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CHAPTER 12 UNITED STATES

1. Comprehensive Policy Instruments

The Federal Reserve System employs all three classical monetary instruments: the discount rate; minimum-reserve ratios; and open-market operations. In addition, subsidiary measures are often used, mostly to affect particular segments of the market. While emphasis is most often put on open-market operations, there seems to be no agreement among policy makers or analysts of monetary affairs in the United States that these operations alone signify the direction (easiness or tightness) of monetary policy. Likewise, there seems to be no general agreement about the use of some other variable, or combination of variables, as the proper indicator. Accordingly, a number of variables which are often mentioned as relevant (sometimes, by their respective proponents, as the "only" relevant variables) will be presented. These include the following:

The Discount Rate. Actual lending by the Federal Reserve System to commercial banks is normally very small, resorted to (in effect by Federal Reserve regulation) infrequently, and of the shortest possible duration (not over fifteen days). Not only the average, but also the peak amounts of this lending and fluctuations in it, are small in comparison with such other relevant magnitudes as total assets of the Federal Reserve System, or total reserves of commercial banks. Changes in the discount rate do not therefore greatly affect the cost of borrowed funds; they serve more as indicators of the direction of monetary policy. Yet, even this statement is probably less applicable to the United States than it would be to many other countries; according to the Federal Reserve System, changes in the discount rate are usually meant to follow the market (adjust to changes in the market rates which are caused by other developments), rather than to lead the market in new directions.

Treasury-Bill Rate. If monetary policy is designed to maintain some desired level of short-term rates, the yield of Treasury bills would probably be a good indicator of this variable. The Treasury-bill rate and the discount rate are normally quite close to each other; but the latter may sometimes remain unchanged for long periods, whereas the bill rate fluctuates continuously.

Reserve Ratios. Minimum-reserve ratios vary according to the type of bank and the type of deposit against which reserves are held. Most often, reserve ratios move together; but exceptions occur, so that the use of a single rate to represent the entire schedule may conceivably yield misleading impressions. This variable is therefore represented here by a weighted average calculated for purposes of the National Bureau's monetary studies.

Free Reserves. These are excess reserves held by member banks over and above the legally-required reserves (but not including "borrowed reserves," that is, advances from the Federal Reserve System). This magnitude is sometimes regarded as an indication of monetary policy: the larger the free reserves, the "easier" the policy.

Federal Reserve Credit and Open-Market Operations. A minor fraction of total Federal Reserve credit to banks is the Federal Reserve lending to commercial banks, mentioned earlier; but by far the greater part is created by open-market purchases. This is probably the most important *direct* instrument which the Federal Reserve System uses. By open-market operations the System determines the size of commercial-bank reserves and, combined with the use of minimum-reserve ratios, the lending capacity of banks. In terms of day-to-day conduct of monetary policy, open-market operations constitute by far the chief instrument through which the Federal Reserve System regulates the market. The Open-Market Committee of the Federal Reserve System, which directs open-market operations, is thus the crucial organ in the conduct of monetary policy in the United States.

The Federal Reserve System does not lend directly to the U.S. government, and Treasury deposits at the Federal Reserve Banks are normally minor. Net lending to the government is thus insignificant, so that the amount defined as "Federal Reserve credit" (which is, in turn, almost equivalent to the size of the open-market portfolio) is practically identical with the central bank's total domestic assets.

"High-Powered Money." Also often referred to as the "monetary base," this consists (except for a small amount of Treasury currency)

of the central bank's total domestic liabilities (commercial bank deposits at the Federal Reserve System and the amount of currency issued by it). Since the Federal Reserve's total liabilities must be equal to its total assets, the differences between this and the abovementioned Federal Reserve credit is roughly equal to the System's (net) foreign assets. Thus, this variable is affected both by changes in the central bank's credit (in the United States, this is by far the more important factor), and by changes in the external assets—gold (for the most part) and foreign-exchange reserves—which are held by the Federal Reserve System.[1] It is often argued that while movements of its foreign assets are not directly controlled by the Federal Reserve System, the System takes these movements into account in its decisions on the size of its credit (which has the same effect on the monetary base as movements of foreign assets); that is, the variable which the System intends to regulate is not just the amount of its credit, but the total of high-powered money.

Other Monetary Instruments. Two other variables will be observed which are further removed from the direct action of the monetary authorities but may be the magnitudes which they endeavor to manipulate. These are *commercial bank credit* and *money supply*. In both cases, as in the studies of other countries, rates of change rather than absolute amounts will be observed. Money supply will be represented by alternative definitions: the conventional one, which covers cash and demand deposits; and another which includes time deposits also. During a number of years, these alternatives exhibited somewhat different movements, and both may have had the attention of the monetary authorities.

Budgetary Variables. In the fiscal sphere, the three budgetary variables which are used in the studies of other countries, *budgetary revenues, budgetary expenditures* (both represented by their respective rates of change), and the *budgetary balance* will be observed here. All of these refer, as usual, to the cash budget.

[1] Strictly speaking, the gold is held by the Treasury, whereas the Federal Reserve System holds gold certificates. But this technical complication is not relevant for the present discussion. Gold certificates are regarded here as gold, and therefore as a "foreign" asset of the central bank although they are a claim of the Federal Reserve System on the U.S. Treasury.

2. Comprehensive Policy Patterns

The top five series in Chart 12-1 represent possible indicators of the balance-of-payments position:[2] gold and foreign-exchange reserves (including net IMF position), the balance on the "liquidity" basis, the balance on the "official-settlements" basis, the ratio of the country's external reserves to its liquid obligations to foreign official monetary institutions, and the ratio of these reserves to the country's total short-term obligations (that is, in practice, adding mostly liabilities to foreign commercial banks in the denominator of the ratio). The balance on the "official-settlements" basis is shown only during the years 1960–66, for which the estimate was readily available. But since changes in liabilities to foreign banks, which are the main source of differences between this concept and the "liquidity" concept of the balance of payments, were of relatively little importance in the 1950's, it may be assumed that not much information is lost by this partial omission.

