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Chapter 13

The Banking Sector and the Moneyflows of Other Transactors

By far the chief importance — at this writing, at any rate — of the 100% system would be its power to mitigate the present depression and, in the future, to lessen not only depressions but the booms which lead to depression.

. . . recovery was apparently well started by the Federal Reserve open-market purchases, which revived prices and business from May to September 1932. Unfortunately, the efforts were not kept up. . . . It would have been still easier to prevent the depression almost altogether.

With plenty of money, there could be no fall of prices, and without a fall of prices, the subsequent links in the depression chain would be almost non-existent. . . .

The 100% system would not prevent the little ripples, but it would probably prevent all, or at least, most, of the great overwhelming waves. Irving Fisher, *100% Money* (Adelphi, 1935), pp. 105, 114-5, and 120.

The wave of speculative activity in the stock market in the late twenties became the occasion of grave concern.

The failure to check the speculative movement revealed the essential weakness of monetary policy, even as a device to check the boom. It was not possible, by means of Central Bank control over credit, to ensure adequate funds for productive uses and to choke off funds for speculative uses.

. . . recently. . . . We have been privileged to observe what contribution can be made by the utmost limit of Central Bank action toward economic recovery.

. . . for the extremely important area of residential building, for the general run of intermediate and small-scale enterprise, for the more risky ventures, and for small cities and communities, cheap money in the banking system offers no adequate remedy. For these areas fantastically high reserves and a high degree of bank liquidity are apparently of little avail. Alvin H. Hansen, *Fiscal Policy and Business Cycles* (Norton, 1941), pp. 76, 77, 78, and 81.

When a Harvard professor and a Yale professor disagree so sharply, it is little wonder that the public is somewhat confused about the role of banks and U. S. monetary funds in the cyclical fluctuations of moneyflows.

There is a persistent notion, we suspect fostered by the hydraulic analogy, that banks and U. S. monetary funds alone can cope with substantially the whole problem of unemployment except that of a seasonal or frictional nature. Various economists have held this view, among them

Fisher. On the other hand, the passages quoted from Hansen seem to indicate that banks and U. S. monetary funds cannot advisedly do much of anything about cyclical unemployment.[1]

During the seven years covered by our moneyflows accounts business activity rose to a peak in 1937, took a sudden major dip, recovered, and under the stimulus of the defense and war program in 1941 and 1942 was expanding toward a level that few had thought possible. In the light of our moneyflows accounts we offered in Chapter 12 part of a tentative hypothesis concerning the nature of the processes of expansion and contraction in moneyflows. In this chapter we shall extend this tentative hypothesis to cover the question, How far are banks and U. S. monetary funds in a position to influence cyclical fluctuations in moneyflows?

1 *Bank Credit and the Federal Reserve*

The two primary parties to a moneyflow transaction are the payer and the payee. In Chapter 12 our consideration of the question, Who exercises discretion over moneyflows? was confined to that exercised by primary parties. Both the Federal government and banks and U. S. monetary funds have some voice in moneyflows to which they are third parties. The influence of banks and U. S. monetary funds on cyclical fluctuations is necessarily pretty much a third party affair. They are third parties to more than 99 percent of the moneyflows that arise in connection with ordinary transactions.

If we are to see how this indirect influence operates we must first have in mind the moneyflow transactions to which banks and U. S. monetary funds are primary parties. At various points we have indicated that the negative cash balances of banks serve them in just the same way as positive cash balances serve other transactors. We can show this by giving a journal entry for a cash purchase by the banking sector. The entry is precisely the same as that in Chapter 5, Section 2, except that we must remember we are presenting a consolidated account for banks and U. S. monetary funds. The banking sector makes cash settlements with other

1)	Banks and U. S. monetary funds	Dr customer expenditures	3)	Dealer	Dr cash
2)	Banks and U. S. monetary funds	Cr currency and deposit liabilities	4)	Dealer	Cr receipts from customers

transactors by increasing its currency and deposit liabilities just as a nonbank transactor makes such a settlement by drawing down his cash bal-

[1] In *Monetary Theory and Fiscal Policy* (McGraw-Hill, 1949), Hansen allows a somewhat larger role to the banking sector. But he still shows a marked preference for fiscal over monetary and bank credit policy in dealing with business fluctuations.

ance. The cash balance of banks and U. S. monetary funds decreases algebraically speaking (for there is an addition either to currency outside banks or to deposit liabilities) and the cash balance of the payee increases.

The largest ordinary items in the statement of payments and balances for the banking sector (Table 40) are receipts of cash interest and expenditures on gross cash pay. Bank payrolls are a small fraction of the payrolls for all transactors. Their interest receipts are a much more substantial factor in the national cash interest account, and we would undoubtedly be warranted in assuming that banks have a good deal of discretion in respect of this receipt item (and also their service charges). Banks and U. S. monetary funds exert an influence on the moneyflows of other transactors through interest costs to borrowers. However, we believe the nature of this influence can be approached more effectively through an analysis of lending and borrowing than through the national cash interest account.

From time to time we have had occasion, in discussing other sectors to resolve the net financial flow into its components. Such a resolution is imperative with banks and U. S. monetary funds. Their net financial flow is not zero (although theoretically it always might be just that); actually during the seven years their ordinary receipts averaged a few hundred million more than their ordinary expenditures and they advanced (or returned) the excess through financial channels each year. But banks and U. S. monetary funds are only a very minor net financial source of money to other transactors, as can be seen from line h.

The large and widely variable items in the moneyflows of the banking sector are the chief components of this net financial flow: the changes in the gold stock, in the size and composition of bank credit (loans and securities), and in total currency and deposit liabilities.

If we pass over the possibility of influencing the moneyflows of other transactors by modifying exchange rates and the purchase prices of gold and silver, and by issuing and retiring fiat currency, the main channel of influence open to banks and U. S. monetary funds is their participation in the markets for loans and securities. Commonly total bank credit and total cash balances of nonbank transactors are concurrently increased (or decreased) by purchases (or sales) of loans and securities. The influence of banks and U. S. monetary funds on the moneyflows of other transactors is exerted in part through the effects of changes in these two totals. Influence is exerted also through the effects of changes in the composition of bank credit and through the interest charges and other terms on which credit is extended.

These various lines of influence must be traced through three stages: first within the transactor group, banks and U. S. monetary funds, second in the loan and security markets, and third in the relations between these markets and the readjustment processes affecting the ordinary receipts and expenditures of nonbank transactors.

To bring out clearly the relations between banks and U. S. monetary funds and the rest of the economy, we have treated this sector as if it were a single transactor, quite separate from the Federal government, by presenting a consolidated statement for it.[2] But one must not be misled by this device. The sector consists during the seven years of about 15,000 transactors (most but not all of which are private enterprises) plus a number of public supervisory authorities. We have often spoken of this assemblage as the banking sector, but it certainly does not behave like a single bank with 15,000 or more branches. However, power to influence bank deposits and the buying and selling of loans and securities by banks is vested in the Board of Governors of the Federal Reserve System and in the System's Federal Open Market Committee, and the issue and redemption of paper currency is now largely concentrated in the Federal Reserve banks.

When we asked how banks and U. S. monetary funds affect cyclical fluctuations in the moneyflows of other transactors we had in mind public policies toward the moneyflows of domestic nonbank transactors that can be implemented through the bank supervisory and central banking functions of the Federal Reserve System. We have proposed for simplicity to narrow the question by passing over channels of influence that are currently not likely to be pressed when it is so construed (exchange rates, gold and silver transactions, and fiat issues and redemptions). The first stage of our question, therefore, focuses on the Federal Reserve System and the influence it exercises over total bank credit and its composition, total nonbank cash balances, and bank interest charges and credit terms. Our answer here will be restricted to listing the most pertinent

[2] Much the most important part of this statement is Part Two: Loanfunds. With minor changes and with additional detail this exhibit appears currently in the Federal Reserve Bulletin under the caption, Consolidated Condition Statement for Banks and the Monetary System.

In the following pages we shall discuss the Federal Reserve as a separate sector. But it did not seem worth while to present separate figures for it here, because the condition statement, Member Bank Reserves, Reserve Bank Credit and Related Items is so readily available. On the way in which this statement is fitted into Part Two of Table 40 see Morris A. Copeland and Daniel H. Brill, Banking Assets and the Money Supply since 1929, 34 Federal Reserve Bulletin 24 ff.

TABLE 40 STATEMENT OF PAYMENTS AND BALANCES

(Millions of

		1935	1936	1937
	ORDINARY RECEIPTS AND OTHER SOURCES OF MONEY			PART ONE:
A	Cash Dividends		20	20
B	Cash Interest		1,700	1,740
C	Gross Rents		90	100
D	Receipts from Customers (Service Charges)		360	360
E	Insurance Benefits		10	10
F	Total Ordinary Receipts		2,200	2,200
G	Net Money Obtained thru Financing		0	0
H	Total Sources of Money		2,200	2,300
	ORDINARY EXPENDITURES AND OTHER DISPOSITIONS OF MONEY			
J	Gross Cash Pay		540	560
K	Cash Dividends		240	240
L	Cash Interest		480	460
M	Gross Rents		50	50
N	Spent by Banks and U.S.Monetary Funds as Customers		260	260
P	Instalments to Contractors		40	60
Q	Taxes Collected		100	120
R	Insurance Premiums		80	80
S	Public Purpose Payments		3/	3/
T	Total Ordinary Expenditures		1,800	1,800
U	Net Money Advanced or Returned to Finance Others		400	500
V	Total Dispositions of Money		2,200	2,300
				PART TWO:
	ASSETS, DECEMBER 31			
W	Gold Stock	10,100	11,300	12,800
X	Federal Obligations	19,500	21,500	20,700
Y	Other Loans and Securities	29,400	31,300	31,300
Z	Treasury Currency	2,500	2,500	2,600
a	Total Loanfunds Receivable	61,500	66,600	67,400
	LIABILITIES, DECEMBER 31			
b	Currency and Deposits	53,800	58,600	59,100
c	Paid-in Capital	7,000	6,900	6,700
d	Total Loanfunds Payable	60,800	65,400	65,800
	COMPUTATION OF LOANFUND FINANCING			
e	Net Loanfund Balance Receivable, December 31	700	1,200	1,600
f	Increment in Loanfund Balance Receivable		500	400
g	Valuation Gains (Net)		100	- 100
h	Money Advanced or Returned Less Money Obtained		400	500
	1/Includes net sources of money not accounted for as follows		0	100
	2/Includes net uses of money not accounted for as follows		5/	0

3/Less than $5 million.
4/Lies between ± $50 million.
5/Less than $50 million.

FOR BANKS AND U. S. MONETARY FUNDS P&B VII

Dollars)

1938	1939	1940	1941	1942	Source	
MONEYFLOWS						
20	20	20	20	20	BK 101 A	A
1,720	1,700	1,740	1,820	1,860	BK 101 T	B
100	100	90	90	90	BK 101 U	C
360	360	380	380	380	BK 102 J	D
10	30	20	10	10	BK 102 N	E
2,200	2,200	2,200	2,300	2,400	A thru E	F
0	0	0	0	0	-h when h < zero . .	G
2,200	2,200	2,600	2,500	2,400	F + G 1/	H
560	580	600	620	680	BK 201 C	J
220	240	240	260	240	BK 201 H	K
460	440	420	420	380	BK 201 R	L
50	50	40	40	40	BK 201 S	M
240	220	280	300	320	BK 202 V	N
40	40	60	60	20	BK 203 B	P
120	160	140	160	180	BK 203 O	Q
80	90	100	110	120	BK 203 S	R
3/	3/	3/	3/	3/	BK 203 T	S
1,800	1,800	1,800	2,000	2,000	J thru S	T
300	400	800	500	200	h when h > zero .	U
2,200	2,200	2,600	2,500	2,400	T + U 2/	V
LOANFUNDS						
14,500	17,600	22,000	22,700	22,700	BK 301 A	W
22,100	23,500	25,000	29,700	54,100	BK 301 G	X
30,300	30,900	32,500	34,800	31,400	BK 301 N	Y
2,800	3,000	3,100	3,200	3,600	BK 301 O	Z
69,700	75,000	82,500	90,500	111,900	W thru Z	a
61,300	66,500	73,300	80,900	102,400	BK 302 P	b
6,600	6,500	6,500	6,300	6,200	BK 301 Y	c
68,000	73,000	79,800	87,200	108,600	b + c	d
1,700	2,000	2,700	3,300	3,300	a minus d	e
200	300	700	500	100	Increment in e . .	f
- 200	- 100	- 100	4/	- 100	BK 303 M	g
300	400	800	500	200	f minus g	h
0	5/	400	200	0		
100	0	0	0	200		

Note: Due to rounding, figures for various lines calculated by formulas given in the source column may differ slightly from the entries shown.

functions of the Federal Reserve System for these lines of influence and noting certain of their limitations:

1) Responsibility for central banking operations and for the supervision of commercial (and mutual savings) banks is somewhat divided. The Federal Open Market Committee developed because there was not a single central bank under a single governing board, and developed as a substitute for such an arrangement. Federal Reserve controls over commercial banks are confined to member banks, and banks can elect to withdraw from membership. Responsibility for bank examination is divided among various governmental units, chiefly among three Federal agencies; Federal Reserve examiners cover only nonnational member banks.

2) The two main powers of the Federal Reserve System are open market operations (under the Committee) and control of member bank reserve requirements (under the Board). The real function of member bank reserve requirements has become that of putting the Federal Reserve System in a position to restrain expansion of the total deposit liabilities of member banks and total member bank credit. The System's ability to restrain credit expansion by raising reserve requirements is somewhat closely restricted by the statutory range within which the Board has discretion.

