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APPENDIX I: PART F

RELATIONSHIP OF BALANCE SHEETS AND WEALTH ESTIMATES TO NATIONAL INCOME ACCOUNTS

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RELATIONSHIP OF BALANCE SHEETS AND WEALTH ESTIMATES TO NATIONAL INCOME ACCOUNTS[1]

This paper is concerned with the development of a national accounting structure which provides systematically for inclusion of stocks as well as the conventional flows. Substantive issues are approached from the standpoint of how different proposals affect the design of the accounts.

The first part of the paper sets forth a statement of transactions engaged in during a period. These transactions form the basis for the traditional national income and product production, appropriation and saving and investment accounts. I then describe a valuation statement, which contains information needed to supplement the saving and investment account to derive changes in a balance sheet statement. This latter statement provides the link between the flow data in the income and product accounts and the stock information shown on the balance sheet.

This set of accounts is essentially neutral with respect to the broad issues that most of us are really concerned with. Nevertheless, I have thought it useful to illustrate how divergent views on sectoring, capitalization, and valuation can be accommodated in the context of the set of accounts derived herein.

It is possible to draw up a simple statement of all the transactions engaged in by a given economic unit during a certain period. Table A contains an example of such a statement for all proprietors for the year 196x. Any transaction which tends to increase the cash balance of the economic unit is entered as a credit, while transactions which tend to decrease cash are entered as debits. The balance of this account (line 20) thus equals the change in cash holdings over the accounting period.

Note that such a statement contains a lot of information, but that traditional analytical concepts such as net income, saving, and inventory change do not appear in the account since they are not transactions. This statement serves principally as a checklist from which to construct the national accounts.

Preparing Income and Product Accounts

The information contained in this transaction statement can be allocated into three analytically useful accounts for each unit: production, appropriation, and saving and investment accounts. Table B shows these accounts for proprietors. The production account portrays output and income and other costs of production (pt. I of table B). The appropriation account confronts income earned in production and transfer receipts with taxes, consumption, and saving (pt. II of table B). The saving and investment account shows saving and borrowing offset by investment and lending (pt. III of table B).

[1] This paper does not necessarily reflect the views of the Office of Business Economics.

Let us now proceed to construct the three accounts for our nonfarm proprietors from the transaction statement. The production account includes the following transactions: sales, rents, the purchase of raw materials, wages, interest paid, and indirect taxes. But this is not all—we are measuring production and production need not be sold. In order to have a complete measure we impute the change in inventory during the period as a sale by the firm to its own savings and investment account. Further, we recognize depreciation—which is a valuation change not a transaction—as a charge against output in order to provide for information on net income. Finally, we impute a rent receipt of 18 to the production account for the entrepreneurs' rent of their homes. Entrepreneurial and net rental income becomes the balancing entry in the production account.

Entrepreneurial and rental income, and imputed rents enter the appropriation account from the production account while interest, dividends, and transfers received, and income taxes and consumer goods purchased are taken directly from the transaction statement. Saving is then struck as the residential balance in the appropriation account.

The saving and investment account includes net saving carried down from the appropriation account and depreciation and inventory purchases carried down from the production account. The purchase of physical and financial assets and borrowing are taken from the transaction account.

The accounts as now set up permit us to take account of economic realities which are not transactions since they are internal to the proprietors' account: entrepreneurial and rental income (dr B–I; cr B–II); depreciation (dr B–I; cr B–III); inventory change (dr B–III; cr B–I); imputed rent (dr B–II; cr B–I); and saving (dr B–II; cr B–III). A vertical consolidation of these three accounts would eliminate all of these items and yield a transaction account like table A; except that purchases and sales of similar items would be shown net rather than gross. The preparation of meaningful national income accounts may thus be viewed as a process of adding useful information to the bare record of transactions.

Preparation of Balance Sheets

An economic unit's balance sheet records the value of assets held and liabilities owed at a given moment of time. A balance sheet struck at the end of a period differs from that at the beginning of a period because (1) the collection of assets and liabilities has changed—new items have been added and old ones eliminated, and (2) there has been a change in the value of assets and liabilities held on both dates or acquired in the interim. The saving and investment account (B–III) shows the changes coming from transactions, while changes in value may be recorded in a valuation statement such as table C.

The valuation statement records changes during the period in the value of assets held at the end of the period. Increases in value are debited to this account, while decreases are credited. In the example given here (table C), changes in market value are recorded for selected assets. Asset and liability items not having entries in table C were assumed to not have changed in unit value during the period.

Depreciation is also recorded in this statement since it is essentially a reduction in the value of fixed capital. It would be possible to record here also other changes in valuation that are not due to market values if desired for analytical convenience.

We could prepare from table A a statement of changes in the balance sheet stemming from current transactions, but we already have such a statement in the saving and investment account (table B–III). However, the distinction between net saving and depreciation embedded in table B–III would not be in a statement of balance sheet changes coming from current transactions. Instead, the change in net worth from current transactions can be obtained by adding back depreciation to net saving; i.e., "gross saving" in table B–III.

We now have the two elements—transactions and valuations—of the change in the balance sheet. We now prepare a change in balance sheet account in table D. The portion due to transactions comes from table B–III, and that due to valuation comes from table C, with debits netted against credits for specific balance sheet items.

Having derived the change in balance sheet account, we now add the changes to the beginning balances to obtain the closing balance sheet (table E).

Derivation of Complete Set of National Accounts

We now move on to consideration of the relation between the national accounts and balance sheets for all sectors of the economy. The detailed construction of these tables is the same as for proprietors; in subsequent discussion we shall concentrate on the derivation of national accounts.

Following table E, there are eight statements accounting for six groups of transactors: proprietors, persons other than proprietors, nonfinancial corporations, financial intermediaries, government, and foreigners. Table 1 shows the transaction statement; table 2 the production account; table 3 the appropriation account; table 4 the saving and investment account; table 5 the valuation statement; table 6 the change in balance sheet statement; table 7 the beginning balance sheet, and table 8 the ending balance sheet. In each table, except table 1, three additional columns are shown: A combined account including foreigners, which is simply the arithmetic sum of each row; a combined national account, excluding foreigners; and a consolidated national account wherein the values of similar items on the debit and credit sides of the account are netted against each other.

In the production account (table 2) the following items have been "imputed": interest on consumer debts for persons other than proprietors; capital services exported to abroad for nonfinancial corporations; services performed without charge by financial intermediaries; and the value of work performed by civil servants for Government. When we consolidate the production account (column 9) we derive GNP. This GNP total can be broken down as many ways as is convenient: In the Survey of Current Business we break it down by type of purchaser, by type of product, by industry producing it, by legal form of the organization producing it, and by incomes and other charges against output.

The appropriation account (table 3) consolidates (col. 9) to give us net national product. We currently maintain appropriation accounts for persons (col. 10) Government (col. 5) and foreigners (col. 6), and consolidate the appropriation accounts for nonfinancial corporations and financial intermediaries into the production account. More analytic interest is focused on sector appropriation accounts than on the consolidated national appropriation account, partly because under present depreciation practice the net national product is not too meaningful and partly because the sector accounts confront purchases with the purchasers' incomes. It should be noted that personal and governmental purchases of durable goods are presently included in the appropriation accounts. The alternative of capitalizing such purchases is discussed below.