All the series presented indicate a downward imbalance of payments existing almost continuously throughout the period. Since changes from deficit to surplus, or vice versa, in the balance-of-payments position were infrequent, an analysis of responses to imbalances of payments is very difficult indeed. Nevertheless, a few observations can be made.

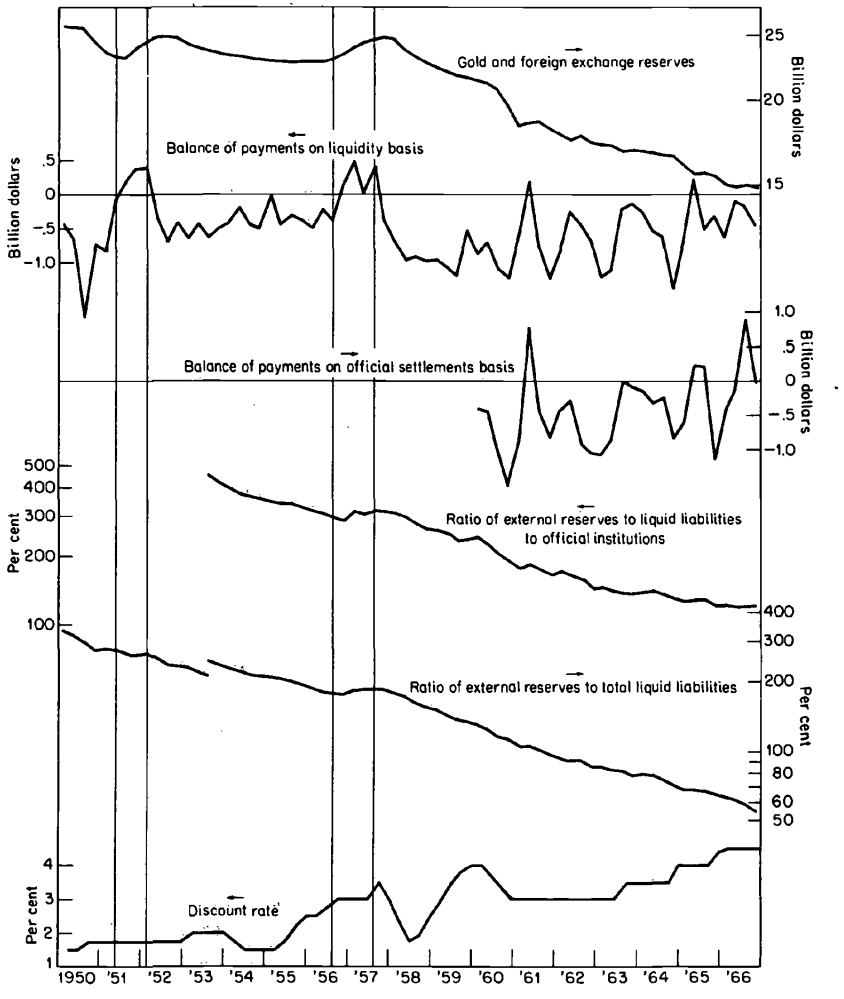
First, it may be worthwhile to look for possible policy reactions to the few upward movements that did interrupt the long decline. If the slight, temporary surpluses during single quarters are overlooked—as they should be—only two periods of upward movement may be distinguished, one during 1951–52, and the other during 1956–57. Table 12-1 delineates these periods more precisely.

As may be seen from Table 12-1, the indications of the various series are not identical. A simultaneous upward movement in all series occurs, in fact, only during a single quarter in each of the two episodes. In general, the series of external assets presents a favorable movement for the longest duration, while the two series of ratios of external reserves to foreign liabilities indicate much shorter periods (and smaller extent) of improvement. The series of the balance of payments on the liquidity basis falls in between, and may also be assumed to have attracted a large amount of attention. It was thus decided to rely pri-

[2] See the discussion of the United Kingdom, the other "reserve country."

CHART 12-1

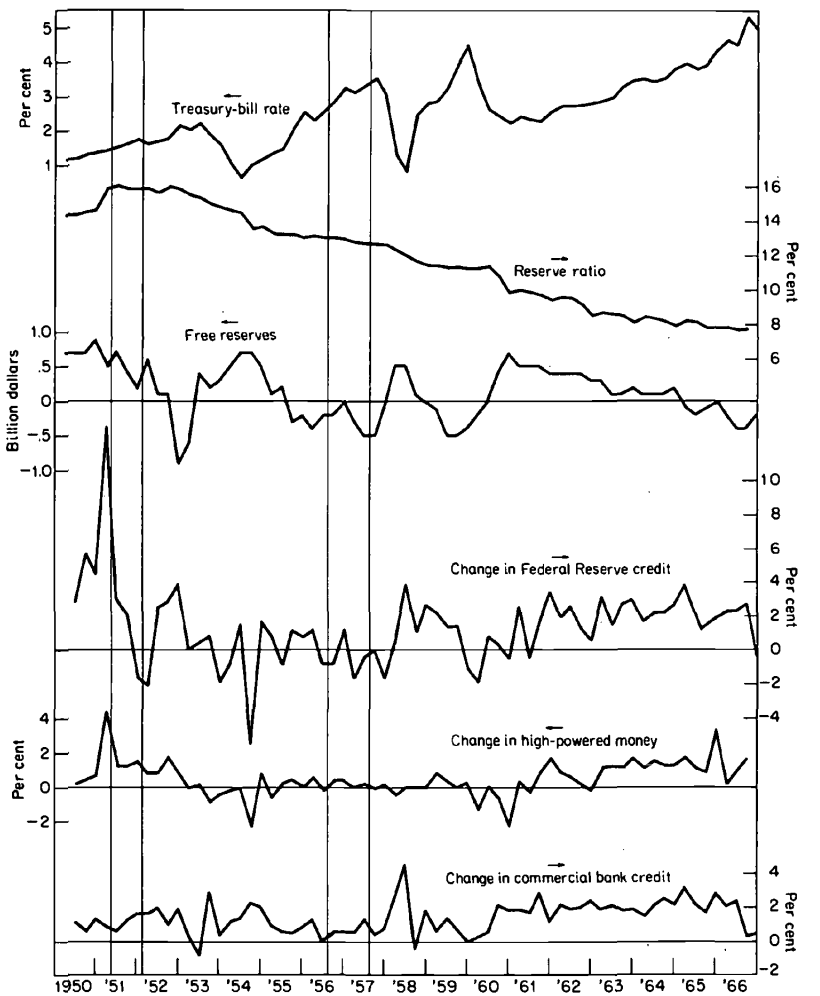
UNITED STATES: TIME SERIES OF SELECTED VARIABLES



marily on this measure in the present analysis. Yet, for purposes of comparison with other periods, quarters in which external assets moved upward while the balance of payments series showed a deficit will be disregarded rather than considered as parts of periods of downward imbalance.

