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Volume Title: The Flow-of Funds Approach to Social Accounting

Volume Author/Editor:

Volume Publisher: UMI

Volume ISBN: 0-870-14182-1

Volume URL: <http://www.nber.org/books/unkn62-1>

Publication Date: 1962

Chapter Title: Institutional Data as a Source of New Information for Use in Social Accounting Systems

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Chapter URL: <http://www.nber.org/chapters/c2040>

Chapter pages in book: (p. 297 - 314)

Institutional Data as a Source of New Information for Use in Social Accounting Systems

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THE objective of this paper is to outline an important potential use of an underexploited source of data for social accounting systems—viz. the financial records of institutions, corporations, and government agencies. All these organizations have in common the maintenance of objective accounting records which relate to highly significant aspects of economic behavior and which can be considered to have a high degree of reliability. As will be discussed below, these records can be used to provide the first reliable estimates of the distribution of a high proportion of assets and liabilities and of current saving among different economic groups in the population. Information on gross as well as net transactions in specific items of assets and liabilities for detailed economic groups can also be obtained for flow-of-funds purposes.

The financial records of institutions, corporations, and government organizations (which shall be referred to as institutional data) are of course, already used extensively in various national economic accounts. However, they are used only to a negligible extent as a basis for providing information on the assets and liabilities or saving of the different economic groups normally combined in a single "individuals," "personal," or "domestic, private noncorporate" sector in the national accounts. The emphasis in this paper, therefore, will be on the use of institutional data to provide information on the level of and on changes in assets and liabilities for economically meaningful classifications of individuals. The most important of these classifications for analyzing asset and liability structures and saving behavior would involve the grouping of individuals by major occupation and income class. The occupational classification should distinguish as a minimum among farmers, nonfarm entrepreneurs, and other individuals, and should show separately such groups of "quasi-individuals" as nonprofit organizations, private pension and welfare plans, and personal trust funds (even though, for many purposes, e.g. an income distribution of individuals' saving, personal trust funds and pension and welfare plans might have to be allocated

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to their beneficial owners). In addition to the basic occupation and income classifications, it would be extremely desirable to group individuals by other economic, social and demographic characteristics of the family units involved—such as past income, wealth, age of head, and family size—which are regarded as significantly affecting the composition of and trends in assets and liabilities.

By an appropriate sampling of accounts on the books of financial institutions, corporations, and government units, it should be possible to derive reliable estimates of the distribution among economic and other groups of most items of assets and liabilities and saving—such as demand and time deposits (including those in saving and loan associations), insurance, a high proportion of government and corporate securities held by individuals, mortgages, other debt, and housing. It would not be feasible through this approach to cover one component of saving and wealth—viz. currency—and, what is a more serious deficiency, net investment in nonfarm and farm business would continue to be inadequately estimated, though some improvements could be made in the available data. According to the SEC-Commerce estimates, the components of saving which can be covered in this manner have accounted for virtually all of the total net individuals' or personal saving in recent years (and almost all gross saving by individuals other than farm and nonfarm entrepreneurs). It should be noted, however, that these estimates probably understate the relative importance of net investment in business.

Before proceeding to the techniques and procedures for obtaining this new information from institutional records, some mention should be made of the currently available data on the distribution of individuals' saving and wealth among different groups in the population. Virtually all available information of this type has been obtained from sample surveys of individual consumer units or families (including single persons). However, in view of major deficiencies in the survey data, few definitive statements can be made about the saving behavior or structure of wealth of different economic groups. These deficiencies have been described at length in a recent paper and are evidenced by serious discrepancies between blown-up survey results of certain components of saving—particularly liquid assets—and reasonably reliable external aggregates.¹ Such discrepancies cannot be explained by sampling errors and are sufficiently large so that almost any reliance on consumer survey data for analysis of saving and wealth involves the assumption that the very substantial biases which are known to exist are distributed among individuals or

¹ See Irwin Friend and Stanley Schor, "Who Saves?" *Review of Economics and Statistics*, May 1959, Part 2.

economic groups in some convenient fashion. It is a testimonial to the importance of distributional information on saving and wealth that analysts have been so willing to make this assumption. In the present state of the arts, nearly all saving analysts will agree that consumer surveys have not provided reliable information on aggregate saving by different groups in the population; so the needs for such data in a system of social accounts have not been filled.