Alongside the Board's control of reserve requirements and the System's open market operations we should no doubt list the Board's rediscount powers. Although the rediscount powers have been of relatively little consequence during the past fifteen years, they are likely to become important again. But in the interest of brevity we shall omit discussion of these powers and also of various other channels through which the Federal Reserve exercises its influence over the banking sector.

3) The principal avenue of influence on interest rates open to the Fedral Reserve System is not through the rest of the banking sector, but broadly through its own participation in the loan and security markets. Its open market operations are mainly in marketable U. S. securities, and the direct effect of such operations is on the prices and yields of these securities. There are indirect effects on the prices and yields of other loans and securities, too; but these indirect effects are likely to be greater on rates on short term customer loans and on yields of high grade (and seasoned) corporate bonds than on rates on new mortgages. Also they are likely to impinge somewhat unevenly on different categories of short term customer loans. Rates on large loans seem to be more sensitive than those on small; rates in large centers more sensitive than in smaller places.

When one speaks of interest rates as a channel of bank influence on the total volume of ordinary transactions it is usually some kind of average level of rates on new loans and renewals that is meant. But when the Federal Reserve exerts pressure on the level of interest rates, it exerts at the same time more or less pressure on the differentials among various categories of rates and of yields. The System's influence over the level of interest rates cannot well be isolated from its influence on the structure of rates and yields.

4) If a Federal Reserve bank sells a government bond to — or buys one from — a nonbank transactor, this operation has a dollar for dollar effect on total bank credit and total nonbank cash balances (Table 40, lines X + Y and line b). There is also a potential effect on bank credit and cash balances that does not register in Table 40. Its nature may be illustrated most simply on a different assumption.

If a Federal Reserve bank sells a government bond to — or buys one from — a commercial member bank, this transaction does not show in Table 40, because it is an intrasector transaction. But it may have an effect — a more than dollar for dollar effect — that will show subsequently. For it subtracts from — or adds to — the commercial bank's reserve, and each dollar of reserve means to the commercial bank a potential source of money of several dollars (the number depending on the reserve requirements then in effect) through an increase in its deposit liabilities, and this potential source means in turn an equal potential disposition of money through an increase in earning assets. The question whether these possibilities become actualities we defer to the following section.

5) The Federal Reserve influences not only the amount of bank credit but also its composition. However, its influence on composition is somewhat narrowly restricted. The limitations on its influence over the total of customer loans are particularly significant,[3] although to indicate their significance we must make here a point that properly belongs in Section 2.

There is a recognized perverse cycle in bank credit analysis (as well as in other kinds of credit analysis). The numbers of would-be borrowers who are rated as unsatisfactory credit risks commonly increases during a business recession (thus tightening credit in one direction, although a general policy of easing credit may be widely thought advisable). And during the more optimistic phase of a cyclical upswing the number of

[3] Federal Reserve selective credit controls bear directly on composition and on customer loans, but they are too selective for a broad attack on the perverse cycle in credit analysis and we may pass them by here.

unsatisfactory credit risk ratings commonly decreases (easing credit in one direction, although credit restraints on expansion may be official policy). This perverse credit analysis cycle is difficult to cope with under any circumstances; historically it has been aggravated by a parallel perverse cycle in the credit standards applied by bank examiners. The problem thus created would be simpler if all bank examining functions were vested in the Federal Reserve System. Nonetheless in spite of the difficulties inherent in a division of responsibility for bank examination a good deal of progress toward working out the problem seems to have been made, at least so far as a period of expansionary influences is concerned.

6) Up to this point we have treated Federal Reserve open market operations as if they were directed solely with a view to their effects on total bank credit and its composition, on total nonbank cash balances, and on the interest rates the public has to pay. Some economists have urged that in determining open market operations these considerations of credit and monetary policy ought to be permitted to override all others. But the fact remains that they have not. Open market sales have been seriously restricted by considerations of their effects on the prices of U. S. securities — if not by a policy of maintaining those prices at least by a policy of avoiding a disorderly market drop.

We cannot go far into this policy issue here, although our attempt to trace the effects of Federal Reserve open market operations on the moneyflows of nonbank transactors (in Sections 2 and 3) has an important bearing on it. Whatever the issue's merits, Federal Reserve credit restraints are likely again to be hampered by the same considerations, unless the System's powers are so altered and so exercised that open market operations can be effectively used to tighten bank credit without embarrassing the Treasury.

We set out to trace the influence of banks and U. S. monetary funds on the volume of ordinary transactions of nonbank transactors. As we observed, this influence is exerted partly through the totals of bank credit and of nonbank cash balances, partly through the composition of bank credit, and partly through interest rates and credit standards. We said we would trace this influence through three stages. This cursory examination of the first stage suggests that if it is proposed to use these lines of influence to moderate cyclical fluctuations in the dollar volume of total ordinary transactions, the limitations of the Federal Reserve System in this connection must be kept in mind.

The second stage has to do with the relations between banks and U. S. monetary funds and the loan and security markets.

2 *Bank Credit and the Loan and Security Markets*

We have repeatedly urged that the level of bank credit is not fixed by banks and U. S. monetary funds alone. Such centralized discretion within the banking sector as is exercised by the Federal Reserve Board and the Federal Open Market Committee conditions and in turn is conditioned by the discretion exercised by nonbank transactors. We can now say why it is an oversimplification to conceive of this mutual conditioning as a (money) market or supply and demand readjustment process. One phase of this mutual conditioning process, indeed, goes on in portions of the loan and security markets; but another phase is peculiarly monetary. Hence it is more than a readjustment of terms and volumes of moneyflow between a set of borrowers and a set of lenders, more than an adjustment in which we have to deal simply with a disposition of money by the one set (lenders) and a source of money for the other set (borrowers). In the money market plus monetary adjustment we are here concerned with, banks and U. S. monetary funds are engaged in transactions with two other classes of transactors at once, those whose obligations they hold and those who hold their currency and deposit liabilities.

Let us take the case in which cash balances of other transactors are increasing, and let us continue to pass over purchases and sales of gold and silver and fiat issue and redemption by U. S. monetary funds (and also issues and retirements of the capital stock of banks and U. S. monetary funds). Under these conditions banks and U. S. monetary funds will be deriving a source of money from the additions to their currency and deposit liabilities, and simultaneously disposing of the money so obtained by adding to bank credit (loans and securities). For the parties from whom banks and U. S. monetary funds are obtaining the money the disposition of funds will take the form of an increase in cash balances. The parties to whom banks and U. S. monetary funds are advancing the money will be either increasing their debts or liquidating their portfolios (or both).

This statement of the case implies that we have to deal with two distinct sets of transactors in addition to banks and U. S. monetary funds. Do we? The question requires us to face a rather slippery point with respect to the moneyflows accounts. Consider the type of transaction in which nonbank transactor A gives his note to his bank and acquires a deposit. To simplify the statement let us speak as if bank credit consisted exclusively of such customer loans. Under these conditions it is clear that we have only the two primary parties to deal with. A's increased cash

balance is a disposition of money by A and a source to the bank. The bank's loan is a disposition of money by the bank and a source to A. The A who advances money to the bank and the A who obtains money through the bank loan are necessarily the same party. And by our assumption, currency and deposits can increase only through this type of transaction. The increments in the cash balances of A and his fellows and the increments in bank credit are necessarily equal and synchronous, because they are merely the two sides of the same transactions.[4] And for the same reason those whose cash balances are increased by these transactions are necessarily the same parties as those who receive the bank loans.

But obviously we must not conclude that each nonbank transactor will always owe banks and U. S. monetary funds precisely the amount of his cash balance. For other types of transaction affect the distribution of cash balances among nonbank transactors, though they do not much affect the total amount of such balances.[5] Therefore, in analyzing the interaction between the discretions exercised by banks and U. S. monetary funds and the discretions exercised by nonbank transactors and the resulting readjustment that determines total bank credit and total nonbank cash balances we must recognize that some nonbank transactors are likely to be increasing their bank indebtedness while others are increasing their cash balances.

We shall not stop to restate this argument as it applies to a decrease in bank credit or to allow for components of bank credit other than customer loans, because to do so would not affect our conclusions. In the total bank credit and currency and deposits readjustment three classes of transactors must be recognized: those whose cash balances are increasing (or decreasing), those who are dealing with banks and U. S. monetary funds in loans and securities, and as an intermediary between them, banks and U. S. monetary funds.[6] When total currency and deposits are

[4] We must consider the discount on A's note as a second and separate transaction. It is an ordinary expenditure for A and an ordinary receipt for the bank, not a loanfund transaction.

[5] The effect on the total under the assumed conditions equals the (algebraic) excess of the ordinary receipts of banks and U. S. monetary funds over their ordinary expenditures.

[6] We get three classes of transactors because we look at the bank credit and currency and deposits readjustment comprehensively. It is not merely the effects of bank loan and loan repayment transactions that we must consider; it is the combined effects of these transactions and all other moneyflow transactions on cash balances. For this comprehensive view we must take account of the influence of the ordinary transactions of banks and U. S. monetary funds on their negative cash balance. During any period the increment in bank credit will exceed the increment in total currency and

increasing, there is a two-step moneyflow from the cash balances class of transactors through banks and U. S. monetary funds to the loans and securities class. When total currency and deposits are decreasing, there is a two-step moneyflow in the other direction.

But we must not make this picture too schematic. The two classes of nonbank transactors, the cash balances class and the loans and securities class, may overlap. They may at times even coincide; the back-and-forth flow may still be of significance, if and when they do. Moreover, the flow between the two classes of transactors (when they do not coincide) does not directly depend on changes in total bank credit and total currency and deposits. It may quite conceivably be substantial even in a period of little or no change in total nonbank cash balances.

Because the total bank credit and currency and deposits readjustment involves three classes of transactors, we have to deal with three sets of considerations, those affecting the exercise of discretion by each of the three classes of transactors. As far as the loans and securities class of transactors is concerned, nothing in particular need be said here. From their point of view banks and U. S. monetary funds are in competition with other transactors in the loan and security markets. If the loans and securities class can obtain money more cheaply elsewhere (or dispose of it elsewhere to better advantage) they are in general likely to do so.

A somewhat special set of considerations affects the exercise of discretion by the cash balances class. Cyclical changes in their active cash requirements tend to make transactors advance money to banks and U. S. monetary funds during business expansions (i.e., add to their own cash balances) and call it back as their active cash requirements decline during recessions. At the same time there are likely to be cyclical changes in the preferences of these transactors for cash as against other loanfund balances to perform the longer term value storage function, i.e., changes in liquidity preference; because of changes in liquidity preference these transactors tend to advance money to banks and U. S. monetary funds (increase their claims against this sector) during recessions and call the money back during expansions. Hence cyclical changes in active cash balance requirements and in liquidity preference at least partly offset each other, especially if we are looking at all nonbank transactors as a single sector.

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deposits by the amount of the sector's net ordinary receipts (if, as we assume, the other loanfund balances of banks and U. S. monetary funds remain constant). But, as we have seen, net ordinary receipts of banks and U. S. monetary funds are a small item in this total picture.

Between them these two types of consideration — that for the short term and that for the longer term value storage function — exhaust the storehouse function. But they still leave something to be said about the considerations affecting the discretion of the cash balances class. We must take account of the extent to which these transactors may fail to exercise their discretion or may be slow about doing it. In Chapter 12 we found reason to expect sheep to advance money when business is expanding and to obtain money through financing during recessions. Now sheep are likely to be relatively passive not only in exercising discretion over their spending but also in exercising discretion over the composition of their loanfund balances. Hence we may expect that a good deal of what they advance in an upswing and some of what they obtain in a downswing will take the form of changes in their cash balances. For such slowness in exercising or failure to exercise discretion over loanfund balances we suggest the term *financial inadvertence.*

Between the cash balances class and the loans and securities class stand banks and U. S. monetary funds. Commercial banks and mutual savings banks, like the loans and securities class, study the various loan and security markets to see where they can to best advantage dispose of any "money" (excess reserves) they may acquire when business is expanding and deposits are growing (or to see what earning assets they can most advantageously liquidate when deposits and reserves shrink). Their demand for and supply of loans and securities is a component of the total market demand and supply. In general they buy more than they sell when nonbank cash balances are increasing, sell more than they buy when such balances are declining.[7]

For the individual bank an upper limit is put on the size of its portfolio by the amount of its deposits,[8] and an upper limit is put on its deposits by the reserve ratio requirements and by the amount of its reserve and the part of its portfolio that can be converted into reserve. To this we must add that a gold import deposited in a coastal bank adds dollar for dollar to its reserve and its deposits. Much of the time most banks so exercise their discretion over the composition of their loanfund balances that excess reserves (unnecessary nonearning assets) are promptly converted into portfolios. But certainly the record of the 'thirties makes clear that actual portfolios may remain for a considerable period below the levels to which they might be expanded. As Hansen so vigorously points out, the cash balances class is not the only category of

[7] Counting new loans as purchases and repayments as sales by the banks.

[8] Still ruling out additions to bank paid-in capital.

transactors that may, because of a growing liquidity preference, accumulate idle balances in the form of a nonearning asset (cash). Commercial banks may do much the same; for them idle balances mean excess reserves. When commercial banks go in for idle reserve balances, the effect of Federal Reserve open market purchases on total bank credit and total nonbank cash balances is likely to be reduced to somewhat less than a dollar for dollar basis. Even so, and even with present restrictions on the Federal Reserve portfolio, the System might, with the volume of governments now outstanding, be able during a business recession to prevent a contraction of total bank credit and perhaps to compel an expansion.