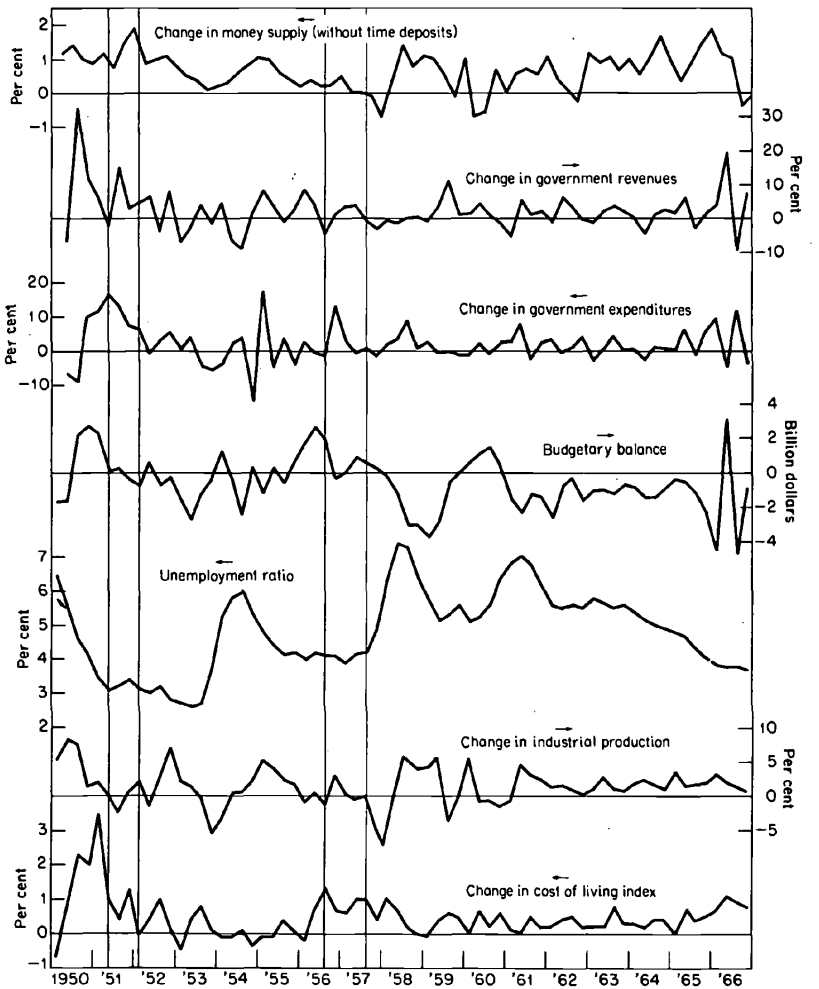
The two episodes of upward movement are thus judged to have

CHART 12-1 (*Continued*)



taken place during, first, the third quarter of 1951 through the first quarter of 1952; and, second, the fourth quarter of 1956 through the third quarter of 1957. The first of these will be compared with the six preceding quarters, from the beginning of 1950 to mid-1951, which was clearly a period of deficits; and with the following two years, 1953–54, again a period of clear deficits (the second half of 1952 being ignored altogether, for the reason mentioned above). The second

CHART 12-1 (*Concluded*)



episode, that of 1956–57, will be compared with the two following deficit years, 1958–59 (the last quarter of 1957 being ignored for the same reason); and also with the preceding years, 1953–54 (1955 being a year of a rough equilibrium according to indications of external reserves and the balance of payments on liquidity basis). The comparison, for each of the policy variables mentioned earlier, is carried out in Table 12-2.

TABLE 12-1

UNITED STATES: INDICATORS OF BALANCE-OF-PAYMENTS POSITION, 1951–52 AND 1956–57

Period	*External Reserves* (*1*)	*Balance on Liquidity Basis* (*2*)	*Ratio of Reserves to Official Liquid Liabilities* (*3*)	*Ratio of Reserves to Total Liquid Liabilities* (*4*)
1951 I	−	−	n.a.	=
II	−	=		−
III	−	+		−
IV	+	+		−
1952 I	+	+		+
II	+	−		−
III	=	−		−
IV	=	−		−
1956 I	=	−	−	−
II	=	−	−	−
III	+	−	−	−
IV	+	+	−	=
1957 I	+	+	+	+
II	+	=	=	+
III	+	+	+	=
IV	+	−	−	−

+ indicates an upward movement.
− indicates a downward movement.
= indicates stability.
n.a. indicates not available.