I might note that the situation is even worse than is generally recognized. Given the very large biases in the aggregate saving (and wealth) estimates derived from survey data, there can be no assurance that any distributional or trend estimates from such data, or any measure of the degree of association between saving and other variables, may not be similarly afflicted. On the other hand, certain types of information on saving behavior—e.g. on the distribution of saving among individual consumers rather than among broad groups; on the relation of saving to family characteristics within these groups; and on motivations, attitudes, and expectations affecting saving—can only be obtained from consumer surveys. As a result, even though there is no assurance that improved consumer survey data will in the future be able to provide adequate information on saving by broad economic groups, and even if there is every presumption that such information can be provided by the institutional approach outlined in this paper, the implementation of the institutional approach should not be considered as a substitute for further exploration of the feasibility of obtaining reliable data on saving from consumer surveys.

Techniques and Procedures

Since the essence of the institutional approach is to obtain unbiased and reliable data on the holdings and net transactions of other economic units from objective records maintained by institutions having first-hand knowledge of such matters, it should be pointed out that certain types of records more clearly satisfy these criteria than others. These are the records in which the bookkeeping is handled by the institution itself rather than by the customer or economic unit to whom the record applies. Some examples are the customer accounts in banks or saving and loan associations, customer records of life insurance companies, transfer records for corporate stock, property and mortgage deeds registered with public agencies, and mortgage and other consumer debt records of financial institutions and business firms. There are other records filled out directly by the economic unit involved and required by law to be filed with some

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government agency, including, most notably, income tax returns, which are presumably more reliable than data obtained from consumer surveys generally but not so satisfactory as the data about which the institutional source has first-hand knowledge.

Sometimes more than one type of institutional data will provide similar information on the financial position or transactions of economic units. The choice will then depend on considerations of cost and reliability and on supplementary information which may be available in one case and not the other. For example, net saving in stock by different groups of individuals can be estimated either from transfer books for corporate stock (plus appropriate follow-ups of nominee holdings) or from brokerage records (including transactions in new issues). Each source has certain advantages, but the crucial advantage of transfer books is that they provide information on holdings as well as on changes. It might be noted that in this illustration it would be possible to use even a third source—income tax returns—to improve greatly our present consumer survey estimates of the distribution of saving in (and holdings of) stock by economic groups, but this approach would be inferior to one based on either of the other two sets of institutional records.

The general plan to be followed for each institutional body of data to be covered is, first, to select a sample of institutions and, second, to select a sample of accounts within each institution, transcribing names and addresses of the owners and dollar amounts of the accounts at the beginning and end of the year. Though a number of variations in procedure are possible and should be tested, the final step would probably involve contacting the individuals directly to obtain occupation (including occupation of the head of the family if different from the individual), income class, and other significant family characteristics. Such contacts can be effected by mail, with telephone and interview follow-ups if necessary.

It is obvious from this brief description that while the general approach proposed might give unbiased and, if sufficient resources are expended, reliable estimates of different components of saving and of wealth, it does not give any better estimates of family characteristics, particularly income, than the usual consumer survey. The necessity for contacting individuals directly could be avoided by asking the institutions involved to classify their customers, which might be possible in a high proportion of cases for broad occupation and income classes; but the errors would very likely be even larger than those obtained from direct consumer response. A more attractive alternative would be to tie in the sample information obtained from institutions (i.e. names, addresses, and amounts of accounts)

with the data on occupation and income obtained from individual income tax returns. This last alternative has several disadvantages of its own, including greater cost, the problem of identifying the appropriate family unit, and the inability to provide information on family characteristics other than occupation and income (and, perhaps, dependents, geographic location, and prior incomes).

Thus, the basic technique for obtaining information on family characteristics is likely to remain direct contact with the consumer unit, supplemented, if feasible, by income checks from tax returns. It is important, therefore, to clarify the possible misconception that if the institutional approach has to rely on consumer surveys for information on family characteristics, it may be subject to the same biases as such surveys for any analysis of the relation between saving or wealth and these characteristics. In fact, certain basic family characteristics, such as occupation, can be obtained quite reliably from consumer surveys; and even income, which is more difficult to measure, has a much smaller margin of error attached to it than the data on saving. The joint use of institutional data for objective information on components of saving (and wealth) together with direct recourse to consumers for information on family characteristics (supplemented, if necessary, by income tax returns) should permit us to say with a high degree of reliability that X dollars and Y per cent of saving in indicated forms are accounted for by such groups as entrepreneurs or by different income classes, even though there may still be some understatement of income for these groups.