However, we repeat that Federal Reserve influence on the composition of bank credit is narrowly restricted. Expansion of bank credit does not necessarily mean new customer loans. During 1934-36, when excess reserves were mounting as gold flowed into the United States, such expansion of bank credit as did take place was largely in increased holdings of U. S. securities.

Changes in the composition as well as in the total amount of bank credit are of consequence because they are parts of the intersector financial flows in which banks act as intermediaries. During a recession banks may play a passive role in these flows. Sheep that incur cash deficits when their receipts decline may perforce draw down cash balances. Bears that have cash surpluses may retire debts — including debts to banks — or add to their portfolios. The result may be a concomitant contraction of bank credit and nonbank cash balances and a moneyflow from bears through banks to sheep — a financial flow in which banks are merely a passive channel.

But banks can play an active role by taking the initiative in contracting their portfolios. Particularly if they contract customer loans, they are likely to compel their debtors to stint and hoard to pay their debts. This means banks can convert bulls or sheep into bears, can initiate the financial flows (from bank-made bears to unconverted sheep) in which they are intermediaries. There is little or no evidence that banks so exercised their discretion during the period covered by our moneyflows accounts. But there can be no doubt that in times past overly rapid bank credit contraction has accelerated a good many business recessions or that before the Federal Reserve was established recessions were sometimes initiated by financial panics in which banks played a major role.

In respect to policies for encouraging total bank credit expansion the

Federal Reserve System does not appear to have been restricted by a quantitative statutory limit on its discretion over reserve requirements, or by a conflict between an easy credit policy and any policy toward prices of U. S. securities. But both these kinds of restrictions have applied to its power to stop or restrain an expansion of total bank credit and total nonbank cash balances. One who holds that the Federal Reserve System should at times restrain the expansion of bank credit and nonbank cash balances without regard to any effects on U. S. security prices and who is not greatly concerned about the composition of bank credit may be satisfied with present Federal Reserve powers. One who believes in bank credit restraints but puts some stress on maintaining an orderly market for marketable government issues and on the composition of bank credit will be likely to think there is need for an expansion of Federal Reserve powers through some form of special reserves proposal,[9] or alternatively for an expansion of the open market and rediscount powers of the System that would permit the inclusion in Federal Reserve credit of any item eligible for inclusion in member bank portfolios.

If banks can convert bulls and sheep into bears, the banking sector is in a position to restrain a cyclical increase in moneyflows, and to initiate or accelerate a contraction. The Federal Reserve has a responsibility at times for restraining expansion. The chief limitation on its powers, so far as this responsibility is concerned, is the inability to isolate its general restraints from a marked depressing effect on the prices of U. S. securities.

The Federal Reserve is unlikely to wish to initiate or accelerate a cyclical downswing. Rather it has a responsibility for preventing the banking sector from so doing. For this responsibility its power over total bank credit may well be adequate; but its influence over total customer loans is not great. Presumably it would not be able to prevent banks from contracting them during a major recession.

Can banks convert bears into sheep and sheep into bulls? Their ability to make conversions in the other direction rests on their right to refuse a new loan or a renewal. Banks have no corresponding leverage to induce a man to borrow and spend. But when there are transactors with bullish inclinations the banking sector can help an expansion of moneyflows by financing them. Indeed banks can go further than this. They can actively seek out those with bullish inclinations, counsel them, and select those with the most promising projects.

[9] See, for example, Marriner S. Eccles, Proposal for a Special Reserve Requirement, 34 *Federal Reserve Bulletin* 14 ff.

Banks influence the moneyflows of other transactors almost entirely by serving as financial intermediaries; the financial flows in which they participate are two-step flows. The flows we are now concerned with proceed from other transactors — chiefly sheep — to bulls. We have said that banks could help an expansion of moneyflows by financing the bulls. Of course they do not provide the funds themselves. However for this financing they do not need the consent of those who do put up the money. When increased bullish spending increases sheep's ordinary receipts, sheep have three alternatives open to them: they can spend more, and the more they spend the larger bulls' receipts and the less bulls will need to raise through financial channels; they can put money into the loan and security markets themselves by adding to their portfolios or paying off their debts; or they can allow their cash balances to grow, thereby advancing money to banks which banks simultaneously advance to bulls. The first two alternatives require initiative on the part of sheep; the third represents for the most part their financial inadvertence. Bulls get their increased spending financed in any case; if banks are willing they can advance whatever money bulls require over and above any increase in bulls' receipts and over and above what bulls can raise through nonbank channels. This makes bank credit expansion a particularly convenient and effective means of financing bulls' expenditures.[10] During the seven years for which we have moneyflows accounts, it was used extensively by the Federal government. If it was so used by industrial corporations during this period, the annual figures do not disclose that use clearly (see Section 3 below).

Our central question in this chapter is how the banking sector influences the ordinary moneyflows of other transactors. Up to this point we have been concerned to outline the relations of the Federal Reserve System to the rest of the banking sector and of both to the loan and security markets and to the cash balances of other (i.e., nonbank) transactors. Before proceeding to the third phase of our analysis of bank influences on nonbank moneyflows we believe we can draw one broad conclusion regarding the nature of these influences. We have several times spoken of credit and monetary policies, meaning policies that could be implemented through central bank and bank supervisory powers over total bank credit and its composition, over total nonbank cash balances, and over interest rates and credit terms. We seem to have gone far enough to recognize (a) that monetary policy in the sense of policy toward total nonbank cash balances and their distribution by

[10] We take this to be what is valid in the idea of forced saving.

sectors is scarcely separable from policy toward total bank credit, that bank credit policy is logically all there is to monetary policy in its broader sense,[11] and (b) that Federal bank credit policy may sometimes need to be distinguished from Federal credit policy. We have noted that some Federal bank supervisory functions are vested in agencies other than the Federal Reserve System. But on the whole we may fairly identify Federal bank credit policy and Federal Reserve credit policy. However Federal Reserve policy is only a part of Federal credit policy. The Federal government comes into contact with the loan and security markets through channels other than those provided by the Federal Reserve: farm credit channels, home owner credit channels, foreign credit channels, etc. With our present governmental structure Federal credit policy — which includes bank credit policy — may not always be a unified, well-coordinated whole.

3 *The Components of Financial Moneyflows*

According to the tentative hypothesis outlined in Chapter 12 the volume and composition of moneyflows in the main circuit during any period is to be understood as a readjustment of the flows of the preceding period. There are two mutually conditioning aspects of the readjustment process, one affecting ordinary transactions (product transactions and transfers), the other affecting financial moneyflows.

The financial flows make it possible for bulls to elect to expand and bears to contract their ordinary expenditures somewhat independently of what happens to their ordinary receipts. However, the more closely other transactors follow the lead of bulls during expansion (or bears during recession), the less the required net financial flow from others to bulls (or from bears to others).

Thus far in this chapter our consideration of the channels of influence

[11] But there is a technical phase of monetary policy that is not bank credit policy — a phase that currently on the domestic level is mostly concerned with maintaining convertibility among the various forms of cash balances. The technical phase of monetary policy is undoubtedly important. But its domestic objective is fairly sharply defined, and most of the problems of effectuating this objective appear to have been worked out. Accordingly, in stating the fifth feature of the money circuit in Chapter 12 we implied that the banking sector would not be functioning properly if convertibility were not adequately maintained.

We think of this technical phase of monetary policy as broad enough to include changes in exchange rates, changes in Mint terms of purchase and sale for gold and silver, and fiat issues and redemptions. In the interests of simplicity we have been ruling these topics out of consideration. Some incidental attention is given them in the note at the end of this chapter and there is a further comment on exchange rates in Chapter 14.

of banks and U. S. monetary funds upon the moneyflows of other transactors has pictured banks and U. S. monetary funds as financial intermediaries between two classes of nonbank transactors, the loans and securities class and the cash balances class — between those whose obligations the banking sector holds and those who hold the currency and deposit liabilities of the banking sector. When bank credit is expanding there is a financial moneyflow from those who are mainly holders of cash balances through banks and U. S. monetary funds to those who are mainly obligors to the banking sector. When bank credit is contracting there is a financial flow in the other direction.

This suggests that the influence of banks and U. S. monetary funds upon the moneyflows of other transactors can be explored by analyzing the various net intersector financial flows into components so as to disclose the relations between the active hoarding and dishoarding of loan-fund balances on the one hand and the two-step financial flows that pass through banks and U. S. monetary funds on the other. In this section we will undertake with the aid of a component analysis of net financial flows to examine these relations and to determine for our seven year period, if possible, how far banks and U. S. monetary funds may have encouraged and assisted bullish sectors in financing stepped-up expenditure programs, how far they may have retarded or restricted such expenditure programs, and whether they have encouraged bearish contractions of expenditures.[12]

What we have said on these matters above implies that the banking sector stands in an asymmetrical relation to expansions and contractions in the aggregate of ordinary transactions. We believe such asymmetry is an inescapable corollary of our tentative hypothesis. A financial source of money is a necessary condition to a bullish expansion of expenditures; so is a bullish inclination. Banks can offer such a source and can play the active role in bringing source and inclination into contact; they have not much leverage to induce the inclination. In the downward direction their influence is stronger. They can refuse to provide the financial source; and they can call back money they have previously advanced. They can start or accelerate a recession; they can't do much to stop it — they can't convert bears into sheep or sheep into bulls. They can accelerate, restrain or stop an expansion; they can't start one all by themselves.

[12] We must expect, with our accounts on an annual rather than a quarterly basis and with the broad transactor groups we have adopted, that there will be highly significant financial flows that are not revealed.

But are we right about this asymmetry? Or have we perhaps omitted something significant about the nature of monetary and banking influences on moneyflows? Fisher in the chapter head quotation was evidently thinking in terms of a symmetrical relation, as have many others, a relation in which the banking sector could stop a contraction and start an expansion of total ordinary transactions by buying loans and securities from nonbank transactors and paying for them with its currency and deposit liabilities. Some economists, among them Fisher, have held that a bank credit policy aimed at and succeeding in eliminating cyclical fluctuations from nonbank cash balances[13] would practically prevent cyclical fluctuations in the volume of ordinary transactions. Other economists, not going this far, have held that if a bank credit expansion policy were sufficiently vigorous, it could stop a contraction of moneyflows and raise business activity to something like a full employment level.

Certainly our tentative hypothesis implies that a Federal bank credit policy that aimed at and succeeded in maintaining nonbank cash balances would not by itself be adequate to prevent or stop a cyclical contraction in moneyflows. Even if the Federal Reserve were able, when nonbank bearish transactors were preponderant, to increase nonbank cash balances substantially — and that means to more than offset the probable propensity of banks to pile up excess reserves — this, on our hypothesis, would not stop or retard a recession. Active cash balances can decline, and idle cash balances increase, with a cyclical decrease in the volume of ordinary transactions, as they apparently did in 1937-38. Federal Reserve maintenance or expansion of total bank credit might conceivably prevent a cyclical downswing from being accelerated by any action of banks. But there is no reason to think that this would significantly restrain bearish stinting and hoarding. Presumably only the form of hoarding would be changed, not its amount; with reduced portfolio yields bears would prefer to hoard cash rather than securities. Moreover, if bank credit is maintained or increased by Federal Reserve purchases of governments,[14] it is somewhat improbable a contraction of bank customer loans will be prevented. Even if total bank credit were to be expanded, the calling of customer loans and renewal refusals might still aggravate the recession. What the Federal Reserve can do to alleviate

[13] Usually defined in this connection as excluding time deposits.

[14] If purchases of governments by the banking sector were confined to purchases from the Treasury, as several versions of the 100 percent reserves plan require, their influence on private nonbank transactors would indeed be negligible.

the perverse cycle in credit analysis during a business recession remains to be determined. According to our tentative hypothesis, the most important thing a liberal Federal bank credit policy can accomplish in such a time is to keep banks from accelerating the downswing.

The discretionary hypothesis does, indeed, attribute some further restraining influence to bank credit policy during a recession. Let us suppose that a sufficiently vigorous policy of expanding Federal Reserve credit does lead to an increase in total bank credit. Three results should follow. First, to the extent that the added bank credit means decreased portfolios and increased cash balances for nonbank transactors, the change in composition will be in the direction of greater liquidity; and increased liquidity should be a mild encouragement to bullishness. Second, the prices of remaining nonbank portfolio items may be prevented from declining as much as they otherwise would have declined and some of them may even be improved; nonbank transactors may enjoy capital gains. However, the distribution of the capital gains will depend upon the initial distribution of portfolio holdings; and if what banks buy is mainly marketable U. S. securities the chief gains will accrue to holders of these marketable securities. Third, interest rates will presumably be reduced. However, reductions on some categories of loans may be less than those on others; and the perverse credit analysis cycle may still mean that banks are timid about new customer loans, particularly perhaps to small businesses.

Increased liquidity, capital gains, and reduced interest costs are all factors favorable to an expansion of the volume of ordinary transactions. But these three effects of bank credit expansion fall a very long way short of being powerful enough to make bank credit policy alone a dependable means of stopping business recessions.[15]

So much for the implications of our tentative hypothesis as to the ways in which an easy bank credit policy might exert an expansionary influence when bearish transactors are predominant. There is need next to

[15] Arthur F. Burns has urged that we have concentrated attention on the cyclical effects of Federal bank credit policy, neglecting its longer term implications. Certainly he is right, and right in implying that the limitations on Federal bank credit policy which apply to its cyclical effects may not apply to the longer term trend. But so long as we have a cycle it will be difficult to separate cyclical and trend effects with assurance. We have pointed out three ways in which an easy Federal bank credit policy might encourage an increase or discourage a decrease in moneyflows: through increased liquidity of nonbank loanfund balances, through lower interest rates, and through higher capital gains or lower capital losses on portfolios. Quite possibly, on all three counts, the secular effects of an easy Federal bank credit policy may be more significant than its cyclical effects.

introduce an amendment to that hypothesis as we outlined it in Chapter 12. We there stated it in terms of a net deficit on ordinary account for bulls during expansion and a net surplus on ordinary account for bears during recession. For the sake of simplicity we spoke as if the entire net financial flow could be manipulated by a transactor when he is actively exercising his discretion to expand or contract his ordinary expenditures. But in Chapter 11 and in Implication 9 of the features attributed to the money circuit we urged that a transactor has relatively little separate discretion over the changes in his active balances.

