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THE FLOW-OF-FUNDS APPROACH TO SOCIAL ACCOUNTING Appraisal, Analysis, and Applications

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Introduction

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SECURITIES AND EXCHANGE COMMISSION

THE Conference on Research in Income and Wealth has in the past held conferences on the national income and product accounts, input-output analysis, income size distribution, and national balance sheets. The meetings held in November 1959 were devoted to the newest member of the social accounting family, the flow-of-funds accounts. This was particularly appropriate since in August of that year the flow of funds became a regularly published quarterly series appearing in the *Federal Reserve Bulletin*.

The flow of funds represents a system of presentation of the numerous activities and transactions taking place among the various sectors of the whole economy. The pioneering work in the field, then known as money flows, was conducted by Morris A. Copeland and published by the National Bureau. It was then continued by the Federal Reserve, and further developments and improvements were under the initial direction of Daniel H. Brill and later of Stanley J. Sigel.

Among the major problems confronting systems of social accounting are consistency with each other and integration. These have been discussed in *The National Economic Accounts of the United States*,¹ by the Statistical Office of the United Nations, and by the Conference of European Statisticians. Integrated systems have also been presented by Morris A. Copeland, Graeme S. Dorrance, and Richard Ruggles, among others. The subject of integration has generated so much interest that it was felt that a conference should be called to discuss in detail integration of the flow of funds and the national income and product accounts. On further consideration it was decided to expand the scope to include other aspects of flow-of-funds analysis.

Thirteen papers, falling into three general areas, were presented and discussed at the 1959 conference. The first area concerns the integration of social accounting systems and includes a presentation of an integrated system for the United States and a discussion of the systems developed in Canada and other foreign countries. The

¹ Hearings before the Subcommittee on Economic Statistics of the Joint Economic Committee, 85th Congress, 1st session, 1957.

second covers the uses of flow-of-funds data and their applications to the analysis of financial and economic conditions. The third presents papers discussing data problems both as to availability and techniques.

Social accounting systems in the United States can be said to have developed through a process of evolution at different levels of integration. Many series began independently in answer to particular needs. These series were, of course, interrelated, and it became apparent that they would give a more useful picture of the economy and tool for analysis if they were incorporated into integrated accounting systems. The systems were then organized, again as necessity dictated, along more or less independent lines. The social accounting systems exposed a mass of additional information of great utility, and thus greater detail was gradually worked into the systems.

In some instances, data needs dictated the incorporation of one system into another, particularly where one constituted a segment or sector of a broader system. We see this in the integration of the balance of international payments in the national income and product accounts. In another instance, a system was developed that expanded on one particular aspect of some other system, as, for example, input-output analysis. In the case of the national income and product accounts and the flow-of-funds accounts, we are presented with two systems, more or less independently developed, covering the whole economy with different orientations. The two systems touch at many places with what appear to be resounding clashes. These reflect differences in concept and coverage, in data sources, in methods of estimation, and often in opinions. All this lends to the confusion of the general public, already confused by the intricacies of the systems themselves.

The answer that immediately occurs is reconciliation. This, in fact, has already taken place to some extent. However, as pointed out by Copeland in his comments, this can only be considered an immediate absolute minimum objective. Reconciliation tables can give only partial satisfaction, considering their complex nature. On the other hand, reconciliation tables are completely feasible and extremely useful, given the time and persistence to use them.

The other approach to integration, as Stanley J. Sigel brings out in an important paper in this volume, is that of synthesis—the construction of a single uniform structure to serve as the basis for all systems. Such an approach might not necessitate changes in concepts, but in any case agreement on estimates would be needed. Most integrated systems that have been proposed here or abroad take the present structure of the national income accounts as the necessary

framework. This has the advantage of not making drastic changes in the senior system and of not upsetting an accepted or betterunderstood organization of data. Sigel objects to developing an integrated system that starts with the present national income and product structure of accounts. He feels that both a flow-of-funds system and an income and product system should be developed from a consistent body of data without any predetermined orientation.