Another misconception that has arisen is that the use of institutional records for social accounting purposes as outlined above requires matching of accounts for the same individual (or consumer unit). Obviously, the same individual may have more than one account even for the same type of asset in the same institution or in different institutions, and would normally have several types of assets; so if matching were required, it would be utopian to expect the kind of cooperation that would be needed both from the individuals and institutions involved. Fortunately, no such matching is necessary if our objective is simply to allocate various forms of saving (and wealth) to different economic groups rather than to distribute saving among individual consumer units. The former is, of course, the basic problem for social accounting purposes. On the other hand, it would not be feasible to use the institutional approach in lieu of consumer surveys to relate saving to income (or to other family characteristics) for individual consumer units within an economic group or to derive information on the proportion of consumer units with different forms of saving or with different totals of saving.

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Moreover, the estimation of average values of family characteristics for analytical purposes, as distinct from the use of family characteristics as classifying variables by which to distribute saving and wealth for social accounting systems, might require either independent sample surveys of consumer units or, alternatively, estimation of "duplication" ratios—viz. for any specified type of asset or liability, the average ratio of the sample number of accounts to the sample number of families in each family-characteristic class.

DEPOSITS

The major categories of deposits—together constituting a very important part of the total of individuals' saving and wealth—can all be handled in a similar fashion. These include demand deposits, time and savings deposits, and deposits or shares in savings and loan associations and credit unions. For demand deposits, the Federal Reserve Board has for a number of years conducted a large-scale annual Demand Deposit Ownership Survey, which in its most recent version breaks down the total of individuals' demand deposits into noncorporate domestic individuals (financial and nonfinancial separately), farmers, nonprofit organizations, trusts, foreigners, and personal domestic individuals, and also by size of account. In this survey, the individual commercial bank is responsible for the classification of accounts, and personal accounts of nonfarm entrepreneurs are grouped together with other personal accounts. There is no breakdown of personal accounts by occupation or income.

Many years ago, I conducted a small-scale sample survey of demand deposits, which was closer to the institutional approach I have been describing.² From a distribution of the universe of individuals' demand deposits by size of bank and geographic location, a sample of 111 banks was selected as of mid-1943 (in 86 different communities), and approximately 200 accounts were taken at random from each of these banks (yielding a total of some 23,000 accounts). The amounts of these accounts were transcribed as of June 30, 1942 and June 30, 1943; and the banks classified these accounts by fairly detailed occupational groupings, distinguishing among business (or "trade"), personal, and mixed accounts of entrepreneurs. Within the banks, the general sampling procedure was to select at random 100 accounts from those open as of June 30, 1943, and another 100 accounts from those open as of June 30, 1942. The balances as of June 30, 1942 and June 30, 1943 were then transcribed for all 200 accounts. If an account was not open as of June 30, 1942 for the first 100 accounts,

² Irwin Friend, "Individuals' Demand Deposits, June 1942-43," *Survey of Current Business*, Dept. of Commerce, June 1944, pp. 14-22.

or June 30, 1943 for the second 100, that fact was noted. The occupation or type of business of the owner of each account was normally obtained either from bank records or bank officials. Though the checking accounts sampled included the demand deposits of individuals, partnerships, and corporations, corporate accounts were excluded from the analysis. Under this sampling procedure, the number and amount of opened and closed accounts are not directly comparable with continuous accounts. To make them comparable, the opened accounts in the sample were multiplied by the total number of continuous accounts, including those selected at the beginning and end of the period, and divided by the number of continuous accounts selected as of June 30, 1943. A similar adjustment was made for closed accounts. These sample results were checked against data on the total number of accounts as of June 30, 1942 and June 30, 1943, which were supplied by most of the reporting banks. The sample results were then weighted by size and geographic location of bank.

The results of this early survey were of considerable substantive interest at the time in indicating, among other things, the distribution among different occupation groups of the unprecedented increase in demand deposits in the period covered,³ but of more interest for our present purpose is the fact that the blown-up estimates checked rather well with whatever external checks were available. While procedures used to sample banks and accounts could and should be made more efficient (e.g. by checking on the feasibility of obtaining all of the largest individual accounts in a bank as well as a random sample of other accounts, or by sampling proportional to dollar amounts), the major change envisaged in the more comprehensive program which is being proposed involves obtaining information on family characteristics directly from the individual owning the account sampled. If there is reluctance on the part of the banks to make the names and addresses of depositors sampled available to an outside (government or other) organization for survey purposes even on a confidential (and temporary) basis, it would be an easy matter for a bank to mail the questionnaires for the survey organization, which would eventually obtain the questionnaire from the individual; it would indicate family characteristics and be coded for size of account at the beginning and end of the period, but would not give the name of the individual. However, it would probably be necessary to allow for follow-ups in any case.

