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Source: *The Journal of Finance*, Dec., 1962, Vol. 17, No. 4 (Dec., 1962), pp. 606-621

Published by: Wiley for the American Finance Association

Stable URL: https://www.jstor.org/stable/2977779

TYPES OF MONEY USE IN THE 1950'S*

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THE ANALYTICAL AND policy implications of aggregate changes in money use in the economy are not simple to unravel. For the most part, this is an inherent problem, since changes in monetary phenomena and changes in production and consumption are not linked in stable, predictable relationships, as is well known. But, to some extent, the problem is one of lack of information. That is, the available measures of changes in velocity do not reveal nearly so much about underlying money uses as the analyst could usefully employ.

It is the purpose of this paper to examine some of the evidence available on the uses of money in recent years and to present some tentative estimates which may be of use to monetary analysts. One objective is to quantify the sources of the differences in income velocity and transactions velocity, for in the postwar years the two measures have differed both in their secular trend and in their cyclical movements.

I

This, of course, is no surprise, since final outlays for goods and services represent only a relatively small fraction of total monetary expenditures. Spending for intermediate transactions—those involved in the production and distribution process—in a complex modern economy is inevitably a good deal larger than consumption or final outlays. According to data from the Flow of Funds accounts, as compiled and published by the Board of Governors of the Federal Reserve System in the format used before 1958, intermediate transactions are more than twice the volume of final expenditures (see Table 1).

In addition to intermediate and final transactions, or production-distribution-consumption related outlays, there is a vast array of financial transactions—transactions that bear somewhat less directly

* This paper presents part of the results of a series of studies in money use conducted at the Federal Reserve Bank of Chicago between 1956 and 1961. The authors worked on the study, seriatim, while on the staff of the bank; Charlotte H. Scott and Neva Van Peski of the bank's staff are responsible for a large share of the data.

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TABLE 1

OUTLAYS FOR PRODUCTION, DISTRIBUTION, AND CONSUMPTION, 1950–60*

(Billion Dollars)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
From flow-of-funds accounts—non-financial transactions	1,036	1,168	1,236	1,292	1,299	1,406	1,501	1,591	1,594	1,734	1,796
Less: Payments included above *not* directly related to production, distribution, and consumption†	120	139	161	168	174	185	201	215	220	243	254
Equals: Production-distribution-consumption related transactions	916	1,029	1,075	1,124	1,125	1,221	1,300	1,376	1,374	1,491	1,542
Final purchases‡	273	316	333	350	349	378	400	427	432	462	485
Intermediate transactions	643	713	742	774	776	843	900	949	942	1,029	1,057
Ratio of intermediate transactions to final purchases	2.36	2.26	2.23	2.21	2.22	2.23	2.25	2.22	2.18	2.23	2.18

* Based on flow-of-funds accounts data, in the format used prior to 1958. Data for years 1957–60 on comparable basis are estimated.

† Includes exchanges of existing assets, grants and donations, tax payments and tax refunds, and consumer-sector life insurance and pension premium and benefit transactions (treated for the present purposes as savings transactions).

‡ GNP, excluding imputed and in-kind transactions for 1957 to 1960; GNP identifiable in flow-of-funds non-financial transactions for earlier years.

on the manufacture or marketing of goods and services. All the transactions here classed as "financial" do confer some economic advantage to the transactors, or they would not have occurred, and thus, in a sense they "lubricate" the real economic processes. The connection between some types of financial transactions and the flow of income and production is readily apparent—for example, the money exchanges involved in raising funds to finance final or intermediate purchases through new issues of securities or borrowing from nonbank sources.[1] In a similar class are money uses entailed in transferring existing real assets, such as land, which are to be utilized in the course of the productive process. The relationship between real economic activity and some other types of money use for financial transactions is less clear—for example, the shifting of ownership of outstanding securities. The diverse types of financial transactions with varying degrees of bearing on economic activity also include the money uses occasioned by the repayment of borrowing, the "deposit" of funds in savings institutions, the purchase of foreign exchange, and the transfer of deposits from one account to another of individual consumers, businesses, or governments.

In addition to all these uses of money, there are transactions which may have some impact, possibly quite direct, on prices and production but which do not involve transfers of money as conventionally defined. In some sectors of the economy, mechanisms have been developed which permit transactors to economize on the use of money (and clerical labor) by settling among themselves only for the net results of a much larger volume of gross transactions. Each broker on a registered stock exchange, for example, settles his net balance daily with all other brokers through the stock-exchange clearing house. The over-all effect of such instances of netting out large receipts and payments flows is to make the relationship between money use and economic activity still less clear.