Sigel has, however, made a great forward stride toward integration in his systematic approach to setting up a structure of accounts to serve as the schematic basis for both national income and product accounts and flow-of-funds accounts. Sigel's matrix of sector activity accounts has, of course, forced the acceptance of certain concepts and definitions, but after this obstacle is passed we find that we can obtain the national income and product summary accounts by the same consolidations as currently used. The flow-of-funds accounts result from the usual sector consolidations.

This approach is greatly desirable on the basis of internal consistency of estimates and concepts. The disadvantages concern the changes in the national income and product accounts indicated by Sigel. Copeland in his comments points out that these are not necessary and that the income and product accounts can be kept unchanged by using a skeleton type of integration from which the various systems can be derived in greater detail.

In his paper Sigel also touches on a single nonduplicating system of consolidation of the basic structure. This involves a horizontal consolidation of all the production accounts and a vertical sector consolidation of all other accounts. This type of summary has the distinct advantage of presenting all the important income and product aggregates as well as the intersector flows in savings and investment, while maintaining a certain elegance of form. Such a system would, of course, imply changes in the systems as we know them now, and from this point of view might raise problems.

In the other papers in Part I, S. J. Handfield-Jones and Graeme S. Dorrance discuss social accounting in Canada and other foreign countries. Handfield-Jones, in discussing the origins of the Canadian national transactions accounts, points out that one of the first questions to come up was the orientation of a flow-of-funds system for Canada. The decision was that, in accordance with the Canadian tradition, the financial accounts should be an extension of the already established national income and expenditure accounts rather than an independent development. In Canada both the flow-of-funds and the input-output studies are consistent with the national income and expenditure accounts and are considered parts of one social

accounting framework. This approach obviously has its advantages and tends to alleviate the problems brought about by the necessity to reconcile and integrate.

Handfield-Jones suggests that the analytical purposes of flow-offunds data would be better served by classification of flows into specialized financial claims, such as contractual saving, as opposed to more general types of claims, such as savings deposits or securities. He also makes suggestions in the field of sectoring, indicating the closer similarity of small corporations to unincorporated business rather than to corporations as a whole. Stephen P. Taylor, in his comment, suggests the setting up of a large corporation sector, particularly in view of the better quality and greater reliability of the data available. These suggestions would add greatly to the usefulness of flow-of-funds analysis.

Dorrance presents an interesting paper that covers the financial accounts of other foreign countries, together with an extremely useful appendix classifying and categorizing the accounts for seventeen countries. In this contribution, Dorrance brings out the basic differences in the aims and development of financial accounts in the United States as opposed to what he calls "non-North American" accounts. The latter are generally characterized as "appendages to the income-expenditure accounts" and "directed toward the analysis of particular problems." This is contrasted to the United States approach, which encompasses an over-all analysis of the entire economy that is not geared to any particular problem or theory.

Drawing on his knowledge of the various systems, Dorrance discusses the many statistical and conceptual problems involved in integration. In spite of the problems, he concludes that integration is desirable and that it should be within the framework of the national income and expenditure accounts. Generally this appears to be the trend in most foreign countries.

Part II presents four papers on the uses of flow-of-funds data in various fields of analysis. The flow of funds presents, in one vast, complex system, data on the interactions and interrelations of the financial and nonfinancial activities of the various sectors of the economy. The papers in this section explain how these data can be used by the banker or financier, by the economic analyst, or by the planner of government policy.

Morris A. Copeland has contributed a provocative paper on some analytical uses of flow-of-funds data. He illustrates their use in the development of capital outlay functions for consumers and for state and local governments. In another section he presents an analysis of World War II financing by utilizing sources and uses of funds data for the federal government. He also discusses the role of the various sectors of the economy in the financing of the war and shows the uses of flow-of-funds data in the study of the question of changes in liquidity preference during the course of recent business cycles. In the last section of his paper he goes further into business cycle analysis through the use of financial transactions data for the various sectors.

