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PROBLEMS IN THE FIELD OF FINANCIAL STATISTICS
(Memorandum prepared by the Research Department, International Monetary Fund)

I. Definition and Scope of Financial Statistics

The financial system is different from all other sectors of the economy. Statistics describing and explaining it are therefore different from those required for other sectors. Non-financial businesses produce goods and services for sale at a price and the total value of production ordinarily increases with increased production. Hence, under most circumstances, increased production is the sign of progress and the determination of the best methods of recording the amounts of production and consumption and the changes in prices and costs provide most of the problems facing statisticians. The services of the financial system, however, while of very great value, are often not of greater value when produced in larger quantity. Indeed, a rapid increase in the production of financial services is one of the clear signs of an inflation. The process of counting the production of services is, therefore, only a small part of the job of financial statistics. The essential task of financial business is to provide the community with a variety of liquid assets that can be held rather than consumed by the rest of the economy in return for less liquid assets or evidence of direct indebtedness. This process enables the community to distribute its wealth in a greater variety of forms. The financial system thus provides bridges between the present and the future and between the domestic economy and the rest of the world. It channels the savings of those who do not wish to invest in real assets into the hands of those who do, and similarly channels the foreign receipts of those who do not wish to buy abroad into the hands of those who do. The system consists of a

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large number of institutions using a number of tools to create assets for the rest of the community to hold: treasuries, central banks, other banks, and numerous savings, investment, and foreign exchange businesses. These institutions operate largely on the basis of (1) interest rates that equate the present and future demand for and supply of money and that influence the demand for and the supply of foreign exchange, and (2) exchange rates that provide a more direct means of equating the demand for and the supply of foreign exchange. Their use of these tools is in part regulated by a series of gold, foreign exchange, and other reserve ratios. The product of their operations is a regulated supply of money and an array of other liquid assets that provide, for savers, alternatives to direct investment and a concomitant structure of liabilities owed by various parts of the economy to the financial institutions. Therefore financial statistics should be a record of the changes in the asset and liability accounts of these institutions and of the uses made of their tools to alter their balance sheets. On this basis, a measurement of the creation of liquid assets to be held by the public in return for the surrender of less liquid assets or the creation of debts should explain how the system works and the motivations and consequences of its action.

II. The Role of Financial Statistics

Economic statistics measure what has happened. However, one wishes to know not only what happened, but why it happened. It is here that financial statistics should make their principal contribution.

In one respect the record of the financial institutions is always good. When the statistics of any period are assembled actual savings must always be found to be equal to realized investment and total foreign receipts must always be found to be equal to total foreign payments. A statement contrasting, as of the beginning of a period, the amount that savers wished to save with the amount that investors wished to invest and the amount of exchange that buyers wished to buy with the amount that sellers wished to sell at existing interest and exchange rates would, if it could be compiled, tell a different story. If these statistics could be compiled, the record of the financial system would appear much less good.

When intended savings exceed intended investment, prices, incomes,

employment, and production will fall unless some individuals' intentions are frustrated in appropriate directions. If the same situation does not prevail abroad, the balance of payments may develop an unwanted surplus. Conversely, when planned investment exceeds planned savings the opposite phenomena may occur - collectively called inflation. It is the main function of the financial system to assist in the frustration of certain of these intentions so that their inevitable reconciliation provides a satisfactory level of income, employment, production and prices. The financial machinery can only rarely encourage or restrain saving sufficiently to make it exactly equal to desired investment or vice versa. Likewise it can only rarely bring about an exact balance between foreign exchange purchases and sales without calling upon the monetary authorities to make some unplanned purchases or sales of exchange. In some cases, the obvious poorer quality of the record is reflected in developments that can unquestionably be classified as inflation or deflation and on occasion the financial system can only operate with the assistance of exchange restrictions that are designed to disappoint some of the demands for foreign exchange and to forcibly augment the supply of foreign exchange tendered to it.