To show responsiveness to the position of the balance of payments, a policy variable would have indicated a more expansionary policy during each surplus episode than during the preceding and following deficit periods. Table 12-2 reveals such patterns only for the rates of change of commercial-bank credit, money supply, and government expenditures in the surplus episode of 1951–52, and only for government expenditures in the episode of 1956–57. In all other instances the evidence is either mixed, or suggests the opposite pattern of a more expansive policy during the deficit than during the surplus periods. Thus, only the single variable of the rate of change of government

TABLE 12-2

UNITED STATES: MOVEMENTS OF POLICY VARIABLES DURING PERIODS OF SURPLUSES AND DEFICITS

		Deficit: I *1950* – II *1951*	*Surplus:* III *1951* – I *1952*	*Deficit:* I *1953* – IV *1954*	*Surplus:* IV *1956* – III *1957*	*Deficit:* I *1958* – IV *1959*
Discount rate		stable	stable	fluctuates	raised	fluctuates
Treasury-bill rate		rises	stable	falls	rises	fluctuates
Reserve ratio		raised	stable	lowered	stable	lowered
Free reserves		stable	fluctuate	rise	fall	fluctuate
Federal Reserve credit	Average quarterly rate of change, per cent	+1.3	−.3	0	−.2	+.4
High-powered money		+1.4	+1.2	−.3	+.2	0
Commercial-bank credit		+.9	+1.7	+1.2	+.7	+1.4
Money supply (without time deposits)		+1.1	+1.4	+.5	+.1	+.8
Government revenue		+8.5	+7.6	−2.0	+2.0	+1.7
Government expenditure		+4.5	+9.2	−2.4	+4.0	+1.9
Budgetary balance (quarterly average, in billions of dollars)		+.7	−.3	−.9	+.3	−1.9

expenditures moves consistently according to the required pattern. But the effect of the Korean War on this variable (as, indeed, on most others) during the first episode must have been so strong that even here an inference of a causal connection from the positive association with the balance-of-payments position would most probably be unwarranted. Hence the evidence of Table 12-2 does not support the assumption that monetary and budgetary policy tended to be more expansive during periods of balance-of-payments surpluses than during periods of deficits. As will be shown shortly, it is easy to explain the differences among periods in the behavior of policy variables by domestic economic conditions, rather than by the balance-of-payments position.

In the period from 1958 onward, only a few sporadic quarters show balance-of-payments surpluses. No clear balance-of-payments fluctuations between positive and negative balances exist; therefore, in this period. It is possible, however, that the balance-of-payments performance might have been judged, during these years, by the *direction* of change rather than by the balance-of-payments position, and that, although the balance was negative throughout, only *larger* deficits were a source of concern such as to induce policy reactions. If this is true, the policy pattern should be found to be comparatively restrictive during periods of large deficits, and more expansive during periods of small deficits.

Table 12-3 tests this possibility by dividing the period 1958–66 into six subperiods of alternate large and small deficits, within which are measured the policy variables of discount rate, money supply, credit supply, and budgetary balance. Three indicators, presented in columns 1, 2, and 3, are used to estimate the size of the deficit: the decline of external reserves, the deficit on liquidity basis, and the deficit on official-settlements basis. As may be seen, these indicators agree with each other almost consistently, with two exceptions: for the subperiod of II 1962–II 1963, the liquidity and official-settlements measures show a substantial increase in the deficit from the preceding subperiod, while the decline of external reserves is moderate. Similarly, in the following subperiod, II 1963–III 1964, the rate of decline of reserves remains unchanged, while the two other indicators point out a very significant decline in the deficit. In both of these instances, liquidity and official-settlements definitions of the imbalance were used to determine the subperiods. It seems clear that the behavior of the four policy variables, presented in columns 4 to 7, does not support the assumption that

TABLE 12-3

UNITED STATES: MOVEMENTS OF SELECTED POLICY VARIABLES, 1958–66

Period	*Loss of External Reserves* (*1*)	*Balance-of-Payments Deficit on "Liquidity" Basis* (*2*)	*Balance-of-Payments Deficit on "Official Settlements" Basis* (*3*)	*Discount Rate (change over the period)* (*4*)	*Money Supply (average quarterly rate of change, per cent)* (*5*)	*Commercial Bank Credit (average quarterly rate of change, per cent)* (*6*)	*Budgetary Deficit (quarterly average in millions of dollars)* (*7*)
I 1958 – I 1961	505	896	—	—	.5	1.4	1.0
I 1961 – II 1962	158	577	239	—	.6	1.9	1.7
II 1962 – II 1963	90	863	986	—	.7	2.1	1.0
II 1963 – III 1964	96	351	159	+.50	1.2	2.0	1.2
III 1964 – I 1966	258	560	430	+1.00	1.2	2.3	2.0
I 1966 – IV 1966	80	242	*surplus* 225	—	.2	1.1	.8

NOTE: Columns (*1*), (*2*), and (*3*) are quarterly averages, expressed in millions of dollars.

policy tended to be more expansionary in periods of small balance-of-payments deficits. The hypothesis that comprehensive monetary or budgetary variables responded, from 1958 onwards, to balance-of-payments improvements or deteriorations, cannot be sustained.

An examination of longer periods may be more rewarding. As just mentioned, the period from 1958 onward is one of persistent, large balance-of-payments deficits, in which the external position of the country deteriorated with almost no interruption. For the period 1950–57, on the other hand, the net fall of the country's external reserves was slight; so also was the cumulative balance-of-payments deficit on the liquidity basis. Moreover, the level of reserves, judged by comparisons with past periods or with other countries, must have been regarded as particularly high; and increasing liabilities to foreign countries—signifying rising external reserves of those countries—may have been regarded favorably not only by the countries concerned but also by the United States. The ratio of the country's reserves to its foreign liabilities was falling throughout these years; but it was so high at the outset that, even by 1957, the decline may not have been a source of concern. From 1958 onward, however, the deterioration was much more persistent and large-scale, and the cumulative effect on the level of reserves and on the ratio of reserves to liabilities was very considerable. It is thus likely—as, indeed, statements of policy makers would suggest—that only from 1958 on has the balance-of-payments deterioration attracted serious concern. If aggregate policy reflected this concern, policy variables during 1958–66 would show a relatively contractionary tendency in comparison with the preceding years.