James S. Duesenberry covers another application of flow-of-funds analysis—its use in setting up models of the structure and operation of the financial markets. As he indicates, he is attempting to present in outline "the nature of the processes by which supply and demand are brought into balance in the money and capital markets." Duesenberry goes into an interesting discussion of short- and long-run supply and demand adjustments and the influence of interest rates. James Tobin in his comment makes the point that the supply and demand functions used in the model should include stocks of financial assets as well as flows.

A somewhat different type of analysis of monetary conditions is presented by Emanuel T. Weiler in his paper and by John G. Gurley in his comment. Weiler and Gurley use flow-of-funds data to try to determine differences in the pattern of money flows between tightmoney and easy-money periods. Weiler approaches the problem through sources and uses of funds analysis for different sectors, comparing the patterns under different credit conditions. Gurley does the same thing through the use of various flow relationships.

The last paper in this section is in some ways the most closely related to everyday application of flow-of-funds analysis to practical problems in the financial markets. James J. O'Leary describes the uses and techniques of the system known as "sources and uses of funds in the capital markets." These are primarily for use by financial officers of banks, insurance companies, and others with the responsibility for investing funds entrusted to them. In particular, O'Leary describes the sources and uses of funds analysis developed by the Life Insurance Association of America and compares it with the flow of funds. In her comment, Sally Ronk, does the same thing for the Bankers Trust version.

In Part III, the final group of scheduled papers, the principal area of discussion concerns data sources and problems, both current and future. Irwin Friend describes an approach to obtain estimates of the distribution of saving of each type by various holder characteristics. The method, known as the institutional approach, envisages sampling accounts from the records of various kinds of institutions and following up by questionnaires to determine income, occupation, and other characteristics. This approach has already been used for demand

deposits and could advantageously be used for other items such as corporate securities, insurance, savings shares, and so on. Daniel H. Brill arouses our curiosity in the Federal Reserve's survey of small business, which may constitute a source of data on the finances of unincorporated business. While Brill is quick to tell us that the survey was not designed to give aggregate estimates, we are hopeful that it will yield information of tremendous usefulness in social accounting analysis.

Arthur L. Broida and Robert Ferber are concerned with consumer surveys and how they fit in with social accounting systems. They discuss the sources of errors in surveys of this type, the consequences of such errors, and improvements that might be implemented. It is pointed out how consumer surveys can give greater depth of detail to the financial flow statistics.

In the past, one of the questions raised by users of flow-of-funds accounts has been the problem of the degree of grossness needed in financial flow data. Although Morris Mendelson does not actually tell what the "optimum" is, he does indicate the possibility of compromise between maximum grossness and maximum netness. In his paper he discusses the advantages of gross flows for analytical purposes and goes into their uses. He also indicates areas in which gross flows of one nature or another can be presented without too much difficulty.

George Garvy discusses one of the more troublesome of the technical problems involved in the preparation of flow-of-funds estimates—float. The paper presents a description of the procedures currently used to adjust for float and compares them with earlier flow-of-funds methods as well as with the adjustments made by the Securities and Exchange Commission in its estimates of the volume and composition of individuals' saving.

The papers and comments constitute valuable additions to the social accounting literature, and bring our knowledge and understanding of flow-of-funds analysis up to date. In particular, this volume fills a gap in regard to the flow-of-funds system, indicating how it fits into the economic scheme, what are its uses and its problems, and what more can be expected.

I would like to take this opportunity to express my appreciation for the considerable assistance given by the other members of the Editorial Committee, Henry S. Murphy, Daniel H. Brill, and Loughlin F. McHugh. Mr. Murphy also served as chairman and Mr. Brill as a member of the Program Committee. I also wish to acknowledge the help of Mildred E. Courtney, secretary of the conference, and of the editorial staff of the National Bureau of Economic Research.