It should be the main purpose of financial statistics to throw light upon these problems. Financial statistics are, however, necessarily records of completed events from which the frustrated aspirations that one primarily wants to know cannot be read, but can only be imperfectly inferred. Both the special importance of financial statistics and the difficulty of making good ones arise from this fact.

III. Available Financial Statistics

The financial statistics of many countries took their present form some years ago, largely as a by-product of regulations intended to insure the solvency of individual banks and financial firms by prescribing the distribution of their assets and liabilities. To enforce these prescriptions, government agencies were given the power to require banks and certain other

classes of financial firms to prepare balance sheets in a specified manner and to submit them periodically to the supervisory agency. Financial statistics resulted from the consolidation or combination of the returns by the supervisory agency. In many cases, this system is no longer the best, as statistics constructed primarily to demonstrate the solvency of financial institutions under specific assumptions regarding the liquidity of individual assets and liabilities do not provide relevant answers to the questions that must be faced when conducting a survey of the financial system.

Even the ability of banks to maintain their solvency during a period of rapidly declining money supply through following rules regarding the amount and distribution of their assets and liabilities has been called seriously into question. On the other hand, the wisdom of requiring banks to contract their assets - and hence further to contract the money supply - during such a period has been called seriously into question. Since the establishment of central banks, it has become evident that the cash reserves of commercial banks are the creation of the central bank and that the solvency of the banking system depends in the first instance upon the maintenance of a sufficient level of lending by the banks themselves and ultimately upon the willingness of the central bank to expand the volume of reserve money. In these circumstances, it is unlikely that statistics derived from the attempt to insure the solvency of banks through controlling the amount and distribution of their assets and liabilities would provide the most useful picture of the operation of the banking system.

IV. Major Problems in the Construction of Financial Statistics

Many of the problems that frequently have to be faced in the compilation of statistics do not arise in the field of financial statistics. Money and banking statistics are not created by special analysis, surveys or reports. A monetary system necessarily produces them as part of its normal operations. Money is a statistic since it consists in numbers written on the books of banks

or of currency whose issues are fully recorded. The valuation of items and the means of combining items from various sources is less of a problem than in most fields of statistics since practically all the assets and liabilities of the banks and the monetary authorities are money or claims to money. In most countries, the assembly of the data constitutes no great problem. The monetary authorities and the banks are few in number compared to the primary sources in other fields of economic statistics, the keeping of books is one of the most essential parts of banking, and the tradition that banks should report to the monetary authorities or publish balance sheets is well established in practically all countries.

The questions that must be faced are, however, of the most fundamental character. The major problem is to organize the available data so as to indicate the answers to some of the problems outlined above. Thus, it may be known at the end of any period that savings and investment are equal, but it is not known whether the plans of savers and investors were consistent at the beginning of the period. However, if these plans had been consistent, the financial system would have been called upon to do nothing more than transfer the savings of some parts of the community to other parts. If, however, these plans had not been consistent, the financial system would have been called upon to accommodate these inconsistent desires through an expansion or contraction of its assets. Thus, those who are saving will have attempted to increase their holdings of money, repay loans that the banks had made to them or purchase securities. On the other hand, individuals and firms wishing to invest at the current rate of interest will have attempted either to decrease their holdings of money, borrow from the banks, sell their existing holdings of securities or issue new securities for sale. If the supply of securities on the part of the non financial sectors of the economy was inadequate to satisfy the demands of savers, at the current rates of interest accepted by the banks, the banks will have been required to sell securities to prevent a fall in interest rates. Conversely, if the demand was inadequate to meet the supply, the banks will either have had to purchase securities or acquiesce in a rise in interest

rates. Thus, the expansion or contraction of bank assets in any period gives an indication of the degree to which the plans of savers and investors at the beginning of any period are inconsistent.