The saving and investment account (table 4) consolidates to form the customary national income saving and investment account (col. 9). I have assumed that we can satisfactorily solve the problem of float, so that total debits equal total credits for each type of financial claim in the combined accounts (col. 7). Combining the national accounts (col. 8) leaves imbalances in these financial claims, equal to foreigners' net transactions in them. These equal net foreign investment and are "left over" in consolidating the national accounts.

In the valuation statement (table 5) no equivalence between debits and credits is maintained. In effect unrealized capital gains or losses are attributed to the asset holder, and no offsetting capital losses or gains are attributed to the issuer. The contraentry for a valuation change in an asset is made to the holders' net worth.

Because of the treatment of valuation changes just described, the change in balance sheet account (table 6), and the balance sheet (tables 7 and 8), have balances in the financial claims of the consolidated national accounts (col. 9 in each table) which equal net foreign holdings, plus the excess of market value over issue price. This problem is discussed in the section on valuation of financial claims, below.

Application of Accounting Framework

The framework portrayed has been set up in terms of the present national accounts. We shall now consider modifications required to handle different sectoring, capitalization or valuation principles.

SECTORING

The full panoply of accounts just set up can only be derived for amalgamations of decisionmaking economic units. This creates no problem when the focus of wealth analysis is on the influence of wealth on the purchase, saving, lending or borrowing decisions of suitable classes of economic units. By the time the wealth inventory data become available, and provided we get the necessary funds, the Office of Business Economics will probably be able to provide the requisite sector details in the current accounts, at least for recent years.

However, the data provided by a wealth inventory can also provide the means for production function and capital output ratio analysis. Here the decisionmaking unit is inappropriate because of the prevalence and importance of the multiunit firm. Most workers in these

fields prefer establishment information. For such studies, information from the production account and selected capital items from the balance sheet are what is needed, and these items can be obtained on an establishment level. The Office of Business Economics has made substantial progress in breaking down the production accounts by establishment, particularly in the preparation of input-output tables and in gross product originating by industry. Thus, the outlook is that by the time the establishment-based plant and equipment statistics are available from the wealth inventory, we should have matching output data available.

Some analysts have expressed interest in placing the business activities of entrepreneurs in one sector and their personal activities in another. While I personally see little use in the distinction, a technique such as that employed in the present flow of funds accounts would be a reasonable compromise. In that system the entrepreneurial income is paid into the entrepreneurs' consumer appropriation account, and the increase in the net worth of the business is treated as a claim by the consumer on the business.

CAPITAL VERSUS CURRENT ITEMS

The present national accounts treat the following purchases of goods and services as capital items: business purchases of inventory, durable goods, and construction, and persons' purchases of housing. Purchases of all consumer durable goods and of government durables and construction are treated as current purchases in the appropriation accounts of the respective entities. No attempt is made to capitalize research and development outlays, advertising, or the acquisition of goodwill. In preparing the account tables, I have followed present OBE practice.

The distinction between current and capital items is crucial in setting up a fully integrated set of current and balance sheet accounts. If different distinctions are used in preparing balance sheets than in preparing income and product accounts, our set of accounts would be integrated only in the sense of being derived from a common transaction statement (table 1).

As noted earlier, there are two general types of studies where analysts might like common stock and flow numbers: production function studies and studies of the influence of existing stock on purchase decisions. I submit that the present NID capitalization treatment is most appropriate for the former, while the latter kinds of analyses might be best served by broader definitions of wealth.

The usefulness of the present NID distinction between capital and current is that it provides capital input data for the types of output which are priced in markets. If the definition of capital were widened to include, say, consumer and Government durables, we should have to cook up nonmarket priced output measures for the services of much of such capital. I doubt that we would really add much to our knowledge of production and income generation by this approach.

However, existing stocks of consumer and Government durables may play some role in decisions by these groups to purchase such items. In the absence of reliable data, I am somewhat skeptical about this. However, we cannot settle the question without formulating and test-

ing hypotheses. However, we cannot see how artificial measures of the services provided by consumer and Government durables will help this analysis of the influence of stocks on purchases.

One possible approach would be to enter such purchases in the saving and investment accounts, and not impute output to them. Depreciation of such purchases would enter the valuation statement, yielding the desired net stocks on the balance sheets. This might be a possible compromise, but has the drawback of departing from currently used measures of personal saving and Government surplus.

VALUATION OF FINANCIAL CLAIMS

Total debits do not equal total credits in tables 6, 7, and 8 for the following financial claims: cash, U.S. securities, other bonds, and stocks. The consolidated national wealth statement, column 9 of tables 7 and 8, includes (1) the value of "real" assets, (2) claims on foreigners, and (3) the excess of the market value of financial claims over issue value.

If we revalue the issuers' obligations to current market value, the debits and credits for the particular financial claim will equal. However, in order to balance within a sector account we must enter a contraentry to the revaluation of the obligation.

Such a contraentry could either be to the asset side—perhaps to some "goodwill" item—or to net worth. If the contraentry is made to the asset side, our consolidated national wealth would be identical with that derived from the accounts shown in this paper, except that the excess of market over issue value would appear as a "goodwill" item rather than mixed up with specific financial claims.

The other option—contraentry to net worth—keeps the excess of market over issue value from affecting the consolidated national wealth: we are left with (1) the value of "real" assets and (2) claims on foreigners. However, this involves us in a logical difficulty in the case of common stock. Common stock is a financial claim traded on the market. However, in the case of stock, what the market values is the net worth of the firm. Therefore, making the contraentry for stock to the net worth account would be a species of giving and then taking

away. The contraentry for common stock would thus appear to be a prime candidate for the asset side.

In the case of debt, a difference between current market value and issue price is not a revaluation of the firm, but a reflection of changes in interest rates. If market value is below issue price, the issuer is better off, because he issued his bonds at a lower rate of interest. Likewise, if market value is above issue price, the issuer is worse off, because he issued his bonds at a higher rate of interest. Since it is essentially a case of "well offness" the contraentry for debt should be to net worth.

If we make the contraentry for stock revaluation to "goodwill," and that for debt revaluation to net worth, our national balance sheet will consolidate out to (1) the value of "real assets," (2) claims on foreigners, and (3) the excess of the value of firms as going concerns over the resale or replacement values of the assets taken separately.