A comparison of changes in policy variables during the two periods is presented in Table 12-4. All of the variables, with the possible exception of interest rates, clearly indicate that an assumption of such greater responsiveness in the later period must be rejected. Two variables, the reserve ratio and free reserves, appear to move in about the same manner during the two periods. Other monetary variables—Federal Reserve credit, high-powered money, commercial-bank credit, and money supply—all move during 1958 and onward in a distinctly more expansive way than during the earlier years. This is true also for the budgetary variables. Although government expenditures rise at a slightly slower pace during the second period (a fact undoubtedly due to the huge impact of the Korean War during the earlier years of the first period), they rise at the same rate as (or even slightly more than) government revenues; whereas during the earlier period revenues

TABLE 12-4

UNITED STATES: MOVEMENTS OF POLICY VARIABLES IN 1950–57 AND 1958–66

		1950–57	*1958–66*
Discount rate		raised	raised at about the same pace
Treasury-bill rate		rises	rises at about the same pace
Reserve ratio		lowered	lowered at about the same pace
Free reserves		no trend	no trend
Federal Reserve credit	Average quarterly rate of change, per cent	+.2	+.6
High-powered money		+.4	+.6
Commercial-bank credit		+1.0	+1.7
Money supply: excluding time deposits		+.6	+.7
including time deposits		+.8	+1.5
Government revenue		+2.8	+1.7
Government expenditure		+2.1	+1.8
Budgetary balance (quarterly average, in billions of dollars)		+.1	−1.2

increased much more than expenditures. An approximately balanced budget during the earlier period as a whole turned into a budget with persistent deficits during the later period. By most of the evidence, therefore, monetary and budgetary policies were distinctly more expansive during the period from 1958 onward rather than more restrictive, as responsiveness to balance-of-payments position would have required.

Interest rates, as the discount rate and the Treasury-bill rate indicate, did rise during 1958–66—as a restrictive policy would require. But no clear-cut conclusion about responsiveness to the balance-of-payments position can be drawn from this trend. For one thing, a rising trend of interest rates is evident during these years in other major countries as well, although rates in the U.S. do show some rise even in comparison with these other countries. It should also be noted that the trend toward increasing the interest rates, as shown both by Chart 12-1 and Table 12-3, started rather late—the discount rate started its steady climb only in mid-1963—and was not evident when balance-of-payments deficits were most severe. It seems reasonable to assume that the rise of interest rates was a cyclical phenomenon, due to the eco-

nomic expansion of these years, and probably reinforced by large-scale governmental borrowing. From the evidence of the increased rate of expansion of money supply, it may be inferred that the monetary authorities did not contribute to the rise of interest rates but, on the contrary, mitigated it. The active monetary policy was, thus, most probably expansionary.

Yet, it may be argued that even though the monetary authorities did not initiate the rise of interest rates, they could have done more to prevent this rise; and that they did not is an indication of an intention to maintain a high level of interest rates, possibly to affect favorably the balance of payments. Some support for such assumption may also be derived from the fact that interest rates during the 1960–61 recession were not allowed to fall as much as they were in the two earlier recession periods, 1953–54 and 1957–58. That is, despite the undoubtedly major impact which domestic cyclical developments and requirements have continued to exert on interest rate policy, the balance-of-payments position may also be assumed to have been taken into consideration during the 1960's.

Finally, a cyclical analysis which uses cycles of policy variables may be attempted in a search for an association between policy instruments and targets. As may be seen from Chart 12-1, movements of many of the monetary variables could be divided into a number of cycles, at least until about 1960; but in some cases the turning points of these cycles would differ greatly among the various monetary indicators. A cyclical analysis based on the reference dates of a single variable could be repeated for each of these variables; but this could hardly be expected to be rewarding. Instead, reference dates for monetary policy were derived from a study by Brunner and Meltzer, in which the authors estimated "easiness" or "tightness" of monetary policy by a number of indicators—chiefly by what the Open-Market Committee itself specified as its guideline.[3] This study ends with the year 1962; and, in any case, it would be difficult to find significant cyclical policy movements from 1960 onward. The monetary policy "cycles" thus refer only to prior years, as follows:[4]

[3] Karl Brunner and Allan H. Meltzer, *An Analysis of Federal Reserve Monetary Policy Making*, Washington: Subcommittee on Domestic Finance, Committee on Banking and Currency, 1964 (in three parts). The "scaling" of policy decisions is provided in Appendix II, which appears in the third part ("An Alternative Approach to the Monetary Mechanism"), pp. 119–25.

[4] As may be seen from Chart 12-1 almost identical turning points are indicated by the discount rate.

Cycle	*Trough*	*Peak*	*Trough*
–1953		IV 1949	I 1953
1953–1957	I 1953	IV 1954	III 1957
1957–1959	III 1957	II 1958	IV 1959

The reference-cycle patterns of a few target variables are presented in Chart 12-2. Part A shows the pattern given by the rate of change of external reserves. Responsiveness to this indicator would be reflected in an inverted V-shape (that is, the "easing" of monetary policy would take place when reserves were rising, or falling only slowly, while "tightening" would be undertaken when reserves were falling rapidly). No resemblance to such a pattern seems to appear. Part B presents the balance of payments on the liquidity basis. Responsiveness to this indi-