It is probably impossible to give a quantitative measurement to this inconsistency. In the first place, to the extent that some of the saving planned by the community at the beginning of the period was intended to be held in monetary form, a rise in bank assets during the period will be compatible with consistent investment and savings plans. Yet even a measure of the rise in bank assets resulting from inconsistent plans will not give a measure of the inconsistency. The interest rates acceptable by banks are likely to alter during the period under review and even if they do not alter, the effects of an alteration of bank assets and liabilities will produce changes in the desires that investors and savers had at the beginning of the period.

Changes in these aggregates alone cannot provide an adequate measure of developments in the economy. For a full understanding of the forces at work, the relation between the banks and particular sectors of the economy must be analysed. Thus, it is perfectly feasible for the savings plans of resident individuals and businesses as a group to be inconsistent and for the plans of the entire private sector to be consistent. Account must be taken of the change in a country's international indebtedness. Thus, to the extent that foreigners are making net investments in a country planned domestic saving can be less than total investment. Even if total private savings and investment plans are inconsistent, there will still be consistency for the economy as a single unit if, at the same time, the savings and investment plans of the government are equally inconsistent in the opposite direction so that the savings and investment plans of the community as a whole are consistent. This planned inconsistency in government accounts is frequently one of the aims of national economic policy. Under these circumstances the assets and liabilities of the banks, vis-a-vis the private sector of the economy will tend to alter in one direction and their assets and liabilities, vis-a-vis the government will

move in the opposite direction. If, however, these inter-relations within the economy are to be fully understood and the consistency of the plans of the various sectors of the economy compared with their achievements, it follows that financial statistics should be constructed so as to show the relations between the financial system and the different sectors of the economy. It also follows that financial, national income, and other economic statistics should be constructed on the basis of comparable classifications.

Even the broad classifications outlined here are usually inadequate for a complete understanding of economic developments. It is also desirable to know when particular industrial or other segments of the economy can only satisfy their savings and investment desires after direct or indirect recourse to the monetary system. Therefore, in so far as possible, the accounts of the financial system should be segregated by as detailed economic classifications as is feasible.

Considerations of economic policy must, however, recognize that the relation between the various sectors of the economy is complicated by the relations between the economy and the rest of the world. Individuals plan not only to invest in their own economy nor do their savings entirely arise out of income earned at home. Some of their receipts arise from abroad and some of their investments are made abroad. These transactions are now adequately described by the balance of payments statements produced by most countries. However, to the extent that these foreign receipts and foreign payments are not equal, there will be a change in a country's international reserves. When a country's foreign reserves alter, the changes are reflected directly in a change in the foreign assets of its financial institutions. Consequently, they re indirectly reflected in the assets and liabilities of the rest of the conomy, vis-a-vis the financial institutions. Therefore, in order that a omplete picture of the various inter-relationships may be reached, it is ssential that financial statistics clearly demonstrate the effect of foreign ransactions on the domestic monetary situation.

Finally changes in community habits are also reflected in financial records. Thus, as communities develop, the role of the monetary system becomes less direct in many respects. In under-developed economies, all savings are normally held in monetary form or in foreign exchange. The banks are called on to supply the money to satisfy these savings desires. Simultaneously, they must provide the finance for the concurrent investment. If they fail to perform this role, the latent savings desires unmatched by personal investment desires may provide a depressing force limiting economic expansion. As these economies develop, other assets tend to become more attractive to individuals and the banks must perforce play more the role of achieving consistency between inconsistent savings and investment desires and less the role of providing the chief asset for acquisition by savers and the main source of finance for investors.

It is, therefore, the function of financial statistics to provide data on the inconsistency in community investment and savings desires and on the methods by which consistency was achieved, on the impact of international transactions on the national economy and on the changes in community asset-holding patterns. This can only be done if rather full financial statistics are published and if they are constructed specifically to answer these relevant questions rather than limited to a survey of the solvency, on certain assumptions, of the financial institutions.