³ It might be noted that in recent years saving in the form of time and savings deposits or of savings and loan association accounts has been much larger than in demand deposits.

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CORPORATE STOCK

The general approach to obtaining the desired data for corporate stock is quite close to that described for deposits. In this case, a sample of corporations—including probably all of the largest and a random sample of the remainder—would be asked for names, addresses, and number of shares of record (at the beginning and end of the period) of a sample of stockholders, information which would, of course, be available on the transfer books and related records of the corporation. Gross turnover as well as net transactions and holdings could also be obtained. One major problem which arises in connection with corporate stock, but is not serious for most types of assets, involves the necessity of ascertaining the beneficial ownership of an appropriate sample of nominee holdings. However, in principle, this raises no new difficulties but simply requires contacting the nominee (normally a broker or a bank) for the same type of cooperation as that given by the corporation.

Some exploratory work of recent years seems to confirm the feasibility of these procedures. Several corporations—including U.S. Steel, Ford, du Pont, and (while the results have not yet been published) General Electric and Standard Oil of New Jersey—have undertaken such studies of their own stock ownership, though these studies have not been coordinated.⁴ In addition, at the end of 1955, together with two representatives of the SEC, I checked on the feasibility of these procedures with officials of five of the largest nonfinancial corporations in the United States, all of whom indicated an interest in and a willingness to cooperate in such a program. However, all of them noted that they would prefer or perhaps insist on their sending out the questionnaire, to maintain confidentiality of the stockholders' list. This past year, a graduate student at the Wharton School, University of Pennsylvania, initiated a full-scale exploratory study for which we were able to get the cooperation of one of the largest corporations in the Philadelphia area. In this connection, I might note that we were able to obtain close to a two-thirds response rate from a sample of roughly 1,000 stockholders without telephone contact, interviews, or follow-ups, and without joint sponsorship of the corporation, a government agency, or of any outside organization like the New York Stock Exchange. With such additional steps, the response rate should be greatly increased. It is interesting that the response rate achieved in a much larger and more expensive study carried out recently by the General Electric Company was close to 90 per cent. It is planned to pursue this

⁴ Two smaller corporations, Joy and Pitney-Bowes, carried out similar surveys.

pretesting with several additional corporations in the Philadelphia area.

The approach proposed makes possible ownership and turnover studies for individual stocks and classes of stock which would not be feasible from consumer surveys. However, if reliable data are to be obtained for individual stocks which are included in the sample, this might require (depending on the variance of the data and on the permissible margin of error) considerably larger samples per firm than are necessary for estimates for all stock combined.

It has already been mentioned that brokerage records could be used instead of transfer books for obtaining data on saving in (but not holdings of) corporate stock by economic groups. The exploratory work carried out at the end of 1955 with two representatives of the SEC, covering three of the largest brokerage firms as well as five nonfinancial corporations, again indicated the feasibility of this approach and of the willingness of firms to cooperate.

OTHER ASSETS AND LIABILITIES

While corporate stock constitutes the vast preponderance of individuals' holdings of securities (over 75 per cent of market value as of the end of 1958), individuals also hold important amounts of United States savings bonds, other United States government securities, state and local government securities, and corporate bonds and notes. For United States savings bonds, constituting the largest of these other blocks of securities owned by individuals, a similar approach to that described for corporate stock could be followed to obtain information on the level of and changes in holdings. In this case, it would be necessary to use alphabetical files maintained by the United States government in lieu of corporate transfer books. Apparently, the records for Series E bonds, unlike those for other savings bonds, are not consolidated; so a single individual may have a number of accounts; but, again, this does not introduce any serious difficulty. (A more troublesome mechanical problem relating to Series E bonds might arise in tracking down the owners of these bonds where they have been held for many years.)