An enormous volume of fund transfers internal to the monetary system is also excluded from ordinary measures of money use. These transfers are essential to the mobility of capital which characterizes the modern economy, but their relationship to the timing and levels of economic activity is far from direct. Over-all, such transactions greatly exceed total transfers of currency and demand deposits adjusted. They include debits to interbank deposits, transfers of reserve funds among Federal Reserve member banks, and the daily

1. By definition, creation of bank deposits (equals bank lending) does not constitute money *use*.

net settlements among the twelve Federal Reserve banks through the interdistrict settlement fund.

Many gaps exist in the presently available information on money use in the United States. We do not have, for example, any comprehensive measure of total transactions. The Federal Reserve System collects and publishes data on debits to demand deposit accounts for 344 centers throughout the country. These figures exclude charges to both interbank accounts and United States government deposits. Moreover, banks outside the reporting centers—having demand deposit liabilities amounting to around 54 per cent of demand deposits

TABLE 2*

DEBITS TO DEMAND DEPOSITS, 1960†

	Billion Dollars	Per Cent of Total
Banks in:		
New York City	1,103	31
Six other major financial centers	578	16
337 other reporting centers	1,158	33
Total, all reporting centers	2,839	80
Areas not reporting (estimated)	713	20
Total	3,552	100

* Source: For data on reporting centers, *Federal Reserve Bulletin;* nonreporting areas estimated on the basis of data for suburban and rural banks in the Seventh Federal Reserve District.

† Excluding interbank and U.S. government deposits.

of individuals, businesses, and state and local governments in the reporting areas—are omitted from the regular debits series.

Debits at banks outside the reporting centers probably amount to around one-fourth of those generated by banks in reporting centers (see Table 2).[2] The volume for rural and suburban banks exceeds the combined total for all banks in Chicago, Boston, Philadelphia, Detroit, San Francisco, and Los Angeles. Furthermore, the rate of use of demand deposits at rural banks differs from that of their urban counterparts.[3]

In addition to the incomplete coverage of money transfers by check, virtually no information is available concerning the volume of

2. This figure was estimated on the basis of data for banks located in the suburban periphery of reporting centers in the Seventh Federal Reserve District and a sample of banks in rural areas of the district.

3. In 1960, for example, demand deposits turned over about 21 times a year at the typical urban reporting bank in the Seventh Federal Reserve District; at the typical rural bank, among those surveyed, demand deposits turned over about 13 times a year.

currency transactions. The traditional estimate is that currency payments account for one-tenth of total expenditures. The origin and reliability of this estimate, however, are obscure.

The addition of rural bank debits and currency expenditures to urban debits does not complete the picture. Still not included, for example, is activity in interbank deposits—the charges to correspondent balances for check clearings, security purchases, and other transactions. A bank's reshuffling of balances among its several correspondents undoubtedly adds up to a sizable sum. Since interbank balances are excluded from the traditional measure of the money supply, these very large transfers of assets which qualify as mediums of exchange are not counted here in the total of money use.

Similarly, there is a vast number of transactions, amounting to trillions of dollars annually, that flow through member-bank reserve accounts. In 1960, the twelve Federal Reserve banks handled over a trillion dollars in checks other than those of the U.S. Treasury and transferred over 2.4 trillion dollars in reserve funds among member banks.[4]

One step further back are those payments made to settle daily balances among Reserve banks. Even with the Board of Governors acting as a clearing house, so that each bank pays for or receives credit daily only on its net balance with all other Reserve offices, the volume of debits to the interdistrict settlement fund was around 1.4 trillion dollars in 1960.[5]

The treatment of transfers of funds by the U.S. Treasury also affects the closeness of the linkage between money use and economic activity. On the one hand, government deposits are excluded from most data on the money supply, and debits to these accounts are excluded from Federal Reserve data on money use, since the connection between federal government outlays and the size of Treasury money holdings is a weak one. Yet, while debits to interbank accounts, member-bank reserve accounts at the Federal Reserve banks, and the interdistrict settlement fund in general reflect no more than clearing arrangements, the federal government's spending is an important component of real economic activity, and the debits to Treasury accounts which reflect production-distribution-consumption related transactions deserve to be included in any comprehensive measure of total money use.

