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The Canadian National Transactions Accounts

S. J. HANDFIELD-JONES

BANK OF CANADA

THIS opportunity to describe the work which has been done in Canada on the preparation of flow-of-funds accounts, or, as they have been renamed, the national transactions accounts, is a most welcome one, as is the opportunity to hear the more exhaustive discussion of various features of the new field of social accounting at this conference. My paper is a relatively short one, for it does not seem necessary either to describe the more elementary principles of flow-of-funds accounting, which will be familiar to all the participants, or, at the other extreme, to go into the technical details of sources and methods which are relevant only to the Canadian context. These are discussed at some length in the study entitled *Financing of Economic Activity in Canada*, published in the spring of 1959 by the Royal Commission on Canada's Economic Prospects, in which the national transactions accounts first saw the light of day. Any interest which the Canadian experiment may have to this wider audience will stem from the extent to which the methods resembled or diverged from the approach of the Federal Reserve Board in its flow-of-funds accounts. Broadly speaking, we in Canada were trying to do the same thing in a similar context, and the results may suggest what is inherently common and where there is room for alternative treatments in a comprehensive system of flow accounts. The first section of this paper discusses the origins of the national transactions accounts in Canada, the second describes the structure which eventually emerged, and the third comments in a rather personal way upon the purposes and functions of the accounting system.

Origins of the National Transactions Accounts

The first attempt to compile a system of national transaction accounts was made under the auspices of the Royal Commission on Canada's Economic Prospects by a group consisting of L. M. Read, who has played a very considerable role in Canadian statistical development since the war and is now on the staff of Carleton University in Ottawa, F. W. Emmerson of the Research and Development Division of the Dominion Bureau of Statistics, and myself as a representative

of the Bank of Canada. The results for 1946-54 were published this spring (1959) as an appendix to the study entitled *Financing of Economic Activity in Canada* by Professor W. C. Hood of the University of Toronto. It is perhaps no coincidence that the pioneering work on the national transactions accounts and the early development of national income accounts were both associated in Canada with the work of Royal Commissions, and it was certainly no coincidence that the national transactions accounts depended heavily upon the cooperating resources of the Dominion Bureau of Statistics and the Bank of Canada. On the one hand, the Dominion Bureau of Statistics is responsible for collecting, compiling, and publishing many of the statistics prepared by the federal government, including the national income and expenditure accounts. On the other hand, the Central Bank's necessary concern with the monetary and banking system, with the securities markets, and to an increasing extent with other financial intermediaries has resulted in Canada as in other countries in a considerable body of financial statistics which provide many of the necessary foundation stones for the construction of financial transactions accounts. One of the first attempts to integrate much of this information with some of the data on nonfinancial flows in the economy was the direct estimate of personal saving, prepared in the Research Department of the Bank of Canada.¹ This calculation was designed to measure the balance of personal investment and financial transactions and, thus, complement the method of subtracting current expenditures from current incomes. Since little information can be obtained directly from individuals, the estimates of these transactions had to be based largely on the records of other sectors. For example, savings through life insurance were derived from insurance company reports; and net purchases of securities, by deducting from net new issues the net purchases of all other transactors.

Other federal government agencies collect or analyze financial statistics in certain fields. For example, the Department of National Revenue publishes the only comprehensive data on corporate assets and liabilities in *Taxation Statistics*; and the Department of Insurance publishes reports on insurance companies, small loan companies, and trust and loan companies. Important work on the mortgage market has been done by the Central Mortgage and Housing Corporation. The Dominion Bureau of Statistics itself collects certain information in the field of consumer credit and the financial position

¹ D. J. R. Humphreys, "Personal Savings in Canada: Direct Estimates 1939-1953," a paper presented at the 114th annual meeting of the American Statistical Association in Montreal, September 1954.

of individuals and government, and has laid the groundwork for regular surveys of trustee pension funds. A more important precursor to the flow of funds is the system of balance-of-payment statistics, which record the transactions between nonresidents and residents; the capital account represents the most complex product of the Dominion Bureau of Statistics in the financial field.

Ever since the idea of flow-of-funds accounts was first broached, as a theoretical idea by such social accounting authorities as Richard Stone, and as a more practical one by Morris A. Copeland, it proved attractive for at least two reasons. On the one hand, it offered a unifying framework, which could perform the same functions of ordering and reconciling the rather diverse mass of financial data as the national accounts performed for nonfinancial. On the other, it promised to bridge the gap between the nonfinancial and financial systems in a complete self-balancing structure. It was in this connection that the Dominion Bureau of Statistics was most directly involved, for the national accounts, which are its responsibility, already provide a system of accounts of the economy's nonfinancial transactions.

Mr. Read had been engaged by the Bank of Canada in the summer of 1955 to examine the feasibility of constructing flow-of-funds accounts in Canada, and one of the first questions to be considered was whether there should be an extension of the national income and expenditure accounts into the area of financial transactions, or whether there should be substantial differences in concept and coverage, which would exclude transactions the financial side of which had certain characteristics—notably barter transactions or those involving other than money or near-money. Such exclusions would, of course, result in different estimates of the nonfinancial flows than the estimates in the national accounts. A tendency to thus limit the coverage was evident in the work of Copeland and, to a lesser extent, in the methods of the Federal Reserve Board. The advantages of such a course were not too clearly apparent, however, in the Canadian context, and certainly did not outweigh the disadvantages of extra work, lack of uniformity, and the increased unfamiliarity with the results which would be entailed. The time did not yet seem ripe to impose any theoretical preoccupations on the accounts, and for special analytical purposes it would surely be easier to eliminate the margin in question from a broader system than to add it to a narrower one. As Read himself has said:

. . . the N.T. accounts, as they stand at present, are so constructed as to be consonant with the national income and expenditure sector accounts in every practical respect. The

sectoring differs somewhat—the pie is cut in a few more sections but it is the same pie that is being cut. The N.T. accounts adopt an accruals basis of accounting as their standard or long-term objective as do the national products accounts on the whole, and the same imputed transactions are included in both. The current transactions account and the investment transactions account are conceptually, therefore, *not* new accounts. The user of the accounts must note whatever novelty may appear in the sectoring but he is not burdened with the task of accommodating his thought to or of reconciling existing data with those of a basically new over-all approach.

.....