Unfortunately, probably well under half of other securities, consisting mainly of marketable bonds, can be handled in an analogous fashion. Marketable bonds include unregistered (i.e. bearer or coupon) securities as well as registered ones, and only the latter are amenable to the approach followed for corporate stock. It is conceivable, though highly unlikely, that it might be possible to examine the records of institutions which have unregistered securities in safe-

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keeping; but, in any case, this would not cover securities in individuals' safe deposit boxes or homes. There is, however, an alternative approach, which might be expected to provide reliable data on saving in, though not holdings of, unregistered securities. This would involve a sampling of brokerage or dealer records, including those relating to new issues and records of banks acting as broker-dealers.

All current and accumulated saving in insurance can be obtained from the same institutional approach once the decision is made as to the concept and coverage of such saving. The pertinent data include the records relating to policyholders of life insurance companies, to private pension plans, and to United States government and state and local life insurance and pension plans.

Institutional records can also be used for the remaining major component of individuals' nonbusiness assets—viz. investment in housing. Housing ownership, purchases, and sales can be ascertained, apparently in virtually all instances, from registrars of deeds and related agencies (with checks on comprehensiveness of coverage possible from other sources, such as public and private mortgage agencies and builders). It should be feasible as well, from these records, to make rough estimates of depreciation applicable to the different groups in the population. Data on improvements in housing can be obtained from public and private organizations, but here the information is probably fairly spotty.

On the personal liabilities side, information on the level of and changes in mortgage debt is available from several institutional sources including again the registrar of deeds and the records of the institutional lenders. The mortgage deeds would cover individual as well as nonindividual lenders, but would probably make available only a schedule of repayments, and would not show prepayments. On the other hand, the records of institutional lenders would cover prepayments as well, but would not cover mortgage money made available by individuals. Other consumer indebtedness is available primarily from the records of the institutional lenders (viz. nonfinancial businesses, sales finance and loan companies, banks, brokers, etc.), but for some components of such debt, partial information which might be useful for checking purposes could also be obtained from public, state, or local agencies.

The major weakness in the institutional approach is the difficulty of obtaining reliable information for unincorporated businesses (non-farm and farm) on the level of or even on the changes in investment in physical assets (plant, equipment, and inventories) and on trade payables and receivables. However, this is a deficiency which is

shared with alternative approaches. For a high proportion of trade payables and receivables, it might be possible, though expensive, to compile the necessary data from a variety of institutional sources. For plant and equipment, it would be even more difficult to do this; and for inventories, reliance would pretty much have to be placed on the tax and other records of the unincorporated business firms themselves. Careful surveys of noncorporate business firms might give fully as good data at less expense. Perhaps the ultimate (i.e. the best possible, if not altogether satisfactory) resolution of this very difficult problem will await the day when the Internal Revenue Service requires appropriate business balance sheet data either from all sole proprietorships or from a suitable sample of audited returns.⁵

Some Concluding Remarks

The previous discussion has attempted to outline the nature of the institutional approach to obtaining data on individuals' saving, assets, and liabilities for social accounting purposes. It is my feeling that this approach would provide reliable estimates of total saving and changes in the major items of assets and liabilities for the different groups of individuals other than entrepreneurs, and would improve the estimates of entrepreneurial saving. Reliable estimates of most forms of wealth for the different groups in the population should also be provided, but in addition to the problem posed by certain assets and liabilities of entrepreneurs, there is a further difficulty attached to unregistered (coupon) bonds. The institutional approach would be useful even if for some reason—such as inadequacy of resources—it turned out on the basis of further exploration not to be feasible to implement the required procedures for all components of saving and wealth. Its utility is potentially greatest in (but is not confined to) the area of financial assets and liabilities, particularly deposits in financial institutions and corporate stock.

The two major problems in implementing this approach are associated, first, with the need for cooperation by institutions as well as individuals and, second, with the rather substantial cost involved.⁶ The experience with which I am familiar makes me believe that the

⁵ It would be possible to derive immediately a relatively independent residual estimate of unincorporated business or entrepreneurial saving by subtracting nonentrepreneurial personal saving obtained through the institutional approach from the total of SEC-Commerce personal saving.

