Volume Title: The Measurement of Corporate Sources and Uses of Funds

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Volume Publisher: UMI

Volume ISBN: 0-87014-424-3

Volume URL: http://www.nber.org/books/meis64-1

Publication Date: 1964

Chapter Title: Critique of the Data

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Chapter URL: http://www.nber.org/chapters/c1853

Chapter pages in book: (p. 81 - 112)

CHAPTER 3

Critique of the Data

OUR estimates of corporate flows are subject to errors of both omission and commission. Although they cause inaccuracies in individual flows, several of the measurement errors are offsetting ones and therefore do not affect the accuracy of the total flows. This is particularly so when a total flow is allocated among components, for example, the series on bank loans. After the bank loan series was estimated, it was allocated among short-term and long-term loans. If the short-term component is overstated, the long-term component is correspondingly understated. Other examples are the allocation of an all-corporate sum among the respective industries, and the allocation of an annual figure among the quarters. Unfortunately, most errors are not compensating ones and therefore affect the total as well as the individual flows.

The errors and omissions of the NBER estimates can be attributed to deficiencies in the underlying data or to the operations that were performed on them. Some of the shortcomings of the source material carried forward into the NBER estimates are the consequences of (a) incorrect coverage, (b) inconsistent consolidation procedures and changes in the level of consolidation and (c) float. In other instances, shortcomings originate in operational procedures, especially those that are fundamentally allocative. These include the procedures used to allocate flows (a) among industries, (b) between corporate and non-corporate business and (c) over quarters. Finally, there are a number of specific deficiencies associated with particular flows.

The errors resulting from inadequate coverage are obvious and need no elaboration. The shortcomings of NBER estimates that have their origins in the other factors enumerated above will be discussed in the given order.

CONSOLIDATION

The level of consolidation is not necessarily the same for all transactor groups in the entire set of accounts, nor is it the same for all industry classes in the corporate universe. Thus, the recorded flows may differ among the separate transactor groups. In addition, errors arise when the degree of consolidation varies from period to period. Level figures may be affected solely by changes in consolidation, and these are carried into the accounts when flows are estimated as first differences of level figures. Similarly, an increase in the degree of consolidation will reduce the combined sum of reported profits by the decrease in reported intercorporate dividends.

During the 1950–55 period there were changes in the levels of consolidation of corporations filing tax returns with the Internal Revenue Service. Through 1953 a consolidated return could be filed if a company held 95 per cent of the stock of a subsidiary. The Internal Revenue Code was changed in 1954 so that a company could then file on a consolidated basis if only 80 per cent of the shares of a subsidiary were held. In 1954 and 1955, increasing profits encouraged corporations to file consolidated returns, thereby reducing their tax liabilities. Thus, the change in the consolidation rule tends to reduce many figures reported for the corporate universe.

Unfortunately, variations in the degree of consolidation also give rise to problems of industry classification. On an unconsolidated basis, holding companies tend to be classified as investment companies, whereas on a consolidated basis they are included in the industry to which their subsidiaries belong. When the holding company is an operating one, subsidiaries may be shifted from their own industry classification to that of the parent. When changes in the degree of consolidation result in the reclassification of either parent or subsidiary, the industrial composition of corporate flows is affected.

Finally, when a corporation files consolidated tax returns, the debt among the various parts of the consolidated companies is netted out, and such items as other short-term borrowing are reduced. Reported changes in outstanding debt reflect thereby changes in the degree of consolidation in tax returns as well as the actual flow of credit.

FLOAT

Float is the product of a time lag in the recording of information relating to transactions. When two parties enter into a transaction, a voucher of record, authorization, or request usually results. Typically,

the voucher is initiated by one of the transactors, and the transaction is consequently recorded on his books first. Frequently the other party does not record the transaction until the voucher has been physically delivered and processed. Until the second party records the transaction, the records of the two transactors relating to the same transaction are different. Although float is typically associated with bank deposits, it is common, and often substantial, in other accounts.

Presumably, the level of float is subject to variation from systematic factors, such as seasonality, as well as a host of random factors. The importance of this source of measurement error relative to the true flow would tend to increase when flows are estimated as first differences of level figures. Relative to correct flows, float also increases the shorter the period considered, so that estimates of quarterly flows incorporate relatively more float errors than do estimates of annual flows.

Float will contribute to error whenever an estimate of a transactor's flow is based upon the books of the other party to the transaction. Utilizing the books of one transactor to measure the transactions of another is common in social accounting and affects estimates of both financial and nonfinancial flows.

Nonfinancial Flows

The principal nonfinancial flows whose estimates are affected by float are related to tax payments and refunds. Indeed, the estimates of tax refunds are the only important internal source of funds subject to error on this account.

Federal tax payment and refund figures represent collections to and payments from the Treasury accounts. Inaccuracies arise from timing differences in the recording of checks by the issuing corporations and the Treasury in the case of tax payments, and from timing differences in the recording of checks by the Treasury and the recipient corporations in the case of refunds. As a consequence, there is a slight lag in the Treasury data on tax payments and a slight lead in the data on tax refunds.

The payment float is augmented by the delivery lag. Since deliveries are subject to the vagaries of the weather, it is likely that there is a seasonal fluctuation in the float, particularly at year end. In addition, the quarterly estimates are subject to a further float error. Since float tends to vary with the size of payments, and tax payments are not spread evenly over the year, float is subject to additional seasonal fluctuation.

It has been estimated that during periods of heavy tax payments, float may amount to as much as three-quarters of a billion dollars. Fortunately most payments take place in the middle rather than at the end of the month. The end-of-the-month float, which is the one relevant to this study, is thus much less than it might otherwise be.

Data on renegotiation payments and state income taxes are subject to similar limitations. It should be noted, however, that the float effect on state income tax estimates is minor, in comparison with the effect of basing estimates on data taken from reports of states with various fiscal-year endings.

Financial Flows

Most financial flows are subject to float. The float traditionally associated with bank deposits affects our NBER estimates of cash, even though the estimates are based on holder rather than bank records. The figures are derived from SEC working capital data and these, in turn, are based on IRS returns. The effect of the float error is to understate the amount of cash held by the group as a whole. Check issuers tend to reduce their cash accounts as soon as checks are written, but since there is some delay before the payees receive the checks, neither the payors nor the payees record the corresponding deposits as assets.

Among the financial sources of funds the principal account subject to substantial float error is the trade credit flow. Two float phenomena reinforce each other in making trade payables appear less than receivables. The first of these factors stems from the check float phenomenon just discussed. Second, when goods are sold, the selling company issues the invoice which is likely to pass through the company's accounting structure before being charged to payables on the books of the buyers. If corporate trade debt and credit were equal, float could be measured by taking the difference between the two. However, even if there were no float problems, corporate receivables and payables need not be equal since there is no reason for corporate net debt or credit to the remainder of the economy on trade credit account to be zero. Furthermore, since noncorporate trade debt and credit are exceedingly difficult to measure, it is impossible to allocate the excess of corporate trade credit over debt between noncorporate trade debt and float.[1]

[1] See George Garvy, "The Float in Flow-of-Funds Accounts," in *The Flow-of-Funds Approach to Social Accounting*, Studies in Income and Wealth, 26, Princeton University Press for National Bureau of Economic Research, 1962.

