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Comment

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ONE of the most notable aspects of the papers which have been presented at this conference on the flow-of-funds accounts is the degree of unanimity with which they mention, first, the small amount of analytical use to which these accounts have so far been put, and, secondly, the absence of—and the need for—an over-all theoretical framework or analytical system which will do for the flow-of-funds accounts what Keynes's *General Theory* did for the national income accounts.

I would like to suggest that the most basic reasons for this problem are: (1) the fact that in several important respects the "Keynesian Revolution" has not yet been fully completed—that we are still being unconsciously influenced by the microeconomic, static, classical perspective, which focuses on individual markets, securities, transactions, and balance sheets, and have not yet accepted the full implications of the macroeconomic *flow* concept either in our national economic accounts or in our theoretical functional analysis; (2) that we have not yet accepted the full implications of the distinction between the financial, or money-and-credit, perspective and the "real" or national income perspective. Here it is worth remembering Keynes's observation in the preface of his *General Theory*:

The composition of this book has been for the author a long struggle of escape . . . a struggle of escape from habitual modes of thought and expression. The ideas which are here expressed so laboriously are extremely simple and should be obvious. The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.

The object of these comments is to point out how the traditional perspectives have influenced some of the conference papers, and to indicate the kind of genuinely dynamic conceptual framework which would appear to be more appropriate and more useful for macroeconomic money-flow analysis.

The Conceptual Treatment of Money

One of the chief sources of confusion has been the traditional concept of money as a form of credit—a credit claim for the holder and a credit liability for the banks and monetary authorities. I would like to thank Professor Copeland for setting forth the traditional conceptual treatment of monetary expansion in such sharp focus that its economic absurdity is clearly apparent. (See his paper, pages 196 and 205–209.)

Professor Copeland insists that an increase in currency and deposit liabilities of the banking sector “is not a source of any funds that finance an increase in aggregate demand.” For the economy as a whole, nonfinancial expenditures are financed solely by nonfinancial receipts. In the case of the monetary expansion which financed such a large part of our wartime military expenditures, the banking sector was “a mere financial intermediary” between the depositors, who did the financial saving, and the government, which did the deficit spending.

This conceptual treatment undoubtedly fulfills the requirements of double-entry bookkeeping in a static, balance sheet perspective, and even of a dynamic flow analysis in the “real” or national income perspective: the government’s wartime nonfinancial deficit was necessarily *equal to* the nonfinancial surplus of all other sectors. But this conceptual treatment is obviously fallacious when viewed in a dynamic, time-sequence, money-flow perspective. If we ask of each transaction, “From whom does the money come, and to whom does it go?” it is quite obvious that the depositor-savers were not the initial source of the new money which the government borrowed.

To base our flow-of-funds accounts on a genuinely dynamic money-flow perspective, it appears necessary to abandon conceptually the time-honored myth of debt money and to make a clear-cut conceptual distinction between money and credit.

On the “uses” side of the accounts, the acquisition of currently used means of payment (money) should be treated as the acquisition of a noncredit asset which is “real” even though it may be only a bookkeeping entry at the bank. A payment by check should be treated as the transfer of a “warehouse receipt” rather than the transfer of a credit claim.

On the “sources” side of the accounts, monetary expansion must not be treated as a credit *transaction*, but as a nonfinancial *intraunit action* comparable to an alchemist’s “costless” creation of gold or the chance discovery of a boulder-sized nugget by some desert miner—i.e. as a nonfinancial seigniorage profit of the monetary agency.

In terms of money flows, any increase in the money supply must be treated as the initiation of a flow, any addition to a cash balance as

the termination of a flow. Linking these two flows conceptually¹ implies a false sequential order.

The Concept of Credit Flows

A second major example of the subversive influence of traditional perspectives is the absence from the flow-of-funds accounts of any analytically significant measures of the total credit used or advanced. What part of the total flow of credit was used—or advanced—by the economic units in each sector? What part of the total capital expenditure of the economic units in each sector was financed by internal funds and what part by external funds “borrowed” from the credit market? These questions cannot be answered effectively with data now presented in the flow-of-funds accounts.

The flow-of-funds concept, “net financial investment,” has little analytical value because the total for all sectors is zero and in the consumer sector it nets total borrowing (largely accounted for by the middle-income households) against total financial saving (predominantly supplied by the upper 5 per cent or so of households), thus netting out one of the most significant credit flows in the economy.

The other main flow-of-funds concepts, “net acquisition of financial assets” and “net increase in liabilities,” are quite inappropriate for most analytical purposes because in all sectors except the consumer and rest-of-world sectors they are so grossly inflated by obviously intermediate-type flows. Furthermore, this measure of the total credit flow can be expected to change with every shift in the particular intermediate channels through which the significant credit flows.