⁶ Another troublesome problem to which there are several possible resolutions relates to the desirability of identifying capital transfers from one economic unit to another and, perhaps less important, identifying capital gains and losses to separate such items from saving as usually defined.

necessary institutional cooperation can be obtained, but further exploratory work is required to reach this conclusion more firmly. Much less cooperation by individuals is involved than in consumer surveys. In view of the pioneering aspects of this approach, it is difficult to estimate its cost, which will depend not only on the size of sample of institutions and accounts but also on a number of other factors relating to the nature of records and the degree of cooperation given by the institutional sources of data. Clearly, compared to the collection of such data from consumer surveys, costs are raised by the fact that, in effect, a number of different institutional sources are required to compile information which could be obtained, at least in principle, from a single consumer unit. On the other hand, for any single component of saving or wealth, e.g. corporate stock, it is obviously more efficient to take as a sampling unit an account in an institution, which may be sampled proportional to size, than a family or consumer unit, since a high proportion of these units either do not possess such an asset or have only a negligible amount.

A final word may be in order about the ultimate integration of the institutional approach with consumer surveys for the collection and analysis of data relating to individuals' assets and liabilities. As suggested earlier, many years of past experimentation with consumer surveys have not yet yielded satisfactory data on the distribution of current and accumulated saving, and there is no assurance that years of further experimentation will be more successful. In the meantime, we urgently need reliable information on who saves and in what form—a need which probably can be filled through the use of institutional data.

Such information would not only be highly valuable by itself, but could be extremely useful in indicating the areas in which consumer surveys are deficient. Thus, we might conclude—as we cannot at present—that consumer field surveys are completely adequate in providing data on saving for certain income and occupational groups or for certain items of assets and liabilities. We would also have more conclusive evidence of the areas in which consumer field surveys are particularly deficient, so that either additional resources could be allocated to these areas, or if this does not appear to be a feasible solution, reliance might be placed on alternative approaches for such information. From the viewpoint of further attempts to validate consumer survey data, what is needed are detailed checks of these data against external sources on an individual family and economic group basis. The institutional data would provide the necessary checks on an economic group basis. A useful attempt to carry out some checks for a few individual items of saving against institutional

sources of data for individual families is being made by the Inter-University Committee for Research on Consumer Behavior. However, it is difficult to obtain institutional cooperation in this approach, since anonymity of the family cannot be maintained. It is very expensive to cover more than a handful of families; and even for these families, there is the problem that families who save, particularly in those economic groups accounting for the major share of total saving, are likely to have more than one bank account, more than one securities account, etc.

If it is eventually possible to adjust adequately for biases in consumer surveys, they could provide virtually all the information we need for an understanding of saving trends and behavior. If this is not possible, which seems to be a more realistic assumption at least for the foreseeable future, the surveys may still continue to be indispensable for certain types of saving data. We may (and I suspect we will) find out that it is necessary to rely on institutional records to obtain reliable data for several key forms of saving (e.g. deposits and securities) and for upper income groups, which account for a high proportion of total saving.

COMMENT

WESLEY LINDOW, Irving Trust Company

Two sentences stand out in this very interesting paper: (1) “. . . many years of past experimentation with consumer surveys have not yet yielded satisfactory data on the distribution of current and accumulated saving, and there is no assurance that years of further experimentation will be successful”; (2) “It is my feeling that this [the institutional] approach would provide reliable estimates of total saving and changes in the major items of assets and liabilities for the different groups of individuals other than entrepreneurs, and would improve the estimates of entrepreneurial saving.”

There have been other proposals to use institutional records; so it is desirable to emphasize what this one is and what it is not. It is a sampling of financial records, which are then related back to the owners of assets to ascertain their economic status and other characteristics. The same procedure would also be used for certain kinds of liabilities. The important point is that the action starts with the institutional records and proceeds to the individual; it does not start with the individual and fan out to the institution in an effort to match all his assets and debts as they may show up in the institutional records.

It seems incredible that the gaps Dr. Friend is trying to fill are still

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with us. I remember working on them in the Treasury Department in connection with war financing in the early 1940's. At that time we tried several approaches to find out more about the distribution of saving and income. In one approach we got Rensis Likert to sample families in certain areas with the objective of filling in the gaps on types of saving by income groups. In this approach respondents were asked to give certain answers as best they could from immediate recollection. These studies were helpful, but they left a lot unanswered. In Buffalo, for example, which was picked for a study because of heavy currency outflow, the respondents never seemed to have any currency, or so they said.

A second effort involved the "budget build-up" approach of the Department of Labor. Here, the respondent in a sample study was asked to work up with the interviewer a long list of expenses and types of savings. The purpose was to effect a reconciliation of the data, taking whatever time was necessary to do so, since few people seemed to know their own figures very well. This was a detailed, expensive type of survey; and a Congressional committee expressed their degree of disapproval of our efforts by virtually laughing as I explained it. They told us to stop.