None of these financial floats result from the use of the accounts of a noncorporate sector in deriving corporate flows. The principal financial source of funds that is subject to a float error of that type is bank debt. As we have noted above, this error is particularly important in the case of short-term bank debt.

ALLOCATION OF INDUSTRIAL FLOWS

If data were taken from one of the three principal sources of corporate data: SEC working capital estimates, *Statistics of Income,* or publications of the regulatory agencies, the principal problem of allocating flows among the corporate industry subsectors would arise from the consolidation phenomena discussed above. However, when the data must be taken from the books of the other sectors participating in the transactions, accurate allocation among the corporate subsectors is not always possible because of differences in industry classifications employed. This is particularly so in the case of tax refunds and bank loans.

ALLOCATION OF FLOWS BETWEEN CORPORATE AND NONCORPORATE SECTORS

When flows must be allocated between the corporate and noncorporate sectors, allocation errors are almost inevitable (float errors may also arise, but these are generally less serious). The only nonfinancial flow subject to such an allocative error is insurance benefits.

Important allocation problems are found in many financial flows. The principal financial sources subject to such error are short-term bank debt, long-term bank debt and mortgage debt.[2] The allocative errors among financial uses may result from incorrectly assuming that the corporate universe or some part of it does not hold a particular type of asset. For example, although mortgage companies are included in the corporate universe, no transactions in mortgages are recorded. Similarly, portfolio transactions in corporate securities are attributed only to regulated industries. Corporations in other industies also hold corporate securities. The omission of the bulk of corporate transactions in corporate securities is one of the most serious deficiencies in the NBER accounts.

[2] The procedure chosen for use in this study was developed by the Federal Reserve Board, Flow-of-Funds Section. While the general principles have since remained the same, the Federal Reserve has since increased the proportions allocated to the corporate sector.

QUARTERLY ALLOCATIONS

The flows subject to errors resulting from quarterly allocations of annual totals are more efficiently discussed by exception than by enumeration. Since practically every flow is subject to this error, an enumeration would differ little from a listing of each flow in the accounts. In the more detailed discussion of flows below, the quality of the quarterly estimates is noted whenever there is a special reason for doing so. Here it is sufficient to note that the few estimates that are least subject to such error are those for which estimates are derived from other than corporate records; e.g., tax payments, renegotiation payments, refunds from federal government records, security issues from SEC estimates, and capital expenditures from NID estimates. It should be noted that these more accurate flows are directly measured for both the annual and the quarterly totals.

In the remainder of this section, those flows which have important, but less general, sources of error will be examined. With a few exceptions the emphasis will be on the accuracy of the individual flows rather than on the generic sources of error.

INTERNAL FUNDS

Incorrect reporting of income statements and balance sheets to regulatory agencies or to tax authorities is an important cause of measurement errors. This may result either from honest mistakes or from deliberate cheating.[3] Underfiling by taxpayers, overestimation of expenses, or understatement of sales can all result in an understatement of true profits. Incorrect reporting is probably greater in the manufacturing, mining, and the trade, service, and miscellaneous groups than in the utilities because of the lack of detailed and continuous government supervision. The time period is so short in the quarterly series that the errors are undoubtedly relatively larger than in the annual series. For the gas and electric, railroad, and communications groups, the quarterly estimates are more accurate, in part because almost all individual corporations in these industries are required to file quarterly, standardized reports with the regulatory agencies. For the manufacturing industries, the estimates are primarily based on SEC-FTC tabulations.[4] The SEC-FTC survey of manufacturing corpo-

[3] M. Farioletti, "Some Income Adjustments Results from the 1949 Audit Control Program," *An Appraisal of the 1950 Census Income Data,* Studies in Income and Wealth 23, Princeton University Press for NBER, 1958.

[4] Federal Trade Commission-Securities and Exchange Commission, *Quarterly Financial Report for Manufacturing Corporations,* Washington, D.C.

rations differs from the *Statistics of Income* manufacturing universe in coverage, consolidation, and accounting detail, but is close enough to permit reasonably accurate interpolations and extrapolations of the *Statistics of Income* data. However, estimates of quarterly flows in the trade, service, and miscellaneous group are not based on correspondingly exhaustive tabulations and require substantial improvement to raise their accuracy to the level of other industry groups.

The incentive to understate true profits is matched by a similar tax incentive to overstate depreciation. Unlike most other methods of reducing profits, the method of overstating depreciation does not lead to an underestimation of net inside funds. It merely changes the distribution of inside funds between the two components, retained earnings and depreciation.

The magnitude of other reporting distortions of internal funds is relatively small.

FINANCIAL SOURCES

One source of error pervades many financial flow estimates. It arises from the difficulties of measuring capital gains. Most financial flows are not measured directly but are estimated by taking first differences of successive balance sheet figures. Balance sheet items change when transactions take place; they also change as a result of write-ups and write-downs not directly involving transactions. Unfortunately, it was impossible in this study to estimate the necessary adjustments for transforming changes in balance sheet figures into true measures of transactions.

The existence of capital gains gives rise to an additional source of error. The Internal Revenue Service's definition of capital gains determines how flows are reported in the annual tax returns and in the *Statistics of Income.* Regulations change from time to time, so that a number of adjustments would have to be made to reported profits to make them directly comparable over time.

BANK DEBT

The estimation of short-term bank debt starts with a benchmark taken from bank records. These records exceed holder records by the amount of float and thus tend to make the bank debt higher and the accounts and notes payable correspondingly lower. The accounts and notes payable estimates are biased downward because they are estimated by subtracting short-term bank debt from total short-term payables.

The commercial loan survey benchmarks are a decade apart. The use of the commercial loan tabulation of the 1955 member-bank survey as one of the benchmarks was necessary, but unfortunate. A variety of special difficulties associated with the 1955 tabulation make it a less satisfactory benchmark than those of earlier member-bank surveys. The use of even the best surveys, however, may give rise to difficulties. Among these is the fact that the data may not represent figures for the end of a quarter or year. Shifting the benchmark to the end of an accounting period introduces some error. Moreover, in the period 1953–55 there were substantial changes in bank portfolios and corporate activity so that more than usual error is involved in shifting benchmarks to end-of-quarter or end-of-year dates.

Member-bank data reporting the industry detail of weekly changes in commercial and industrial loans are not very useful for interpolating other bank data, and consequently were not used. The reporting banks comprise only a number of the larger banks in some of the larger cities, and the population of these banks keeps changing. In addition, the banks do not report all loans, but only an imprecisely defined category called "larger loans." [5] Among the deficiencies of the category are the inclusion of some loans to unincorporated business and the limitation of the reported changes to loans outstanding (neither initial nor final portfolios are reported). These drawbacks are unfortunate indeed, since there is much potentially valuable industry material in the reported data. The usefulness of the series would be improved immensely if fluctuations in the reporting population were eliminated. If, in addition, the reporting banks would periodically report amounts outstanding and would separate loans to corporate borrowers from the total, the reporting bank data could be linked to other bank data and used to produce better estimates of bank flows for much shorter periods than is now possible.

Although a number of separate estimates of long-term bank debt existed when the NBER estimates were made, none had been modified in the light of the 1955 bank loan survey and were therefore considered unsatisfactory. New estimates were derived which were essentially modifications of those made by the SEC.