4. *Annual Report of the Board of Governors of the Federal Reserve System* (1960), p. 123.

5. Board of Governors of the Federal Reserve System, *Interdistrict Settlement Fund, Summary of Transactions,* Release G.15 (monthly).

On the other hand, the Treasury, like the commercial banks and the Federal Reserve banks, generates a large volume of transfers of funds having relatively little economic significance in its course of collecting taxes, making disbursements, managing the public debt, and shifting the funds acquired or needed in these operations among its thousands of bank accounts. The Treasury holds its deposits both at the Federal Reserve banks and at certified commercial banks. By far the largest portion of Treasury balances is held in accounts at commercial banks, although virtually all checks are drawn on its accounts at Federal Reserve banks. In recent years, it has been the practice of the Treasury to try to maintain its deposits at Federal Reserve banks at about 500 million dollars, transferring funds from or to its commercial bank tax and loan accounts at frequent intervals when its balances at the Reserve banks go below or above the target figure. Large-scale drains on the banking system and the money market at times of Treasury borrowings and tax-payment dates are thereby eliminated, together with the disruptive effects that such drains on member-bank reserves might have on credit and capital markets.

Almost all receipts from the cash sales of government securities, with the exception of the regular weekly issues of Treasury bills, and a sizable portion of tax receipts are deposited directly into the tax and loan accounts. In fiscal 1960, the Treasury's gross cash receipts from the public and cash received from sales of public debt securities totaled around 215 billion dollars. Of this amount, around 57 billion dollars was received by means of credits to the Treasury's tax and loan balances.

The practice of using accounts at commercial banks for receipt of a substantial portion of the federal government's gross cash inflow, while using accounts at the reserve banks exclusively for expenditure and debt retirement and redemption transactions, gives rise to a considerable amount of "money use" that consists of no more than the shifting of funds from one account to another. In addition to "calls" on that part of the gross cash inflow credited to tax and loan accounts —that is, the transfers of balances to the Treasury's accounts at the Federal Reserve banks—charges to government balances are generated by "redeposits" of funds in tax and loan accounts which occur when balances at the Reserve banks rise significantly above the expected level and exceed the target amounts. Also, the Treasury accounts at commercial banks other than tax and loan accounts—"general depositary" accounts, "limited depositary" accounts, etc.—give

rise to numerous transfers of funds. This is because each such account is characteristically either a receipt or a disbursement account, which requires periodic drawing down or replenishing.

The commonly used published information on government receipts, expenditures, and debt transactions reflects for the most part only the net results of the operations of this elaborate array of clearing accounts, and these net results account for most government money usage which has economic significance. In fiscal 1960 identifiable gross federal government money use—that is, charges to all federal government accounts at commercial banks and at the Reserve banks—totaled almost 280 billion dollars.[6] Federal outlays for final product—purchases of goods and services reflected in gross national product data—amounted to 53 billion dollars. Total debits to federal accounts which appear to be related to the production-distribution-consumption process were in the neighborhood of 110 billion dollars. The 57 billion dollar difference was made up of transfer payments, grants to state and local governments, interest payments, and expenditures of government corporations and business-type operations (such as the Post Office) which are offset by receipts produced by these operations. All such payments affect the income and consumption patterns of the remainder of the economy and can thus be classed as "intermediate" transactions in a sense peculiar to the federal government.

Another 100 billion dollars of government money use involved security transactions, largely cash retirement and redemption of public debt securities. Much the largest part of this total—around 76 billion dollars—was generated by the weekly "roll-over" of regular Treasury bill issues. Regular Treasury bill issues are redeemed by payment with checks drawn on the Treasurer's accounts at the Reserve banks. Although the maturing issues are generally replaced by the sale of a like amount of new bills, each transaction, even when a single investor is both redeeming and purchasing bills on the same day, is handled separately on a cash basis,with few exceptions. Thus government money use for security transactions for the most part has little connection with the pace and direction of economic activity. The remaining government money usage—for transfers among various bank accounts—has even less economic significance and, like transfers of funds internal to the commercial banks and the Federal Reserve System, is appropriately excluded from tabulations of total money use in the American economy.

6. Estimated, largely from Treasury data.

II

How much, then, is the total volume of private money transaction and government final outlays and transfer payments in the United States? Adding rural debits, currency transactions,[7] and federal non-financial spending to urban debits increases the over-all figure to 4.0 *trillion* dollars in 1960.