Strictly speaking we should divide the net financial flow into two parts, one arising from net changes in active loanfund balances (active cash, trade receivables, and trade payables), the other from net changes in the remainder of the loanfund balances (i.e., in what we have called idle balances). And we should amend the hypothesis by combining the net financial flow ascribable to changes in active balances with the surplus or deficit on ordinary account. The hypothesis would then be expressed in terms of the effective net surplus or deficit (from ordinary transactions plus active balance changes) on the one hand and changes in the rest of the loanfund balances on the other. For most transactors the latter means changes in idle cash, in portfolios, in paid-in capital, and in other debts payable.

While strict logic calls for such an amendment, expediency suggests a compromise. In the first place it has not seemed wise within the limits of this exploratory study to attempt to estimate active cash balances. We are in a position to make only a part of the indicated correction — to separate out of the net financial flow the effect of changes in book credit and to combine this effect with the ordinary account. Second, this partial correction has two incidental advantages. When we make it we arrive at a concept that has considerable currency, the cash surplus or deficit. Also, it is very convenient to work with the cash surplus or deficit in relating the moneyflows of other transactors to the operations of banks and U. S. monetary funds. However, if we state our hypothesis in terms of cash surpluses and deficits we must bear in mind the necessity of making a rough supplementary allowance for the way changes in active cash balances may influence transactors' discretion.

When we come presently to recapitulate the discretionary hypothesis we shall speak in terms of cash surpluses and deficits and of the *net negotiable financial flow* (net flow exclusive of the effects of changes in trade receivables and trade payables). And we shall shortly offer a component analysis of this net negotiable financial flow designed to show the part banks and U. S. monetary funds play in it.

But first we need to pursue the subject of Section 2 a little further. Presumably our component analysis should answer the question, To what transactors is the banking sector extending credit? It would be easy to give a clear-cut answer to this question if bank credit consisted entirely of customer loans broadly conceived, i.e., if banks and U. S. monetary funds acquired loans and securities only from the obligors and if liquidation of bank credit always took the form of repayments by obligors. But the fact of the matter is, a substantial part of bank credit transactions may be in the open market.

If the customer loan assumption were valid in the broad sense indicated, we would analyze bank credit by obligors. One component of the financial flow of each sector — households, Federal government, industrial corporations, etc. — would be the increment in its debt to banks. And apart from changes in cash, the rest of the negotiable financial flow (changes in other negotiable claims receivable and payable) of most transactors might be attributed mainly to the open market.

The customer loan assumption, even in its broad sense, implies that banks do not engage in open market operations, and this is surely contrary to fact. Nevertheless, we believe the component analysis this assumption suggests is both valid and highly informative. It will not tell us who sold whose debt to whom, but it will correctly report the resulting changes in debtor-creditor relations, and these are more significant. In particular it will identify the creditor relationships of the banking sector with its large and highly variable portfolio. Because it reveals the obligors of the various elements in this portfolio and not the parties from whom these elements were immediately acquired, it can help to indicate the probable incidence of changes in bank credit policy.

We have said that the relation of the banking sector to the business cycle is asymmetrical. The point just made suggests a further aspect of this asymmetry. Contraction and even the tightening of credit is bound to the past in a way that expansion is not. Particularly in contraction the effects of present banking operations are conditioned by the composition of present bank portfolios; that means they are conditioned by the past bank credit operations that have helped to fix that composition. Similarly, present Federal Reserve policy toward open market sales is conditioned by its past operations. The System can only sell what it previously bought. This suggests a broad question we believe economists have inadequately explored: What are the possibilities and limitations of the advance planning of the composition of bank credit, especially when bank credit is expanding but when there is no urgent immediate occasion to tighten credit? As it applies to the Federal Reserve System in particular,

this question must be rephrased: What would be the possibilities of the advance planning of the composition of Federal Reserve credit, if such credit could include all the items eligible for inclusion in member bank portfolios? And what statutory restrictions on bank portfolio items for inclusion in Federal Reserve credit are advisable?

The Federal Reserve credit policies we have chiefly considered above are often thought of as general, in contrast to selective credit policies. But total bank credit policy is selective in a sense; it discriminates between different classes of transactors. By tightening credit when the demand for gross national product appears to be pressing upon the supply, banks may be able to restrict a part of the demand, a part that needs to be financed. But one cannot logically escape the fact that if a policy of tightened bank credit is effective in this way, what it effects is a rationing of purchases of gross national product. It restricts the purchases of some would-be purchasers by making bank credit unavailable to finance them, or perhaps by forcing those already in debt to banks either to find refinancing elsewhere or else to stint and pay off their debts. Clear recognition of this fact helps us to understand why a tight credit policy is likely to be unpopular when there seems to be an occasion for it. But such recognition also raises two pointed questions in regard to a tightening of credit to restrain an overexpansion of moneyflows. How far is it advisable to embark upon a rationing program without being perfectly clear whose rations are being cut? Is a tightened credit policy the instrument most likely to cut the rations that most clearly merit cutting? We have already suggested that, under our present governmental organization, Federal Reserve credit policy cannot be unqualifiedly identified with Federal credit policy. And in so doing we have intended to imply a need for a coordination of Federal credit policies. By these two questions we mean to imply a still broader need, the need to coordinate Federal credit and other Federal policies toward expansions and contractions in moneyflows.

With these comments on the relations of banks and U. S. monetary funds to negotiable financial moneyflows in mind let us proceed to a quantitative analysis of these flows. What we propose is to analyze the net negotiable inflow of a nonbank sector into three components: the decrement in cash balances, the increment in obligations held by banks and U. S. monetary funds, and the increment in the net balance of other negotiable claims payable. For one sector, the rest of the world, we shall show also a fourth component, gold imports.

The information needed for this rough analysis, in addition to that in

preceding tables, is a distribution of bank credit (loans and securities) by obligors (see Table 41). The detail on bank portfolios available for this period is not very satisfactory and several crude apportionments have been necessary. It has therefore seemed wise to make two sector combinations. Industrial corporations and business proprietors and partnerships et al appear as a single sector on line D and private insurance carriers and security and realty firms et al on line H.

Table 41

Bank Credit Classified by Obligors
(Billions of Dollars)

		1935	*1936*	*1937*	*1938*	*1939*	*1940*	*1941*	*1942*	*Source*
A	Total Loans & Securities Held by Banks & U. S. Monetary Funds	48.9	52.8	52.0	52.4	54.4	57.5	64.5	85.5	BL 102 S
B	Household Loans & Mortgages	4.3	4.8	4.6	4.6	4.9	5.1	5.3	4.6	BL 103 G
C	Obligations of the Fed. Govt.	19.5	21.5	20.7	22.1	23.5	25.0	29.7	54.1	BL 102 R
D	Loans to & Securities of Industrial Corp. & Business Firms et al	14.7	15.9	16.3	14.6	14.7	15.6	17.4	14.7	BL 103 d
E	Farm Loans & Mortgages	1.6	1.6	1.8	2.2	2.2	2.4	2.5	2.7	BL 104 C
F	Obligations of State & Local Govt.	3.4	3.5	3.4	3.8	4.0	4.3	4.2	3.9	BL 104 D
G	Obligations of the Rest of the World	1.2	1.1	1.0	.9	.9	.7	.6	.4	BL 104 G
H	Obligations of All Other Nonbank Transactors	4.2	4.5	4.3	4.2	4.3	4.4	4.9	5.1	BL 104 X

Because of rounding, columns may not precisely downtotal.

Table 42

The Cash Surpluses or Cash Deficits of the Transactor Groups
(Billions of Dollars)

		1936	*1937*	*1938*	*1939*	*1940*	*1941*	*1942*
	Cash Surplus (+) or Cash Deficit (−) of:							
A	Households	3.0	1.8	−.9	.6	.7	5.2	15.5
B	Farms	.5	[a]	−.2	.4	[a]	.4	1.5
C	Industrial Corporations	−.3	−1.4	1.7	.4	−.5	1.1	8.2
D	Business Proprietors & Partnerships et al	.2	.7	.6	−.6	−.7	−.6	5.3
E	The Federal Government	−4.9	[a]	−1.2	−2.3	−3.2	−8.7	−39.1
F	State & Local Governments	[a]	.2	.1	[a]	.3	.9	1.7
G	Banks & U. S. Monetary Funds	.4	.4	.4	.4	.4	.3	.4
H	Private Insurance Carriers	1.8	2.0	2.0	1.9	2.2	2.7	2.9
J	Security & Realty Firms et al	.4	−.1	[a]	.1	[a]	−.2	.1
K	The Rest of the World	.2	[a]	−1.0	−.7	−1.5	−1.1	.2

[a] Lies between ± $50 million.

The component analysis can readily be derived from Tables 28, 29, 31, and 41, the cash decrement from Table 28, the increment in debt held by banks and U. S. monetary funds directly from Table 41, and the third component (the increment in the net debt to others, or net funds from the open market) as a residual. The computation of the residual component for each sector involves three steps: (1) determination of

the excess of those negotiable claims owed over negotiable claims owned that are shown in Tables 29 and 31; (2) subtraction of the debt held by banks (we shall refer to the remainder as net due to the open market, etc.); (3) computation of the increment in the net balance of claims due to the open market, etc. We shall not attempt to take account of the valuation adjustment (gains and losses on securities) in this component analysis.

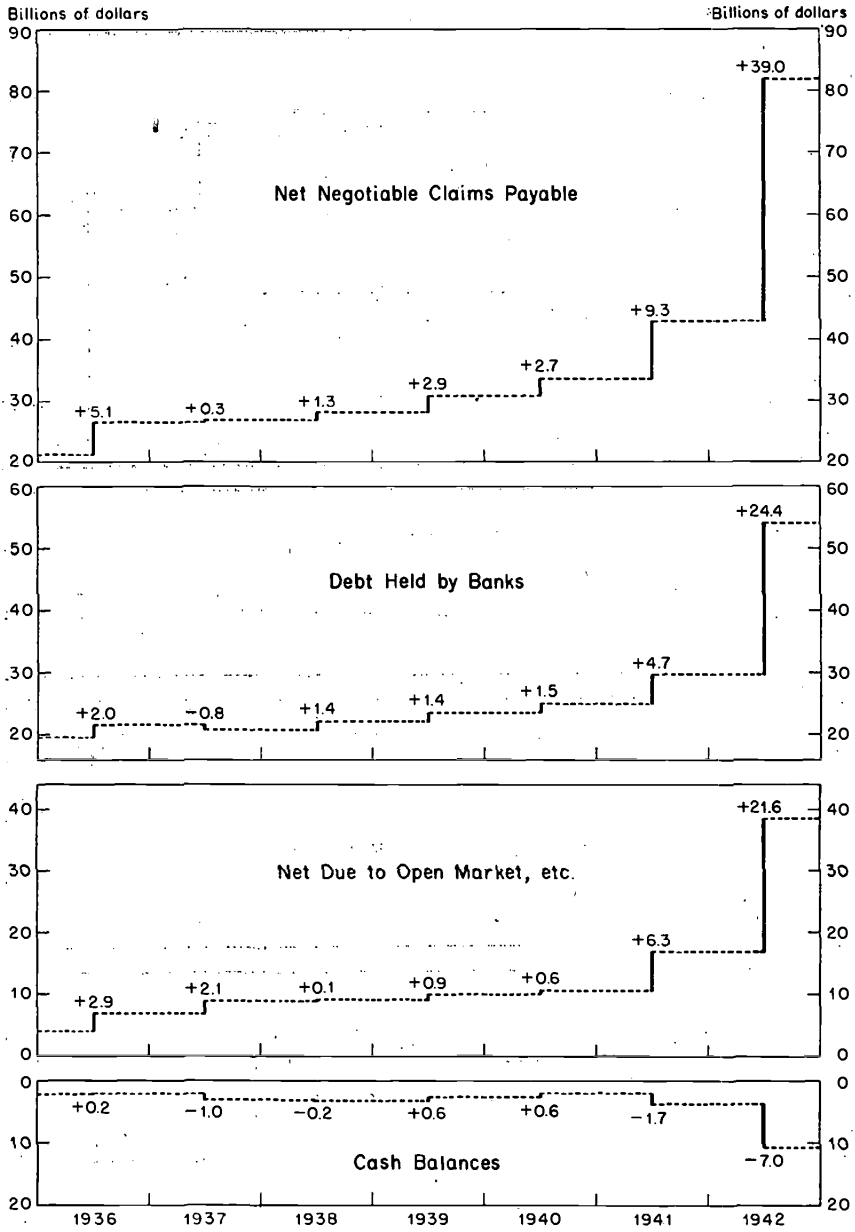
For convenience the cash surplus for each sector is shown in Table 42. We believe these estimates represent what is commonly meant by a cash surplus. Technically it has been computed as ordinary receipts minus ordinary expenditures plus money obtained through trade credit channels (the increment in trade payables minus the increment in trade receivables plus debts forgiven and receivables recoveries minus bad debt write-offs). Theoretically the cash surplus or deficit so computed should equal the net negotiable financial flow. For any nonbank transactor the cash surplus or deficit summarizes the effects of all transactions except loan and security transactions (and except gold movements in the case of the rest of the world) on the cash balance. But we cannot expect the computed net negotiable financial flow and the computed cash surplus or deficit to agree precisely, chiefly because of the discrepancies in the moneyflows accounts. (A second cause of disagreement is that we have not applied the valuation adjustment a/c loans and securities in the computation of the net negotiable financial flow.)