The area of imputation and accrual is, relatively speaking, not large or subject to unique fluctuations; and, in any case, it might be ventured, national transactions totals are as relevant to strictly monetary analysis as aggregates restricted to transactions directly involving money or credit. If, for some purposes, it is desirable to isolate cash transactions or cash and credit transactions, aggregates may easily be approximated within the more comprehensive framework of national transactions.²

The Dominion Bureau of Statistics has also pursued the objective of a standardized accounting framework; when the Inter-Industry Relations Study for 1949 was prepared, the concepts underlying the input-output matrix were consistent with the national income and expenditure accounts. In the same way, the flow-of-funds account could be a new aspect or dimension of the one consistent social accounting framework. At the same time, the area of financial statistics could be integrated into the broader framework of Canadian economic statistics generally, within the Canadian tradition of coordinated statistical development.

During the period in which Read was engaged in the feasibility study, Professor Hood, who was one of the senior research staff members for the Royal Commission on Canada's Economic Prospects, became interested in the possibility of constructing the transactions accounts for the postwar years as a basis for his proposed study of the financial aspects of growth. This interest stimulated the formation of the interdepartmental group to which was given the cooperative responsibility of preparing the estimates which have now been

² L. M. Read, "The Development of National Transactions Accounts: Canada's Version of or Substitute for Money Flows Accounts," *Canadian Journal of Economics and Political Science*, February 1957, pp. 50-52.

published. This group viewed its task as the rearrangement of the national income and expenditure accounts into the matrix form and their extension in two directions. On the one hand, the four sectors of the national accounts—persons, business, government, and non-resident—would be further subdivided, particularly in order to segregate the financial intermediaries, which have a special place, of course, in flow-of-funds accounting. On the other hand, the accounting system would be extended beyond the areas of transactions in real goods and services in order to reveal the financial channels through which funds flow between transactors.

Structure of the National Transactions Accounts

To illustrate the structure of the accounts which emerged, a copy of the matrix for 1954 is appended (Table A-1). I might say at once that the results are experimental and speculative, and represent more an exercise in method than a set of reliable and operational statistics. I would also express my view that the matrix form of presentation, which has many advantages and appears to lend itself particularly well to flow-of-funds accounts is not without some drawbacks. The matrix tables, while presenting in one place the whole story for a given period of time, are necessarily complex, and demand a tremendous fund of familiarity before they can be readily comprehended. They need to be supplemented by time series presentations for the various sector and category accounts, where the period under review can be studied more easily against the historical background. In this regard, the Canadian accounts have followed the example of the American.

The heart of the national transactions accounts is the standard system of classification of transactors into sectors and of the things being exchanged into categories, by which the myriad of individual transactions which comprise economic activity can be brought within the framework of a social accounting system. Eleven sectors are distinguished in the matrix. Sector I, the consumer sector, corresponds closely to the personal sector in the national accounts, and includes individuals in their nonbusiness roles, nonprofit institutions, private pension funds, and various trustee and agency accounts. Sectors II–VII inclusive together correspond to the national accounts business sector. Single totals are shown for the current receipts and expenditures of this group of sectors, but investment and financial transactions are shown separately for unincorporated business, nonfinancial corporations, government enterprises, banking, life insurance and “other” financial institutions. Further division of the

INTEGRATION OF SOCIAL ACCOUNTING SYSTEMS

 TABLE A-1
 NATIONAL TRANSACTIONS ACCOUNTS, 1954
 (millions of dollars)

Sector	A. CURRENT TRANSACTIONS ACCOUNT							Total (C Account)
	Labor Service	Capital Service	Proprietor Service	Transfers, Including Taxes	Goods and Services n.e.i.	Gross Saving		
I. Consumers								
Debit	433			1,859	15,742	809		18,843
Credit	12,799	1,719	2,665	1,660				18,843
Combined business accounts^a								
Debit	10,454	2,013	2,665	4,113	22,789	3,544		22,789
Credit								22,789
Government								
Federal	986	504		1,591	1,177	186		4,444
Debit		234		4,210				4,444
Credit								
IX. Provincial								
Debit	320	97		688	126	456		1,687
Credit		289		1,398				1,687
X. Municipal								
Debit	606	68		59	307	166		1,206
Credit		164		1,042				1,206
XI. Rest of World								
Debit		147			5,000	427		5,574
Credit		423			5,151			5,574
Total								
Debit	12,799	2,829	2,665	8,310	22,352	5,588		54,543
Credit	12,799	2,829	2,665	8,310	27,940			54,543

n.e.i. = not elsewhere included.

^a Includes the following sectors: unincorporated business, nonfinancial corporations, government enterprises, banking, life insurance, and other finance.

(continued)

CANADIAN NATIONAL TRANSACTIONS ACCOUNTS

TABLE A-1 (continued)

Sector		B. INVESTMENT TRANSACTIONS ACCOUNT							Total (B Account)
		Gross Saving		Residual of National Accounts	Change in Inventories	Gross Fixed Capital		Saving Minus Investment	
		Capital Consumption, etc.	Other Saving			Residential	Non- residential		
I. Consumers									
Debit									809.0
Credit			809.0						809.0
II. Unincorporated business									
Debit				-46.0		1,158.0	886.0		-828.0
Credit		1,170.0							1,170.0
III. Nonfinancial corporations									
Debit				-47.3		61.0	1,981.9		68.2
Credit		1,507.1			-26.0				2,063.8
IV. Government enterprises									
Debit				-36.7			638.7		-383.0
Credit		211.0	8.0						219.0
V. Banking									
Debit							20.0		14.2
Credit		9.3	24.9						34.2
VI. Life insurance									
Debit							11.7		-8.2
Credit		2.6	0.9						3.5
VII. Other finance									
Debit						8.0	13.7		31.8
Credit		5.0	48.5						53.5

(continued)

INTEGRATION OF SOCIAL ACCOUNTING SYSTEMS

TABLE A-1 (continued)

		B. INVESTMENT TRANSACTIONS ACCOUNT (concluded)						
		<i>Gross Saving</i>		<i>Gross Fixed Capital</i>				
<i>Sector</i>	Capital Consumption, etc.	Other Saving	Residual of National Accounts	Change in Inventories	Residential	Non-residential	Saving Minus Investment	Total (B Account)
VIII. <i>Government</i>								
Federal								
Debit				-4.0	11.0	279.0	-100.0	186.0
Credit	186.0							186.0
IX. <i>Provincial</i>								
Debit				+1.0		300.0	155.0	456.0
Credit	456.0							456.0
X. <i>Municipal</i>								
Debit						352.0	-186.0	166.0
Credit	166.0							166.0
XI. <i>Rest of World</i>								
Debit							427.0	427.0
Credit	427.0							427.0
<i>Total</i>								
Debit				-133.0	1,238.0	1,483.0		5,588.0
Credit	2,905.0	2,709.0	-26.0					5,588.0

(continued)