The data in Tables 3 (see also Chart I) and 4 demonstrate that changes in GNP or even in the broader measure which includes both intermediate and final outlays for goods and services are an inadequate indicator of the direction and magnitude of changes in the monetary phenomena with which policy must be concerned. For example, in the eight-year period covered by the tables, total money spending rose by over 50 per cent, while spending related to production, distribution, and consumption rose by less than 40 per cent.

Moreover, the data in Table 3 suggest that the published debits series is not entirely representative of changes in total money use, although the disparities here are not large ones. From 1953 to 1960, the use of demand deposit accounts at banks in the 344 centers covered by the Federal Reserve series increased by 61 per cent, somewhat more than total money use as estimated here. Debits at rural and suburban banks are estimated to have increased by 56 per cent and federal government non-financial spending by 28 per cent.

The increase in the dollar volume of the economy's output of goods and services in this period is responsible for close to 30 per

7. As noted earlier, the traditional notion, of obscure origin, is that currency transactions account for about one-tenth of total money expenditures. This may not be an unreasonable estimate, but it does seem unreasonable to arrive at a total for money spending by simply inflating checkbook spending by one-ninth. That procedure would implicitly assume that secular and cyclical influences have as pronounced an effect on currency transactions as on demand deposit transactions, which is highly unlikely.

It is much more likely that currency transactions, while they have pronounced short seasonal movements, are relatively immune to cyclical developments and that their secular trend is amply reflected in the secular changes in the stock of currency and coin. That is, it is probable that the amplitude of cyclical fluctuation in the kinds of transactions ordinarily involving use of currency and coin is quite small and also that the opportunities for economizing on currency and coin usage over time are limited. All this suggests that the turnover of currency and coin is rather stable, comparing time intervals of as long as several months or a year. Therefore, in this paper, money use via currency and coin has been estimated by applying a stable turnover figure to the outstanding stock.

The turnover figure assumed is twelve times per year. This, in turn, is based on the guess—judgment, not evidence—that each dollar of currency and coin is used by the non-bank public an average of four times before again becoming part of commercial banks' vault cash and that each dollar is paid out by commercial banks to non-bank customers an average of three times before being shipped back to the ultimate source of currency and coin—the Federal Reserve banks—and on the fact that in recent years annual shipments of currency and coin to commercial banks by the Reserve banks has approximately equaled the total currency and coin outstanding (see *Forty-seventh Annual Report of the Board of Governors of the Federal Reserve System* [1960], p. 123).

cent of the estimated 1,373 billion dollar increase in total money spending. The year-to-year change in production-distribution-consumption related outlays, following the pattern of GNP, has varied considerably. Total money use, however, has risen at a remarkably steady pace. In the 1953–57 period, the annual increase ranged quite narrowly, between 5.9 and 7.1 per cent. In 1958 and 1960 the increase apparently was much smaller. The rate of increase on a quarterly basis, crudely adjusting for seasonal variation by use of com-

TABLE 3

TOTAL MONEY USE, 1953–60

(Billion Dollars)

	1953	1954	1955	1956	1957	1958	1959	1960
Bank debits, 344 reporting centers*	1,759	1,887	2,044	2,201	2,357	2,440	2,679	2,839
Bank debits, areas not reporting†	458	492	530	547	601	609	759	713
Total bank debits, excluding those to government and interbank deposits	2,217	2,379	2,574	2,748	2,958	3,049	3,438	3,552
U.S Treasury outlays for final product and transfer payments‡	85	80	80	83	92	102	107	109
Total bank debits and government spending	2,302	2,459	2,654	2,831	3,050	3,151	3,545	3,661
Currency and coin transactions§	326	323	325	329	333	334	340	340
Total money spending.	2,628	2,782	2,979	3,160	3,383	3,485	3,885	4,001

* Compiled by the Federal Reserve System and published monthly in the *Federal Reserve Bulletin.*

† Estimated on the basis of data for banks located in the suburban periphery of Seventh District reporting centers and from debits data from a sample of Seventh District farm-area banks.

‡ Total federal government non-financial uses of funds in Flow of Funds accounts in their pre-1958 format.

§ Estimated on the basis of the assumption that the turnover of currency and coin outside banks is stable from quarter to quarter and year to year. Figures shown equal 12 times annual averages of currency outside banks.