The component analyses for four sectors appear as ordinate increments in Charts 10-13. An upward step reports a source of money, a downward step a disposition of money. (It was necessary to use a condensed vertical scale for the Federal government.) In order to include asset balances in this form of presentation the asset scales have been made to read downward. The steps show annual increments in the year end balances; for convenience they are plotted at the midyear. For any year the algebraic sum of the steps on the lower grids for each sector equals the step on the top grid.

During most of the seven years something like half of the Federal government's deficit financing took the form of increased Federal debt held by banks; and during 1941 and 1942 Federal loan and security financing was partly offset by an accumulation of the cash balance (Chart 10). During six of the seven years the Federal government expanded its ordinary expenditures, and banks greatly assisted the government in raising the funds to finance these expanded expenditures. But of course banks and U. S. monetary funds are not a unified person-

Chart 10

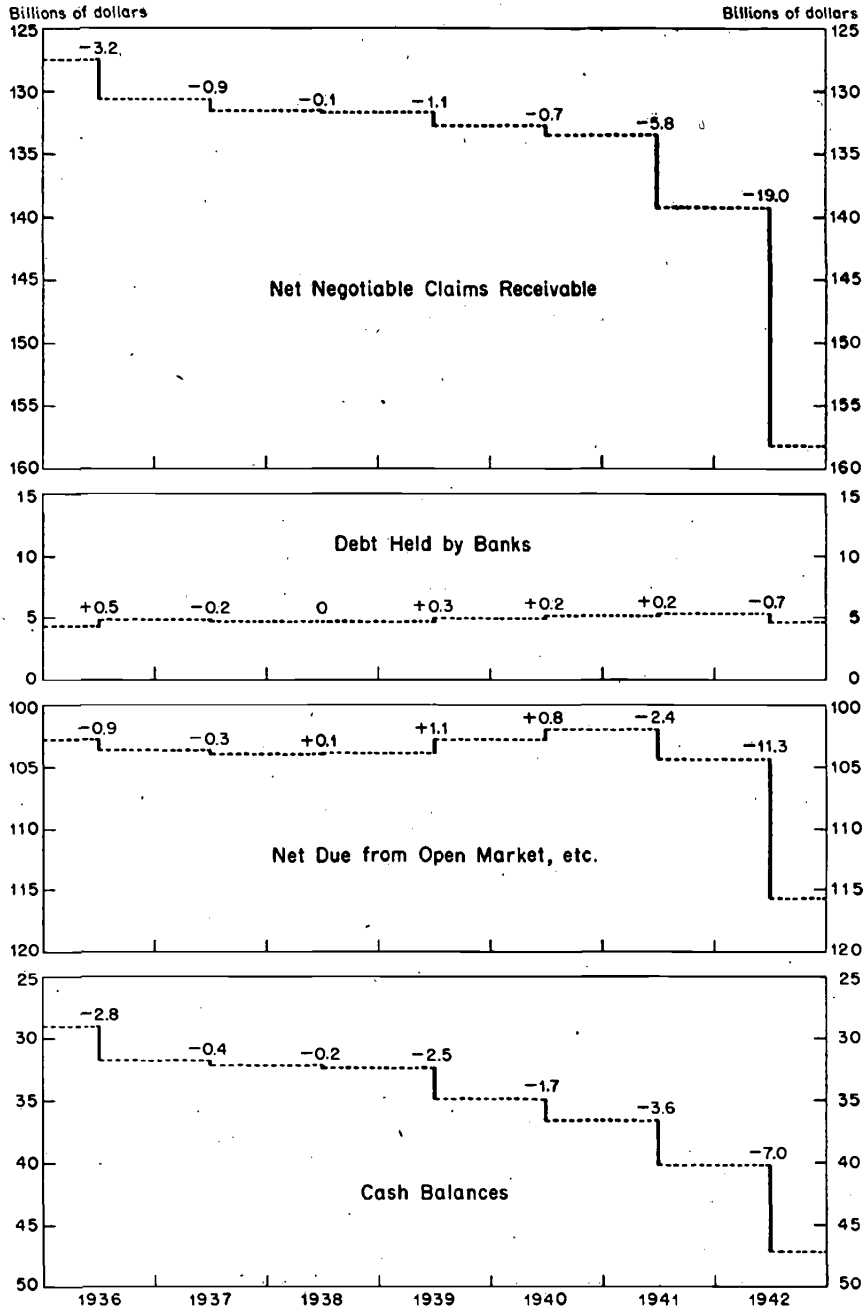
Major Components of the Net Negotiable Financial Flow to the Federal Government



Note: Dotted lines on each grid show the levels of the year-end balance of claims. The increment during each year (the financial flow) is represented by a heavy vertical line plotted at June 30. The amount in billions of dollars is entered immediately above or below, money obtained appearing as a plus quantity, money advanced or returned as a minus quantity. For each year the sum of the component flows on the lower grids equals the total negotiable flow on the top grid (except for the rounding discrepancy). On liability grids the ordinate scale reads up as usual; on asset grids this scale reads down. Trade receivables and payables are not included in the net balance of negotiable claims; on these loanfunds see text.

Chart 11

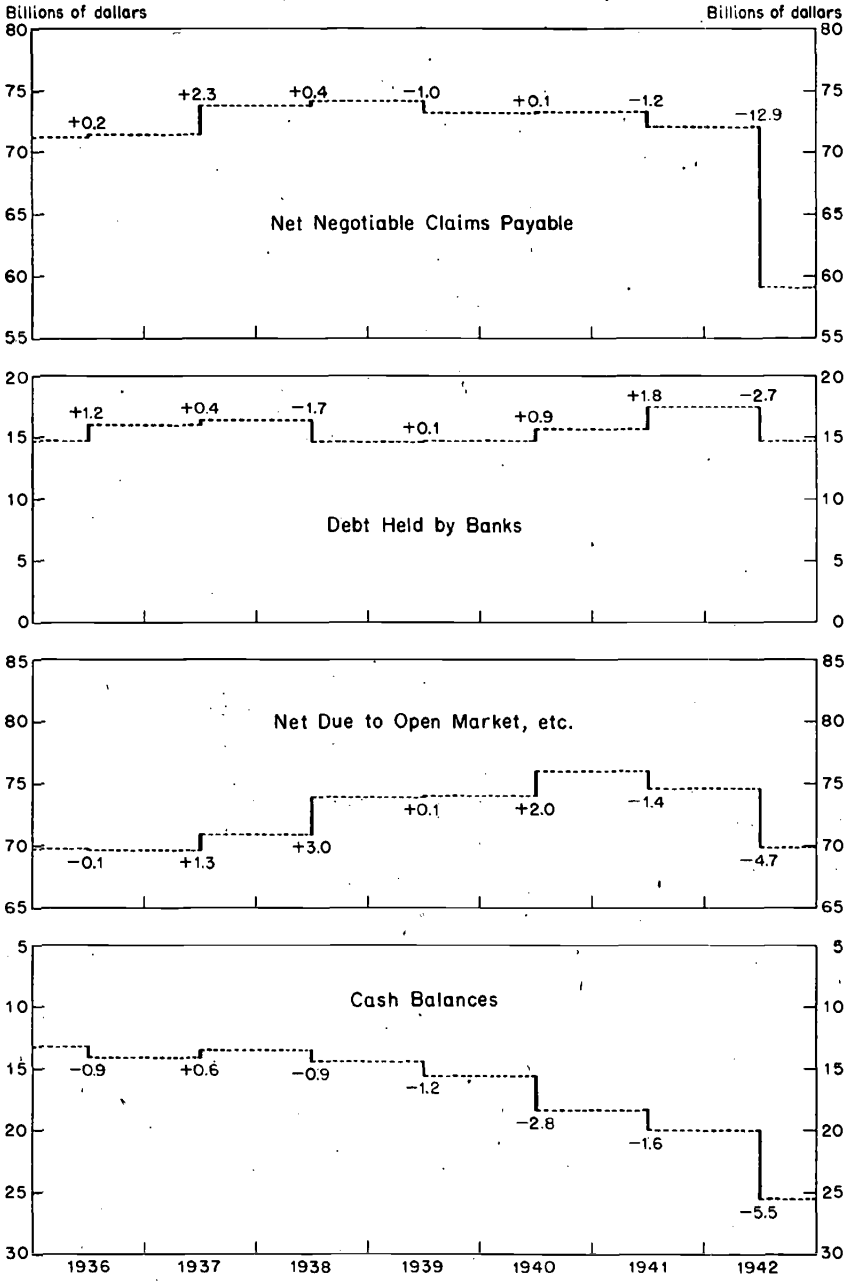
Major Components of the Net Negotiable Financial Flow to Households



See note to Chart 10.

Chart 12

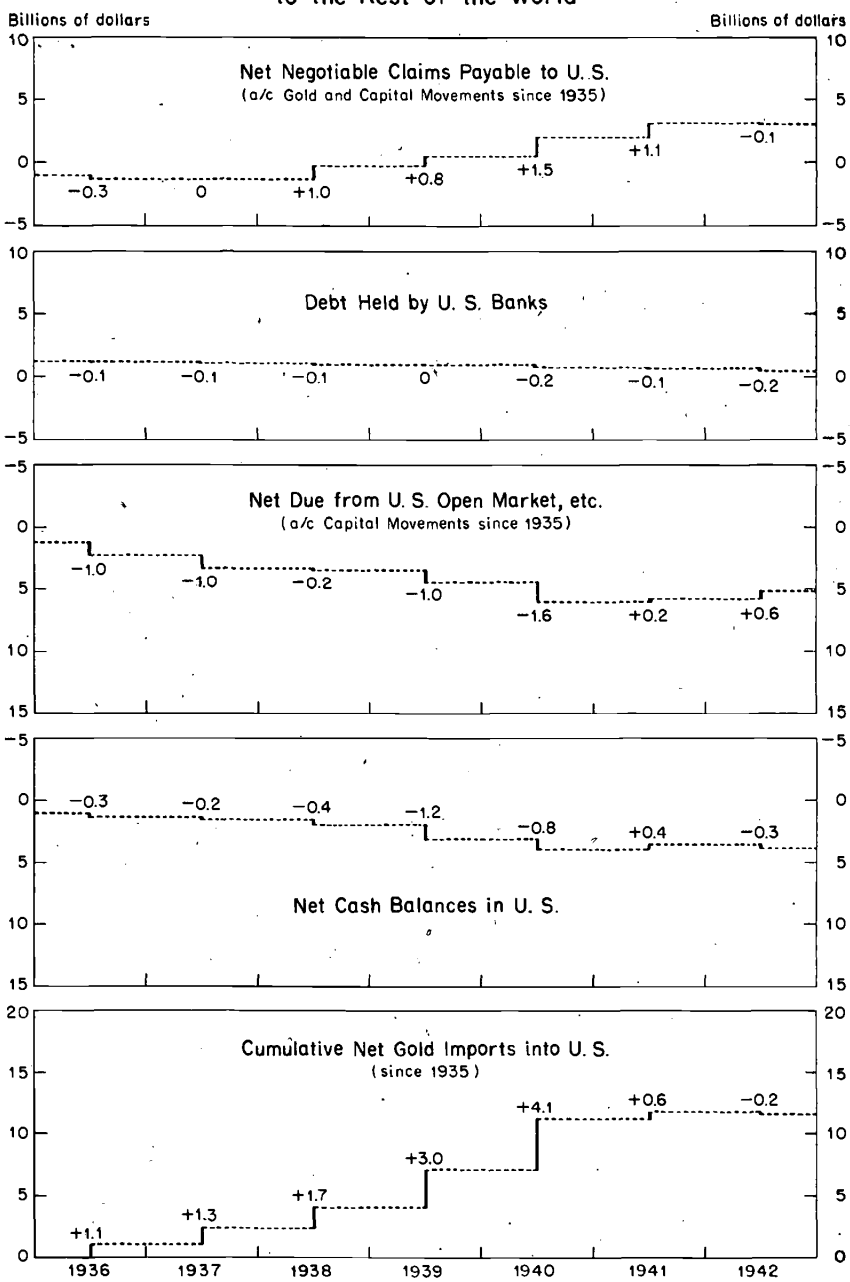
Major Components of the Net Negotiable Financial Flow to Industrial Corporations and Business Proprietors et al



See note to Chart 10.

Chart 13

Major Components of the Net Negotiable Financial Flow to the Rest of the World



See note to Chart 10.

ality, separate from the Federal government, in such operations; the central banking authority is a Federal agency.

During the period under consideration bank credit was a very small factor in the negotiable financial flow of households. And in four of the years households both accumulated cash balances and added to the net balance of negotiable claims receivable through open market operations. If banks exercised much third-party influence over household moneyflows during these seven years, Chart 11 does not disclose it.

One of the significant facts brought out by these charts is the virtual lack of relation during the period covered between bank credit changes and the negotiable financial flow of industrial corporations and business firms et al. An increase in bank holdings of business obligations contributed slightly more funds in 1936 than were absorbed by the increment in cash balances. Although indebtedness to banks increased in 1941, businesses as a whole appear to have had a cash surplus. These seven years are probably an exceptional period, but certainly Chart 12 suggests that banks may have moved a long way toward getting themselves out of touch with the business sector of the loan and security markets. Even during the seven years, however, potential bank influence over business was considerable because of the $14 billion and more of business obligations held.