Mr. O’Leary, Miss Ronk, the SEC, the Department of Commerce, the Council of Economic Advisers, and others who have direct practical need of some measure of total “sources and uses,” as well as Professors Gurley and Shaw in their new theoretical system, have attempted to get at the economically significant credit flows by various *ad hoc* methods of netting out part of the “pass-through” intermediate credit flows—by treating intermediate financial institutions (rather than the initial saver) as the “source” of the credit, by netting business trade credit against trade debt, by netting retirement of corporate securities against total new issues, etc. But because these *ad hoc* approaches are unable to net out all of the intermediate credit, and are usually not applied in a conceptually consistent manner to all sectors, or even to all types of credit flows within

¹ As in the flow diagrams of Morris A. Copeland’s *A Study of Moneyflows in the United States*, National Bureau of Economic Research, 1952, frontispiece; and G. L. Bach, *Economics and Public Policy*, p. 158.

individual sectors, they do not provide a satisfactory basis for analyzing the relationships between financial and nonfinancial flows within individual sectors or for making comparisons of these relationships among different sectors.

In the development of the national income accounts, it was found that analytically significant measures of total output and total income could be developed only by netting out "intermediate-product" transactions in a conceptually consistent manner—i.e. by conceptually treating the whole economy as a single, vertically integrated productive enterprise. GNP is measured as the sum of the "value added"—and the net income received—at each stage of production.

When the economy is viewed as an integrated whole, in a money-flow perspective, it is no more difficult to develop a clear-cut conceptual distinction between the economically significant "primary" credit flows and the pass-through intermediate flows—or to net out the intermediate flows and compute the primary credit advanced (or used) by each economic unit through which credit flows. The primary flows are those which would be included in the traditional concepts of financial saving and deficit financing—that is, those in which changes in credit flows are more closely related, functionally, to changes in nonfinancial (income-expenditure) flows than to changes in other credit flows. Borrowing *for the purpose of* financing non-financial expenditure (rather than for the acquisition of credit claims) would be a primary use of credit. The acquisition of financial assets with part of the nonfinancial current surplus (rather than with borrowed funds) would be primary advance of credit. Obtaining \$10,000 of home mortgage credit from an insurance company in which one has \$5,000 of insurance reserves should not, however, be considered to involve intermediate credit in any case where the two flows are regarded as *functionally independent* from the point of view of household financial decisions.

Quantitative Estimation of Primary Credit

To be conceptually clear-cut and most useful analytically, the primary credit flows should be derived from the accounts of each individual economic unit (not merely from the accounts of the consolidated sector). In the absence of more appropriate data, my own estimates of the primary credit flows have been derived from the flow-of-funds accounts by the following procedure, as a temporary practical working expedient.²

² Tables and charts of these data, based on the 1960-61 version of the flow-of-funds accounts, and various analytical studies based on them, are available from the writer.

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PRELIMINARY ADJUSTMENTS

Since an increase in tax liability has the same functional economic significance as an increase in trade credit or any other short-term credit liability, I have added the change in corporate federal income tax liability to corporate sector liabilities and to federal government credit claims. (When data are available, the same should be done for all other tax liabilities.) Since money must be treated as a non-credit asset, the increase in currency and demand deposits (and gold, etc.) must be subtracted, in each sector, from the flow-of-funds concept, "net increase in financial assets," to obtain a measure which I call "net increase in credit claims."

NETTING OUT OF INTERMEDIATE CREDIT

To arrive at the primary credit used and advanced by each sector, intermediate credit (pass-through) flows are subtracted from both the net increase in credit claims and the net increase in liabilities. For the rest-of-world sector, there is considered to be no intermediate credit. For the consumer sector, only security credit is counted as intermediate. In the nonprofit organizations sector, nonfinancial business sectors and government sectors—whose characteristic institutional role makes them more or less continuous users of credit (net borrowers)—all *advances* of credit are treated as intermediate credit. In the financial sectors—whose characteristic institutional role makes them more or less continuous advancers of credit—all *uses* of credit are treated as intermediate credit.³

The National Credit Balance

To be most useful, the flow-of-funds accounts should have one main summary presentation designed specifically for macroeconomic

³ At the time of the conference, a different method was used; in the original comment it was described as follows: "For all other sectors (in which the nature of the credit instruments gives little clue to the economic significance of the flows), wherever the net increase in credit claims and the net increase in liabilities have the same sign, intermediate credit is assumed to be the lesser of the two. If they have different signs, there is considered to be no intermediate credit.

"For practical reasons (elimination of negative numbers to make possible more meaningful percentage computations), as well as theoretical reasons, net repayment of debt (a repurchase of one's own credit liabilities) is treated as an advance of money to the credit market, and is added to any increase in holdings of securities (or other credit claims) issued by others, rather than as negative borrowing. Likewise, a net liquidation of securities (or other credit claims) is treated as a use of credit (i.e., a net receipt of money from the credit market), and is added to any net borrowing, rather than as a negative advance."

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analysis of (1) the national credit balance—the total credit advanced and used by all sectors combined—and the amount advanced and used by each individual *major* sector (consumer, business, government, and rest-of-world); and (2) the relationship between credit flows and nonfinancial (income-expenditure) flows for each major sector. Thus, in addition to the primary credit flows, it should include the changes in cash balances, income (current receipts after deductions), current expenditure, current surplus, and capital expenditure. This table would be roughly comparable in its analytical uses and significance to the table on page 1 of the Joint Economic Committee's *Economic Indicators*, entitled "The Nation's Income, Expenditure and Saving."