V. Problems of Co-ordinating Financial and Other Statistics

The major problems of co-ordination in the field of financial statistics arise from the fact that financial statistics are one part of a large group of economic statistics, designed to describe the determination of major economic aggregates. On the one hand there are the national income and balance of payments accounts. On the other hand, there are wealth accounts of which financial statistics form a part. The first provide an indication of the value flows that have taken place within any economy during the period providing, among other things, data on the accumulation of wealth. The second

indicate the changes in a community's assets or in the valuation placed on them by members of the community that have been associated with the value flows outlined in the receipts-payments accounts.

As the accounts of a corporation can be fully analysed only by a concurrent examination of both its income and expenses statement and its balance sheets: so a full picture of the developments in any economy can be gained only by a concurrent assessment of changes in the total assets and liabilities held by the community with an examination of its national income accounts and balance of payments. Financial statistics should provide perhaps the most important data, and, in some countries, the only presently available information for the compilation of a statement of assets and liabilities. Consequently, they must be so designed that they will contribute to an understanding of those problems that are in part described by other series of statistics.

The problems of co-ordination arising from this relation between the different types of statistics are of two types. In the first place, both types of account must be constructed on parallel bases to facilitate comparison. For instance, the various categories into which the aggregates are classified must be consistently defined for the construction of the accounts. They must both recognize the constituent elements in any economy. Thus, transactions of the private, government, and foreign sectors should be separately identified, and certain groups of transactions, at least, classified in greater detail. If a satisfactory survey of economic developments is to result from an examination of both types of statistics, it is obvious that these sectors must be consistently defined in the construction of both types of accounts. These problems of co-ordination should be relatively easy to solve.

A more significant problem of co-ordination is the assignment of their proper roles in the development of economic analysis to these two types of statement. For the purpose of devising financial statistics, it is even more important that they be designed so as to indicate answers to those questions that cannot be solved through an examination of other types of accounts. It is this requirement that gives rise to the major problems in this field that have been discussed above.

VI. Principal International Recommendations in the Field of Financial Statistics

As yet there are no generally accepted recommendations in the field of financial statistics. The League of Nations Committee of Statistical Experts prepared a series of recommendations in 1941 that has never been formally approved by the United Nations. The International Monetary Fund has prepared a draft Money and Banking Manual. This has been distributed to all the members of the Fund and to a considerable number of individuals for comment. At present the staff of the Fund is revising this draft and intends to issue further drafts. The revisions can only be satisfactory if the Fund receives suggestions from the authorities in the Fund's member countries and from individuals. It is hoped that it will eventually be possible to prepare a Manual that will be generally acceptable as a basis for the compilation of monetary and some other financial statistics.

The draft Manual suggests that bank balance sheets continue to be compiled along lines that are almost universal now. Thus, it suggests that accounts should be classified in the following groups:

1. Monetary Accounts
2. Other Cash Accounts
3. Earning Assets and Borrowing
4. Other Accounts

with further traditional sub-classifications of the accounts. It suggests also, however, that all the assets and liabilities of the monetary system be classified according to whether they are claims on or payable to the following other sectors of the economy:

I. The Money Creating Sector

   1. Monetary Authorities
   2. Banks

II. The Foreign Sector

   1. Foreign Official and Banking Institutions
   2. Other Foreigners

III. The Money Holding Sector

1. Businesses and Individuals
2. Local Governments
3. Government Agencies
4. The Government

It is also suggested that the more important accounts within each sector (particularly loans and bank deposits) be further classified by the economic activity of the debtors and creditors.

All these classifications, as well as other aspects of this draft Manual are now in the process of revision. It is hoped that this project will elicit sufficient interest and comment throughout the world to enable the International Monetary Fund to prepare a Manual that will be generally acceptable. If this can be done, there will be a firm foundation for the formulation of international proposals in the field of financial statistics that should provide a framework for the revision, expansion and improvement of the financial statistics published in many countries.

NOTE: This paper is based on a statement prepared for the discussion at the International Seminar on Statistical Organization sponsored by the Government of Canada and the United Nations, Ottawa, Canada, 13-31 October 1952.
