value relative to the dollar. However, considerable political and economic uncertainty remains and the market continues to speculate about the course of the Mexican economy under the administration which came into office on December 1.[9]

CONCLUSION

This article has sought to review U.S. international trade and financial developments over the last year or so. In taking such an overview, there is one common theme that continually surfaces. That theme relates to the desirability of fixed versus floating exchange rates in the world today.

It is shown in the article that efforts to artificially support a particular exchange rate were doomed to failure. The shocks that resulted from the inevitable large changes in exchange rates were greater than those that would have resulted if exchange rates would have been allowed to change gradually as market pressure developed. On the other hand, the United States policy of maintaining a relatively free market for the dollar insulated this nation from the kind of shocks experienced by Italy, the United Kingdom, and Mexico.[10] While there was considerable variation in U.S. trade and capital flows during the last year or so, the United States was spared the kind of exchange market crises that were continually plaguing these other countries and that plagued the United States itself from the late 1960's until March 1973.

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[9]At the close of trading on December 15 the peso was being quoted at 20 peso/dollar. Thus, it had risen back up to the level it attained after the first float in September. Although Chart III does not cover the events of December, this recent appreciation would imply a decline of the product line back to about the 340 level.

[10]In this regard, of a total of $16 billion worth of foreign exchange market intervention conducted by governments around the world between August and October 1976, the Federal Reserve was responsible for only $63.4 million. Statement by Scott E. Pardee, *New York Times*, 2 December 1976, p. 80.

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