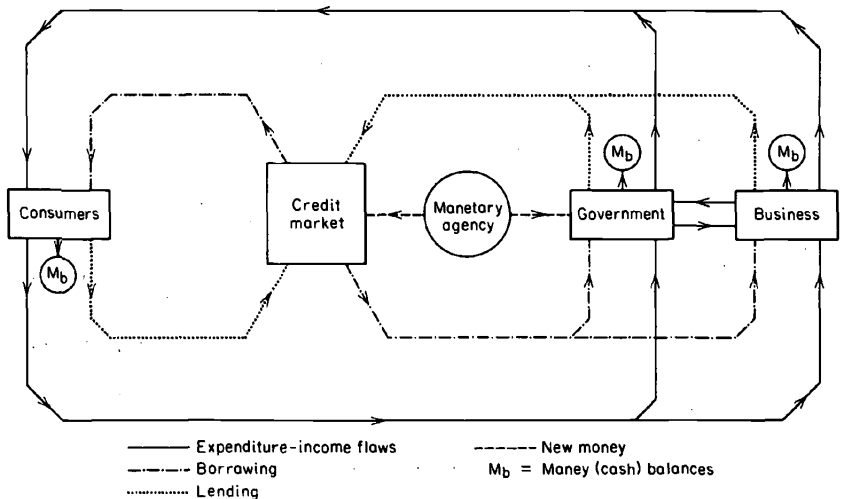
A Flow Model for Dynamic Macroeconomic Analysis

THE CIRCUIT OF MONEY FLOWS

In a dynamic macroeconomic model of money flows, the payment circuits are conceived of as being made up of a myriad of individual transactions, in each of which a sum of *money* is exchanged for something else of equivalent value.

In Chart 1, the solid-line outer circuit represents the nonfinancial expenditure-income payments in exchange for "real" goods and

CHART 1
Primary Money Flows in the American Economy



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services. The dash-line inner circuit represents money advanced in exchange for credit claims (or securities). The counterclockwise *money flows* shown in the diagram are thus conceptually matched by (unseen) equal and opposite flows of real goods, services, and securities.

The "credit market" is an analytical abstraction for conceptually "pooling" all credit flows between economic units. Netting out all intermediate credit flows makes it possible appropriately to include financial institutions, such as banks and insurance companies, in the business sector, along with the so-called nonfinancial business firms, which in practice also advance large amounts of intermediate credit.

The money balance of each sector is represented in the diagram by a small circle. In terms of concept and analytical significance, it is immaterial whether the money is held as a bookkeeping entry in a bank demand deposit or as ten-dollar gold pieces in a cookie jar.

The "monetary agency" is an analytical abstraction representing the source of all new money. New money created in connection with bank loans is shown as entering the circuit *via* the credit market. Conceptually, the banks borrow the new money, as intermediate credit, from the monetary agency. Seigniorage on coins and other Treasury currency is shown as flowing to the government sector as *nonfinancial income*.

THE MONEY-FLOW EQUATION

The flows in the diagram may be represented algebraically in a sources and uses of funds equation:

$$I + U + M = E + A + C$$

where I = nonfinancial net income

U = primary uses of credit

M = new money (increase in currency and demand deposits)⁴

E = nonfinancial expenditure (consumption + capital investment)

A = primary credit advances

C = change in cash balance

This equation is a flow-of-funds alternative to the Keynesian-national income equation, $Y = C + I$. The basic money-flow equation is equally appropriate to the economy as a whole or to

⁴ In the original conference version this was erroneously stated as follows: "strictly, only the seigniorage profit of the monetary agency."

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individual economic units. Its three subsidiary equations are true only for the economy as a whole: $I = E$, $U = A$, $M = C$.⁵

ANALYTICAL USES

This conceptual framework suggests the following functional and structural requirements for maintaining steady economic expansion at a capacity rate of output (assuming a stable price level and a stable, "normal" money-GNP ratio):

1. There must be a continuous balance between the total primary credit *actually* used (borrowed) by all sectors and the total trend volume of primary credit which *would be* advanced by all sectors—including the new money advanced by the monetary agency—if the economy were steadily growing at a capacity rate of output.

2. The monetary agency must supply enough (and only enough) new money to meet the needs of the economy at a capacity output rate of growth. The appropriate amount can be viewed from two perspectives: (a) it must be enough to provide the additional *cash balances* needed to service the expanding volume of transactions—the inventory stock aspect; and (b) it must be enough to provide the additional *purchasing power* (i.e., the additional funds which do not come from previous income-expenditure flows) to buy the necessary increment of output at stable prices.

There is good reason to believe that the use of the flow-of-funds accounts with this analytical framework would make it possible to measure currently, and even to control, the extent to which these requirements are being met.

⁵ In the original version, the $M = C$ equation was erroneously qualified as follows: "however, the latter is strictly true only where the total increase in money is costless, 'pure' money, with 100 per cent seigniorage profit."