Had these three component analyses (Charts 10-12) included trade credit the picture would not have been very different. The Federal government used some funds for book credit in 1940 (pre-payments) and obtained about $2-1/3 billion in 1942 through increased trade payables. A very gradual increase in household trade payables provided them some funds during the first six years of the period. About a billion (chiefly instalment debt) was paid off in 1942. Increases in net trade receivables of industrial corporations and business firms involved some use of funds during 1936, 1937, and 1939; during 1940-42 such increases averaged about $1.5 billion a year.

The component analysis for the rest of the world brings out forcefully the minor role of bank credit in the international financial flow during the period under observation, and the dominant role of gold movements.

The details revealed by Charts 11-13 are not especially striking. We think this is due to the particular behavior of the components (on an annual basis) during the seven year period, not to defects in the component analysis. We suggest that this type of component analysis brings out clearly the role of banks and U. S. monetary funds in the money circuit and is a device that much of the time should prove extremely useful.

Economists have sometimes thought of cash balances as a potential source of money promoting bullishness. Do these charts indicate that during the seven years bulls drew down cash balances to help finance ordinary expenditures? The Federal government drew down its balance slightly in 1936 and again in 1939-40, and the rest of the world did so in 1941. If these are cases in point they do not amount to much. We believe it would not be proper to construe the 1937 decrease in the cash of industrial corporations and business firms et al in this way. Although when we look at 1937 as a whole industrial corporations appear to have been bulls, their year end declines in cash and in trade receivables and payables (see Table 22) should presumably be taken to reflect the fourth-quarter drop in business activity. As the figures stand, they do not indicate any extensive use of cash balances, during the period of our inquiry, to finance bullish GNP purchases.

However, it is well to note that the evidence on this point can be made to tell a different story if we change the sector grouping. For some purposes it is advantageous to think of the Federal government and banks and U. S. monetary funds as one transactor group, and to show a consolidated loanfund balance statement for this group. The decrement in the cash balance (or increment in net currency and deposit liabilities) then shows as a substantial financial source of funds.

WHEN THE FEDERAL GOVERNMENT AND THE BANKING SYSTEM ARE TREATED AS ONE SECTOR (Billions of Dollars)

		1936	*1937*	*1938*	*1939*	*1940*	*1941*	*1942*
1	Decrement in the consolidated cash balance of the Federal government and the banking sector (P&B V line b minus P&B VII line b)	5.1	—.5	2.1	5.8	7.4	6.0	14.5
2	Line 1 minus the increment in the gold stock	3.9	—2.0	.4	2.7	3.0	5.3	14.5
3	Total net negotiable financial inflow for the Federal government and the banking sector together (the increments in Fig. 4a, top grid, minus P&B VII line f)	4.6	—.1	1.1	2.6	2.0	8.8	38.8

Even when we count the monetary gold stock in the consolidated cash balance, as in line 2, a substantial part of deficit financing is accounted for by the cash decrement. Line 2 is over 80 percent of line 3 in 1936, 60 percent in 1941, and 37 percent in 1942. In 1939 and 1940, partly because the consolidated portfolio of the Federal government and banking system increased, the cash decrement exceeded the total net negotiable financial inflow shown in line 3. Doubtless the decrement in cash

may help to finance other things besides GNP expenditures (the consolidated portfolio increased also in 1936 and 1941). Such a consolidated presentation of financial flows makes the difference between financing a war by issuing greenbacks and financing a war by issuing obligations, the interest rates on which are kept down with the aid of the banking system, look more like a difference of degree than one of kind.

4 *A Resume of the Discretionary Hypothesis*

The interpretative comments on moneyflows and loanfund balances offered in preceding pages refer most immediately to the annual estimates for 1936-42 presented in Part Two. But a major consideration in shaping the statements of payments and balances for the several sectors was that whenever feasible these annual estimates should be developed from established statistical series. The behavior of many items in these statements, therefore, either is known or can be approximately inferred for a somewhat longer period than seven years and often more frequently than at annual intervals. In attempting interpretations we have sought to keep this wider range of information constantly in mind.

The interpretations may be grouped under two heads: those that are somewhat closely linked to the scheme of moneyflow and loanfund accounts we have elaborated and those of a more tentative nature. It is, of course, impossible to draw a sharp line between these two groups of interpretations, for there are many degrees of tentativeness. But broadly, the account-linked interpretations may be said to cluster around the five key features we have attributed to the money circuit and their ten implications while the more tentative ones comprise what has been called the discretionary hypothesis.

The firmer interpretations derive their firmness in varying degree from their association with the set of quadruple entry accounts the estimates constitute. They provide a basis on which one may theorize about moneyflows and about cash and other loanfund balances. We believe that the portrayal of moneyflows through such a set of accounts is not accidental to the nature of moneyflows, that moneyflows by their very nature require us to think in terms of some such accounting scheme, if we are to think accurately. In formulating the five key features and their implications we have merely sought to give precision to familiar factual statements and to systematize familiar economic relationships. We readily agree that this formulation may need amendment in detail, but we doubt that anyone can logically take major issue with this type of formulation unless he is prepared to deny the quadruple entry basis on which it rests.

Using this formulation as a foundation we have developed a discretionary hypothesis concerning how changes in moneyflows come about. In working out this hypothesis we have attempted to take account of many facts beyond those included in our tables, but the testing to which we have so far been able to subject this theoretical framework is insufficient to be definitive. We propose it merely as a tentative working hypothesis, hoping it will prove useful in further inquiry.

The hypothesis has to do primarily with cyclical and secular variations in moneyflows. Seasonal and other within-the-year variations and sporadic variations are considered only incidentally. No attempt is made to deal with cyclical and secular variations separately. In summarizing the hypothesis here we repeat that it is not to be taken as an explanation of the business cycle; it deals with only one aspect of the cycle — In what ways do the expansions and contractions in moneyflows come about? It is convenient to repeat also several points asserted in the five features and their implications.

The hypothesis may be summarized as follows:

i *Short and longer term functions of cash*

The entire cash balance serves the value storage function. It stores up cash surpluses and is a store that can be drawn upon to meet cash deficits.

The active cash balance is the part of the balance required for the short term value storage function, i.e., for offsetting against each other the temporary cash surpluses and deficits that are due to seasonal and other within-the-year variations (and sporadic variations) in receipts and expenditures. The remainder — the idle cash balance — serves the longer term or cyclical and secular value storage function.

Various other loanfund balances — claims receivable and claims payable — help to perform both value storage functions.

ii *Discretion over idle cash*

Transactors have discretion to increase cash balances by borrowing or by selling loans and securities (or to decrease cash balances by debt repayments and portfolio acquisitions). They can exercise this discretion over cyclical and secular variations in their idle cash balances.

iii *Freedom to spend more or to stint*

As has been recognized by various writers, the total volume of ordinary transactions could increase (or decrease) if all transactors simultaneously increased (or decreased) their ordinary expenditures *pari passu,* so that the receipts of each increased (or decreased) just as rapidly as his expenditures. Cash balances and the loan and security markets give some trans-

actors discretion to increase (or decrease) their ordinary expenditures by more than the change in their ordinary receipts. Those who dishoard their idle loanfund balances to finance a more rapid increase in spending than in receipts we call bulls. Those who stint (i.e., curtail their expenditures more rapidly than their receipts decline) and hoard idle loanfund balances we call bears. Other transactors are sheep. But we do not pretend to distinguish these three groups very precisely; we take a sector's cash surplus or deficit as an approximate measure of the change in its idle net loanfund balances.

iv *Two interacting readjustments*

The total volume of transactions in the main money circuit during any period is to be understood as a readjustment of the previous volume, a readjustment that arises from the mutually conditioning choices of bulls, bears, and sheep. This readjustment always proceeds in two interacting simultaneous phases. On the one hand there is a readjustment phase affecting gross national product expenditures, product receipts minus nonfinal product expenditures (net product receipts), and transfers; we include here also changes in trade receivables and trade payables; this phase of the readjustment takes place largely in the commodity, labor, and service markets. On the other hand there is a readjustment phase affecting the loan and security markets and the flows of money through financial channels.

We may characterize these two interacting readjustment processes as the ordinary and the financial respectively. Each of them is, in large part but not entirely an adjustment between changed supply conditions and changed demand conditions, on the one hand changes in the demand for and supply of commodities, services, and labor, on the other changes in the demand for and supply of funds.

In the ordinary readjustment the initiative appears to lie mainly with the demand changes, because most transactors have more discretion to change ordinary expenditures than ordinary receipts. However, we must not think of this as merely a readjustment between supply and demand. Taxes, contractual commitments, and public purpose payments are involved. And governments can initiate changes in their tax receipts. It is a readjustment between the total of ordinary expenditures and the total of ordinary receipts of all transactors.

In the financial readjustment process lenders and investors in securities and borrowers, issuers of securities, and those who wish to liquidate portfolios must get together on terms in the loan and security markets. But loan and security transactions are not the whole story. For the rest

of the world gold imports into the U. S. have been an important source of funds. And there are changes in sector cash balances to consider. Through their influence on total nonbank cash balances and their participation in the loan and security markets banks have a great deal of discretion over the moneyflows through financial channels in which they serve as financial intermediaries. Banks, of course, may be bulls or bears on their own account but what they do in this respect does not matter much. What does matter greatly is their relation to the negotiable financial flows.

v *Negotiable financial moneyflows necessarily compensate cash surpluses and deficits*

When bulls predominate in this two-phase readjustment process, moneyflows increase, and those with cash deficits — chiefly bulls because of their higher level of spending — necessarily obtain just enough money from all other transactors through financial channels to meet their cash deficits. When bears predominate, moneyflows decrease, and those with cash surpluses — chiefly bears — necessarily advance or return just enough money to meet the cash deficits of the rest of the economy that occur when bears contract their spending.

When moneyflows are expanding, sheep are likely to contribute to the expansion by adding to their ordinary expenditures, though as sheep they will in general add less than the increase in their ordinary receipts. When moneyflows are contracting, the decrease in the ordinary expenditures of sheep is likely to lag behind the decrease in their receipts. But the lag is likely to be smaller and the downswing consequently steeper. Sheep help to give the cyclical and secular fluctuations in moneyflows their cumulative character.

A crucial question is, How is the readjustment process in the loan and security markets so synchronized with the readjustment process that goes on chiefly in the commodity, labor, and service markets as to make financial moneyflows precisely compensate cash surpluses and deficits?

vi *If there were no loan and security markets*

During an expansion of moneyflows the ordinary receipts of most sheep and bears are likely to exceed their ordinary expenditures, and they are likely to accumulate cash. The cash balances of bulls may decline somewhat if they have large idle balances to begin with.

Conceivably the high spending level of bulls might be financed entirely by drawing down their cash balances, and other transactors might merely allow their cash balances to accumulate through financial inadvertence.

If so, no new money would pass through the loan and security markets, and the net negotiable financial flow would be simply a transfer of cash balances.

Similarly, when moneyflows are contracting, the hoarding by bears might conceivably be entirely in the form of increased cash balances and the cash deficits of other transactors due to the stinting of the bears be met merely by drawing down cash balances.

If total bank credit (also the gold stock and Treasury currency) were constant, and if the cash surpluses and deficits of the various economic sectors that accompany cyclical and secular variations in total ordinary transactions were to be met entirely by shifts in the ownership of cash balances, so that the negotiable financial moneyflows between sectors consisted entirely of increments and decrements in sector cash balances, these financial flows would necessarily exactly match the cash surpluses and deficits of the several sectors.

vii *Cash keeps the loan and security markets in step with ordinary transactions*

The matching between negotiable financial moneyflows and cash surpluses and deficits is in no wise disturbed when we add loan and security transactions to the analysis. All that is involved is a partial substitution of loans and securities for cash in the shifts, a change in the form of the financial flows. Transactors with cash deficits can obtain money through financing by selling loans and securities instead of by drawing down their cash balances. Transactors with cash surpluses can advance or return money by buying loans and securities or retiring debt instead of advancing it in the form of an increment in cash.

Because loan and security transactions take place only as they serve as partial substitutes for changes in cash balances in performing the function of offsetting cash surpluses and deficits, the readjustment processes in the loan and security markets are necessarily synchronized with those that go on mainly in the markets for commodities, labor, and services. It is dwindling cash balances that force transactors into the loan and security markets to obtain money; accumulating cash balances are necessary if transactors are to find it attractive to advance or return money through these markets.

For convenience, we have stated the case in terms of cash surpluses and deficits, but we must recognize a complication. A nonbank transactor's requirement for active cash changes as his ordinary transactions increase and decrease. An increase in the active cash requirement makes a transactor's effective surplus smaller than his nominal cash surplus; a decrease

in the active cash requirement augments this surplus. Although we do not have satisfactory estimates of year to year changes in active cash we should qualify what we have said to allow for the difference between effective surpluses and deficits and cash surpluses and deficits.

viii *Convertibility has been extended to loans and securities*

Loan and security transactions may take place between one nonbank sector and another, or banks and U. S. monetary funds may intervene. In a flexible-price commodity market, demand and supply are adjusted, in part at least, through adjustments in prices. There is this type of adjustment in the loan and security markets too (through changes in interest rates), but there is also one that is peculiar to loans and securities. Nonbank transactors can sell more loans and securities than nonbank transactors buy, or they can sell fewer. Banks and U. S. monetary funds can convert many kinds of loans and securities into cash for nonbank transactors by simultaneous and equal increases in bank credit and in total nonbank cash balances; or they can convert cash into loans and securities for nonbank transactors by simultaneous and equal decreases in bank credit and in nonbank cash balances. Convertibility plays a significant role in keeping the loan and security markets in step with ordinary transactions.