Dividing loans into short- and long-term bank categories introduces

[5] For example, see the specification of the loan universe in *Federal Reserve Bulletin,* January 1959, p. 40. In an experiment with the weekly reporting member-bank loan series, changes in cumulated weekly flows compared with differences in benchmark level figures resulted in a very poor relationship.

the likelihood of some error to each. When levels are on a current maturity basis, first differences of outstandings reflect the maturation process as well as net transactions within the separate maturity classes. Thus, it is preferable to have the data on an original maturity basis in order to obtain a consistent cash-transaction accounting basis for all flows. The SEC data on which the NBER estimates are based are generally on an original maturity basis, but there may be some error in the original accounting, so that it is likely that some long-term debt remains in the short-term category.

SECURITY ISSUES

Security issues tend to be understated because of the omission of issues of small firms. Small issues, less than $300,000, need not be registered with the SEC. In addition, the SEC does not record flows of entrepreneurial capital into new corporations when there are neither public offerings nor sales to institutions.[6] The understatement is particularly important in the trade, service, and miscellaneous group and, probably to a lesser extent, in the manufacturing group.[7]

There is a special problem in accounting for the cash flows from security issues of the gas and electric utility industry. The SEC publishes estimates of issues to the public. Security issues are treated as public only if less than 50 per cent of the issue is sold to the parent or affiliate. If that criterion is not satisfied, none of the issues is included in SEC figures. In view of the many holding companies in the

[6] I. Schweiger provides information which suggests that during the eleven-year period 1946–56, $8 to $12 billion of equity funds and $13 to $20 billion of debt funds were secured by the corporate component of the 4.3 million new firms that were established in this period. The current short-term debt component is reasonably well recorded in the *Statistics of Income* current liability figures; the component of the long-term debt, obtained primarily from institutional lenders, is not as well recorded in the SEC figures for security issues or in the Federal Reserve Board's mortgage figures. Long-term loans obtained from noninstitutional sources are not identifiable. The equity issues are understated in the SEC security issue figures. The understatement of this component is probably greater than for any other source of funds. See I. Schweiger, "Adequacy of Small Business Financing: Another View," in *Financing Small Business*, Report to the House Committee on Banking and Currency by the Federal Reserve System, Washington, D.C., 1958, pp. 124–149. The postwar capital market study of the National Bureau estimates stock issues of privately held corporations during 1946–56 at $6.5 billion.

[7] At least proportionately to the issues of manufacturing corporations. Manufacturing firms issue so many more securities than do trade-miscellaneous firms that even if the dollar volume of small manufacturing issues exceeds that of small trade-miscellaneous issues, the percentage of manufacturing issues missed by the SEC would still be smaller than the percentage of trade-miscellaneous issues missed.

utility industry, the SEC rule unquestionably tends to understate the volume of securities actually issued to the public by this industry.

SALE-LEASEBACK

These figures should be treated as lower bounds rather than as estimates of the total volume of such transactions. The figures are rough estimates of corporate transactions with insurance companies only; the understatement in the flow on this account is undoubtedly sizeable. The sale-leaseback transactions of personal trusts, pension funds, universities, and others (including individuals), for which data are lacking, are completely omitted.

This treatment of sale-leaseback transactions implies acceptance of the argument that a leaseback is really a loan.[8] Consistent with this view, the capitalized value of the lease should appear as a liability and the value of the property should appear as an asset on the books of the "borrower." The capitalized value of the lease should replace the value of the property on the books of the "lender." Regardless of the merits of the thesis, it has not been adhered to elsewhere in the National Bureau's postwar capital market project.[9] Information on transactions entered into is scanty enough; information on the terms of those transactions—and these terms would have to be known if capitalization operations were to be undertaken—is simply nonexistent.

MORTGAGE DEBT

In addition to the problem of allocating total mortgage debt between corporate and noncorporate business, further deficiencies result from the lack of reliability of the estimates of total business mortgage debt.[10] Nonresidential mortgage credit extended by nonbank sources is understated. Intracorporate mortgage debt is completely omitted, as are the holdings of individual and other noninstitutional investors.

DEBT TO GOVERNMENT

While the data on such debt were taken from the worksheets of the Federal Reserve Board, the bulk of the data can be estimated from government publications. This debt includes both loans and securi-

[8] See especially Donald R. Gant, "Illusion in Lease Financing," *Harvard Business Review*, March–April 1959, pp. 121–142.

[9] Morris Mendelson, *Flow of Funds*, Tables 2-1 and 2-2.

[10] Saul B. Klaman, *The Volume of Mortgage Debt in the Postwar Decade*, New York, NBER, Technical Paper 13, 1958; see especially pp. 11 and 12.

ties held by the government or its agents. The estimating procedure is complicated by virtue of the numerous programs involved. But, because the data for total debt to government are derived by a process of aggregating industry debt, the industry break is substantially accurate.

CAPITAL TRANSACTIONS

Plant and Equipment Expenditures

These figures include only acquisitions of new plant and equipment. The expenditure series must be allocated between the corporate and noncorporate groups as well as among the industries that constitute the all-corporate group. All such allocations are sources of error.

Other Capital Transactions

These consist largely of flotation costs of securities. Some flotation costs are incurred even if the security is not issued, but these small sums are omitted. For securities issued near the terminal months of the year, the flotation costs may not have been incurred in the same year the securities were marketed. However, the amount of error introduced by this factor is small.

CONSTRUCTION WORK IN PROCESS

An important shortcoming of the data is the inadequacy of the estimates of corporate expenditures for both residential land and residential construction work in process. Federal Reserve Board estimates of these expenditures were the best available and were therefore utilized.

INVENTORIES

Year-end level figures before adjustment are taken from the *Statistics of Income*. Since they are book value figures, valuation adjustments must be made to convert them to measures of transactions. The data must be adjusted for write-ups and write-downs as well as for changes in the valuation base from LIFO to FIFO. The Federal Reserve Board makes these adjustments by using Department of Commerce inventory valuation adjustments, which are presumed to bring the book value figures to a transactions basis. However, the frequent revisions of the inventory figures in the National Income Accounts suggest that the quarterly inventory figures may involve substantial error.

USED CAPITAL

Estimates of corporate purchases and sales of used plant and equipment, land, and residential and commercial property are poor, and are excluded from our accounts. To the extent that these transactions are between corporations in the same industry, the discrepancy between total sources and total uses is unchanged. A source has simply been netted against an identical use. However, if such transactions are between corporations in different industry groups, discrepancies of equal amount but opposite sign will result in the industry groups effecting the transaction. The all-corporate discrepancy will remain unaffected since it reflects net transactions between the corporate sector and others. Of course, the all-corporate estimate of sources will be understated if corporations are net sellers of used equipment to the remainder of the economy.

FINANCIAL USES

The deficiency of the estimates of federal obligations held by corporations results from inconsistent corporate treatment of tax notes. Some corporations net these notes against tax liabilities; others do not. The error introduced is probably not large. Fortunately, since the corporations tend to hold mainly short-term federal obligations, there is little valuation problem associated with year-end data.

The estimates of state and local government obligations held by corporations are much less satisfactory. Since 1954, these securities are explicitly recorded in the *Statistics of Income*. However, prior to that, estimates were made by capitalizing the tax-exempt interest receipts reported in the *Statistics of Income*.

Security retirements are not subject to the same careful scrutiny by the SEC as security issues. Consequently, the SEC has considerable difficulty estimating such retirements, and the estimates are probably on the low side.