CHART 12-2

UNITED STATES: PATTERNS OF TARGET VARIABLES DURING MONETARY POLICY CYCLES

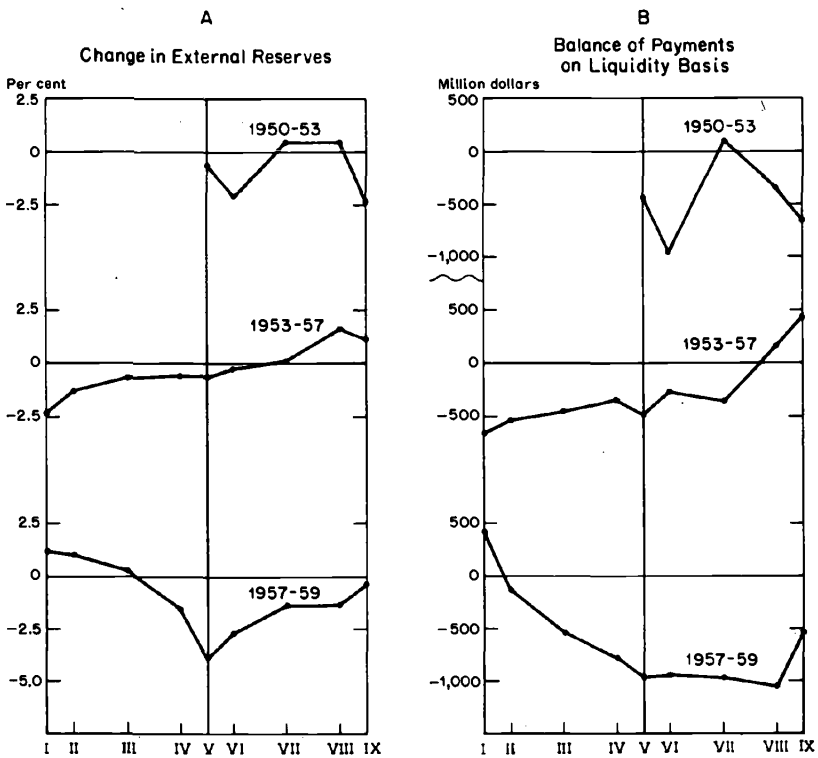
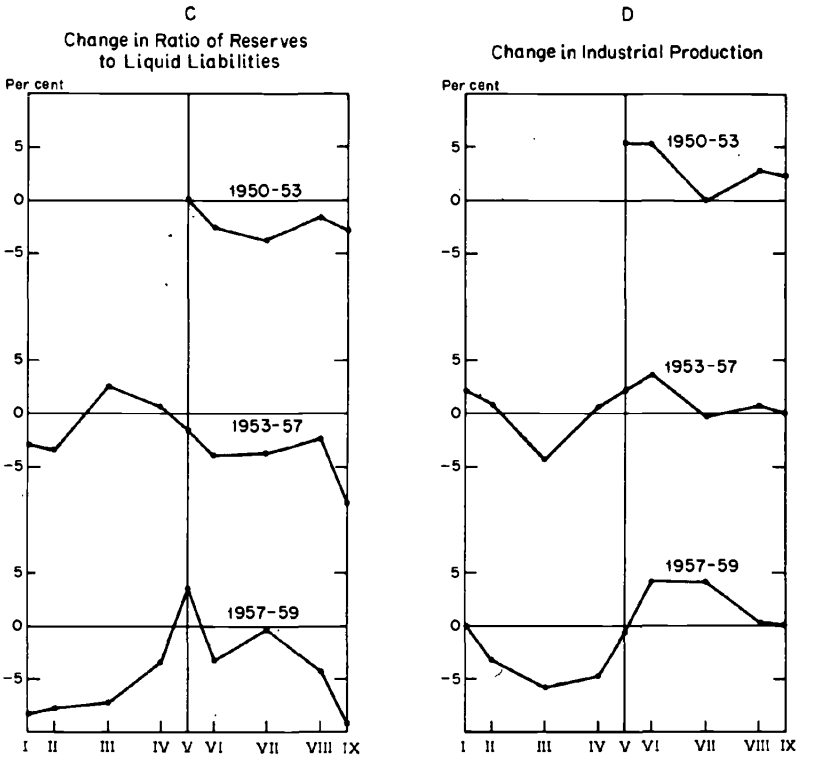


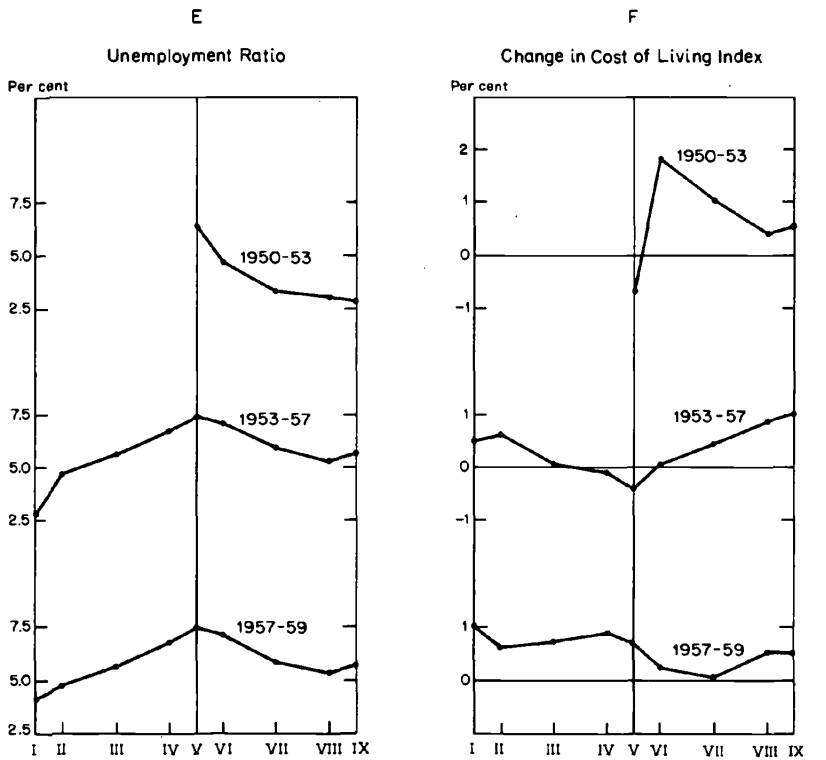
CHART 12-2 (*Continued*)



cator would be expressed, again, in an inverted V-shape; or at least in the balance of payments being higher (a higher surplus, or a lower deficit) during the easy-money phase than during the tight-money periods. Again, no such general pattern may be observed. Another alternative, the indication of the balance-of-payments position by the rate of change of the ratio of external reserves to the country's total short-term liabilities to foreigners, is tested in Part C. Again, responsiveness of monetary policy would be indicated by inverted V-shaped patterns. Such a pattern is found in the monetary-policy cycle of 1957–59; but this is probably too meager an evidence to suggest the existence of an association.