Of course this type of convertibility is not free. Interest offers an inducement to nonbank transactors to convert idle cash into earning assets; and it costs money to convert one's own debt or one's portfolio into cash.

ix *Are moneyflows and cash balances correlated?*

During a cyclical expansion of total ordinary expenditures two factors are likely to make for an expansion of nonbank cash balances. One is the growth of active cash requirements that accompanies the increasing volume of business; some transactors — chiefly bulls — will need to borrow or liquidate portfolios in order to build up their cash on hand. The other factor is financial inadvertence; most sheep are likely to have effective cash surpluses and to be slow enough about portfolio acquisitions and debt retirements so that they accumulate cash. Against these two factors we may set some decline in liquidity preference. But such a decline is unlikely to be more than a partial offset; the factors making for an increase in total nonbank cash balances can in general be counted on to prevail.

During a cyclical contraction of total ordinary expenditures reverse influences operate. Active cash requirements decline and, with most

sheep incurring cash deficits, there may be some inadvertent decline in cash balances. At the same time liquidity preference increases. But in this case the net outcome is less certain. If the recession is sufficiently prolonged, the currency and deposit liabilities of the banking sector can be confidently expected to decline. However, if the recession is sharp and short they may show little or no change (as in 1937-38).

These considerations suggest some degree of correlation between cyclical fluctuations in total ordinary expenditures and cyclical fluctuations in nonbank cash balances. But they point to a line of causation that runs from volume of moneyflows to quantity of money, not conversely. Moreover, they point to influences that have their immediate origin in decisions of nonbank transactors. This certainly does not mean a denial of influences that originate with the banking sector. Rather this means that it is difficult to separate the influences the banking sector exerts on the quantity of money from the influence it exerts on the volume of moneyflows. Federal Reserve credit policy impinges on both.

x *The banking sector and total ordinary transactions*

The banking sector influences total ordinary transactions by buying and selling loans and securities. To a lesser extent it influences this total — chiefly the transactions of the rest of the world — by buying and selling gold and silver. Its own ordinary transactions are of minor consequence in this total.

We have concentrated attention on the major channel of banking influence on moneyflows, expansions and contractions of bank credit. The common accompaniments of such changes in the earning assets of the banking sector are equal and offsetting changes in its currency and deposit liabilities. But we must not suppose the interest-bearing obligations of each nonbank transactor it acquires are matched dollar for dollar by an increase in that transactor's cash balance. If this were the case the influence of the banking sector on other transactors' moneyflows would be somewhat narrowly confined. It could permit (or restrain) an expansion of moneyflows by permitting (or restraining) an expansion of active cash balances, but its role in such an expansion would be essentially a passive one. Also it could compel a decrease in total ordinary transactions by liquidating its portfolio and compelling a decrease in active cash. But if the effects of a contraction of bank credit could be so evenly distributed — and this seems unlikely — they should cause no one any serious financial distress. Clearly on the upswing and apparently in recession also the potentialities of the banking sector would be seriously understated on such a view.

The most important aspect of the influence of the banking sector on the moneyflows of other transactors arises from the fact that commonly some transactors are getting into (or out of) debt to banks while others are increasing (or decreasing) their cash balances. This means a financial flow from one group of nonbank transactors through the banking sector to another, a flow in which the banking sector acts as an intermediary between two nonbank transactors. Now as the intermediary the banking sector is something more than an ordinary middleman: It enjoys certain strategic advantages in connection with these financial flows, advantages that are sufficient to make bankers the leaders of the business community, at least so far as cyclical fluctuations in moneyflows are concerned.

During a cyclical upswing the financial flows in which the banking sector serves as an intermediary go chiefly to bulls and come chiefly from sheep. The sheep advance money to banks by inadvertent increases in cash balances. The sheep, indeed, have three options when their ordinary receipts increase: (1) They can spend more (and the more sheep spend the less bulls will need to raise through financial channels); (2) They can increase their portfolios or pay off their debts (thereby supplying funds directly to the loan and security markets); or (3) They can pile up cash (thereby advancing money to the banking sector which it can relend). In effect banks can borrow money (by expanding their deposit liabilities) and lend it to bulls without stopping to obtain consent from the sheep who are the ultimate lenders (i.e., the ultimate creditors). This makes bank credit expansion a particularly convenient and effective means of financing an expansion of moneyflows. During the seven years studied a substantial part of the financial moneyflows required to offset Federal cash deficits took the form of increases in government obligations held by banks, but the cash deficits and surpluses of other sectors apparently were not in any important sense thus offset by changes in bank credit.

If the banking sector can actively promote a cyclical expansion of business by advancing funds to bulls, it can also retard such an expansion and both compel and accelerate a contraction.

Bank credit policy can restrain an expansion of moneyflows. It can discourage bulls by increasing the costs of financing. It can also help to see that they are refused additional accommodation, if further expansion of total bank credit is sufficiently restricted or if it encourages more severe credit analyses. However, since credit is fluid we must reckon with the possibility that financial moneyflows may under some circumstances detour the restrictions of a tight bank credit policy.

A contraction of bank credit — particularly of customer loans and mortgages — is likely, unless it is a very gradual one, to force bank debtors to stint and hoard, i.e., to convert bulls and sheep into bears. In times past rapid bank credit contractions have caused serious and extensive financial distress, accelerating and, before the Federal Reserve Act, helping to precipitate contractions of moneyflows. It is doubtful whether present Federal Reserve powers are adequate to prevent banks from accelerating a moneyflows contraction, but during the only recession in the seven years studied banks do not appear to have exerted a significant influence of this type.

Once a business recession is under way the banking sector can do little to stop it or to initiate an upturn. It cannot effectively deter anyone from stinting and hoarding or induce anyone to dishoard and spend. But when there are credit-worthy would-be bulls, the banking sector can actively contribute to recovery by discovering and financing them.

This is the hypothesis or theoretical framework we propose. Like the five key features and their implications on which it is erected, it has to some extent been couched in terms of the special details we have assigned to the statements of payments and balances. And, as with the features and their implications, we believe the validity of the hypothesis or framework is largely independent of these special details.

To add imputed items to the accounts would not affect cash surpluses and deficits, for any such added item would be an addition to both a sector's expenditures and its receipts. Imputed items are among the many significant quantitative facts about our economy that are not measures of moneyflows. Certainly they can contribute to an understanding of what goes on in the money circuit and why various transactor groups manage their moneyflows and loanfund balances as they do. But there is no reason to think that adding them to Table 33 would make the moneyflows themselves behave any differently, or require us to restate the processes by which moneyflows expand and contract.

Exclusion of offset settlement items would distort the picture of gross national product expenditures, net product receipts, and transfers (Table 33), and make it awkward to interpret. But it would not disturb the balance of any account, or call for any modification in the description of how expansions and contractions in moneyflows take place. Nor would changes in the detailed scheme of classification of ordinary transactions be likely to require any major modification in the statement of the hypothesis.

Had we defined cash balances differently, it would be necessary to alter the negotiable financial flow component analysis (Charts 10-13)

accordingly. The apparent composition, but not the net amount, of financial flow would be changed. A similar comment applies to the effects that might be expected from the inclusion of technical transactions in the moneyflows accounts. Various plus components and minus components would be added to the financial flow analysis, but the added plus components and the added minus components would always precisely neutralize each other.

The nature of the statement of payments and balances depends significantly on the way we have elected to draw the line between ordinary transactions and financial operations. Many close accounting decisions entered into the drawing of this line. Increases in the paid-in capital of corporations appear as a financial source (decreases as a financial use) of funds for transactor groups III, VII, and X. Changes in the paid-in capital of other enterprises are a component of the ordinary moneyflow, net owner takeouts (which is an ordinary use of money for groups II, IV, and X). The failure to treat changes in noncorporate paid-in capital as financial presumably makes unincorporated enterprises appear slightly less active in the exercise of discretion than they should appear (Charts 8 and 9).

In Chapter 11 we noted that as a result of the way we drew the line between ordinary and financial flows the accounts do not reveal the extent to which tangible assets may perform the storehouse of value function. Undoubtedly it is theoretically possible for bulls to dispose of a stock of tangibles as well as a stock of government bonds in order to finance increased purchases of gross national product. But there is another side to this possibility. A part of the cash deficit of a sector that is expanding its GNP purchases may be due to the fact that this expansion is accompanied by the acquisition of existing assets.

Certainly the hypothesis we have outlined (or framework we have proposed) should be interpreted with these possibilities in mind. A somewhat fuller balance sheet showing would be needed for this purpose. Without attempting to go into the point in detail, we venture the guess that during the seven years under review the most important modification of our interpretation in this connection would be to recognize that during the early war years a part of the Federal cash deficit was due to Federal acquisitions of titles to real estate and of inventories.[16]

One other aspect of the statistical and accounting conventions we have adopted clearly bears on the interpretation of our hypothesis — the

[16] The effect of real estate acquisitions appears in Table 11, line c. The effect of inventory acquisitions was presumably somewhat larger; it may be said to involve an overstatement of Federal GNP expenditures in Table 33 and an understatement of GNP expenditures by other sectors, especially industrial corporations.

scheme of transactor grouping. A more detailed classification of transactors might be expected to reveal cash surpluses and cash deficits that have been offset against each other in the broad group statements here presented. Again, as we have seen, combining sectors such as the Federal government and banks and U. S. monetary funds may give quite a different picture of the composition of financial flows. Further, as we insisted in Chapter 12, if the economy is looked at in terms of too aggregative a level the financial flows to which the hypothesis refers are lost to view.

These considerations point principally to the need for care in interpreting the hypothesis or framework. We do not believe they raise any question of its validity, whatever may be said about its validity on other grounds.

To flag its tentative nature and stress the need for much further testing we have called the framework within which we propose to interpret cyclical fluctuations in moneyflows not a theory but an hypothesis. If it should gain acceptance it would displace a framework for interpreting these fluctuations that runs in terms of an hydraulic analogy for the money circuit. To some the words 'test' and 'hypothesis' in this connection will suggest the possibility of a finding of fact, a critical fact that has yet to be found and that will determine the issue between these two alternative formulations.

This is one of the ways science proceeds, but it is certainly not the only one. It is not the applicable procedure here. We claim to have demonstrated in the note at the end of Chapter 12 that the hydraulic explanation has many implications that are inconsistent with a social accounting approach to the study of moneyflows and that there is not much left of the analogy if one does not accept these conflicting implications.[17] If so, it should clearly be rejected by anyone who adopts the social accounting approach. And we believe it would be difficult to gainsay either the general validity of that approach or its great advantages in empirical investigation.

Unless one accepts the social accounting approach the question of testing our tentative framework for interpreting cyclical plus secular

[17] In this note we also considered what is left of the equation of exchange approach to the investigation of moneyflows when the hydraulic implications are expurgated. The reader may wonder whether what is left constitutes an alternative framework. The answer is, No.

We claim that what is left of the equation of exchange approach is the hypothesis that there is a discoverable habit pattern that conforms to the following specifications: 1) Some (not fully agreed upon) total of moneyflows (for all transactors, or for each of several not yet agreed upon sectors) is a function of some (not yet fully

expansions and contractions in moneyflows in terms of transactor discretion does not arise. If one accepts the social accounting approach, he will require an interpretation within a framework consistent with the five key features. Our hypothesis is a framework erected on this foundation. When we speak of testing it, we mean testing by using it in further investigations of moneyflows. We believe the hypothesis is one that will well repay such probing. But it would be strange indeed, if the testing the hypothesis would get by being so used did not lead to extensive amendment.

Some may think we should have tried to summarize our hypothesis in simpler language. But we have a less technical and rather less precise alternative statement of it.

The dollar sign was showing; every sheet this symbol topped;
And that was odd because so many cyphers had been dropped.
The estimates arrayed themselves in columns and in rows;
They showed the cash each sector held; they showed its moneyflows.
"The time has come," the Walrus said, "To talk about inflation.
If all the cash outside the banks is cash in circulation,
Do you suppose that moneyflows increase as cash increases?"
"I wonder," said the Carpenter, "Let's take this thing to pieces."

They sat up in an ivory tower and watched the circuit-flow;
So quick and fast the dollars passed, they scarce could see them go.
The Carpenter was much perplexed, and broached this argument;
"I say! That's queer, but all the time some chap holds every cent."
The Walrus sighed as he replied, "We must investigate,
If there's no money in the land left free to circulate!
Queer's not the word. It's so absurd that I just can't believe it.
How can folks always hold their cash until payees receive it?"

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agreed upon opening, average, or other) total cash balance. (We may add that the fiscal period to which this function applies is not fully agreed upon).

2) There are no other variables in this equation of exchange except time. Each of the other quantities in this equation is a parameter, the value of which is to be determined by statistical inquiry as a 'best' fit.

3) This equation will be useful for controlling the moneyflows total through the cash balance total, not conversely.

This hypothesis does not constitute a separate alternative framework. It is both entirely consistent with and a necessary corollary of the hydraulic approach. Unless some such habit pattern can be established and confirmed by various investigators, there would seem to be scarcely anything to be said for the hydraulic approach.

The relation of this hypothesis to the framework we have proposed is less clear-cut. This is because the nonhydraulic equation of exchange hypothesis is so vague. On the whole we regard it as a possible line of inquiry within the discretionary framework, but one that is not too promising, particularly if attacked sector by sector. In any case as an habit pattern hypothesis it must meet and down its competitors. It must give about as good a fit to the facts as any alternative that introduces other variables that are independent of the cash balance total, or that uses another fiscal period along with these other variables, or that approaches the problem on a less aggregative basis.