Then we also tried sampling our Series E bond records to learn more about the ownership pattern. This sounded like an easy job and a logical universe to work in. Warehouses of filing cases with cards waited to be selected. We set up a system to sample a percentage of the cards, and then tried to develop a list of all the bonds owned by the owners selected. It was sometimes a frightful job to assemble the bonds owned by a single family with all the various name combinations, and to follow through the changes of address. A good deal of time went into the project, which became much more complex than we had anticipated; and in the end the results were dubious.

I mention these things to emphasize that the problems at hand are old and difficult. Improved results seem always to be just around the corner. Consequently, we must be coldly realistic about the institutional approach before us today, especially since it is bound to be received with something less than enthusiasm by most institutions.

I might also note that I personally have mixed feelings on the proposals Dr. Friend has made. As an economist, I share his enthusiasm for methods of producing more and better data. But as an employee of one of the institutions involved, I have to temper that enthusiasm. We are already heavily burdened by the reports which must be prepared. The supervisory authorities and our own management, as well as those who want better over-all financial statistics,

always seem to need more data. Although we are disposed to cooperate, the burden upon us must be remembered. It should be realized that there is a limit to the cooperation that can reasonably be expected from any institution, and that new proposals to get data should not be made lightly. It is also most important that careful thought be given to minimizing the burden which any new proposal might involve. A degree of institutional impatience with poorly planned efforts to gather statistics, involving much work and dubious results, should certainly be understandable.

One tremendous advantage of tapping institutional sources is, of course, that financial records exist for control reasons and so must be accurate. The respondent in a consumer survey may not know what he does with his money, but the financial institutions *know* what they owe him or he owes them. So Dr. Friend would start out auspiciously—by sampling the deposit cards of a bank or the records of an insurance company.

In principle, it would be easy to take every hundredth card and then write to the owner hoping he will send back a report on his income group and other facts.

But suppose Dr. Friend's survey organization does not do the sampling itself; instead, they send instructions to the institutions, which are likely to turn them over to people who are not statisticians, and who have little interest in the project. I have reported elsewhere¹ on weaknesses in bank statistics arising from poor compilations and other causes. Similar weaknesses could certainly turn up again in the surveys under discussion today if not guarded against.

Sampling is obviously a wonderful tool, often better perhaps than a census; but it is subject to many hazards. To my mind there are two methods of carrying out the present proposal. The first would be to have all the sampling done by teams of statistically trained people, who would descend upon an institution much as bank examiners do today, although with advance notice.

The second method, which would have economy as its main merit, would involve the usual sending out of forms to banks and other organizations. However the amount of preparation needed to give this method a reasonable chance to succeed is much greater than for the first method. If the result is not to be a flow of inadequate and even misleading data, as has happened frequently in the past, a great deal of ingenuity is going to have to be brought to bear on the problem. The sanguine assumption that all it will take is some forms and short directions has to be an early casualty if the battle is to be won.

¹ "A Business Viewpoint on the Adequacy of Monetary and Financial Statistics," a paper presented at the December 1958 meeting of the American Statistical Association.

What would I propose? As a start, a few institutions of various types might be chosen as guinea pigs. For a variety of reasons, there will always be difficulty in finding organizations willing to cooperate (there are already a lot of forms to fill out, and visiting scholars are already studying many things). But I am sure that some institutions will cooperate if they are asked. Then the actual records to be sampled should be examined by competent technicians. Differences among institutions of the same type should be noted. With this as a background, sampling techniques and the detailed statistical forms should be devised, and devised using every ounce of ingenuity available. The technicians should do as much of the detailed work as possible to develop that sixth sense which will minimize errors when the forms and techniques developed in these pilot studies are later applied to a larger sample. There must be built-in checks. The forms should fairly bristle with protective devices erected to anticipate errors. It should be assumed that errors will be made if there is an opportunity to make them. Anything which does not tie into double entry accounting on the official books is always subject to weakness. It should be realized that the work is likely to be done by people who aren't exactly keen on filling out forms, hate to read fine print in instructions, do not understand and are sometimes suspicious of sampling, and see no harm in grabbing the nearest handful of accounts for a sample rather than picking out every tenth name. Finally, it would be wise to have a kind of statistical audit once the sampling procedures are actually operating to see that things are really being done properly.