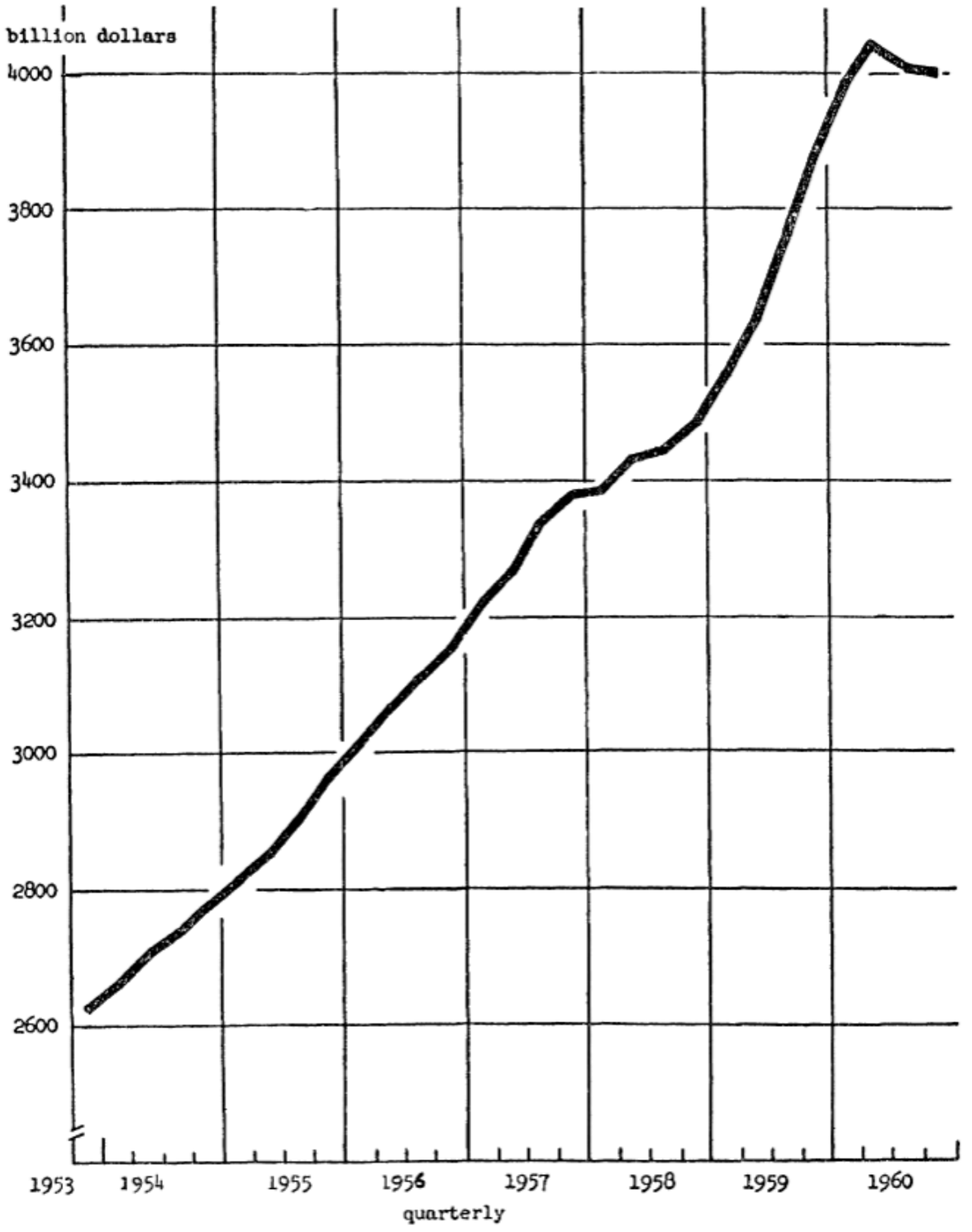
parisons with year-ago data and of four-quarter moving totals, has also been very steady.

III

Financial outlays encompass a wide variety of transactions. A large segment is accounted for by the purchase and sale of securities of all types. In dollar volume, the government securities market is by far the most important. In fact, transactions in outstanding Treasury obligations and non-bank cash purchases of newly issued federal securities together are estimated to be responsible for almost 15 per cent of total financial transactions (Table 5).

CHART 1

TOTAL MONEY USE, 1954–60
(4-QUARTER MOVING TOTALS)



Source: Quarterly data underlying annual totals shown in Table 3.