Finally, corporations do not treat their holdings of commercial paper uniformly in their balance sheets. This contributes to errors in the various accounts to which such holdings can be debited.

DISCREPANCY

If correct estimates of total sources and total uses could be made independently of estimates of the component flows, discrepancies would appear on both sides of the flow-of-funds account and would con-

stitute a measure of the extent to which the sum of the component flows overstate or understate the total actual flow. Since no independent estimates of total flows are available, placing the discrepancy on the sources side of the account is arbitrary. The discrepancy can be shifted to the uses side of the account merely by changing its sign. Total measured sources or uses would correspondingly change.

Discrepancies will appear in any sector account if there are errors of measurement. The "net" error may be hidden by estimating one of the component flows as a residual. But errors do exist and component flows are directly estimated. Consequently, discrepancies are stated in both the annual and the quarterly accounts for each industry.[11]

It is hardly necessary to point out that a positive discrepancy is not necessarily an indication that some of the sources of funds have been understated. The excess of total measured uses over total measured sources is equally consistent with an overstatement of uses of funds. It is similarly consistent with an understatement of both total sources and total uses, but with a greater total error on the uses side of the accounting identity. It is necessary to examine each component flow separately to determine the nature of its likely bias and other errors of measurement.

Furthermore, randomness of the sign of the discrepancy is not necessarily indicative of randomness of the errors of measurement in each component flow or of the signs of those errors. However, runs of a given sign are consistent with a "net" bias in the estimates of total flows, and a systematic pattern of signs, such as a seasonal, also suggests correspondingly sytematic "net" biases.

Table 29 indicates that there are systematic patterns in the signs of the discrepancies for both the annual and the quarterly accounts. The all-corporate annual discrepancy is consistently positive and the quarterly discrepancies repeat the same seasonal pattern, with the second and third quarters positive and the first and fourth quarters negative. The annual and quarterly configurations for manufacturing

[11] For an excellent discussion of the sources of these discrepancies, see, The Board of Governors of the Federal Reserve System, *Flow of Funds in the United States*, pp. 89–91, and Appendix A. The first of the above-cited passages deals specifically with discrepancies in the corporate business sector. The Appendix deals with discrepancies more broadly. All that is said in these passages applies equally to the all-corporate group here and to the various component industries. One additional source of discrepancy appears in our accounts as a consequence of the substitution of ICC data for IRS data for some of our estimates in the railroad account. Finally, additional discrepancies appear in the quarterly account as a consequence of the variety of ways in which the flows were interpolated.

TABLE 29

DISCREPANCY, ANNUAL AND QUARTERLY FIGURES
(million dollars)

Year and Quarter	All-Corp.	Manufacturing	Mining	Railroad	Gas and Elec.	Communications	Trade and Service
1950	3,049	805	−192	−123	431	−24	2,218
1951	649	1,420	−200	112	391	−13	1,061
1952	1,322	544	−502	72	281	−68	965
1953	1,785	1,813	−226	−14	630	2	−450
I	−74	546	−7	25	247	−26	−865
II	1,072	1,045	−156	−32	200	28	−21
III	1,081	733	−79	76	279	67	−3
IV	−297	−508	15	−80	−97	−69	434
1954	430	985	−161	224	342	−39	−951
I	−522	462	−88	7	74	14	−997
II	424	485	−52	143	95	−27	−228
III	706	252	2	34	146	41	223
IV	−179	−216	−21	41	28	−65	46
1955 (R)	+934	535	−1,285	−126	612	−842	2,040
1955 (P)	−880	614	−275	−147	464	−150	−1,418
I	−1,293	192	−163	−42	283	38	−1,607
II	957	1,003	−14	13	103	−78	−75
III	248	26	−14	−129	39	235	83
IV	−792	−609	−82	6	39	−343	189

SOURCE: These data are taken from the annual and quarterly fund-flow tables in Chapter 1.
(R) denotes revised 1955 data (see Table 37).
(P) denotes preliminary 1955 data.

are almost identical, differing only in the sign of the first quarter. The mining industry discrepancy is almost always negative; all annual discrepancies are negative and only two of the twelve quarterly discrepancies are positive. The difficulty in separating manufacturing from mining and the resulting bias may be responsible for the tendency of the two discrepancies to have opposite signs. The gas and electric industry discrepancy is consistently positive in the annual accounts and is negative but once in the quarterly accounts. The communications industry discrepancy is generally small but tends to be negative in the annual accounts. The quarterly discrepancies exhibit the same pattern; the third quarter is always positive, the fourth quarter is always

negative, and discrepancies in the two quarters of each half-year have opposite signs and roughly offsetting amounts. The railroad discrepancy is also small, and the railroad industry is the only one with no apparent systematic pattern. The use of regulatory authority data is undoubtedly the most important reason for such statistical "good behavior."

The discrepancy in the trade-service industry group is generally the largest, reflecting the residual character—in an accounting sense—of the industry group, its heterogeneity, poorly defined character, and absence of many of the reliable statistical sources available for the other industries. The huge revision of the preliminary 1955 working capital estimates described below [12] also indicates the general lack of reliable data for this industry group.

Quarterly flows are generally much smaller than annual flows, but quarterly discrepancies are not proportionately smaller than annual discrepancies. This is so for several reasons. Quarterly estimates are much less soundly based than annual estimates, and the methods of estimating individual flows are less reliable than in annual accounts. Many quarterly flows are estimated by allocating annual flows. Also, errors due to float tend to increase the shorter the period covered, and so tend to be proportionately greater for quarterly estimates. Finally, there are unsystematic measurement errors from many other sources.

Comparison with Other Estimates

Sources and uses of funds accounts for the corporate universe have become available on a continuing basis only since World War II. There are two major published estimates: the Department of Commerce data, beginning in 1946, and the Federal Reserve Board flow-of-funds data, going back to 1939. Only the Commerce series provides an industrial break. In addition to the above, Professor John C. Dawson has provided an industrial break of the Federal Reserve Board flow-of-funds corporate sector for the years 1930–50.[13]

DEPARTMENT OF COMMERCE ESTIMATES

The Department of Commerce and National Bureau accounts differ, but most of the differences can be reconciled. First, the all-corporate universe of the Department of Commerce excludes from corporations reporting to the Internal Revenue Service only banks and insurance

[12] See pp. 104 ff.

[13] Dawson, "Fluctuations in U.S. Corporate Investment."

companies. Second, the industry grouping is somewhat different from that used in the NBER accounts. Commerce aggregates manufacturing with mining, and public utilities with communications. On the other hand, railroads and transportation other than rail are each kept as separate sectors. The corporate trade and service industry estimates are presented directly but there is no explicit accounting for the other industries in the NBER trade, service, residual group, even though the relevant flows are partially included in the Commerce all-corporate data.[14]

More important, however, are the differences in accounting of the two series. The Department of Commerce accounts contain more accrual items than do our accounts. The Commerce data are more consolidated and tend to tie in with the National Income Accounts data, also prepared by the Department of Commerce. They eliminate all intracorporate flows, recording only net flows between the corporate sector and the remainder of the economy. As is evident from a comparison of the account stubs, the Commerce data are less detailed.[15]

[14] *Survey of Current Business,* September 1957, p. 8, footnote 1.

[15] The following is the stub used by the Department of Commerce, as shown in the September 1957 issue of the *Survey of Current Business,* p. 9. Banks and insurance company corporations are not included.