As for the second part of the project, it isn't going to be easy to get data on income and other characteristics from the names used in the sample. Most financial institutions are likely to be quite reluctant to reveal the names of customers and the size of their accounts to a survey organization so it can contact them and ask the necessary questions. Some persons might very much resent the release of such data and even charge that it is a breach of confidence. The roots of this attitude go back a long way, and a financial institution would be rash simply to ignore the possibility of criticism. Difficulties encountered in a recent effort to check savings data derived from a consumer survey against institutional records lend emphasis to this point.

Perhaps the institutions should be asked to do the follow-up work themselves, but then the burden of the project would be even heavier for them. Moreover, no matter who asks the questions, a natural reluctance to give such personal information, and the fear that it might be used ultimately in connection with income tax enforcement

(even if the fear is groundless) will make for difficulties. I have always thought this was one of the reasons no currency showed up in the Treasury survey in Buffalo. Incidentally, after the Buffalo experience, the Treasury devised another type of survey and tried it out in Louisville. We asked Dr. Likert's people not to ask anyone if he had currency but rather to ask if he had any ideas on why people generally seemed to want more currency, judging from outflow at bank counters. The response was fascinating. Most people *had* ideas and frequently referred to what friends or neighbors were supposed to be doing. We felt that often their stories were autobiographical and that they felt safe in speaking only on this basis.

Supposing that all the difficulties in the present proposal were solved, I still can't quite see how these surveys would be integrated with existing consumer surveys. Exactly how would savings and income distribution data obtained from these surveys fit together with other available data? It seems necessary to be somewhat skeptical about the outcome. Suppose, for example, savings distribution as developed in the financial-institutions surveys appeared different from the data in the consumer surveys. It could not be assumed that data stemming from institutional surveys were necessarily right, for they would be based on samples; and there would be a host of such surveys, covering different institutions, and all involving consumer follow-up for income data, etc. Some data would probably be better than others in the institutional field. I imagine that quite disparate statistics could result, and we would still not know how to select the better ones.

The Federal Reserve survey of demand deposit ownership has been cited by Dr. Friend as an example of institutional sampling. It is a very interesting one. I would guess from our experience that this survey is not yet 100 per cent satisfactory, although it is working out better and more quickly than the earlier survey which it replaced. The results are released rapidly, but then the Federal Reserve has carefully organized the sampling operation and has made it relatively easy for the banks involved to provide their data.

It should also be noted, in passing, that something important was lost when the demand deposit survey was revised, a couple of years ago. The old survey used to provide a breakdown of nonfinancial business deposits into five major classifications. This detail was valuable, and its loss is to be regretted.

I would like to dwell for a moment on the reasons why it is not necessary to run down duplicate Series E bond holdings, savings accounts, life insurance policies, etc., under Dr. Friend's scheme, thus avoiding one of the great stumbling blocks in the earlier surveys.

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Take a simple example; suppose that the plan was to study 10 per cent of all savings accounts in a sample of banks to find out what the distribution was by income classes. Suppose, furthermore, that savers in every income category except the \$5,000-6,000 group maintained only one account, but that savers in the latter group averaged three accounts. This would come about if these mavericks insisted on opening an account for their wives as well as their first-born upon entering the \$5,000-6,000 bracket, and summarily gathered the financial reins back into their own hands upon leaving it. A mighty peculiar breed, and not a bachelor in the lot!

Given these assumptions, those in the \$5,000-6,000 bracket would be represented in Dr. Friend's 10-per-cent sample by three times as many accounts as they would have if one account per family was the universal rule. However, these sample accounts would theoretically average one-third of the amounts under the single account arrangement. The dollar amount of savings which these sample accounts would give and, consequently, the amounts and proportions attributable to the category would thus be in no way affected by the splintering of accounts in that income category.

In closing, it seems to me that, though there are many problems which dampen enthusiasm for the institutional approach, it has great potential. One of the most promising aspects lies in the steady spread of mechanized accounting. We have found at the Irving, for example, that putting our loan data on IBM cards has greatly increased our ability to study the characteristics of our loans. But there were many problems that had to be resolved before we finally succeeded in setting up our system, and we still haven't realized its full potentialities. Similarly, the data needed for social accounting systems will be more easily secured from institutional sources in the future if some careful thought is given now on how to reap the potential offered by mechanized accounting.