Every purchase of an outstanding security by a non-bank government securities dealer and every sale by both bank and non-bank dealers to non-bank customers involve the use of money as commonly defined. The 250 billion dollars in money outlays generated by market transactions in outstanding government securities represent the shift among investors of about two-thirds that volume. Net changes in dealer positions over the course of the year are minute relative to the volume of trading and thus have little effect on this relationship.

Activity on the registered stock exchanges make up another large identifiable segment. The volume of business done on the major exchanges during 1960 amounted to 47 billion dollars. The volume of debits resulting from this activity, however, is probably close to double the volume of transactions; many purchases and sales involve

TABLE 4

TYPES OF MONEY USE, 1953–60

	1953	1954	1955	1956	1957	1958	1959	1960	1953–60
	Billion Dollars								
Total money spending*..	2,628	2,782	2,979	3,160	3,383	3,485	3,885	4,001	.....
Production-distribution-consumption related transactions†.....	1,124	1,125	1,221	1,300	1,376	1,374	1,491	1,542	.....
"Financial" transactions‡....	1,504	1,657	1,758	1,860	2,007	2,111	2,394	2,459	.....
	Per Cent of Total Spending								
Production-distribution-consumption related transactions.....	42.8	40.4	1.0	41.1	40.7	39.4	38.4	38.5	.....
"Financial" transactions.....	57.2	59.6	59.0	58.9	59.3	60.6	61.6	61.5	.....
	Annual Per Cent Change								
Total money spending...	.....	5.86	7.08	6.08	7.06	3.02	11.48	2.99	52.25
Production-distribution-consumption related transactions.....	.....	0.09	8.53	6.47	5.85	−0.15	8.52	3.42	37.19
"Financial" transactions.....	.....	10.17	6.10	5.80	7.90	5.18	13.41	2.72	63.50

* See Table 3.

† See Table 1.

‡ Total money spending less production-distribution-consumption related transactions.

TABLE 5

COMPOSITION OF FINANCIAL TRANSACTIONS INVOLVING MONEY USE, 1960

(Billion Dollars)

Securities transactions		
Government securities market transactions*	250	
Stock-exchange transactions†	94	
Commodity futures transactions†	52	
Over-the-counter stock transactions‡	26	
Over-the-counter bond transactions§	26	
New issues		
U.S. Treasury and federal agency issues‖	70	
State-local issues#	14	
Corporate and foreign issues#	26	
Retirements of state-local and corporate securities	8	566
Other debt transactions		
Consumer instalment credit		
Non-bank extensions	32	
Repayments	47	
Mortgage credit		
Non-bank extensions**	39	
Repayments**	26	
Bank loans to business—repayments**	94	
Bank security loans—repayments**	137	
All other bank loans—repayments**	30	405
Federal funds transactions (non-bank) and non-bank financing of government securities market**	65	
Savings flows		
Savings and loan associations		
Gross receipts	25	
Withdrawals	17	
Time deposits at commercial and mutual savings banks		
Inflow**	47	
Withdrawals**	40	
Life insurance and retirement premium and benefit payments††	58	187
Exchange of existing assets††	36	
Grants and donations††	37	
Tax payments††	123	
Total identifiable financial transactions	1,419	
Unidentifiable financial transactions	1,040	
Total financial transactions		2,459

* Estimated, based in part on data shown in *Treasury–Federal Reserve Study of the Government Securities Market*, Part II (February, 1960).

† Twice the value of stock or commodity futures transactions on organized stock or commodity exchanges.

‡ Based on estimates of the recent ratio of over-the-counter stock transactions to activity on exchanges and the proportions of various types of principal and agency transactions in 1949, as estimated in Irwin Friend's *Activity on Over-the-Counter Markets* (Philadelphia: University of Pennsylvania Press, 1951).

§ Based on estimates of the recent volume of over-the-counter bond transactions, and the composition of over-the-counter transactions in 1949 (Friend, *op. cit.*).

‖ Estimated purchases for cash of newly issued marketable U.S. government securities, savings bonds, and (non-guaranteed) federal agency issues, excluding purchases by commercial banks, Federal Reserve banks, and Treasury investment accounts. Regular Treasury bill issues account for the overwhelming bulk of the figure shown.

Twice the amount of publicly offered bonds, notes, and debentures, investment company shares plus private placement of bonds, and 1.5 times the amount of offerings of preferred and common stock. The 1.5 figure is based on information given in *Annual Report of Securities and Exchange Commission* (1960), p. 230. Adjusted for commercial bank's role as underwriters of general-obligation state-local securities and purchasers of debt securities.