CANADIAN NATIONAL TRANSACTIONS ACCOUNTS

TABLE A-1 (continued)

Sector	C. FINANCIAL TRANSACTIONS ACCOUNT										
	Saving Minus Investment		Currency and Deposits		Charge and Installment Credit		Loans		Claims on Associated Enterprises		
		Gold	Currency and Bank Deposits	Other Institutional Deposits	In-Consumer Accounts	Installment Credit	Bank	Other	Noncorporate	Corporate	Government
I. Consumers			680.2	240.8	23.4	13.6	15.9	82.0	85.2		
Debit											
Credit	809.0										
II. Unincorporated business					9.8	11.6	18.8	18.0	85.2		
Debit						-19.6					
Credit	-828.0										
III. Nonfinancial corporations			161.2	65.7	13.6	27.2	37.9	4.3		355.7	0.6
Debit										655.8	
Credit	68.2										
IV. Government enterprises			-2.4	0.1			32.1	0.6			7.3
Debit											-70.9
Credit	-383.0										
V. Banking		84.2	-104.9				60.3			67.6	-0.8
Debit			487.5								119.4
Credit	14.2										
VI. Life insurance			-7.4				-1.2	15.4		-31.2	
Debit											
Credit	-8.2										
VII. Other finance		39.6	-1.2			-44.8		71.6		-0.2	
Debit			304.7					0.6		15.3	
Credit	31.8										82.6

(continued)

TABLE A-1 (continued)

C. FINANCIAL TRANSACTIONS ACCOUNT (continued)												
Sector	Currency and Deposits			Charge and Installment Credit			Loans			Claims on Associated Enterprises		
	Saving Minus Investment	Gold	Currency and Bank Deposits	Other In-Consumer Accounts	Installment Charge	Credit	Bank	Other	Noncorporate	Corporate	Government	
VIII. Government												
Federal												
Debit			-265.4					-52.4			-67.1	
Credit	-100.0		2.4									
IX. Provincial												
Debit			24.0	0.2				38.5			136.3	
Credit	155.0					-3.5		-3.4				
X. Municipal												
Debit			14.7					3.0			58.1	
Credit	-186.0					10.5		26.4			2.2	
XI. Rest of World												
Debit			66.8	-0.9						392.0		
Credit	427.0	84.2	71.4			2.1		-57.2		112.8		
Total												
Debit		84.2	561.3	304.7	23.4	-6.0	60.3	70.7	85.2	783.9	133.9	
Credit		84.2	561.3	304.7	23.4	-6.0	60.3	70.7	85.2	783.9	133.9	

(continued)

CANADIAN NATIONAL TRANSACTIONS ACCOUNTS

TABLE A-1 (continued)

Sector	C. FINANCIAL TRANSACTIONS ACCOUNT (continued)				D. OTHER TRANSACTIONS AND ERRORS		Total (C and D Accounts)
	Mortgages of Canada	Government of Canada	Bonds Provincial Municipal Others	Stocks	Insurance and Pensions	Foreign Inheritances and Migrants' Funds	
<i>I. Consumers</i>							
Debit	436.4	-201.6	-12.5		416.2	94.0	1,748.0
Credit						89.0	1,748.0
<i>II. Unincorporated business</i>							
Debit	747.0						21.4
Credit							21.4
<i>III. Nonfinancial corporations</i>							
Debit	8.2	-33.0	164.0				1,376.8
Credit	186.0			400.3			1,376.8
<i>IV. Government enterprises</i>							
Debit	-0.1	29.3	9.1	-1.6			108.8
Credit	-0.6	388.1	187.7	-10.3	0.2		108.8
<i>V. Banking</i>							
Debit	74.0	456.2	-14.0	41.0			694.1
Credit					42.5		694.1
<i>VI. Life insurance</i>							
Debit	236.9	-194.1	33.7	190.0			319.9
Credit				12.5	326.8		319.9

(continued)

INTEGRATION OF SOCIAL ACCOUNTING SYSTEMS

TABLE A-1 (concluded)

Sector	C. FINANCIAL TRANSACTIONS ACCOUNT (concluded)												
	Mort- gages	Government of Canada				Bonds		Others	Stocks	Insurance and Pensions	Foreign Inheritances and Migrants' Funds	D. OTHER TRANSCAC- TIONS AND ERRORS	Total (C and D Accounts)
		Federal	Provincial	Municipal	Others	Government	Provincial						
VII. <i>Other finance</i>													
Debit	166.3	43.7	44.4	45.9	67.3	55.5					-10.5	477.6	
Credit					-13.8	47.5			27.1		34.1	477.6	
VIII. <i>Government</i>													
Federal													
Debit	4.5	-118.4										-549.6	
Credit		-573.2			-1.5				62.1		59.1	-549.6	
IX. <i>Provincial</i>													
Debit	6.2	-59.1	85.8	15.6	-11.0							252.3	
Credit			75.9									252.3	
X. <i>Municipal</i>													
Debit		1.7	5.6	7.0								123.1	
Credit			14.4	247.9								123.1	
XI. <i>Rest of World</i>													
Debit		-109.8	33.9	20.0	126.1	140.2				89.0		757.3	
Credit					56.5	-3.4				94.0	-30.1	757.3	
<i>Total</i>													
Debit	932.4	-185.1	278.0	247.9	432.7	185.8			416.2	183.0	737.2	5,329.7	
Credit	932.4	-185.1	278.0	247.9	432.7	185.8			416.2	183.0	737.2	5,329.7	

last four of these are available in the published detail. Sectors VIII–X are the three levels of government, federal, provincial, and municipal. Sector XI is the rest-of-the-world, or nonresident, sector.

While the acceptance of the broad lines of demarcation between the national accounts sectors presents no difficulties in most cases, the division between consumers on the one hand and business on the other is not wholly satisfactory. The proprietors of unincorporated businesses appear in the economic system in two roles—they engage in many of the transactions common to all consumers, but they also buy and sell, borrow and invest on business account. The segregation of these two types of transactions, and the inclusion of the first set in the consumer sector and the second in the unincorporated business sector, both transgresses the basic principle of classification by transactor or enterprise rather than by function and raises practical problems of statistical measurement. As far as current receipts and disbursements are concerned, it is not perhaps too artificial or difficult to make the separation, with the help of the convention that all net earnings of the business are distributed in the current period to the proprietor. In the realm of financial transactions, however, the problems are more difficult, for direct sources of information are largely nonexistent. Certain types of borrowing, such as bank loans and installment credit, can be segregated, to some extent, on the basis of the purpose for which the funds are to be used. Transactions in such liquid assets as cash and securities, however, cannot be distributed between the consumer and the business roles of a proprietor. The methods actually used to construct the unincorporated business sector's financial account was to include in it those financial transactions which can be identified as business transactions, and to leave in the consumer sector the remainder, including the cash and other liquid-asset transactions. In order to balance the account, a direct investment of funds in the business by the proprietor as consumer was imputed, being equal to the excess of investment expenditures and any other uses of funds over the sources of funds identified as business transactions.