Increase in physical assets, total
  Plant and equipment
  Inventories (book value)
Increase in financial assets, total
  Receivables
    Consumer
    Other
  Cash and U.S. Government securities
    Cash (including deposits)
    U.S. Government securities
  Other assets
    TOTAL USES
Internal sources, total
  Retained profits [including depletion]
  Depreciation
External long-term sources, total
  Stocks
  Bonds
  Other debt
Short-term sources, total
  Bank loans
  Trade payables
  Federal income tax liabilities
  Other
    TOTAL SOURCES
    Discrepancy (uses less sources)

In general, the Commerce figures are more net with respect to both financial and nonfinancial transactions, and financial transactions are more frequently combined than in the NBER accounts. The character of some major differences in the accounting bases of the Commerce and Bureau accounts can readily be seen in the description of our method of estimating corporate profits by means of an extended number of adjustments to what are essentially the profit figures in the Commerce accounts.[16] An explicit accounting reconciliation between items in the Commerce and Bureau accounts was not attempted; but differences between these accounts are described in detail in Chapter 2 and in the derivation tables found in Appendixes A and B.

FEDERAL RESERVE BOARD ACCOUNTS

A reconciliation between some of the important components in the Federal Reserve Board and NBER estimates of corporate sources and uses of funds is presented in Table 30. The attempt to keep the NBER data and concepts in substantial alignment with those used in the original Federal Reserve Board corporate business sector account was generally successful.[17] The major conceptual difference is the treatment of nonfinancial flows. Originally, the Federal Reserve accounts presented flows on a cash-transaction basis, recording the underlying details of receipts and outlays. The NBER accounts deviate from this treatment and show the accounting equivalent of the sum, net profits, etc.[18] Originally, the sector coverage of the NBER and Board accounts were the same, but the Federal Reserve changed the sector coverage of its corporate business sector in the extensive 1959 revision.[19]

Although the Board showed a reconciliation between its estimate of corporate net operating surplus and the net profits shown in the NID accounts, no attempt was made to derive a flow-of-funds estimate of net profits. The derivation of such a profit figure is necessary before a direct comparison with NBER estimates can be made. This has been done in Table 30.

DAWSON ESTIMATES

Both Dawson's and the NBER accounts were designed to conform with the Federal Reserve Board's original concepts. Dawson's estimates dif-

[16] See Chapter 2, pp. 41 ff.

[17] See footnote 5, Chapter 1.

[18] In the revisions presented in the *Federal Reserve Bulletin,* August 1959, the Federal Reserve switched to the practice followed in the NBER accounts.

[19] *Federal Reserve Bulletin,* August 1959, p. 847.

TABLE 30

RECONCILIATION BETWEEN COMPONENTS OF FEDERAL RESERVE BOARD FLOW OF FUNDS (FOF) AND NATIONAL BUREAU OF ECONOMIC RESEARCH CORPORATE SOURCES AND USES OF FUNDS, 1950

FOF and NBER Categories	Billions of Dollars
I. Corporate net operating surplus (FOF)	42.7
1. Minus: Depreciation and amortization charges	7.7
2. Minus: Bad debt charges	.6
Equals: Net profit (FOF)	34.4
1. Minus: Difference in estimate for inventory valuation adjustment (FOF makes no adjustment to NID for sector coverage)	.1
2. Plus: Difference in estimate of domestic corporate dividends received	.2
3. Plus: Difference in estimate of foreign dividends and branch profits received	.1
4. Minus: Difference in estimate of corporate audit profits	.1
5. Minus: Depletion (not deducted in FOF)	1.7
6. Plus: Difference in source of data for railroads	.1
7. Plus: Rounding errors	.3
Equals: Net profit (NBER)	33.1
II. Depreciation, amortization and depletion (FOF)	7.7
1. Plus: Difference due to railroads	.1
2. Plus: Depletion	1.7
Equals: Depreciation, amortization and depletion (NBER)	9.5
III. Bank loans (excluding mortgages) (FOF)	2.4
1. Minus: Difference in source of estimate	.3
Equals: Bank debt (excluding mortgages) (NBER)	2.1
IV. Trade debt (FOF)	8.7
1. Minus: Difference in source of estimate	.6
Equals: Short-term debt, other than bank (NBER)	8.1

SOURCE: For FOF data see Federal Reserve Board, *Flow of Funds in the United States, 1939–1953;* for NBER data, see Chapter 1.

fer from the Board's because he substituted regulatory authority for IRS data in estimating many of the flows for the communications, railroad, and gas and electric industries.

Dawson made no attempt to estimate quarterly flows, so that only annual estimates can be compared. An overlap between the Dawson and NBER estimates is shown for 1950 in Tables 31 through 36. Comparisons between the Dawson and NBER estimates are made for both sources and uses of the all-corporate group and for sources alone for each of the industry subsectors.

Since Dawson did not present separate estimates for mining and

manufacturing, the two NBER industries are combined for purposes of comparison. In general, it was much easier to bring the NBER categories into line with Dawson's than the reverse, and therefore Dawson's categories are used in Tables 31 through 36.

TABLE 31

COMPARISON BETWEEN DAWSON AND NATIONAL BUREAU, CORPORATE SOURCES AND USES OF FUNDS, 1950
(billion dollars)

Sources and Uses (Dawson Categories)	Dawson	National Bureau	Difference
Sources			
Net profits	34.3	33.1	1.2
Depreciation and amortization	7.7	9.5	−1.8
Other internal charges	.6	.6	—
Insurance benefits	.8	.8	—
Tax refunds	.4	.4	—
Trade debt	8.7	8.2	.5
Bank debt (excluding mortgages)			
Short-term	2.0	2.5	−.5
Long-term	.4	−.4	.8
Net cash security issues			
Bonds	2.0	2.0	—
Stocks	1.4	1.4	—
Mortgages	1.7	1.7	—
Misc. liabilities (debt to U.S. Government)			
Sale-leaseback [a]	—	.2	−.2
Discrepancy	3.2	3.0	.2
Total sources	63.3	62.9	.4
Uses			
Plant and equipment	16.4	16.4	—
Other capital expenditures	2.5	2.4	.1
Change in inventories	4.9	4.9	—
Profits-tax payments	9.9	9.9	—
Renegotiation payments	—	—	—
Dividend and branch profits	10.5	10.5	—
Currency and deposits	1.6	1.6	—
Government obligations	3.0	2.9	.1
Trade credit	13.7	13.8	−.1
Corporate securities	.1	−.1	.2
Valuation adjustment (bad debt charges)	.6	.6	—
Total uses	63.3	62.9	.4

SOURCE: See tables in Chapter 1 and Appendix D.
[a] No accounting in Dawson.
NOTE: Items need not sum to totals because of rounding.

TABLE 32

COMPARISON BETWEEN DAWSON AND NATIONAL BUREAU, MANUFACTURING AND MINING CORPORATIONS, SOURCES OF FUNDS, 1950
(billion dollars)

Sources (Dawson Categories)	Dawson	National Bureau	Difference
Net profit	22.9	21.4	1.5
Depreciation and amortization	3.8	5.4	−1.6
Other internal charges	.2	.2	—
Insurance benefits	.3	.3	—
Tax refunds	.3	.3	—
Trade debt	4.5	4.5	—
Bank debt (excluding mortgages)			
Short-term			
Long-term	.2	−.3	.5
Net cash security issues			
Bonds	.1	.1	—
Stocks	.1	.1	—
Mortgages	—	.1	−.1
Miscellaneous (debt to U.S. Government)			
Sale-leaseback [a]			
Discrepancy	.6	.6	—
Total above sources	33.1	32.8	.3

SOURCE: See tables in Chapter 1 and Appendix D.
[a] No accounting in Dawson.
NOTE: Items need not sum to totals because of rounding.