** Estimated in part or in whole by the authors.

†† Based on Flow of Funds accounts concepts and data for earlier years; estimated from fragmentary data applying to 1960. Only life insurance and pension transactions involving consumer sectors are treated as "financial" transactions.

In this table the term "bank" includes only commercial banks, and the term "non-bank" includes mutual savings banks.

two debit entries. Often, payment is made by the purchaser to the broker, whereupon the broker pays the seller.

Payments between brokers, moreover, add further to the volume of debits associated with security transactions. For dealings on registered exchanges, the net balance of each broker with all others is settled daily. For over-the-counter securities, each transaction between brokers may be settled individually, and the complete security transaction may result in money use up to three times the dollar amount of the transaction.

The total volume of money outlays generated by stock transactions is, on the other hand, held down by those transactions in which only one debit is necessary. In instances in which an investor simultaneously buys and sells securities, he generally pays or receives the net amount of the individual transactions. Moreover, when an investor buys on open account, the transaction may be charged or credited to his account, with many transactions being executed, although actual payments into or out of the account are small. After considering these various factors, total money spending on stock-market transactions is estimated to be double the dollar volume of ativity. Similarly, money use involved in commodity futures trading on organized exchanges is estimated to be twice the volume of activity.

Data on transactions on registered and exempt stock exchanges are provided regularly by the Security and Exchange Commission, and estimates of the dollar volume of trading in futures on the 16 registered commodity exchanges are made by the Commodity Exchange Authority. No regular information is available, however, on the amount of over-the-counter activity. Estimates in Table 5 are based in part on statistics developed in a study by Irwin Friend of over-the-counter transactions and the proportion of total stock transactions executed on and off the exchanges.[8] Total transactions in outstanding stocks are estimated to have generated about 120 billion dollars in money spending during 1960, less than half the amount related to transactions in outstanding government securities.

Data published by the Securities and Exchange Commission, the Investment Bankers Association, and the Treasury Department provide a basis for estimates of the money use involved in new issues of securities by the Treasury, federal agencies, state and local governments, corporations, investment companies, foreign governments,

8. Irwin Friend, *Activity on Over-the-Counter Markets* (Philadelphia: University of Pennsylvania Press, 1951). The data in this study were also used in connection with the over-the-counter bond transaction estimate. Friend's data indicate the proportions of various types of principal and agency transactions in over-the-counter markets and provide a basis for estimating the number of debits involved in these markets.

and international organizations, and non-profit organizations. The money spending as a result of issues of new non-federal securities is assumed to be equal to twice the issue value of publicly offered securities (a payment each by the underwriter and the investor) plus the dollar volume of private placements, excluding payments by commercial banks. Non-bank purchases of new federal securities involve only one debit. All told, money use generated by activity in governments, corporate securities, commodity futures, and state and local obligations aggregated over 560 billion dollars in 1960. This represented 23 per cent of the 2.5 trillion in financial expenditures.

The next largest block of outlays in the financial category is associated with other borrowing transactions. All non-bank extensions of credit—with the exception of charge accounts, accounts receivable, and other such book entries—plus the repayment of both bank and non-bank credit result in a money outlay. The total of such credit-associated spending amounted to over 400 billion dollars, about 16 per cent of over-all financial spending. The various components of the 400 billion dollars are detailed in Table 5.

Not included in that 400 billion dollars is a special type of debt transaction—one which has its ultimate origin in the time required in presentation of checks to payee banks for collection. When a check drawn on a commercial bank is deposited in another bank, the receiving bank cannot present that item for credit until the following day and may defer credit to the depositor's account until that time. In some transactions, however, payment is required in "immediately available funds"—funds for which the receiving bank can also obtain immediate credit in its account at a Federal Reserve bank. Virtually all government securities transactions today are settled in "Federal funds" or immediately available funds. In addition, dealers in government obligations may need immediate credit to settle the net balance of their transactions during the day.

Any check drawn on an account at a Federal Reserve bank will be immediately credited to the depositing bank's account and therefore qualifies as federal funds. The biggest portion of the federal funds transactions involves the purchase and sale of excess reserves among commercial banks. These transactions, however, do not enter into total money spending, since they generate debits and credits only in reserve accounts.