In the national accounts, investment in new housing is a business function. The consumer is deemed to rent his house in all cases, even from himself if he owns it, and thus GNP is invariant to the extent to which houses are actually rented or owner-occupied in the real world. The transactions of the unincorporated business sector thus include not only the outlays on housing, but also the financing of these outlays—the mortgage borrowing and the accretion of down-payment funds from consumers. The rather paradoxical result of this set of conventions is that consumers do not engage in mortgage

transactions as borrowers, but only as lenders to the extent that they finance other homeowners.

In short, the distinction between Sectors I and II in the Canadian national transactions accounts is unlike the distinctions between other sectors, which are identifiably different groups of people or enterprises; it is a distinction between certain types of transactions of the same group of people—and a somewhat artificial distinction at that—which will be usefully ignored, perhaps, for some analytical purposes. Alternative treatments have been considered. It might be desirable to abstract a separate housing sector, in which would be segregated all the various transactions of individuals relating to housing. Again, the segregation of all the transactions of farmers, both consumer and business transactions, in a separate sector might be helpful, particularly in Canada where agriculture is a very important component of the national economy. The same could be done for nonfarm unincorporated business proprietors. These alternatives cannot be implemented at the present time for statistical reasons, but they are not thereby precluded from reconsideration in the future.

The distinction between consumers and unincorporated business is not, however, the only distinction which is debatable. The distinction between unincorporated business and nonfinancial corporations, which comprise Sector III, is also subject to some reservations, although they are of a rather different type. This dividing line does segregate identifiably different groups of transactors, and reflects such legal and institutional differences as the registration requirements and the incidence of taxation. How great is its functional significance, however? It can be argued with some plausibility that the pattern of a plumber's transactions is hardly likely to be affected, whether or not he has found it expedient to incorporate his business activities. In other words, both the unincorporated and the incorporated plumbers are likely to behave in the market for goods and services and financial claims in much the same way, except insofar as there may be a difference in the average size of their operations. There will be a large difference, on the other hand, between incorporated plumbers and oil or steel companies. The important dichotomy in business, one suspects, is between the sizable corporations on the one hand and the small businesses on the other, whether incorporated or not. The former can obtain long-term capital from the public securities markets, while the latter must depend more heavily on retained earnings, special financial institutions, or the resources of the proprietorship. The former may also be expected to be more richly endowed with liquid assets than the latter, and may more easily obtain short-term capital from the issue of notes or from

the banking system. It may be objected that any boundary line between the two groups must be a completely arbitrary one, and firms will cross it simply by exceeding in size the critical mass. The same sort of objections apply with similar force, however, to the distinction between incorporated and unincorporated business. Statistical considerations are also relevant here. In Canada, the principal source of data on corporate finances is *Taxation Statistics*, which provides information annually on the assets and liabilities of all companies, with separate tabulations on size groups and industrial classifications. The form of this information is not wholly suitable to the construction of flow-of-funds accounts, and it is in this important area, perhaps, that the national transaction accounts are statistically weakest. Moreover, to obtain data more promptly and more frequently, as will be required for analysis of the current situation, additional techniques of data collection will be needed. To do so would be much easier for a limited group of larger corporations than for all companies.

The conclusion of all this is that the sector classification of consumers, unincorporated business, and nonfinancial corporations is more debatable than the classification of financial institutions, governments, and nonresidents.³ What might be termed the private nonfinancial economy, which remains after these latter groups have been segregated, can be divided up in various ways; and only the experience of use will determine the optimum classification.

I turn now to the category classification, the groups into which things being exchanged are arranged as listed across the top of each section of the table. They are grouped into four different sets, which divided the matrix into its major subdivisions. The A account, or current transaction account, includes transactions in current goods, services, and transfer acknowledgments: labor service, the payment for which is wages and salaries and supplementary labor income; capital service, the payment for which is interest, dividends, and net rents; proprietors' service, the payment for which is the income from unincorporated business including farms; transfer acknowledgments of all kinds including taxes; and goods and services not elsewhere included. This account is balanced by entering in the debit column of each sector the balance of current incomes over current outlays, which is, of course, gross saving. Gross saving is then carried down to the B account, or investment transactions

³ Even in the case of financial institutions there may be some questions of classification; for example, pension funds should be included but are not in the national transactions accounts, because of statistical difficulty. Fire and casualty insurance companies, nonprofit institutions, and certain kinds of trust funds might or might not be treated as financial institutions.

account, where it appears as a credit. Fixed capital investment and changes in inventories are then recorded as debits, and a second balancing entry, saving minus investment, closes the B account and is carried to the C account, or financial transactions account. The various categories of financial transactions are largely self-explanatory, and will not be described in detail, some broad questions as to their appropriateness being reserved for discussion in the final section of this paper. Here it suffices to say that the financial categories were arranged in some rough descending order of liquidity, and the availability of information necessarily influenced their selection. The final section is described as "other transactions and errors," and brings each sector into final balance. Since each category in the A, B, and C accounts has been so devised that total debits and total credits are equal (allowing for the fact that current and capital transactions in goods and services must be taken together), this final column in the matrix must also be in balance. It is the unexplored margin of the national transactions accounts out of which, in the future, new categories will be crystallized. Some progress was made in measuring transactions in existing real assets by certain sectors; and where data on receivables and payables have been recorded, such information is preserved in the detailed sector accounts. A complete accounting of such types of transactions proved impossible, however. There remains a pure residual, which is always entered with an appropriate sign on the credit line; and this encompasses not only an error term but also the unidentified and unrecorded transactions, which in some sectors are very large.