The main difference between the two sets of estimates is that, with the exception of the railroad industry, Dawson's practice of using regulatory authority data was abandoned in favor of the Federal Reserve practice of using Internal Revenue Service tax data. This is reflected in the differences in the estimates of all industries except railroads. In both the NBER and Dawson estimates, the flows of the railroad industry are based primarily on tabulations of the Interstate Commerce Commission.

Because the regulatory authority's jurisdiction does not extend to all companies operating in the gas and electric and communications industries, the substitution of the tax source has broadened the industrial coverage of the two sectors. Furthermore, since the Federal Power Commission data do not include the utility holding companies, the shift to IRS-based data sources tends to shift the utility holding

TABLE 33

COMPARISON BETWEEN DAWSON AND NATIONAL BUREAU, RAILROAD CORPORATIONS, SOURCES OF FUNDS, 1950
(billion dollars)

Sources (Dawson Categories)	Dawson	National Bureau	Difference
Net profit	1.4	1.4	—
Depreciation and amortization	.5	.5	—
Other internal charges			
Insurance benefits	.1	.1	—
Tax refunds			
Trade debt	.2	.2	—
Bank debt (excluding mortgages)			
Short-term			
Long-term	.1	.1	—
Net cash security issues			
Bonds	.2	.2	—
Stocks			
Mortgages			
Miscellaneous (debt to U.S. Government)			
Sale-leaseback [a]			
Discrepancy	−.1	−.1	—
Total sources	2.3	2.3	—

SOURCE: See tables in Chapter 1 and Appendix D.
[a] No accounting in Dawson.
NOTE: Items need not sum to totals because of rounding.

companies filing consolidated returns into the utility sector. Holding companies filing unconsolidated returns would probably be classified in "finance" by the IRS. These factors should tend to make Dawson's estimates somewhat smaller than the Bureau's. That this is not the case suggests that the estimates for the flows of companies included in both the Dawson and NBER subsectors are smaller in the NBER accounts. Furthermore, these estimates are sufficiently lower so that the inclusion of the extra companies in the NBER account is not enough to offset them.

It is not clear whether this sort of underestimation of flows of corporations common to both industries also holds true in the communications subsector. The NBER communication industry group conforms to the Internal Revenue Service's industry coverage and thus includes radio, broadcasting, and other communications, as well as the telephone and telegraph component of Dawson. The estimates of the

TABLE 34

COMPARISON BETWEEN DAWSON AND NATIONAL BUREAU, GAS AND ELECTRIC CORPORATIONS, SOURCES OF FUNDS, 1950
(billion dollars)

Sources (Dawson Categories)	Dawson	National Bureau	Difference
Net profit	1.6	1.4	.2
Depreciation and amortization	.6	.7	−.1
Other internal charges			
Insurance benefits	.1	.1	—
Tax refunds			
Trade debt	.1	.1	—
Bank debt (excluding mortgages)			
Short-term			
Long-term	.1	—	.1
Net cash security issues			
Bonds	1.0	1.1	−.1
Stocks	.7	.7	—
Mortgages			
Miscellaneous (debt to U.S. Government)			
Sale-leaseback [a]			
Discrepancy	.5	.5	.1
Total sources	4.9	4.6	.3

SOURCE: See tables in Chapter 1 and Appendix D.
[a] No accounting in Dawson.
NOTE: Items need not sum to totals because of rounding.

flows of the telephone and telegraph component would have to be seriously underestimated if the understatements are to offset the inclusion of the radio, broadcasting, and other communications firms in the NBER subsector. As they stand, the two estimates of total sources differ only by $100 million, and this difference is confined entirely to differences in the estimates of net stock issues.

In general, the major differences between the Dawson and NBER estimates are to be found in the manufacturing and mining corporations and in the trade, service, and miscellaneous industry subsectors. The Dawson-NBER comparisons in Tables 31, 32, and 36 indicate that the principal differences in these flows are in the allocation of short-term debt sources between trade debt and short-term bank debt—arising from the NBER substitution of a revised series on long-term debt for the series Dawson used—and what is essentially a reallocation of internal funds between net profits and depreciation. Total sources

TABLE 35

COMPARISON BETWEEN DAWSON AND NATIONAL BUREAU, COMMUNICATIONS CORPORATIONS, SOURCES OF FUNDS, 1950
(billion dollars)

Sources (Dawson Categories)	Dawson	National Bureau	Difference
Net profit	.7	.7	—
Depreciation and amortization	.4	.4	—
Other internal charges			
Insurance benefits			
Tax refunds			
Trade debt			
Bank debt (excluding mortgages)			
Short-term			
Long-term			
Net cash security issues			
Bonds			
Stocks	.4	.5	−.1
Mortgages			
Miscellaneous (debt to U.S. Government)			
Sale-leaseback [a]			
Discrepancy			
Total sources	1.5	1.6	−.1

SOURCE: See tables in Chapter 1 and Appendix D.
[a] No accounting in Dawson.

are little affected by these NBER changes because most of the changes offset each other.

Finally, an examination of the all-corporate estimates discloses that one of the largest discrepancies among the uses is in net transactions in existing securities. Dawson estimated such transactions for all industry groups other than the residual ones. In the NBER accounts, estimates were made only for the railroad, communications, and gas and electric industries. The all-corporate totals are merely the sums of the estimates for these three industries only, and should not be taken as estimates of net purchases for corporate securities by the corporate universe from the other sectors of the economy. If corporations were acquiring securities of other corporations, the omission of the purchases by other industries may result in a substantial understatement of the uses of funds over the six-year period, and a corresponding understatement of sources if corporations were disposing of corporate securities.

TABLE 36

COMPARISON BETWEEN DAWSON AND NATIONAL BUREAU, TRADE, SERVICES, AND MISCELLANEOUS CORPORATIONS, SOURCES OF FUNDS, 1950
(billion dollars)

Sources (Dawson Categories)	Dawson	National Bureau	Difference
Net profit	7.7	8.2	−.5
Depreciation and amortization	2.4	2.5	−.1
Other internal charges	.4	.4	—
Insurance benefits	.2	.2	—
Tax refunds	.1	.1	—
Trade debt	5.8	5.8	—
Bank debt (excluding mortgages)			
Short-term			
Long-term	.1	−.3	.4
Net cash security issues			
Bonds	.7	.7	—
Stocks	.2	.1	.1
Mortgages	1.7	1.6	.1
Miscellaneous (debt to U.S. Government)			
Sale-leaseback [a]	—	.2	−.2
Discrepancy	2.2	2.1	.1
Total sources	21.4	21.6	.1

SOURCE: See tables in Chapter 1 and Appendix D.
[a] No accounting in Dawson.
NOTE: Items need not sum to totals because of rounding.

Dawson's estimates for 1950, the final year of his study, were most subject to substantial subsequent revision. Some of the differences in estimates are undoubtedly due to such revision.