ILLUSTRATIVE PROPRIETORS' ACCOUNTS, 196X

A. Proprietors' transactions statement, 196X

[Billions of dollars]

	Debit	Credit
1. Sales of goods and services		150
2. Raw materials	65	
3. Consumer goods	50	
4. Houses	25	19
5. Plant and equipment	35	23
6. Rent	5	6
7. Wages	20	
8. Interest	10	15
9. Dividends		22
10. Transfers		1
11. Indirect taxes	25	
12. Income taxes	25	
13. U.S. securities	10	9
14. Accounts receivable	150	140
15. Accounts payable	50	80
16. Bank loans	1	5
17. Mortgages	15	20
18. Other bonds	5	6
19. Corporate stock	3	8
20. Change in cash balance	10	
21. Total debits and credits	504	504

B. Proprietors' income and product account, 196X

[Billions of dollars]

	Debit	Credit
I. Production account:		
1. Sales of goods and services (T)		150
2. Rents (T)	5	6
3. Imputed sales: to inventory account		12
4. Owner occupancy of home		18
5. Purchase of raw materials (T)	65	
6. Product originating: (Above credit minus debit)	(116)	
7. Wages (T)	20	
8. Interest (T)	10	
9. Entrepreneurial and rental income [1]	49	
10. Depreciation	12	
11. Indirect taxes (T)	25	
12. Total debits and credits	186	186
II. Appropriation account:		
1. Interest (T)		15
2. Entrepreneurial and rental income		49
3. Dividends (T)		22
4. Transfers (T)		1
5. Income taxes (T)	25	
6. Personal consumption expenditures:		
7. Consumer goods (T)	50	
8. Imputed rent on home	18	
9. Personal saving	−6	
10. Total debits and credits	87	87
III. Saving and investment account:		
1. Personal saving		−6
2. Depreciation		12
3. Gross saving [1]		6
4. Plant and equipment (T)	12	
5. Houses (T)	6	
6. Inventory	12	
7. Physical assets	30	
8. Cash (T)	10	
9. U.S. securities (T)	1	
10. Accounts receivable (T)	10	
11. Accounts payable (T)		30
12. Bank loans (T)		4
13. Mortgages		5
14. Other bonds (T)	−1	
15. Stocks (T)	−5	
16. Total debits and credits	45	45

[1] Equals change in net worth from transactions.

NOTE.—Items marked (T) come from the transaction statement, either directly or after netting debits against credits. The net debits or credits are entered on the debit side if the item is customarily an asset, or on the credit side if it is customarily a liability or net worth item.

C. Proprietors' valuation statement, 196X

[Billions of dollars]

	Debit	Credit
1. Change in net worth from valuation		45
2. Plant and equipment	5	13
3. Price change	5	3
4. Depreciation		10
5. Houses	8	2
6. Price change	8	
7. Depreciation		2
8. Inventories	6	2
9. Land	36	6
10. U.S. securities		2
11. Other bonds		3
12. Corporate stock	20	2
13. Total debits and credits	75	75

D. Proprietors' change in balance sheet account, 196X

[Billions of dollars]

	Change in balance sheet	Due to transactions	Due to valuation
Part A equals credit side:			
1. Accounts payable	30	30	
2. Bank loans	4	4	
3. Mortgages	5	5	
4. Total liabilities	39	39	
5. Net worth	51	6	45
6. Total liabilities and net worth	90	45	45
Part B equals debit side:			
1. Plant and equipment	4	12	−8
2. Houses	12	6	6
3. Inventory	16	12	4
4. Land	30		30
5. Cash	10	10	
6. U.S. securities	−1	1	−2
7. Accounts receivable	10	10	
8. Other bonds	−4	−1	−3
9. Stocks	13	−5	18
10. Total assets	90	45	45

E. Proprietors' balance sheet, 196X

[Billions of dollars]

	Beginning of year	Change in balance sheet	End of year
Part A: Credit side:			
1. Accounts payable	100	30	130
2. Bank loans	15	4	19
3. Mortgages	50	5	55
4. Total liabilities	165	39	204
5. Net worth	383	51	434
6. Total liabilities and net worth	548	90	638
Part B: Debit side:			
1. Plant and equipment	100	4	104
2. Houses	80	12	92
3. Inventory	70	16	86
4. Land	60	30	90
5. Cash	40	10	50
6. U.S. securities	18	−1	17
7. Accounts receivable	120	10	130
8. Other bonds	20	−4	16
9. Stocks	40	13	53
10. Total assets	548	90	638

ILLUSTRATIVE NATIONAL ACCOUNTS, 196X

TABLE 1.—*Transaction statement*

[Billions of dollars]

	Proprietors (1)	Persons other than proprietors (2)	Nonfinancial corporations (3)	Financial intermediaries (4)	Government (5)	Foreigners (6)	Combined accounts including foreigners (7)
Part A: Credit side: total	504	559	1,632	243	390	56	3,384
Sales of goods and services	150		650	15		25	840
Sales of used houses	19	10					29
Sales of used plant and equipment	23		10	1			34
Sales of land			8				8
Rent received	6	34	5				45
Wages received		190					190
Interest received	15	20	4	50	10	3	102
Dividends received	22	29	10	5			66
Transfers received	1	44					45
Indirect taxes received					100		100
Income taxes received					255		255
Borrowing, or sales or redemption of—							
U.S. securities	9	19	10	8	25	10	81
Accounts receivable	140		310				450
Accounts payable	80		500				580
Bank loans	5	10	30	15			60
Consumer credit		100	30	20			150
Mortgages	20	40		35			95
Other bonds	6	12	50	2		10	80
Corporate stock	8	45	15	2		8	78
Life insurance premiums or benefits		6		10			16
Deposit creation				80			80
Part B: Debit side: total	504	559	1,632	243	390	56	3,384
Purchase of raw materials	65		200	10		10	285
Purchase of consumer goods	50	108			200	10	368
Purchase of houses	25	50					75
Purchase of plant and equipment	35		75	5	50	10	175
Purchase of land					8		8
Rent paid	5	30	10				45
Wages paid	20		100	30	40		190
Interest paid	10	30	25	12	20	5	102
Dividends paid			60	6			66
Transfers paid					45		45
Indirect taxes paid	25		75				100
Income taxes paid	25	75	150	5			255
Lending or purchases or repayment of—							
U.S. securities	10	11	2	16	27	15	81
Accounts receivable	150		430				580
Accounts payable	50		400				450
Bank loans	1	4	10	45			60
Consumer credit		50	60	40			150
Mortgages	15	20		60			95
Other bonds	5	52	5	8		10	80
Corporate stock	3	55				20	78
Life insurance, premiums or benefits		10		6			16
Increases in cash balances	10	64	30			−24	80

TABLE 2.—*Production account*

	Proprietors (1)	Persons other than proprietors (2)	Nonfinancial corporations (3)	Financial intermediaries (4)	Government (5)	Foreigners (6)	Combined accounts including foreigners (7)	Combined national account (8)	Consolidated national account (derived GPN) (9)
Part A: Credit side:									
Sales of goods and services	150		650	15			815	815	540
Rents received	6	34	5				45	45	
Imputed sales:									
Inventory change	12		60				72	72	72
Rents	18	36					54	54	54
Other		[1] 20	[2] 2	[3] 43	[4] 40		105	105	105
Total credits	186	90	717	58	40		1,091	1,091	771
Part B: Debit side:									
Purchase of new materials	65		200	10			275	275	
Rents paid	5	30	10				45	45	
Product originating:									
Wages	20		100	30	40		190	190	190
Net interest	10	30	23	5			68	68	68
Entrepreneural and rental income	49	26					75	75	75
Profits before taxes			266	11			277	277	277
Depreciation	12	4	43	2			61	61	61
Indirect taxes	25		75				100	100	100
Total debits	186	90	717	58	40		1,091	1,091	771

[1] Service charge equivalent to interest paid on consumer debt.
[2] Net capital services furnished to foreigners.
[3] Imported services furnished without payment.
[4] Value of services furnished by civil servants assumed equal to wages paid.