The two carrying balances in the national transactions accounts matrix, gross saving and saving minus investment, are not essential to the logic of the structure; and they are not, of course, categories of transactions in the same sense as the other headings. They do not appear explicitly in the United States accounts, and a place is found for them only by the segregation and separate balancing of the A and B accounts. If it were not for their obvious importance and significance, such a division of the matrix would not have much point. Gross saving is a well-accepted analytical concept and, moreover, can be broken down into capital cost allowances on the one hand and other saving on the other. While the provision which business makes out of its earnings for the wear and tear and obsolescence of its physical assets is not a transaction between two parties but rather an internal bookkeeping arrangement, it has considerable bearing on financial requirements. So do such components of other saving as personal saving, corporate retained earnings, and the current-account balance on transactions between residents and

nonresidents. In the case of the government sectors, other saving is defined as the surplus on the national accounts basis, plus the amount of expenditure on inventories and fixed capital which are shown in the national transactions accounts, in one of the very few deviations from the national accounts concept, as capital rather than current expenditures. The final element of gross saving in the national transactions accounts matrix is the residual error of the national accounts. This error is equal to the difference between the direct estimate of corporate retained earnings, which is based on *Taxation Statistics*, and the balance of the business sector's receipts less disbursement. Since the former is used to estimate the "other saving" of business, the latter must be entered to maintain the balance of the A account.

Saving minus investment is a concept less widely used than gross saving itself, partly perhaps because it sums to zero for the system as a whole and thus fails to yield a national aggregate, but it is perhaps of equal significance. It is a measure of the surplus on deficit of each sector on all nonfinancial transactions—or, rather, it would be if all such transactions, including transactions on existing real assets, could be measured and included in the A and B accounts. As such, it is a measure of the resources which each sector is making available to or obtaining from other sectors. The object of the financial transactions account is, in effect, to demonstrate the actual financial channels through which these net intersector exchanges are consummated.

While the term "sources and uses of funds" has been commonly employed to describe the two sides of the transactions, we have preferred the more neutral terms debit and credit. Debits correspond to uses, referring to acquisition of goods, services, or financial claims: In the current transactions account, debits represent purchases of goods and services, while in the B and C accounts, debits represent changes in assets. Similarly, credits represent sales of goods and services or change in liabilities. Since both gains and losses of an asset item are posted as debits, the entry may have a plus or a minus sign; and, thus, the distinction between debits and credits does not conform strictly to the conventions employed in business accounting statements of the sources and uses of funds. A corporation may raise money either by the issue of its own securities or by the sale of another corporation's securities which it owns; in the first case, the cash debit will be matched by a credit in the bond or stock category, while in the second, the matching entry would be a minus debit in the bond or stock category. Any distinction which blurs the difference between assets and liabilities would seem to obscure information of considerable significance; the two transactions distinguished above

have a very different character. Moreover, all that is known is usually the amount by which an asset or liability item changes during the period, the gross flows of borrowing and repaying, issuing and retiring, buying and selling being unrecorded.

If complete information were available, the matrix could accommodate gross rather than net flows by the provision of two lines for each of the categories affected, one for the plus and one for the minus component of each debit and credit entry. Such gross flows would be most helpful, for example, when loans, mortgages, and installment debt are repayable according to fixed schedules, and it is frequently useful to look at data on gross security issues and retirements rather than merely at the net issue. In such cases as portfolio transactions in marketable securities, on the other hand, it is less clear that the gross flows of purchases and sales add detail of any great significance.

While plusses and minuses are netted against each other within the debits and within the credits, debits and credits are not in principle netted against each other in the national transactions accounts. Thus, the sectors are normally on a combined rather than a consolidated basis. The important exception to the rule is in the current account category "goods and services, n.e.i." where only net debits or net credits are shown for all sectors except the rest-of-the-world, largely because of the difficulty of estimating the flows of intermediate products between businesses.

Uses of the National Transactions Accounts

One of the very obvious facts which any system of flow-of-funds accounts underlines is how complex the financial system has become in the modern economy. Theory by its very nature abstracts from much of the complication of the real world in order to concentrate upon the essence of a simplified model and, thus, may be complemented by a less ordered but more representative description of reality. Flow-of-funds accounts are rooted in the raw mass of empirical fact and attempt to embrace it all in a complete catalogue of the transactions occurring in the economic system. This striving for completeness in itself serves certain important functions.

1. The first of these is essentially statistical. Flow-of-funds accounts provide an inventory of financial statistics, and impose the necessity of reconciling alternative estimates of the same flows. Since the classifications are exhaustive, the attempt is made to measure all financial flows, and this leads to the identification of those areas for which information is inadequate or unobtainable. Work on the national transactions accounts in Canada was much affected, for

example, by the lack of such excellent information on the financial position of corporations as exists in the United States.

2. For financial information to be most useful, it should be translatable into a single standard classification system. While specific areas of study normally demand special classifications, comparability becomes essential as soon as the relationship between such areas is investigated. The acceptance of the flow of funds implies the acceptance of a standard financial classification, comparable in status and function to the standard industrial and commodity classifications. The implementation of such a standard classification will be a long process, but its existence will benefit the collection of new data and the revision of old.

3. The accounts can provide a more precise understanding of the relative orders of magnitude of the various financial flows. While this is nothing new, and many have an intuitive knowledge of what is important and what is not, we certainly found ourselves spending disproportionate effort on the measurement of flows which turned out to be quite small and, on the other hand, neglected some rather larger ones.

4. In a somewhat more sophisticated manner, the accounts provide a basis for a description of events. To some extent, Professor Hood's text in the volume on *Financing of Economic Activity in Canada*, to which national transactions accounts was published as an appendix, is such a description, although it is much more than that alone. There is a place in the broad realm of economics for history as well as science, for description as well as analysis.

Granted all this, we still expect the flow of funds to serve more ambitious purposes. We want them to assist in the discovery of general relationships, particularly between nonfinancial and financial transactions and, thus, to modify and enrich the theoretical models of the financial system. We want to bring order into the mass of financial transactions occurring in the economy, and to explain and predict developments. As so frequently, the parallel between the flow-of-funds accounts and the national income and expenditure accounts appears to be enlightening. These older accounts are fully operational in the sense of being widely used for analysis and forecasting. They enable us to know better what has happened and to order our thoughts on what might happen; it is no exaggeration to claim that economic policy as we know it today would not be possible if the national accounts framework did not exist, and if we had to depend on a few economic indicators which we could not relate to one another. But in the financial area at the present time, we are still largely in this unfortunate state. In the last twenty-five years,

economists have concentrated upon the nonfinancial aspects of economic events with great success; but the financial aspects have been relatively neglected until quite recently.

The type of analysis which I visualize would begin by recognizing fairly simple relationships between certain special types of financial transactions and the income-expenditure pattern of definite groups of transactors.⁴ For example, individuals' savings through life insurance and pension contracts follow a trend which is largely autonomous and marginally affected by incomes, savings, and perhaps interest rates. The repayment of consumer debt once incurred is similarly contractual, and new borrowing is closely related to expenditures on durables and to the terms and conditions ruling at the time. Mortgage borrowing is a function of residential construction, and both, in turn, are related to the availability of funds. Industrial borrowing from the commercial banking system is apparently influenced, in Canada at least, by the trend of inventory accumulation. At least some portion of the complex and little-explored area of payables and receivables is quite strictly determined by the flows of such current transactions as tax liability and interest accruals. People vary the size of their active cash balances in accordance with variations in their expenditure flows.