Revised Estimates

When the NBER estimates of flows for the disaggregated corporate universe were prepared, the 1955 IRS data were not available. Extrapolation beyond 1954 was accomplished largely by using many of the estimates of flows prepared on a nearly current basis by various government agencies. These agencies use IRS data as benchmarks in preparing annual and quarterly current estimates, which are extrapolations of the IRS data. After the Bureau estimates had been compiled, the 1955 *Statistics of Income* became available. A comparison of preliminary 1955 estimates with revised estimates based upon the actual IRS data is found in Tables 37 and 38.

TABLE 37

COMPARISON OF PRELIMINARY 1955 ESTIMATES OF USES WITH REVISIONS BASED ON IRS TABULATIONS OF 1955 TAX-RETURN DATA
(million dollars)

Line	Uses	*All-Corporate* (p)	(r)	*Manufacturing* (p)	(r)	*Mining* (p)	(r)	*Gas & Elec.* (p)	(r)	*Communications* (p)	(r)	*Railroad* (p)	(r)	*Trade & Service* (p)	(r)
b	Plant & equip.	23,321	23,321	11,095	11,095	824	824	4,204	4,204	1,725	1,725	923	923	4,550	4,550
c	Other cap. exp.	1,492	1,492	64	64	24	24	36	36	11	11	8	8	1,349	1,349
d	Change in inventory	2,955	5,787	2,182	2,863	−81	−27	−90	−31	41	11	−74	−55	977	3,026
e-1	Fed. inc. tax pd.	17,126	17,126	10,214	10,214	126	126	1,121	1,121	673	673	265	265	4,727	4,727
e-2	State inc. tax pd.	703	703	441	441	4	4	49	49	29	29	11	11	169	169
f	Renegotiation	78	78	78	78	a	a	a	a	a	a	a	a	a	a
g	Div. & branch profit pd.	11,922	11,922	6,696	6,770	966	780	1,126	1,200	559	562	440	440	2,135	2,170
j	Currency & deprec.	622	1,201	−12	231	13	33	36	−98	18	24	40	40	527	971
k-1	U.S. govt. oblig.	3,962	3,962	2,895	2,616	147	149	62	135	392	421	389	390	77	251
k-2	State & loc. govt. obl.	220	220	109	109	25	25	2	2	1	1	8	8	75	75
m	Notes & accts. rec.	10,350	15,354	4,680	4,704	156	174	209	156	147	132	88	103	5,070	10,085
n	Corp. securities	125	125	n.a.	n.a.	n.a.	n.a.	43	43	53	53	29	29	n.a.	n.a.
p	Bad debt charge	954	1,242	205	205	10	13	13	17	20	21	3	3	703	983
q	Retirement, bonds	3,384	3,384	1,316	1,316	86	86	495	495	561	562	461	461	465	464
r	Retirement, stock	1,565	1,565	815	815	150	150	40	40	8	12	242	242	310	306
s	Total uses	78,779	87,482	40,778	41,521	2,450	2,361	7,346	7,369	4,238	4,237	2,833	2,868	21,134	29,126

SOURCE: Preliminary figures (p) based on extrapolations of 1954 *Statistics of Income* data.
Revised (r), on the basis of 1955 *Statistics of Income* tabulations.
[a] = less than 0.5 million dollars.

TABLE 38

COMPARISON OF PRELIMINARY 1955 ESTIMATES OF SOURCES WITH REVISIONS BASED ON IRS TABULATIONS OF 1955 TAX-RETURN DATA
(million dollars)

Line	Sources	*All-Corporate* (p)	(r)	*Manufacturing* (p)	(r)	*Mining* (p)	(r)	*Gas & Elec.* (p)	(r)	*Communications* (p)	(r)	*Railroad* (p)	(r)	*Trade & Service* (p)	(r)
B	Net profit	36,829	38,712	23,458	24,188	779	1,551	2,305	2,377	1,498	1,508	854	863	7,935	8,225
C	Depr. amort. & depl.	17,708	18,590	9,094	9,194	1,269	1,398	1,534	1,573	653	668	1,024	1,024	4,166	4,733
D	Other internal charges	994	1,202	205	237	10	13	13	17	20	21	42	42	704	872
E	Insurance benefits	1,430	1,427	581	590	58	61	225	222	94	93	160	160	312	301
F	Tax refunds	444	444	279	279	3	3	a	a	a	a	7	7	155	155
H & K	Short-term borrowing	8,368	12,287	2,562	2,513	189	203	283	46	241	907	211	216	4,882	8,402
H	Short-term bank debt	3,662	3,633	469	469	102	102	155	155	77	77	0	0	2,859	2,830
K	Other short-term borrowing	4,706	8,654	2,093	2,044	87	101	128	−109	164	830	211	216	2,023	5,572
L + M + P + Q	Total long-term borrowing	10,421	10,421	2,809	2,809	293	293	1,655	1,655	993	993	674	674	3,997	3,997
L	Long-term bank debt	1,181	1,181	629	629	101	101	53	53	a	a	−26	−26	424	424
M	New bond issues	7,566	7,566	2,060	2,060	180	180	1,602	1,602	993	993	700	700	2,031	2,031
N	New stock issues	3,461	3,461	1,170	1,170	125	125	867	867	889	889	9	9	401	401
P	Sale-leaseback	267	267	a	a	a	a	a	a	a	a	a	a	267	267
Q	Morgages	1,407	1,407	120	120	12	12	a	a	a	a	a	a	1,275	1,275
R	Debt to govt.	4	4	6	6	−1	−1	a	a	a	a	−1	−1	a	a
S	Discrepancy	−880	934	614	535	−275	−1,285	464	612	−150	−842	−147	−126	−1,418	2,040
T	Total sources	78,779	87,482	40,778	41,521	2,450	2,361	7,346	7,369	4,238	4,237	2,833	2,868	21,134	29,126

SOURCE: Preliminary figures (p) based on extrapolations of 1954 *Statistics of Income* data.
Revised (r) on the basis of 1955 *Statistics of Income* tabulations.
[a] = less than 0.5 million dollars.

Critique of the Data

The largest differences between the preliminary and the revised figures are found in the working capital items on the uses side and in the net profit and trade debt liability item on the sources side. Table 39 shows all items for which the preliminary figures differed from the revised ones. In order to measure how much the preliminary figures were in error, two comparisons were used. First, the amount by which the preliminary figures were revised was expressed as a percentage of the revised figures in each case. For the all-corporate figures, the errors were roughly 45 per cent of the revised figures for changes in inventory, currency and deposits, and trade debt. For specific industries, however, the error in these items was even larger. Changes in inventory were revised by from 190 to 272 per cent in mining, gas and electricity, and communications. Changes in inventory for the trade, services, and miscellaneous group, as originally estimated, were only about one-third of the revised figure. For currency and deposits, the estimates for manufacturing and gas and electricity moved in the opposite direction