TABLE 3.—*Appropriation account*

[Billions of dollars]

	Proprietors (1)	Persons other than proprietors (2)	Non-financial corporations (3)	Financial intermediaries (4)	Government (NID account III) (5)	Foreigners (NID account IV) (6)	Combined accounts including foreigners (7)	Combined national account (8)	Consolidated national account (derived NNP) (9)	Personal account (NID account II) (1+2) (10)
Part A: Credit side:										
Wages		190					190	190	190	190
Interest	15	63					78	78	68	78
Entrepreneurial and rental income	49	26					75	75	75	75
Profits before tax			266	11			277	277	277	
Imports						25	25			
Dividends	22	29					51	51		51
Transfer payments	1	44					45	45		45
Indirect taxes					100		100	100	100	
Income taxes					255		255	255		
Total credits	87	352	266	11	355	25	1,096	1,071	710	439
Part B: Debit side:										
Personal consumption expenditures	68	207					275	275	275	275
Government purchases					290		290	290	290	
Exports						32	32			
Personal saving	−6	70					64	64	64	64
Undistributed profits			66	5			71	71	71	
Government surplus					10		10	10	10	
Net foreign saving						−7	−7			
Dividends			50	1			51	51		
Transfer payments					45		45	45		
Income taxes	25	75	150	5			255	255		100
Interest					10		10	10		
Total debits	87	352	266	11	355	25	1,096	1,071	710	439
Part C: Memorandum:										
Derivation of p.c.e.										
Transactions	50	108								
Imputed rent	18	36								
Interest on consumer debt		20								
Imputed finance service charge		43								
Derivation of Government purchasers										
Transactions					250					
Imputed output of civil servants					40					

TABLE 4.—*Saving and investment account*

[Billions of dollars]

	Proprietors (1)	Persons other than proprietors (2)	Nonfinancial corporations (3)	Financial intermediaries (4)	Government (5)	Foreigners (6)	Combined accounts, including foreigners (7)	Combined national account (8)	Consolidated national account (9)
Part A: Credit side:									
Net saving or surplus	−6	70	66	5	10	−7	138	145	145
Depreciation	12	4	43	2			61	61	61
Subtotal: gross saving or surplus [1]	6	74	109	7	10	−7	199	206	206
Deposits [2]				80			80	80	
U.S. securities [2]					−2		−2	−7	
Accounts payable [2]	30		100				130	130	
Bank loans [2]	4	6	20				30	30	
Consumer credit [2]		50					50	50	
Mortgages [2]	5	20					25	25	
Other bonds [2]			45			[3] 10	55	45	
Stocks [2]			15	2		[3] 8	25	17	
Insurance liabilities (reserves) [2]				4			4	4	
Total sources of funds	45	150	289	93	8	11	596	585	206
Part B: Debit side:									
Plant and equipment	12		65	4			81	81	81
Houses	6	40					46	46	46
Inventories	12		60				72	72	72
Land			−8		8				
Subtotal: physical assets	30	40	117	4	8		199	199	199
Cash [2]	10	64	30			−24	80	104	[4] 24
U.S. securities [2]	1	−8	−8	8		5	−2	−7	[4] −5
Accounts receivable [2]	10		120				130	130	
Bank loans [2]				30			30	30	
Consumer credit [2]			30	20			50	50	
Mortgages [2]				25			25	25	
Other bonds [2]	−1	40		6		[3] 10	55	45	
Stocks [2]	−5	10				[3] 20	25	5	[4] −12
Equity in life insurance [2]		4					4	4	
Total uses of fund	45	150	289	93	8	11	546	585	206

[1] Equals change in net worth from current transactions.

[2] The net of borrowing and repayments is entered in the credit side of the borrowers accounts and in the debit side of the creditors accounts.

[3] In the foreign account, bonds and stocks are shown gross, since foreigners purchase American securities and Americans purchase foreign securities. I believe it is analytically interesting to have a record of these transactions.

[4] Financial items left over in consolidation equal net foreign investment of 7.

TABLE 5.—*Valuation statement*

[Billions of dollars]

	Proprietors (1)	Persons other than proprietors (2)	Nonfinancial corporations (3)	Financial intermediaries (4)	Government (5)	Foreigners (6)	Combined accounts including foreigners (7)	Combined national account (8)	Consolidated national account (9)
Part A. Credit side:									
Change in net worth from valuation [1]	45	68	17	−8	6	4	132	128	
Plant and equipment, price decline [2]	3		7	1			11	11	
Plant and equipment, depreciation [2]	10		43	2			55	55	
Houses, price decline [2]		1					1	1	
Houses, depreciation [2]	2	4					6	6	
Inventories, price decline	2		4				6	6	
Land, price decline	6	5	8		9		28	28	
U.S. securities, price decline	2	3		10		2	17	15	
Other bonds, price decline	3	5		12		1	21	20	
Stocks, price decline	2	4		5		3	14	11	
Total credits	75	90	79	22	15	10	291	281	
Part B. Debit side:									
Plant and equipment, price rise [2]	5		21	2			28	28	
Houses, price rise [2]	8	20					28	28	
Inventories, price rise	6		18				24	24	
Land, price rise	36	30	40	2	15		123	123	
U.S. securities, price rise									
Other bonds, price rise				3			3	3	
Stocks, price rise	20	40		15		10	85	75	
Total debits	75	90	79	22	15	10	291	281	
Part C. Net valuation balances:									
Customary debits on balance sheet:									
Plant and equipment	−8		−29	−1			−38	−38	−38
Houses	6	15					21	21	21
Inventories	4		14				18	18	18
Land	30	25	32	2	6		95	95	95
U.S. securities	−2	−3		−10		−2	−17	−15	−15
Other bonds	−3	−5		−9		−1	−18	−17	−17
Stocks	18	36		10		7	71	64	64
Total net debit adjustment	45	68	17	−8	6	4	132	128	128
Customary credits on balance sheet:									
Net worth	45	68	17	−8	6	7	132	128	128

[1] This is net balance in this account.

[2] The change in value of a stock of fixed assets equals the fall in the values set by the market. For analytic convenience I have disaggregated the "observed" decline into (1) that due to depreciation, (2) the residual obtained by deducting depreciation from the "observed" decline. If the residual was positive, it is entered as a debit; if negative it is entered as a credit. Such a segregation is not needed to construct a balance sheet, but permits us to analyze two quite different phenomena: physical wear and tear and revaluations of future income.