Financial claims entering such transactions as these examples portray have attributes which fit them closely to certain purposes, and a series of submodels could be established in these and, I am sure, many other meshes of the financial network on the basis of relationships which may already be well understood but which could be brought into sharper focus by further investigation. I will call them the specialized financial claims in order to distinguish them from other types of claims which serve more general purposes, such as savings deposits, bonds, and stocks.

In the national transactions account matrix, the balance of each sector's transaction moves forward from gross saving, the balance of current income over current expenditure, to saving minus investment; it may now be suggested that a further extension is conceptually possible, by deducting from saving minus investment the excess of uses over sources on account of the specialized financial transactions which are either contractual or related to the nonfinancial transactions. This balance, if positive, will be invested in general-purpose claims; it will be quite free in the sense that the sector can invest on purely financial criteria—where its yield in the broadest

⁴ Illustrations of such relationships may be found in John C. Dawson, "A Cyclical Model for Postwar U.S. Financial Markets," a paper delivered to the seventieth annual meeting of the American Economic Association in Philadelphia, December 1957.

sense will be greatest. The choice will lie between such alternatives as the purchase of bonds or stocks, the acquisition of savings deposits or other inactive balances, or the repayment of certain kinds of debt. If the sector has a deficit at this final point, it must obtain funds by the disposal of such assets, or by borrowing through the issue of securities, through the banking system, or through other channels. This area of choice is most strategically placed for the determination of the equilibrium of the system as a whole. In particular, the principle influences upon the movement of interest rates operate here, although some degree of sensitivity to interest rates is to be found in many if not all of the other markets for goods, services, and financial claims. Moreover, this is the area of greatest theoretical difficulty and the focus of such monetary theories as those of loanable funds and liquidity preference.

The general purpose financial claims are not, of course, homogeneous. They differ on the one hand in their yield and on the other in such matters as term, marketability, and security. The investor wondering what to buy (and similar considerations apply to the borrower wondering what to sell) has to consider two areas of probability: the likelihood that he will wish to sell at various points of time in the future and the realizable value of the asset at each of these points of time. Savings deposits or very short-term securities, such as Treasury bills, can always be liquidated at or near face value, but long-term securities will return less or more than the purchase price if sold on the market, according to the level of interest rates at the time of sale. Thus, the investor's expectations about the future course of interest rates are important. Investment in equities will be influenced, also, by expectations about the movement of prices in general and the prospects for each business in particular. Investment in small businesses involves an additional hazard of thin markets and the uncertainty of finding ready buyers. Finally, there is the chance of default even by the issuer of fixed-interest securities, although this element may be overrated; and the spread which occurs in the yield on the bonds of various types of governments and corporations is probably influenced more by convention and the breadth of the market. The decisions which investors will reach when faced by these considerations are decisions taken in a state of uncertainty, and will reflect not only the expected outcome but also their aversion to risk, which may be the strongest element of all in the calculus of some investors and lead them to hold large sums for long periods in low-yielding assets of assured liquidity.

How far it is possible to press this distinction between financial claims which are specialized and those which are not, between those

which are traded for largely nonfinancial reasons and those which are traded on the basis of such investment considerations as just outlined, must be left an open question. The distinction is quite fuzzy in the case of bank credit, which is obtained by some quite specifically to finance inventories, but by others for all sorts of different reasons, both specific and general. Moreover, a financial claim may be viewed differently by borrower and lender. Mortgages guaranteed under the National Housing Act in Canada, for example, provide a source of funds only for the purpose of building or acquiring new houses, but they are just one among many alternative constituents of an investment portfolio to some of the financial institutions which acquire them; on the other hand, the Government of Canada has itself provided substantial funds through Central Mortgage and Housing Corporation in the form of such mortgages, and would view such mortgages in a quite different light than other lenders. The distinction may be of service, however, in appraising the design of the national transactions accounts as an instrument for analysis. In general, it may be stated that the more specialized is a financial claim, the more obvious is the appropriate classification. In the Canadian context, installment credit and some portion at least of mortgages and direct investment are obvious categories and relatively easy to implement statistically. Moreover, the integration of the financial accounts with the national income and expenditure accounts in the national transactions accounts opens the door to an integration of the interpretation and forecasting of the specialized categories with the interpretation and forecasting of those portions of the national income and expenditure accounts to which they are related.

The real difficulties arise in the general-purpose categories. The most justifiable criticism of the national transactions accounts I have heard centers on the categories relating to currency and bank deposits and to securities. Only a single total is shown in the matrix for currency and bank deposits; there is no split between active and inactive balances, or between time and notice (demand) deposits. Similarly, the bond categories include everything regardless of term: Treasury bills, the short-term notes of installment finance companies, and Canada savings bonds redeemable at par at any time, as well as all the various marketable bonds of longer term. Bonds are sub-classified only on the basis of the identity of the issuer or guarantor. In large part, limitations on the availability of data governed these choices, and they are clearly far from satisfactory. The problem is not wholly one of statistics, however. It was not clear to us what would be the best classification even in an ideal statistical world, and I suggest that the responsibility for this doubt lies with the present

state of monetary and financial theory. Keynes told the creators of the national income and expenditure accounts what were the important things to measure, but no one has provided similar guidance to those of us who have had to devise a financial classification. It may be objected that Keynes himself emphasized the concept of liquidity, and the problem of choice between the various types of general-purpose financial claims could be interpreted as an exercise in liquidity preference. Again, the distinction between specialized and general-purpose financial claims which I have suggested bears some resemblance to the view that the important thing to measure is the liquidity surplus or deficit of the various sectors in the economy.⁵

The concept of liquidity, however, is sufficiently ambiguous to limit its analytical power. While money is often thought of as the most liquid of all assets, few would confine the property of liquidity to money, but would extend it to such assets as savings deposits and Treasury bills. Moreover, the minimum level of cash balances required to finance the income-expenditure cycle is not liquid in the sense of being available for any other spending purpose; a much more important source of reserve buying power is the unused line of credit with bank or other lender, which is rarely included in the catalogue of liquidity but clearly should be, whatever the statistical difficulties. In the case of government securities other than Treasury bills, there seems to be no unanimity on whether they should be considered liquid assets or not. When their maturity date is far ahead in the future, they may be held by individuals or institutions primarily for yield and with little thought of liquidation; but when their lives have shortened to a year or two, they become appropriate investments for corporate funds, and are commonly treated by their owners as liquid assets. Even this distinction is clouded by the fact that long-term bonds are as liquid as short-term ones in the eyes of anyone convinced that yields will not rise, and may thus be purchased either for yield or for capital gain with the intent of early sale.