And so they studied money to sate their curiosity,
Read books about its quantity and circular velocity,
Read books on the equation of exchange. "This means," they read,
"That cash flows like a limpid stream." They wondered if instead
It flowed like electricity, and they found a chart by Sahm
That explained the money circuit in a wiring diagram.
"If money flows with more than lightning speed," the Walrus said,
"No wonder folks can hold their cash until their bills are paid."

They watched the moneyflows some more to check what they'd explained.
The business cycle cyked. The flows of money waxed and waned.
And while they looked, the flows increased as bulls began to buy.
This made the Carpenter exclaim, "I can't see where or why
Expansion gets its start. It's clear the bulls are spending more,
And clearly others spend as much as they spent heretofore;
But still the bulls must borrow to obtain the cash they spend,
And what they need to borrow, lo, the others have to lend!"

The Carpenter began to weep. The cycle made him sore.
He wept again as flows declined, and more and more and more.
The Walrus sought to comfort him. In these bold lines tried,
"A simile is what we need, and a little brass beside.
The fluctuating flows are like a lengthy family tree;
Let's trace their line from Alger Dick who lived in poverty.
Dick helped his son, his son made good, left grandson lots to grow on.
The fourth in line was badly spoiled, and he went broke. And so on."

This greatly pleased the Carpenter, and led him to demand,
"Let's try to see just what takes place when moneyflows expand.
While trade is poor each man's receipts are low, because they all
Have cut their spending to the bone. In time the bold recall
That there is money to be made by risking and investing.
As bulls they start to forward-spend, each item carefully testing.
They have to borrow for this spending. But the more they spend
The more receipts the others get; the more *they* have to lend."

"It's very well," the Walrus said, "To show the rest must get
Whatever money bulls may need to borrow. But the debt
Of bulls may not appeal to them; they may not choose to lend."
"Of course," the Carpenter agreed, "But bulls need not depend
On getting those from whom they buy to take their IOU's.
They may hold others' debts or idle cash that they can use,
Or maybe, banks will make them loans on good security,
Or, on their looks, when ticker-tapes proclaim prosperity."

"Yes, maybe," said the Walrus, for his doubt was not allayed.
"The spending and receiving that go on in marts of trade
Seem separate from financial operations in the Street.
But somehow bulls obtain the money that they need to meet
Their bills when they spend more. Finance expands when trade expands,
So that the funds advanced to bulls just equal bulls demands.
It can't be trade that sets the pace, nor can it be finance,
And yet they move in perfect step like partners in a dance."

If he had been the Carpenter, he'd've wept at this impasse.
But as it was he merely looked in Carroll's looking glass.
The moneyflows reversed themselves. He saw the bulls unspend.
The rest of the economy he also saw unlend.
"Ah, now I see," he cried in glee, "that glass is marvelous.
What keeps finance and trade in step? The answer's obvious.
It's money, cash on hand. And how does money turn this trick?
That too the glass reveals. To see it though you must look quick.

"At first we thought finance and trade precisely synchronized.
In point of fact that's not exact. Our views must be revised.
The bulls' receipts plus funds they raise will usually be
A little less or more than what they spend. Accordingly
Their cash on hand goes down or up. But bulls will scarcely let
Their cash get low. They won't spend much beyond the funds they get.
Still, funds may be supplied when others hoard their cash on hand;
For banks can side with bulls, and when banks do then things are grand.

"I don't mean when they're bulls themselves. That doesn't matter much.
But banks, if so inclined, can help bulls make the needed touch,
And this when bulls have touched the rest for all they can directly.
De jure banks assist with loans; that much you saw correctly.
But what banks lend is money that the rest provide when they,
With some of their receipts not used in any other way,
Just pile up cash. The rest, of course, may very well prefer
To make the loans themselves. If not, they scarcely can demur."

At this the Carpenter remarked, "The rest are mostly sheep.
They may get cash that they invest and cash they merely keep.
But they can also spend. The larger sheep's expenditure
The less bulls need to raise. And consequently bulls are sure
To get the funds they wish to spend, if only banks say 'yes'.
No matter how sheep use receipts they'll merely acquiesce.
Suppose sheep lend; suppose they spend and bulls have less to raise;
Suppose banks lend sheep's hoards. Bulls get their money all three ways."

The Walrus and the Carpenter were highly satisfied
With what they'd learned, and tried to see how it could be applied.
But as the author I was not content. I said, "Encore.
We beg you two economists, please, tell us something more:
How moneyflows contract; where money goes when bears elect
To stint and hoard. Your story's far from done in this respect."
At this polite request they merely roared like animals,
And that was scarcely odd because they'd both turned into bulls.

A Note on International Moneyflows and the Gold Standard

International moneyflows have often been treated in economic theories as if they had characteristics peculiar to themselves. In constructing moneyflows accounts for the various transactor groups that are something like balance of intersector payments statements we emphasize the resemblances between internal and external moneyflows. Although comments on the moneyflows account of the rest of the world are not properly part of the subject announced for this chapter, several such comments may be appended here.

First, the moneyflows account for the rest of the world is unlike the ordinary balance of payments statement in an important respect. It is looked at from the opposite point of view, as the title for this sector suggests. Debits and credits are reversed. The statement of payments and balances for the rest of the world shows sources of money for and dispositions of money by the rest of the world, not sources for and dispositions by the U. S. economy.

Further, this statement of payments and balances differs from the statements presented for other sectors, except banks and U. S. monetary funds, in being a consolidated statement.[18] It shows only those moneyflows of the rest of the world that come from or go to the United States; and only the net cash balance due from the United States; other loanfund balances are similarly netted in this statement.

It is suggested that one reason why international moneyflows have been supposed to have peculiar characteristics is in the nature of a statistical accident. The main outlines of the balance of international payments statement were doubtless grasped at least roughly in quantitative terms a generation or two before full-fledged statistical estimates began to appear regularly, for this is one of the oldest fields of dollar-volume and other money-volume statistics. This availability of a rough consolidated account must have helped to channel economic theorizing into thinking of the nation as an economic unit. Much of the classical theory of international trade, notably the law of comparative costs, takes what Davenport called a collectivist viewpoint. It treats the nation as if it were a single (consolidated) enterprise which could gain by international trade.

In addition to the fact that its debits and credits are reversed, and that it is a consolidated statement, there are four principal peculiarities of the moneyflows account for the rest of the world (1) Gold movements appear as a special type of loanfund transaction. This peculiarity is shared with the account for banks and U. S. monetary funds. (2) Although the account for the rest of the world is a consolidated one, it portrays transactions of a very large number of foreign transactors. Hence it is difficult to localize the discretion over international moneyflows. Especially is this the case because one set of these foreign transactors may get the ordinary receipts, a second set make the ordinary expenditures, and quite possibly a still different set engage in the loanfund transactions. But when there are ex-

[18] Of course the statement for the Federal government is a consolidated statement, since the government is regarded as a single transactor.

change controls, discretion over the international moneyflows becomes less decentralized. (3) The cash balance is not purely a dollar balance. This difference is, in a sense, one of degree. The cash balances of other sectors include some foreign balances. In particular the negative balance of banks and U. S. monetary funds is net of the foreign balances held by U. S. banks. But the cash balance of the rest of the world is more completely a net item. It is an estimate of total dollar balances held abroad minus total foreign balances held by U. S. transactors. During our seven years this net balance appears to have been a positive quantity, but in times past it has presumably been negative. (4) Although the moneyflows account is stated in dollars, a substantial part of the transactions it reflects must have been entered into in terms of other currencies.

In Chapter 12 we interpreted the rest of the world as actively exercising transactor discretion during most of the seven years studied. Apart from the difficulty of localizing discretion we see no reason to revise this interpretation. But it must be recognized that, because the international account may be looked at either as a statement of the moneyflows of the rest of the world going to and coming from the United States or of the moneyflows of the United States coming from and going to the rest of the world, the evidence in Chart 9 is ambiguous. The grid marked 'the rest of the world' can be inverted (positive ordinates becoming negative and conversely) and relabelled 'the United States'. This will make the United States appear as purchasing a negative amount of the 'gross national product' of the rest of the world, and as obtaining a negative amount of money through international financial channels. But there will be a positive correlation between these two negative variables. When the product transactions are plotted on a net basis, they make the United States out to be bearish quite as much as they make the rest of the world out to be bullish. However, this ambiguity can be resolved if we show the product transactions on a gross basis. During most of the seven years it is the product expenditures of the rest of the world in this country, not the product expenditures of this country abroad, that are correlated with the net international financial flow.

Three resemblances between the moneyflows account for the rest of the world and those for other sectors may be emphasized: (1) the account must balance. Ordinary expenditures and other dispositions of money (of dollars) by the rest of the world are limited by their ordinary receipts and other sources of money (of dollars). (2) The account includes product transactions, (cash, not in kind) transfers, and loanfund transactions (capital movements). Each of these three groups of transactions may show a balance that is typically in one direction for a considerable period of years. If the account for the rest of the world differs from the moneyflows accounts of other sectors in this respect, it is because its pattern is subject to gradual but wider changes. In the course of time the account for the rest of the world may shift from a cash surplus pattern (during the 19th century) to a cash deficit pattern (during and since World War I). It is conceivable, though much less likely, that the account for households or industrial corporations might make such a shift. (3) The cash balance helps to keep loan and security transactions and ordinary transactions in step. There is resemblance

here and also a difference. In times past at least, gold movements have shared this function with cash in the case of international moneyflows. Further, in international moneyflows the imperfections of the articulation of the commodity and service markets adjustment and the loan and security markets adjustment are more patent than in the case of internal flows.

These comments differ from the classical (Ricardian) statement of the case most immediately in that they deny there is a marked secular tendency for loanfund transactions and transfer items to wash, i.e., for the international product account to balance by itself in the long run. Recurring capital movements and transfers may characterize an international balance for long periods of time. Moreover, to the degree that international product expenditures are kept in line with international product receipts the result is achieved directly. The rest of the world, like any other sector, must have sources of money in order to spend; the moneyflows account of product, transfer, and loanfund transactions must balance.

If the context of the above comments is included, the difference from the Ricardian statement is somewhat wider. International product expenditures and product receipts are not kept in line by a causal chain of mechanical proportional relationships within each country that runs from the monetary gold stock to total nonbank cash balances to some average of commodity prices. In the note at the end of Chapter 12 we indicated a set of conditions — a preponderant influence of crop years and short pay periods on transactor fiscal periods, general poverty, relative unimportance of loan and security markets — under which moneyflows might behave somewhat according to such a quantity theory causal chain.

This suggests that the Ricardian theory of international gold movements may well have been more apropos in some past period than it is at present, not so much because of changes in the monetary policies of nations as because of changes in institutional arrangements.

We venture to push this suggestion a bit further. In a commercial and financial world dominated by a number of private enterprise countries of not too unequal size, in the economy of each of which the rest of the world is a very important sector, and government a much less important sector than it is today, a world in which there is little trading in corporate bonds and stocks, we might expect international gold movements to be somewhat self-correcting. For in each of the leading commercial nations of such a world we might expect the international moneyflows account to consist mainly of (private) merchandise imports and exports and gold (and silver) movements, so that a gold import would mean a favorable, and a gold export an unfavorable, balance of trade. And we might expect each of these nations to be fairly sensitive to changes in its foreign trade balance. But our present world differs significantly from this one.

Some economists and some bankers have sometimes spoken as if we could restore the self-correcting system of international gold movements by restoring the international gold standard or as if the United States could, acting unilaterally in this respect, achieve some stability in its prices and perhaps in the level of its economic activity.

But restoring the gold standard presumably does not mean making exten-

sive changes in the institutional structure of our economy. Rather it means certain technical modifications in Federal monetary policy. Let us note how the aspects of monetary policy involved impinge on moneyflows and what the modifications are:

1) The Mint dominates the domestic price of gold. A change in the domestic price of gold affects the operating revenues of domestic gold producers and the costs to those who are domestic users of gold in the industrial arts.

2) Subject to the conditions imposed by membership in the International Monetary Fund the Federal government may change the value of the dollar in its exchange for other currencies.

3) The Federal government may continue to adhere to the policy with respect to Treasury currency it has pursued unswervingly for the past three-quarters of a century. Alternatively the government might abandon this policy and engage in deficit financing by issuing bearer demand notes that are legal tender, as were greenbacks. Under present conditions each of these three points is a separately determinable point in Federal policy.

We believe the three points just listed exhaust the present possible meanings of "returning to the gold standard".[19] If anyone advocates such a policy in an effective sense he must mean continuing our present 75 year old policy with respect to the form of deficit financing (retirement of the fiat issue now outstanding is of no material consequence), and/or establishment and maintenance of a particular domestic price for gold, and/or establishment and maintenance of a particular international exchange rate level. Pro forma of course, one may mean return to a situation in which exchanges can be and are permitted to fluctuate between gold points, and in which gold movements can be and are controlled only through international lending and borrowing and not directly. But this type of arrangement is merely a technique for fixing the level of exchange rates, and it is the level fixed that counts. Pro forma one may mean also the reintroduction of gold coin and certificates into the cash balances of nonbank transactors, but unless this involves one of the three points listed we fail to see how it can affect the size of any transactor's cash balance or the volume of any of his main circuit moneyflows.

[19] One might also mean by the gold standard clothing a central banking authority with powers sufficient to enable it to maintain an approximately constant ratio of the total cash balances of nonbank transactors to the monetary gold stock, and directing the central banking authority to maintain such a ratio. In this sense of 'gold standard' we could not return to it, since we were never on it. In this sense it is clearly a close relative of the Fisher 100 percent reserves proposal urged in the chapter head quotation.