TABLE 6.—*Change in balance sheet account*

[Billions of dollars]

	Proprietors (1)	Persons other than proprietors (2)	Nonfinancial corporations (3)	Financial intermediaries (4)	Government (5)	Foreigners (6)	Combined accounts including foreigners (7)	Combined national account (8)	Consolidated national account (9)
Part A: Credit side:									
Current surplus	51	142	126	−1	16	−3	331	334	334
Deposits				80			80	80	
U.S. securities					−2		−2	−2	
Accounts payable	30		100				130	130	
Bank loans	4	6	20				30	30	
Consumer credit		50					50	50	
Mortgages	5	20					25	25	
Other bonds			45			10	55	45	
Stocks			15	2		8	25	17	
Insurance liabilities				4			4	4	
Total credits	90	218	306	85	14	15	728	713	334
Part B: Debit side:									
Plant and equipment	4		36	3			43	43	43
Houses	12	55					67	67	67
Inventories	16		74				90	90	90
Land	30	25	24	2	14		95	95	95
Cash	10	64	30			−24	80	104	[1] 24
U.S. securities	−1	−11	−8	−2		3	−19	−22	[1] −20
Accounts receivable	10		120				130	130	
Bank loans				30			30	30	
Consumer credit			30	20			50	50	
Mortgages				25			25	25	
Other bonds	−4	35		−3		9	37	28	[1] −17
Stocks	13	46		10		27	96	69	[1] 52
Equity in life insurance		4					4	4	
Total debits	90	218	306	85	14	15	728	713	334

[1] See discussion of the valuation of financial claims.

TABLE 7.—*Beginning balance sheet*

[Billions of dollars]

	Proprietors (1)	Persons other than proprietors (2)	Nonfinancial corporations (3)	Financial interme-diaries (4)	Government (5)	Foreigners (6)	Combined accounts, including foreigners (7)	Combined national account (8)	Consolidated national account (9)
Part A: Credit side:									
Net worth	383	1,000	550	75	−184	140	1,964	1,824	1,649
Stocks			150	25		50	225	175	
Accumulated surplus	383	1,000	400	50	−184	90	1,739	1,649	1,649
Liabilities	165	470	760	550	284	20	2,249	2,229	[1] 250
Deposits				500			500	500	[1] 60
U.S. securities					284		284	284	[1] 76
Accounts payable	100		300				400	400	
Bank loans	15	20	60				95	95	
Consumer credit		250					250	250	
Mortgages	50	200					250	250	
Other bonds			400			20	420	400	[1] 114
Insurance liabilities				50			50	50	
Total liabilities and net worth	548	1,470	1,310	625	100	160	4,213	4,053	1,899
Part B: Debit side:									
Plant and equipment	100		430	30			560	560	560
Houses	80	400					480	480	480
Inventories	70		280				350	350	350
Land	60	50	50	4	100		264	264	264
Cash	40	280	120			60	500	440	
U.S. securities	18	110	50	30		20	228	208	
Accounts receivable	120		280				400	400	
Bank loans				95			95	95	
Consumer credit			100	150			250	250	
Mortgages				250			250	250	
Other bonds	20	220		46		20	306	286	
Stocks	40	360		20		60	480	420	[1] 245
Equity in life insurance		50					50	50	
Total assets	548	1,470	1,310	625	100	160	4,213	4,053	1,899

[1] See discussion of the valuation of financial claims.

TABLE 8.—*Ending balance sheet*

[Billions of dollars]

	Proprietors (1)	Persons other than proprietors (2)	Nonfinancial corporations (3)	Financial intermediaries (4)	Government (5)	Foreigners (6)	Combined accounts including foreigners (7)	Combined national account (8)	Consolidated national account (9)
Part A. Credit side:									
Net worth	434	1,142	691	76	−168	145	2,320	2,175	1,983
Stocks			165	27		58	250	192	
Accumulated surplus	434	1,142	526	49	−168	87	2,070	1,983	1,983
Liabilities	204	546	925	634	282	30	2,621	2,591	[1] 263
Deposits				580			580	580	[1] 36
U.S. securities					282		282	282	[1] 96
Accounts payable	130		400				530	530	
Bank loans	19	26	80				125	125	
Consumer credit		300					300	300	
Mortgages	55	220					275	275	
Other bonds			445			30	475	445	[1] 131
Insurance liabilities				54			54	54	
Total liabilities and net worth	638	1,688	1,616	710	114	175	4,941	4,766	2,246
Part B. Debit side:									
Plant and equipment	104		466	33			603	603	603
Houses	92	455					547	547	547
Inventories	86		354				440	440	440
Land	90	75	74	6	114		359	359	359
Cash	50	344	150			36	580	544	
U.S. securities	17	99	42	28		23	209	186	
Accounts receivable	130		400				530	530	
Bank loans				125			125	125	
Consumer credit			130	170			300	300	
Mortgages				275			275	275	
Other bonds	16	255		43		29	343	314	
Stocks	53	406		30		87	576	489	[1] 297
Equity in life insurance		54					54	54	
Total assets	638	1,688	1,616	710	114	175	4,941	4,766	2,246

[1] See discussion of the valuation of financial claims.

Comments on Mr. Gorman's Paper

By Stanley J. Sigel

Although the primary focus of the present report on wealth is on the improvement of the statistical and conceptual basis of estimates of natural real wealth, it is important at the earliest stage possible to give serious consideration to how such concepts and measures can be integrated into broader frameworks of national accounting—sector balance sheets, including financial claims, and an integrated flow structure of national accounts covering both the traditional income and product accounts and financial flow accounts. Mr. Gorman's paper in calling attention to the problem of integrating wealth estimates into a general framework of social accounting is a welcome supplement to the report.

The main purpose of his paper is to investigate the nature of the links between wealth estimates and the national income accounts. The approach used is to place the wealth estimates within a framework of a complete structure of sector balance sheets and to place the national income accounts within a framework of a complete structure of sector flow accounts (integrating income and product and financial flows). The balance sheet system and the integrated flow system are given the same sector structure and the same asset and liability category structure; one can thus focus on valuation problems as the main conceptual and statistical difficulties in linking the flow and balance sheet systems. In approaching the problem in this way, Mr. Gorman has made his paper one devoted as much to the problems and characteristics of an integrated structure of national accounts as to questions of the valuation linkage.

Mr. Gorman's paper is extremely brief and he obviously has not attempted or intended to present a definitive paper on the subject. The account tables he presents have dummy numbers in them and thus do not necessarily represent the way the author would actually set down an integrated structure for the United States that was intended to be implemented statistically and to be used analytically. Nevertheless, he has set down an integrated structure of flow and balance sheet accounts which is quite detailed and specific. He has made choices and decisions; he has gone along with or departed from treatments that have been suggested elsewhere or are already incorporated elsewhere in published systems of accounts. Moreover, whatever his intentions in the matter, readers, whether justifiably or not, may, because of Mr. Gorman's official position, conclude that the paper is at least a reflection of serious comprehensive thinking on the subject rather than merely representing an offhand generally illustrative structure done for the sole purpose of dealing with the problem of valuation linkage at a broad schematic level.

Thus, because the paper may conceivably come to play some role in future discussions on the subject of integration of accounts, because it appears in a document making serious recommendations on the path of some aspects of future national accounting work, because the system given in it is as detailed as it is, and precisely because it is so short with very little discussion on the many considerations that went into the particular system it presents, it is appropriate

to raise the question of the place of this paper in the discussions and work on integrated accounts and financial accounts that have been going on in the past several years in governmental and academic circles here in the United States, at international meetings on the subject, and elsewhere abroad. What seems to be called for, whatever the exact intentions of the author, is an evaluation of the paper in terms of its adequacy as a summary reflection of the present state of the general discussion in this area, its ability to give the interested reader a clear idea of the problems to be faced, its contribution to moving us farther along the road to an integrated system, and its usefulness as a specific basis for further fruitful discussion pointing to such an integration.