All this is something of a digression, I fear, but it points to the conclusion that financial claims, even of the unspecialized variety, may possess not one property but several, and may possess them in varying degree. To classify them as merely being liquid or not being liquid is an oversimplification of the subtle processes of choice which determine their valuation and distribution. Such a conclusion obviously makes more difficult the determination of the most appropriate system of classification of financial claims, and suggests that

⁵ M. W. Holtrop, president of Der Nederlandsche Bank, expressed this view in an address to the eleventh annual meeting of the International Monetary Fund in Washington, September 25, 1956, "The Theory of Monetary Analysis Used by the Nederlandsche Bank."

the full development of the national transactions accounts and their use in analysis and interpretation will be a gradual process, requiring not only new and better statistical information but also a refinement of the underlying concepts and a growing understanding of the functional relationships in the financial markets.

C O M M E N T

STEPHEN TAYLOR, Board of Governors, Federal Reserve System

Most people would certainly agree with Handfield-Jones that development of transaction, or flow-of-funds, accounts has put the cart before the horse. Construction of unified financial-nonfinancial accounts has progressed considerably faster than unified theories on financial-market operation and on the relation between financial and nonfinancial activities. As a result, these transaction accounts do indeed generate too many numbers to cope with in any efficient form right now, and most users feel strongly a need for a conceptual point of view toward them that is at once succinct, lucid, and practical. There is frequent reference to a second Keynesian revolution, and such an idea is at least implicit in Handfield-Jones' contrast between the "great success" of nonfinancial analysis based on Keynes and the present diffuse state of financial analysis.

I suspect, however, that this wish for a revelation in theory has aspects of postadolescent daydreaming. Keynes's model, after all, was a complete system—it had as much of the financial as of the nonfinancial in it and, hence, should be even more relevant to flow of funds than to national income accounts. The difficulty is that the financial part of the system lacked the ring of validity and relevance that the nonfinancial had through most of the last two decades and, as a result, has never entered into empirical work and current analysis in the way the nonfinancial theorems have. The General Theory has thus become, in practice, a partial analysis, having to do with consumption functions, exogenous investment, government taxes and outlays, and the balance between national income and product.

Yet even in nonfinancial markets, we have gone much beyond the substance of the General Theory. Model-building has developed over the years from simple static equilibrium structures to dynamic and growth systems in which, at one time or another, virtually every variable becomes endogenous except the Cold War. And in current analysis the income and product accounts have brought to light many specific items—transfer-payments, home ownership, consumer durables—that have become strategic factors for policy even though they are not mentioned as such in the General Theory.

Little remains of the General Theory today, it seems safe to say, besides the identity equations and some general principles of model building. These are important—they were extremely seminal and they are the Keynesian contribution Handfield-Jones refers to. But the substance of nonfinancial analysis—and of nonfinancial theory to a considerable extent—has grown up since the Theory, starting from the rudimentary variables expressing one part of the system. Identity equations and general models, on the other hand, are as available to flow of funds today as they are to income and product analysis, and with no real changes in method. In this respect, the General Theory is as much the father of one as of the other of these analytic systems, and flow of funds is no more in need of theoretical roots than income and product.¹

What we need now, rather, is some sophisticated efforts to try out the existing methods on new kinds of information in a new setting. On a formal basis, this has not really been done yet, except in John C. Dawson's prolegomenon of 1957.² The purposes of such work would be several: to establish a working definition of liquidity that is measurable, widely acceptable, and relevant; to do the same, if possible, for the notions of supply of and demand for funds; to place the money supply more specifically in its setting, so that its role can be discussed in concrete terms; to stabilize summary forms of data at several levels of detail; and to indicate broadly the most useful forms of model for financial-nonfinancial analysis. This kind of work is challenging, and can keep us busy for a long time. But it is no more than an extension of the applied-engineering work that has been going on for years in the national income field in the direction of tying concepts to statistics and focusing analysis on measurable quantities.

Handfield-Jones' suggestion that specialized financial flows tied to specific nonfinancial flows be distinguished from more general financial instruments is, of course, a move in such a direction. Some of the specialized instruments he mentions cannot really be removed from the financial-market picture, since, as he recognizes, they may be specialized on either the demand or supply side of the market while at the same time representing a general instrument on the other side. In these cases—and I would include federal borrowing here—they must be recognized within the financial-market framework

¹ I don't mean to be a Michelson here and deny the possibility of an economist's quantum or relativity theory. But any such theory would presumably demolish model-building as we know it and, hence, the successes of nonfinancial together with the failures of financial analysis.

² "A Cyclical Model for Postwar U.S. Financial Markets," *American Economic Review*, May 1958, pp. 145-157.

as exogenous flows imposed on the market that must enter into the allocation process.

The more important candidates for special treatment are those financial flows that are inelastic both as supply and as demand elements to movements in the cost and availability of money. The most prominent possibilities here are saving through insurance and pension funds; amortization of mortgage, consumer installment, and certain other kinds of debt; federal cash balances; and, possibly, consumer credit. A shift of data that combines these items with more conventional measures of saving unquestionably gives a more valid picture of the financial market flows that actually work against one another. The result in, for example, life insurance is the cash-flow concept that is evidently central to the portfolio planning of these companies.

Many of the items, may it be added, in the present United States flow-of-funds system and in Sigel's proposal for integration are intended to facilitate data shifts of just this type. The result in flow of funds is a certain number of multiple treatments that seem to go in two directions at once. These can be a little confusing at first, but they reflect the fundamental problem in integrated accounts of presenting in one format the aggregates that are valid in terms of welfare and resource allocation on the one hand and the quantities most useful for financial analysis on the other. The solution to this problem may be to drop the notion of transaction accounts as an extension of income and product accounts, and to establish a form very close to the Canadian national transactions account matrix as the central and most neutral summary of economic activity. Income and product would then be one of a number of specialized restatements of this main summary, along with financial accounts, input-output, and perhaps others, all quite different from one another in form and focus. The Canadian GNP account is already, in effect, a branch off Handfield-Jones' matrix, and his remarks about specialized instruments hint that in developing a financial presentation he may want to branch off again rather than complicate the very clean form of table that he now has.