On the other hand, it may well be that the monetary-policy cycle could be explained by alternative economic targets. Part D presents the rate of change of industrial production. It appears clearly that this rate was negative during the easy-money, and positive during tight-

CHART 12-2 (*Concluded*)



money, phases; monetary policy could thus be assumed to have responded to the need to maintain a high rate of expansion of production. Responsiveness of monetary policy seems to be even more convincingly shown for the target of high employment. In Part E, which presents the pattern of the unemployment ratio, an inverted V-shaped pattern would be consistent with the assumption that monetary policy reacted to the level of unemployment; this, indeed, is found consistently. No such consistency, on the other hand, is revealed for the target of price stability, which is analyzed in Part F. The V-shaped pattern which responsiveness to this target would require clearly emerges once, in the monetary-policy cycle of 1953–57, but not on other occasions.

From about the end of 1953 to the end of 1961, budgetary policy, too, could be explained by the targets of high employment and high production. It may be seen, from Chart 12-1, that if the series depicting the unemployment ratio and the rate of change of industrial production

are shifted to the right by about two quarters, their dips and bulges match fairly consistently those of the series of the budgetary balance (in the case of the unemployment series, this would of course be an inverse relationship). Fluctuations of the budgetary balance may thus be explained as a response, lagging by about half a year, to fluctuations of the level of employment and of the rate of expansion of production.[5]

3. Specific Policy Reactions

The analysis thus far indicates that, through 1966, demand policy was still not primarily responsive to balance-of-payments requirements, although the country's external position may have had an impact on the level of interest rates. It would not be correct, however, to infer that the balance-of-payments problem was regarded lightly during this period. Unlike their reaction in earlier years, much greater concern was shown by U.S. policy makers in the 1960's with the need for balance-of-payments equilibrium. But this concern produced, for the most part, a large number of specific policy actions, rather than a responsive aggregate demand policy. Due to the particular importance of these measures in the United States, and the major significance of the United States for the international system, it may be worthwhile to mention briefly the most salient of these specific policies. For convenience, the measures will be divided into several categories, according to the type of balance-of-payments account on which each device was intended to have its primary effect.

The Current Account. Measures to affect the current account were not many and were largely related to U.S. economic and military foreign aid. One of these steps was an increased tying of economic aid to developing countries to the purchase of American goods. Another was concerned with military expenditures in Europe—primarily in Germany and Italy. Agreements were concluded by which these two countries undertook to buy military wares from the United States, to offset partially the impact of American military expenditures in these countries on the U.S. balance of payments.

Aside from these actions, a few minor steps to encourage exports

[5] Whether this responsiveness is discretionary, decided on ad hoc, or whether it is brought upon by automatic mechanisms, may be a very important issue for other purposes; but it is not a consideration in the present inquiry.

were undertaken. On the imports side, the main impact was sought in tourist trade: the amount of duty-free goods allowed to U.S. residents returning from trips abroad was reduced drastically—a step taken both for its direct impact on imports and, presumably, for its indirect effect on the inclination to go abroad.

Long-Term Capital Movements. This is probably the area in which the largest effort has been made—an effort which includes measures of taxation, quantitative restrictions, and agreements with foreign governments.

One step was the imposition, in 1963, of the interest equalization tax on lending to foreign countries (many of these countries, however, being exempted from the tax). The tax, equivalent to a one per cent rate of interest, is imposed on foreign bonds sold in the United States, or on bank loans with a maturity of over a year.

Another major effort to limit capital outflows has been through the "voluntary" agreements with U.S. companies along the line called for in the President's Balance-of-Payments Program of early 1965. These agreements have been concluded with some six-hundred corporations which, in the aggregate, form the major nonbank investors in foreign countries. Formally, each corporation was asked to draw a complete balance-of-payments account of its operations with the outside world and to suggest means of improving this balance in any of the account's components. In fact, the corporations were expected to make the improvement primarily by reducing their long-term capital outflow—either by investing less abroad or by financing more of their investments by borrowing in foreign markets.

Foreign central banks undertook to help limit the net flow of long-term capital from the United States by agreeing, since 1962, to purchase U.S. Treasury bonds denominated in foreign currency (the so-called "Roosa bonds"). The outstanding amount of these bonds reached the equivalent of $1.5 billion by early 1968. Another step in the same direction was the prepayment, primarily by Germany, of long-term debts owed by foreign governments to the U.S. Government.

Short-Term Capital Movements. In this area, two main policy forms may be distinguished. One is the attempt to affect the structure of interest rates in order to raise rates more significant for international capital flows relative to those important for domestic activity. Specifically, it has often been suggested that the Federal Reserve System attempted in the early 1960's to change the maturity structure of government securities by increasing the supply of short-term paper at the

expense of long-term paper, so that short-term interest rates would rise relative to long-term rates. It is argued that the rise of the former is of relatively little significance to domestic economic activity, but of much importance to international short-term capital flows; whereas a relatively low long-term rate would encourage domestic activity without, it is presumed, having a considerable impact on international capital flows (especially when combined with the interest-equalization tax). While the argument seems convincing, it is doubtful whether the divergent movements of the two rates—which have indeed been substantial during the 1960's, particularly from the fall of 1961 to the fall of 1966—should be attributed to a specific policy rather than to the normal path expected when short-term rates rise.[6]

Another change in the structure of interest rates has been brought about by a gradual increase, during the 1960's, of Regulation Q ceilings on interest rates paid by commercial banks on savings and time deposits, particularly for longer-term time deposits. It is argued that the foreign depositors are primarily interested in this type of deposit, and that this is the reason for the relative increase of ceiling rates for these deposits.

The other main measure in this area was the introduction, in early 1965, of quantitative restrictions on foreign lending by commercial banks. Each bank was asked not to let its outstanding lending exceed by the end of 1965, 105 per cent of the outstanding amount at the end of 1964. For the end of 1966, the ceiling was determined at 109 per cent of the 1964 base.