From these points of view, the paper suffers from certain deficiencies, some general and some quite specific. The remainder of this comment will attempt to spell out some of the characteristics of the paper that lead to this judgment, starting with some general points and going on to more detailed comments.

One set of difficulties arises in the paper in connection with the relation between the present income and product accounts and the structure in the paper. There are three different points here. First of all, the general approach of the paper has been somewhat too narrow in one respect. In spelling out the integrated system for the purposes of this paper, the author has apparently set himself the task of preserving the present national income and product accounts in all their existing detailed treatments. That is, he is basically asking the question of how to tack sector structure and financial flows onto the present income and product accounts rather than the question of what should be the characteristics of an adequate integrated system. These are not necessarily very different questions and it is unlikely that a large number of major changes would have been suggested by asking the more general question.

Nevertheless, from the point of view of the use of the paper as a basis for future discussion, it is to be regreted that this occasion of setting down an integrated structure was not used as a general opportunity of facing the problem areas that may arise in fitting in (or perhaps spreading out is the more appropriate phrase) the income and product accounts. There is reference in the paper to two possibilities of change—consumer durables as a capital outlay, and a government capital account. But there are others not mentioned that should at least be faced. For example, how in an integrated system should Government life insurance and Government employee retirement be treated? If claims on private insurance and private pension plans enter households balance sheets and saving and investment accounts, why should claims on Government insurance and retirement be omitted? Would development of an integrated system perhaps change the weighting of considerations that lead to the present treatment? The answers to such questions are not necessarily obvious; the important point is that the general approach should be such as to encourage the raising up and confrontation of such questions and problems.

The treatment of property income flows is another area where the setting up of an integrated system with specific full sector accounts may create problems or suggest changes in some details of the income and product accounts.

Another point in the general area of tying to the present national accounts is the impression that one seems to get from the paper that the particular treatments shown in the integrated structure there follow directly somehow from the specific characteristics of the present national accounts. This impression, which may not have been intended by the author, can often be misleading. While many of the specific treatments are directly dictated by the decision to follow the present accounts, many of the important sectoring, account, and transaction decisions are not so closely linked—alternatives exist which would have been equally consistent with the present income and product accounts. For example, the sectoring choice made in the paper for the household-proprietor area is not demanded by anything in the income and product accounts; the sectoring choice in the flow of funds accounts, for example, is equally consistent conceptually and is probably easier to derive statistically from the income and product accounts. Similarly, the lack of a production account for the foreign sector does not follow from anything in the structure of the income and product accounts; once it is decided to separate the national production account into sector subaccounts, the only restriction imposed by tying to the present income accounts is that the sector production accounts so set up consolidate down to the present national production account. Within the constraint of consistency with the present income accounts, there is often a surprisingly wide range of choices of treatment in the integrated system; the choices fall back on considerations of analytic suitability, statistical availability, and presentational sinplicity and convenience. A proper emphasis on this can put the discussion of the problems of creating an integrated system in somewhat clearer focus.

The third point concerned with linking to the present income and product accounts is almost exactly opposite to the first point. There are several places in the system set down in the paper where the treatments have not fully met the needs of the present income and product accounts. For example, taxes in the income and product accounts being on an accrual basis, a financial category for tax liabilities is needed—there is no provision for such entries in the paper. Similarly, the concept and method of measurement of Government purchases in the income and product accounts demand financial entries for Government payables and receivables—there are no such entries. These omissions undoubtedly stem from the schematic and illustrative character of the paper but the failure to show the complete structure of entries required by consistency with the present income and product accounts may create difficulties for use of the paper as a basis for future discussion. In addition, for the tax liability entry there may be special valuation adjustment problems that would have been interesting to discuss in connection with the valuation linkage between balance sheets and flow accounts.

The brief compass of the paper and its lack of complete discussion both of the general problems in the area and of the considerations going into each specific decision results in another general feature of the paper—the reader could scarcely gather from it that there have by now been years of discussion and work either directly on the specific subjects of the paper or on topics so closely related that particular parts of the work are directly relevant. Such work includes the flow of funds work at the Federal Reserve (which includes sector partial

balance sheets as well as flow accounts and has been concerned with many of the problems of tying systems together), the national balance sheet studies of the National Bureau's Postwar Capital Markets Project, and their "Income and Wealth Series" volume 26 on "The Flow-of-Funds Approach to Social Accounting" (which includes an article specifically addressed to the problem of integrating flow of funds and income and product accounts), the sessions and reports of the Conference of European Statisticians on the subject of financial assets and liabilities and their incorporation into national accounting systems, as well as work increasingly pursued in several countries.

The problem is not that reference was not made to the body of this work. (Whatever other difficulties this simple omission might cause, it would not by itself affect the usefulness of the paper). What is more serious is that there would appear to be indication that the paper is substantively weaker because of failure to incorporate or take into account what has proved useful and valid in the previous discussions and decisions. This is by no means to say that the previous work has all been successful, or has entirely focussed on the question of an operational integration of accounts, or has or should have any protected position in subsequent work. But, an illustrative paper such as this one by not taking maximum advantage of work already done, by not concentrating more on the problem areas revealed or not dealt with by previous work, and by not pointing up departures from or differences with existing work has limited the extent to which it is suitable to serve as an adequate representation of the present state of work and thinking in the area and as a basis for productive discussion.

There are several areas of discussion and treatment in the paper where more extensive exploitation of the existing bodies of work and experience might have been advantageous. Among these areas are the classification of financial claims, netting and grossing, the nature and incidence of discrepancies, and some sectoring problems. In addition there are instances of somewhat obscure and confusing terminological and definitional usage that might have been avoided.

The illustrative character of the paper also has a limiting effect. While the system of accounts is presented in considerable detail, there are many cells or categories of significance in the real world that are missing entirely or are left blank. In these cases it is impossible to know whether a given category is missing, or a cell blank, because the author is dealing with a simplified scheme where he is not interested in showing all items, even grouped, because the item is considered impossible by definition, is netted or grouped elsewhere, is assumed at zero to avoid complication in a brief paper, is considered so trivial in the real world that it isn't worthwhile carrying through the example, or has simply been neglected. Whatever the reason, certain characteristics both of the real world and presumably also of an adequate national accounting representation of the real world are entirely missing.

Some of the omissions relate either to problem areas or to items whose treatment would be significant in revealing the general tone and analytic orientation of parts of the system. This characteristic of the paper, in several instances, results in the reader not being able to see all the consequences of the general approach and of the specific deci-

sions used in the paper. The reader, thus, cannot evaluate the structure and does not really get a feeling for how the author would actually construct an integrated system. What is needed at this stage in the discussion and work is not simply a broad general schematic view but some indication of the full range of the specific characteristics of the system under discussion, including the less obvious points and the more awkward consequences of the basic and supporting decisions.