Deals involving federal funds entered into by government securities dealers do, on the other hand, generate money expenditures. The financing of dealers by means of repurchase agreements with corporations, for example, generates debits when these loans are made—to the corporations' bank accounts—and when they are repaid—to the

dealers' bank accounts.[9] Also, large checks drawn on the accounts of the United States Treasurer at the Federal Reserve, in payment for maturing Treasury securities or in connection with large government contracts, may be sold as federal funds by corporations. Such deals between non-bank dealers and corporations give rise to debits to a private demand deposit ordinarily only once, when the funds are repaid. It is estimated that money outlays connected with non-bank federal funds operations and other non-bank financing of the government securities market were about 65 billion dollars in 1960.

Another 185 billion dollars in money outlays come from the movement of funds into and out of savings intermediaries. A purchase of shares in savings and loan associations or credit unions must be executed either with currency or with check, and similarly, any outflow involves either currency or a check drawn on the institution's account at a commercial bank. Life insurance and pension premium and benefit payments likewise require money outlays, except for government benefit payments, which involve only the special type of money use associated with federal transfer payments. In the case of time accounts, a deposit must be made with currency or check on a demand deposit, and a withdrawal may be met with currency or a cashier's check.[10]

All these transactions, plus outlays associated with the exchange of existing real assets, grants and donations, and tax payments, boost the amount of identifiable financial transactions to around 1,420 billion dollars. Still left unaccounted for, however, is about 1,040 billion dollars in financial money use. All that can be done with the information presently available is to suggest the types of transactions responsible for the remainder. Some portion of the 1,040 billion dollars is classed as unidentifiable largely because existing data do not afford bases even for crude estimates of the money use involved in a number of types of securities, debt, and savings transactions. For example, the figure for government securities transactions shown in Table 5 is an approximation only of the money use generated by transactions by dealers who make primary markets in Treasury obligations.

9. A portion of these transactions may not technically be federal funds, but they nevertheless have the same effect on debits (see Board of Governors of the Federal Reserve System, *The Federal Funds Market,* p. 50).

10. Under the regulations of the federal supervisory agencies, all officers' checks outstanding are classified as demand deposit liabilities, and thus, when they are paid, they generate debits classed here as money use. Actually, there is no money use, as here defined, when withdrawals from time deposits at commercial banks are effected with the use of currency, since bank-held currency is not in the money supply as conventionally defined. On the other hand, offsetting this deficiency in Table 5, deposits to demand accounts made in the form of currency should be counted as money use, since these payments are made with (non-bank) currency included in the money supply. It is probable that the latter item is much larger than the former (see text below).

It does not reflect the transactions of banks doing a "customer business" in governments—that is, their sales to non-bank customers. Also, non-bank credit transactions, other than consumer and mortgage credit, are not reflected in the "identifiable" section because of the absence of data; transactions which involve actual bank debits, rather than setting up and extinguishing of book credit, such as sales finance company financing of business firms, should in concept be covered.

Another block of money use—this one entirely without economic significance—is that generated by the deposit of currency for credit to demand accounts at commercial banks. This is conceptually a use of the conventionally defined money supply (unlike the deposit of indorsed checks on other accounts, where the use is counted only when the checks are debited to the accounts on which drawn) and could amount to as much as 75 billion dollars, if the estimates of currency turnover used in this paper are approximately correct.

But the largest share of the unidentifiable total is undoubtedly made up of transfers of funds between accounts owned by the same depositors. Some businesses, for example, receive payments in several offices, then transfer funds to a central account for disbursement. On the other hand, some firms may collect all their receipts at their main office but transfer funds to banks located near branches and plants for payroll purposes. In addition, other concerns have several accounts, with specific types of expenditures being made out of each account and balances transferred freely from one to another. State and local governments frequently keep their funds distributed among many banks, though most disbursements are made from one or a few. In some instances, deposits are initially transferred to depositary banks, then transferred back to the central accounts when needed.

The preceding excursion, based in part on rather fanciful data, through the labyrinthine network by means of which payment is made for newly produced goods and services and for the transfer of existing tangible and intangible assets, suggests that much of the differences in the movements of income and transactions velocity stems from the behavior of "financial" transactions largely without direct economic consequence, which dominate over-all money use. In addition, all this suggests the need for further work in disaggregating money use—analyses which take into account the differences among geographic areas, among banks, and among the various classes of ultimate users of money themselves, which surely must determine the manner of changes in money use.