Stabilizing Activities. In addition to the measures listed above, the Federal Reserve System (and, to a smaller extent, the Treasury) began to intervene in the early 1960's in the foreign-exchange markets. This intervention was always carried out for very short durations, being intended to counter disruptive speculative outflows of funds. The means of intervention in the market were provided primarily by a system of bilateral "swap" arrangements, which the Federal Reserve System has concluded with all the major foreign central banks and with the Bank for International Settlements. Started in the spring and summer of 1962, with an initial amount of some $700 million, these agreements have gradually widened in scope through the addition of more central banks and, to a much greater extent, through raising the agreed amount in each bilateral arrangement, until the total amount of the "swap" ar-

[6] See Franco Modigliani and Richard Sutch, "Innovations in Interest Rate Policy," *American Economic Review,* LVI (May 1966), pp. 178–97.

rangements exceeded $7 billion by early 1968. Although drawings under these arrangements were in principle bilateral, most of the drawing has in fact been done by the United States. The other major drawing country was the United Kingdom; when the United Kingdom drew dollars by this arrangement, the United States sometimes offset part of this by drawing other currencies. In this way, the system of bilateral arrangements became in fact multilateral, with the United States serving as a clearing center.

Drawings under the "swap" arrangements were always for a very short time: about half of all commitments was repaid within three months, and the greater part of the rest within six months. Intervention by the Federal Reserve System (and, in the early 1960's, the Treasury) was carried out in both the spot and forward markets for foreign exchange. Forward purchases of dollars by the authorities may be viewed as a means of raising the interest rate on dollar holdings and of inducing in this way a short-term capital inflow. But, in practice, these interventions were sporadic and always for short durations; they seem to have been intended to combat speculation rather than to serve as a permanent way of attracting short-term capital.

4. Summary and Conclusions

The evidence examined here indicates that the United States did not direct its aggregate monetary and budgetary policy primarily to meet the needs of balance-of-payments equilibrium during the period under consideration. This is true both for the earlier years—in which the level of the country's reserves must have been considered high enough for the country to afford balance-of-payments deficits, or even welcome them as being required for the international monetary system as a whole—and for the later years, in which this could no longer have been the prevailing view among policy makers. During the entire period the major monetary and fiscal instruments of aggregate-demand policy were, it appears, responsive to the needs of the targets of high employment and high production, rather than to those of the balance of payments.[7] It seems possible, though, that while no responsiveness to

[7] This, of course, is neither a novel nor a surprising finding. After all, the Council of Economic Advisers was specifically established within the framework of the Full Employment Act. Likewise, the Federal Open-Market program of the

changes in the balance-of-payments position is revealed, the high level of interest rates during the 1960's may have been maintained partly due to the chronic downward imbalance of that period.

An awareness of the balance-of-payments problem since the late 1950's has resulted primarily in a few specific measures taken in an attempt at adjustment. These measures seem to follow a definite pattern, with certain common attributes. First, it appears that the major thrust of these policies was directed at the capital account of the balance of payments, rather than at the current account. Second, most of these measures appear to be of a temporary nature—even though their life span was not necessarily determined in advance. This pattern of policy responses could be given a few explanations, each probably having some validity, which could be regarded as complementary rather than as mutually exclusive.

First, it should be noticed that the deficit in the U.S. balance of payments was derived totally from the capital account; the current account was always in surplus over the period studied, offsetting part of the deficit on capital account.[8] It is conceivable—as would follow from a few policy statements—that policy makers drew from this phenomenon the inference—which most economists would reject—that the adjustment of the balance of payments had to be carried out by improving performance in those items in which the deficit was shown; that is, that corrections should be sought in the capital account, whereas the current account, which was in surplus anyway, did not require any adjustment. This interpretation of policy motivations may find some support from the fact that, within the current account, the major item attracting attention from policy makers was the tourist trade—an item in which the United States has continuously had a substantial deficit.

Another possible explanation is that policy makers wished to prevent a conflict between the U.S. measures and accepted conventions or tendencies in world transactions. A variety of institutions or agreements

Federal Reserve System usually bases its deliberations explicitly on the situation of domestic economic activity. For studies reaching similar conclusions, see William G. Dewald and Harry G. Johnson, "An Objective Analysis of the Objectives of American Monetary Policy, 1952–61," in Dean Carson (ed.), *Banking and Monetary Studies*, Homewood, Ill., 1963, pp. 171–89; and Thomas Havrilesky, "A Test of Monetary Policy Action," *Journal of Political Economy*, June 1967, pp. 299–304.

[8] This statement refers to the period ended with 1966. Subsequently, the surplus on current account began to shrink, and in 1968 it turned into a deficit. Even while the surplus on current account was large, moreover, the question remains how much of it was attributable to capital outflows.

would call for serious reactions from U.S. trade partners to interference with trade in goods; the capital account—and, to some degree, tourist services—are considered less objectionable areas for specific state intervention.

Still another explanation may be found in the assumption that the U.S. deficit was temporary and likely to reverse itself. If this is so, measures having a small impact on the economy as a whole would find favor. Temporary restrictions of capital movements, whose effect on the domestic economy is, in the short run, marginal, would thus tend to be preferred to measures whose impact would be felt through aggregate demand in the economy. Likewise, measures to increase the country's reserves, and thus the country's "breathing space," would be particularly attractive in this situation. Indeed, U.S. policy makers invested considerable effort in this direction during the 1960's.

Finally, as suggested earlier in this study, it may also be possible that U.S. policy makers have felt that the small size of the country's trade, in relation to its total economic activity, did not justify an adaptation of aggregate-demand policy to balance-of-payments requirements, and that the situation called for the adjustment of the balance-of-payments deficit in ways which would not have a direct adverse impact on the domestic economy.

It may be remarked, parenthetically, that during most recent years—which partly transcend the period covered by the statistical investigation—some new elements have been introduced into the system. On the one hand, a new dimension has been added by the war in Vietnam, which contributed significantly to the deterioration of the U.S. balance of payments, both through the direct military expenditures and through the impact of the ensuing domestic inflation. On the other hand, the establishment in 1968 of the so-called "two-tier" gold market has in effect transformed the international system largely into one based on the dollar standard, in which dollar assets accumulated by foreign governments are not converted into gold. This process (which, without any specific agreement, was largely in effect also during much of the 1950's), enables the U.S. to have, at least temporarily, sustained deficits in its balance of payments without feeling the direct pressure imposed by loss of international reserves. Thus, despite further balance-of-payments deficits, and a deterioration of the current account, the immediate need for an adjusting policy has not presented itself with the same urgency as in earlier years.

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