TABLE 39

CHANGES IN PRELIMINARY ESTIMATES AS A PERCENTAGE OF REVISED ESTIMATES, 1955

	All-Corp.	Manufacturing	Mining	Gas and Elec.	Communications	Railroad	Trade, Service
Uses							
Change in inventory	48.94	23.79	−200.00	190.32	−272.73	−34.55	67.71
Dividends	0	10.93	−23.85	6.17	.53	0	1.61
Currency and deposits	48.21	105.19	60.61	136.74	25.00	0	45.73
Federal obligations	0	−10.67	1.34	54.07	6.89	.26	69.32
Notes and accounts receivable	32.59	5.10	10.34	−33.98	−113.63	14.56	49.73
Bad debt charges	23.19	0	23.08	23.53	4.76	0	28.48
Total	9.95	1.79	−3.77	.31	−.02	1.22	27.44
Sources							
Net profit	4.86	3.02	49.77	3.03	.66	1.04	3.53
Depreciation, etc.	4.74	1.09	9.23	2.48	2.25	0	11.98
Other internal charges	17.30	13.50	23.08	23.53	4.76	0	19.27
Insurance benefits	−.21	1.53	4.92	−1.35	−1.08	0	−3.65
Short-term bank debt	−.80	0	0	0	0	0	−1.02
Other short-term borrowing (trade debt)	45.62	−2.40	1.39	217.43	80.24	2.31	63.69
Discrepancy	194.22	−14.77	78.60	24.18	82.19	−16.67	169.51

SOURCE: Tables 37 and 38.

for the revised figures; for mining and the trade, service, and miscellaneous group, the revisions were 60 per cent and 45 per cent, respectively, of the revised amounts. The trade debt figures for the gas and electric industry, communications, and the trade, service and miscellaneous corporations were off much more than the total for all corporations. In other words, the industry revisions tended to offset each other, so that the all-corporate revision was correspondingly reduced. The original estimates of federal obligations and accounts receivable were close to the revised figures, except for the gas and electric and the trade, service and miscellanous groups.

The second comparison was made in an attempt to weigh the revised sources and uses items in terms of the revised total sources and uses of funds for each industry. In each revised industry account, each flow was taken as a percentage of the total flow (Table 40). Thus, for example, in the all-corporate account, the change in inventory was approximately $5.8 billion. This amounted to a little over 6.5 per cent

TABLE 40

REVISED SOURCES AND USES ITEMS AS A PERCENTAGE OF REVISED TOTAL SOURCES AND USES, 1955

	All-Corp.	Manufacturing	Mining	Gas and Elec.	Communications	Railroad	Trade, Service
Uses							
Change in inventory	6.6	6.9	−1.1	−1.4	.3	−1.9	10.4
Dividends	13.6	16.3	33.0	16.3	13.3	15.3	7.5
Currency and deposits	1.4	.6	1.4	−1.3	.6	1.4	3.3
Federal obligations	4.5	6.3	6.3	1.8	9.9	13.6	.9
Notes and accounts receivable	17.5	11.3	7.4	2.1	3.1	3.6	34.6
Bad debt charges	1.4	.5	.6	.2	.5	.1	3.4
Sources							
Net profit	44.2	58.3	65.7	32.3	35.6	30.1	28.2
Depreciation, etc.	21.2	22.1	59.2	21.3	15.8	35.7	16.2
Other internal charges	1.4	.6	.6	.2	.5	1.5	3.0
Insurance benefits	1.6	1.4	2.6	3.0	2.2	5.6	1.0
Short-term bank debt	4.2	1.1	4.3	2.1	1.8	.0	9.7
Other short-term borrowing (trade debt)	9.9	4.9	4.3	−1.5	19.6	7.5	19.1
Discrepancy	1.1	1.3	−154.4	8.3	−120.0	−4.4	7.0

SOURCE: Tables 37 and 38.

of the total uses of funds. If these percentages are applied as weights to the percentages given in Table 39, the relative impact of the error on total sources or uses can be established. Thus, it can be seen that, since changes in inventory amounted to less than 2 per cent of the total uses of funds in the mining, gas and electric, communications, and railroad industries, the large percentage error in estimation had little effect on the estimates for total uses of funds.

The large margin of error in trade debt, however, is another matter. In the communications industry, it accounts for approximately 20 per cent of the total sources of funds; and in the trade, service and miscellaneous group, it accounts for 19 per cent of the total funds. Hence, large errors in this item are heavily weighted. Similarly, accounts receivable amount to 35 per cent of the total uses of funds for the trade, service, and miscellaneous group. Thus, the error of 50 per cent disclosed by the revision accounts for a substantial part of the difference between the revised and the original estimates of total uses.

Recommendations

Since most corporate data are taken directly from, or are based upon, *Statistics of Income,* most suggestions for improving estimates of corporate flows must take the form of recommendations for changing either the details which corporations are asked to report or the details released by the IRS in *Statistics of Income* and *Source Book.*[20] Generally speaking, improvements in the financial-nonfinancial corporate breakdown or in the industrial breakdown per se must depend upon improvements in the break presented in *Statistics of Income.*

Unfortunately, this alone would not be sufficient. To be sure, a more detailed breakdown of credit agencies other than banks would facilitate the removal of finance and mortgage companies as well as holding companies from the corporate universe. But the ability to remove data of corporate brokers and dealers depends upon, among other things, improved estimates of the broker and dealer universe.

What can be done to overcome the difficulties that stem from changing degrees of consolidation is not clear. One not very practical alterna-

[20] Since *Source Book* is only an unpublished preliminary version of *Statistics of Income* with more industrial categories, all remarks on the need for additional detail in *Statistics of Income* apply *protanto* to *Source Book.* In what follows, no recommendations are made for more details in *Statistics of Income* if those details already appear in *Source Book.*

tive would be a requirement that corporations submit completely unconsolidated reports along with their consolidated tax returns.

It does seem, however, that corporations could be asked for more detail than they now submit. This is especially true of the liabilities, where the details on short- and long-term debt are altogether inadequate. It would help immensely if the short-term debt were broken down by sources of funds, i.e., banks, suppliers (accounts payable), etc.; and if long-term debt were classified by type of instrument, i.e., bonds, mortgages, institutional term loans, etc.

If a choice had to be made between the presentation of long-term debt on an original or current maturity basis, it would probably be more useful to have it on an original maturity basis. Nevertheless, the debt data can be presented on both an original and current maturity basis with the outstanding debt classified both ways.

On the asset side of the balance sheet, one important improvement that could be made would be to establish standards of consistency in the practice of reporting tax notes. The advantages or disadvantages of having them netted against tax liability are minor in comparison with the advantages of having all corporations treat them the same way. It is our belief, however, that it would be more useful if corporations were to follow the practice of reporting these holdings on a gross basis. The composition of the category "other investments" is unknown. There is a general presumption that it is largely made up of corporate holdings of equity in other corporations, but this is not unequivocally established. Ascertainment of the composition of this category would be extremely helpful in allocating equity and other investments by industry grouping and in providing information on the magnitude and composition of intercorporate financing.

The principal improvement to be hoped for in other sources of corporate statistics is in the series on weekly-reporting member banks discussed above.

The recommendations of this section have been confined to changes that seem to be inexpensive relative to their productivity. A recommendation for surveys has been avoided, though it is recognized that many of the difficulties encountered in deriving estimates could be eliminated or at least reduced by surveys. The elimination of the difficulties that stem from the existence of float is one problem, however, that can hardly be overcome without sampling of some sort and some experimental work along these lines is required.

Finally, the improvement in the quality of corporate fund-flow data

for the period prior to the tabulation of IRS data requires better estimating procedures. As is obvious from Tables 37 and 38, revisions resulting from the availability of IRS data are undesirably large. Improvements in the data for these pre-IRS periods would substantially improve the accuracy and usefulness of the corporate fund-flow data. What is true for the annual data applies with even greater force to the quarterly estimates.