The general characteristics of the paper discussed so far affect many of the specific features of the system of accounts presented there. The following paragraphs will discuss some of the specific features of the structure in light of the general comments.

In the area of sectoring decisions, the only sectoring problem treated explicitly in the discussion in the paper is the treatment of the combined noncorporate-household complex. There are three obvious choices (and also some others)—(*a*) to group all proprietors and their businesses and all households (of both proprietor and nonproprietor families) in a single sector; (*b*) to put all nonproprietor households and the household activities of proprietors in one sector and the business activities of proprietors in another sector (this is the approach used in the flow of funds accounts); (*c*) to put proprietors and their families and their business and household activities in one sector and all nonproprietor households in another. Gorman has chosen the last. This is an area where nothing that one does can be really satisfactory; the choice made will depend on the weighing of the conceptual, statistical, and analytic advantages and disadvantages of the various alternatives.

I might be inclined to question on various grounds the choice made in the paper,[1] but the important point to be made here is that, in the structure of accounts presented, several of the entries required by the sectoring choice adopted have not been made. For example, there are no entries for wage receipts, life insurance, consumer credit borrowing[2] or consumer credit lending for members of proprietor-families. These are all, of course, items for which it would be extremely difficult to arrive at estimates. (The same is true, however, of the split in consumption expenditures between the two sectors, which is entered.) The failure to make all the entries required for the sectoring choice may, thus, confuse the unwary reader in his attempt to evaluate the structure presented.

Before leaving the household sectors, it might also be noted that the production account for persons other than proprietors seems to be lacking in some of the entries needed to take care of the productive activities of domestic servants, nonprofit organizations, and owner-occupied-house operations, thus raising the question as to what sectoring was intended here.

A number of other questions on sectoring treatment can be raised. Where, for example, are noncorporate financial enterprises (princi-

[1] The stated basis of the choice is that the author sees "little use in the distinction" drawn in alternative (b) between proprietor-family business and household activities. This implies that there are no occasions where a system of accounts enabling all business to be combined together in a simple fashion would be analytically convenient; that the business activities of all proprietorships, including large industrial and financial partnerships, are intimately and inextricably linked with the household activities of the families of the proprietors or partners along the model of the corner grocery store or the small family farm.

[2] As will be discussed in connection with netting, their consumer credit borrowing might conceivably have been omitted because of netting against the sector's consumer credit assets, but as there is no asset entry either, it is clear that this item has just been omitted.

pally brokers and dealers)? There are no nonfinancial entries (particularly no entrepreneurial income) that would indicate they are in the financial intermediaries sector; on the other hand, the financial entries in the proprietors' sector account do not seem to provide for them either.

The entries shown for the Government sector leave some question as to the nature of this sector account. The sector location of Government enterprise is not really clear. The production account entries of the Government sector do not seem to make provision for these enterprises; the absence of entries for Government lending or liability for deposits raises similar questions. Does the lack of entries for transfer payments *within* the Government sector and for debt transactions *within* the Government sector reflect a desire for illustrative simplicity or a consolidation of Federal and State and local governments within the account? The sector location of Treasury monetary functions is also left uncertain since there are neither the currency or money supply liability entries required if such functions are in the Government sector nor the Treasury currency entries needed to reflect the shift of these functions to the banking part of the financial intermediaries sector.

The foreign sector account also raised questions. There are no entries at all in the production account. Again, is this illustrative simplicity or an indication that the whole production account of the foreign sector is shifted to one of the domestic sectors, say to nonfinancial corporations? In terms of a system of entries to accomplish this, there is no real difficulty, but what would that then imply as to the nature of the sector production accounts? There is indication that foreign net interest is handled through an imputation with the nonfinancial corporations sector but in general the not entirely easy question of how to handle net income originating abroad within a system of explicit sector production accounts may have been avoided by having zero entries in the relevant cells. Here again the reader may be confused in his judgment as to usefulness and manageability of a given account structure by illustrative entries that avoid the real problem areas.

The financial area of the accounts is particularly affected by the general characteristics discussed above. For example, the financial transactions and claim categories used in the paper are riddled by omissions. Here, as in other instances, it isn't clear what is illustrative material not meant to be taken literally or seriously, what is deliberate departure from existing systems, what is deliberate choice recommended as a feature of future work. In any case, there are some respects in which what is recorded in the paper is inadequate even as illustration. A simple listing of the kinds of financial claims not covered even in grouping or in an "all other" category will indicate the range of the problem. The omitted items include gold, Treasury currency, currency,[3] time deposits,[3] savings and loan shares, domestic sectors' holdings of foreign currencies, claims on pension funds, the range of Government liabilities not covered by "U.S. securities," Gov-

[3] There is a category called "deposits" on the liability side (thereby excluding currency) and "cash" on the assets side (thereby excluding time deposits).

ernment loans, State and local government securities,[4] commercial mortgages,[5] most aspects of security credit, direct investment from and to abroad, tax liabilities, and a host of miscellaneous loan, subscription, and deposit claims.

In addition, even for the categories that are listed, there are significant blanks in many sector entries. Thus neither the Government nor financial intermediaries have any cash holdings; State and local governments hold no U.S. Government securities (as indicated above, this may be an indication that the Government sector is completely consolidated); the Government has no accounts payable or receivable (although these are explicitly called for by the definition and calculation of Government expenditures in the income and product accounts); there is no bank lending to financial institutions or to the rest of the world; proprietors hold no consumer credit paper nor do their families have consumer debts; proprietor families also have no insurance assets; financial intermediaries purchase no stock (which raises the question of where mutual funds and private pension plans are treated in the sector structures); the Government holds no mortgages, nor has it any deposit liabilities.

Transactions in land and other existing assets have always been one of the most troublesome statistical problem areas in setting up sector accounts; even at an illustrative level, a single entry for Government purchases from corporations is not an adequate indication of where in the structure of accounts such entries would be needed even on a net basis. In particular, the sectoring break between proprietors and households adopted in the paper makes explicit entries for such transfers of property more necessary and harder to avoid behind the rationale of netting.

The apparent nature of the consolidation and netting treatments utilized in the financial area in the paper raises some questions. Both in the balance sheets and the saving and investment account, there is some indication that the kind of netting and consolidation intended for many of the categories may obscure the financial relationships involved and may hamper many analytic uses of the whole structure of accounts.

With a few explicit exceptions, no sector account is shown as having both an asset and a liability entry for a given financial claim category. This could perhaps be partly explained in terms that there are not enough kinds of entries in the illustrative structure actually to illustrate the treatment proposed for certain situations. But it can probably be fairly concluded that there seems to be an underlying principle that, in general, each sector's asset holdings of a given financial claim category and its liabilities under that category be netted together and only a single figure shown for the net asset or net liability (depending on the sign) or for net debit or net credit. This can be inferred from the fact that where it was specifically desired to show both an asset and liability entry for a given sector for a given type of claim, either explicit provision is made for it in the structure of entries of the transactions account (as in the case of accounts payable and

[4] There is a category "other bonds," but since there is no liability entry for it in the Government sector, it apparently doesn't cover State and local issues.