On a technical level, the similarities between the Canadian and United States systems of transaction accounts are more striking than the differences in structure, treatments, statements, and attitudes. These similarities appear largely without benefit of collusion, moreover, since both systems have traveled far from their original sources and by independent routes. There are many differences, of course, arising from differences in institutions, data availability, willingness to guess numbers, and also, it appears, from differences of opinion

as to the most useful form of account. It would be futile and pointless to try to discuss them systematically here, but a few are worth mentioning specifically.

Float

First is the matter of floats and their treatment, an ever-present procedural question. Canada, after taking a hard look at floats and how to measure them, has decided to bury the problem by ruling out transaction account discrepancies altogether. (The income and product discrepancy is specifically allocated to nonfinancial corporations as a credit item.) In this treatment consumer-sector flows are calculated as simple residuals in virtually all financial transaction categories, and thus incorporate any floats that may exist in such transactions. As a statistical and operating matter this is a tempting procedure. The major floats of the economy, in money supply and in trade credit, appear to be highly volatile from week to week, and must be estimated from extremely thin information, considering the range of movements. And on specific dates, particularly December 31, they can be far out from normal as a result of various window-dressing operations. Perhaps most important is that we don't really know what analytic content the float should have, since we don't know the extent to which actions of consumers and business are guided by the balance sheet quantities that happen to be on their books at a particular time. With these many problems attached to float, the Canadian treatment has great appeal as a pragmatic aid in using the accounts.

But there are also hidden problems here. Canada has handled trade credit as an incomplete account, part of the miscellaneous category at the end of the table, and has included no specific estimate for noncorporate trade payables and receivables in the accounts. This means that not only the trade-credit float but the whole noncorporate net position in trade credit is reflected in the consumer account, and that financing of noncorporate business through trade payables, which is sizable and cyclically significant in the United States, flows to business through the item for claims on associated enterprises rather than directly in the trade-credit category. This seems roundabout and unnecessary; a simple alternative would have been to measure noncorporate payables as a net residual in the trade-credit category, thus eliminating them from the flow of claims on enterprises. But if one does this, claims on enterprises are immediately contaminated by another flow, namely trade-credit float coming into the consumer sector, where it will balance against

other floats. Here is the float dilemma: with our present estimating procedures, it seems impossible to sweep float under the rug in any satisfactory fashion that does not disturb other aspects of the accounts in some way. Hence the recourse in the United States to direct estimates at one or another point in the loop—trade-credit float in the Securities and Exchange Commission's series on individuals' saving and in noncorporate receivables and payables in the flow-of-funds accounts.

Consolidation

Beyond technical matters such as float, there are differences between the Canadian and United States systems that appear to reflect different opinions as to effective forms of summarization. Examples are the Canadian use of simple combined statements for the banking sector and (at least partially) for the federal government, as against the consolidated form of account that the United States uses for these sectors. There is also the difference in sectoring of owner-occupied housing, which is in a business sector in Canada and in the consumer sector in the United States. There is, of course, no requirement for Canada to "justify" these treatments as "departures" from the United States form; but it would have been interesting to see, somewhere in the Canadian literature, the reasons for choosing them or even, in the case of the banking and government treatments, a statement that the treatment is what it is.

Owner-Occupied Housing

This is particularly true of the Canadian sectoring of owner-occupied housing as a business activity. Canada may simply want it in the business sector, which would be the end of the matter. However, descriptions of the accounts suggest that such sectoring was dictated by income and product treatment rather than because of analytic value, and is somewhat anomalous. The product accounts do not really seem controlling here, however, since the national transactions accounts are intended only to maintain full consistency with income and product concepts rather than to incorporate the product accounts bodily in the transaction system. There is no requirement that income and product be visible as such, or that all production-account activities or even all business-type activities be included in business-sector accounts. The stipulation was rather that the national transactions accounts be "consonant" with the older system, and in operation this has meant that the main aggregates of income and

product are derivable from the published accounts, but are not shown as such. Given the present format of the transaction tables, the placing of owner-occupied housing in the consumer sector would, it is true, garble the numbers for personal taxes and consumption and for business sales of final product. This, however, comes from the very concise and summary form of the published accounts; an extra column or two would not only take care of the problem, but would permit some deconsolidation of other current business transactions wherever this might seem useful. If the treatment is thus not as constrained technically as it might seem, the question of owner-occupied housing becomes an analytic one, namely, whether consumer investment in housing is governed by the income-generating considerations that presumably operate in commercial business. Is this the Canadian view? This is the kind of question that is left hanging in Canadian discussions of the national transactions accounts.

Business Sectoring

Apart from the housing matter, the Canadian and United States systems are close together in their sectoring of business and treatment of noncorporate transactions, and Handfield-Jones' comments and doubts on the matter reflect our own views quite accurately. However, the custom of apologizing for the noncorporate sector because of its relations with proprietors' consumer activities may be becoming too well established. As an operational matter, the complaint about ties with the consumer sector is perhaps beside the main or prior point, which is, as Handfield-Jones suggests, that within the business group a corporate-noncorporate split is probably not what we really want. This is a matter worth expanding somewhat.

At the present time, nonfarm business data are sectored in most social accounting systems on the basis of legal form of organization, namely, corporate and noncorporate. This legal distinction stems primarily from the nature of tax statistics, at least in the United States, and is considerably less significant for most purposes than the distinction between large and small business. The corporate-noncorporate break is frequently used as an approximation for the division between large and small business; and it is, in general, a fairly efficient one, considering its low cost. We could, nevertheless, gain substantial information from efforts to get data for large and small business more explicitly.

A basic source of data in the United States for such a break may be found in the financial data reported by publicly held corporations

to the SEC. Many items for corporations as a whole that are inadequate in present data, such as bank loans, stock issues, and capital outlays, could be computed more accurately and interrelated with greater precision for this smaller group of firms. Given national aggregates for business as a whole with respect to these items, residual estimates for small business could be made on a more dependable basis than is possible with the current techniques, which use fixed corporate-noncorporate ratios within industries.

Use of these reports could thus produce a more significant division between types of business, considerably more accurate information on large business, and, probably, better data on small business than we now have for the noncorporate sector. There seems little to be gained, however, by trying anything less as a means of making the large-small break; taking short cuts would mean slicing the existing information in slightly different ways, using a new set of assumptions that are perhaps less justified than our present ones and generating accounts possibly less germane to short-run analysis. Reports for individual companies, such as those in SEC files, could, on the other hand, be a source of substantial new information for many industries, and might elevate the whole complex of business, and perhaps consumer, accounts to a new level of reliability and usefulness in both the United States and Canada.