[5] There is a "mortgage" category, but, since only the two sectors containing households are shown as debtors, presumably commercial mortgages are neglected.

receivable), or an explicit footnote is provided to explain the "unusual" treatment (as in the case of entries for stocks and bonds in the foreign sectors accounts).

The items affected by this depend on the kind and scope of sectoring. In the present illustrative structure, with a single sector for all financial institutions and a single government sector, practically every financial category (including those omitted from the tables in the paper) would appear on both the asset and liability sides of at least one sector, with claims on life insurance reserves and on pension funds the only obvious exceptions coming immediately to mind.

General netting of assets against liabilities of the same category in a given sector account is, for the most part, both unnecessary statistically and disadvantageous analytically. Related to the general question of netting is the issue of (and meaning of) sector consolidation. This is not mentioned in the present paper and because of the large number of blank cells it is difficult to infer the implicit treatment. There has been considerable discussion (in connection with financial accounts), both here and internationally, of the different kinds of netting, grossing, consolidation and their statistical, structural, and analytical significance. While the conclusions reached and treatments adopted so far are always subject to further consideration and evaluation, the discussion up to now in the flow of funds literature has succeeded sufficiently in separating out, and focusing on, the various strands of the topic that it should form at least the background of future discussion.

Another example of an area where there seems to be little reflection in the paper of the full range of discussions in earlier work and where the use of dummy entries tends to obscure the problems that must be faced is the question of the appearance and incidence of discrepancies in the accounts. The problem of how to handle discrepancies in the accounts is a much more pressing one in a system that both explicitly records full sector accounts and records both financial and nonfinancial entries than it is in a structure like the present income and product accounts. Because of this, in the flow of funds work there has had to be a considerable amount of attention devoted to the problem of the origin and incidence of timing, valuation, classification, and sector allocation inconsistencies and to the problems of the location and significance of the resulting discrepancies. There has developed over the years a comprehensive and systematic view of and approach to the problem. In an illustrative system, like that in Gorman's paper, where dummy hypothetical entries are utilized, one should not expect to find the problem of discrepancies illustrated in the sample accounts themselves. (In fact, it might be extremely difficult to set up a realistic dummy set of inconsistencies and discrepancies for illustrative purposes.) However, what reference there is to the problem in the paper itself is brief and somewhat confusing. A discrepancy problem is discussed only in connection with the consolidated saving and investment account and there the impression is given that the only serious problem is one of float, i.e., arising from timing inconsistencies. The discrepancy problem is more pervasive, popping up in many sector accounts and many transaction categories.

Moreover, where the discrepancies show up, as opposed to where inconsistencies occur, is to some extent determined by the design of

the accounts and of the statistical implementation of the accounts; they, therefore, should be discussed even in a general paper. The identification of the discrepancy problem in the consolidated savings and investment account as one of the float (i.e., timing) is too narrow; other inconsistencies affect the construction and interpretation of this account. The author, in any case, mentions this aspect of the discrepancy only in order to assume it away. What is needed, of course, is a reference to or consideration of what might be the consequences for the system of accounts of not being able to solve the problem of discrepancies.[6]

One of Mr. Gorman's major contributions in the paper is in his discussion of the valuation linkage between the flow accounts and the balance sheets and the provision of a valuation account to perform the bridging. The conceptual problems surrounding the question of valuation are among the most troublesome and unsettled in national accounting and his systematic approach permits a valuable focusing on the various issues that have to be met.

There are several questions in the area of valuation change and its recording that are raised by his discussion and tabular presentation. Here again, as in the case of the parts of the paper already discussed, the schematic and illustrative nature of the paper make it somewhat difficult to evaluate either the examples that are given or the significance of items not illustrated. So that any comment runs the risk of being off focus in terms of what Mr. Gorman would put down in a complete discussion and presentation.

Eligibility for inclusion in the valuation statement seems to be based on a distinction drawn between "changes in market value" and "other changes in valuation that are not due to market value." The first would seem to be recorded automatically and the latter only "if desired for analytic convenience." Surely analytic "convenience" is the primary consideration in both cases. Moreover, it would seem reasonable that in some sense it is most appropriate to discuss the coverage of the valuation statement only in formal terms—for example, the valuation statement shall include entries for all items where there is an inconsistent valuation, for whatever reason, between the basis of recording in the flow accounts and the basis of recording in the balance sheets. The substantive questions of valuation, and thus of inclusion and exclusion in the valuation statement are shifted to the discussion of the nature of the valuation of the items in the balance sheet. This in turn will depend on the analytic uses envisaged for the sector balance sheets.

The difference in emphasis here may be related to Gorman's apparent preference for viewing the valuation statement as somehow more basic than, or prior to, the closing balance sheet, in the sense that he has the closing balance sheet derived from the addition of entries from the flow accounts and the valuation statement rather than treating the valuation statement as a reconciliation between the two basic bodies of statistics. It is not clear whether this is an analytic or statistical preference or both.

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[6] For a discussion of how the structure of discrepancies throughout the system affects the consolidated saving and investment account and the relation between "net foreign investment" and "net lending abroad" see the last two paragraphs of the section on discrepancies in "A Quarterly Presentation of Flow of Funds, Saving, and Investment," Federal Reserve Bulletin, August 1959, pp. 828–859, at 857–859.

The major valuation issue discussed in the paper is the question of what system of contraentries yields the most meaningful consolidated national wealth statement if issuers' obligations are revalued to current market value. But there is no discussion, aside from the implied one on the effect on the consolidated national balance sheet, of the prior questions of why one would want liabilities in current market value, or more generally of what would be the most generally, analytically useful way to record liabilities in the sector balance sheets. In such a full discussion, it would not seem to me that the needs of arriving at the national balance sheet through a mechanical consolidation of sector balance sheets should be given much weight since the national balance sheet can be derived directly from the physical wealth estimates and estimates of net foreign claims that would have to be prepared for the derivation of the sector statements in any case.

There are a few generalizations in the discussion on valuation that might be questioned. It is, for example, not quite so definite as the wording of the paper would have it that all changes in stock prices can be interpreted as the market's evaluations of the net worth of the firm—the market is sometimes also evaluating itself. Conversely, in the case of debt, it is not true that all differences in issue price and market value reflect only interest rate changes—the market is sometimes also evaluating the firm. The valuation adjustment for physical assets between depreciation and price change is surely not as neatly separated either statistically or conceptually as is implied. Depreciation reflects average rates of obsolescence in some sense as well as physical wear and tear and thus to some extent reflects price declines of the assets not related to physical deterioration.

As stated in the begining of this note, the basis for most of the comments—that is, the questions of the suitability of the system presented in the paper to serve as an effective basis for productive discussion of the problems of creating an integrated system of accounts—may or may not be at all related to the purposes and intentions of the author in preparing the paper. In this sense many of the comments may be completely unfair and irrelevant in the context of the particular paper. In the larger context of work toward an integrated system of accounts, it is hoped that the remarks have some relevance.

NOTE.—Actually, we had invited Mr. Gorman merely to present, in summary fashion, a general framework showing the relationship of wealth and balance sheet estimates to the national income and product accounts. Nevertheless, we reproduce Mr. Sigel's full remarks since they are indeed relevant to the more detailed discussions we hope will take place at a later stage.

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