Flow of Funds System of Social Accounting

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The flow of funds system of social accounting may be defined as a system "in which : (a) the economy is divided into a number of sectors, and (b) a 'sources and uses of funds statement' is constructed for each sector. When all these sources and uses of funds statements are placed side by side, we obtain (c) the flow of funds matrix for the economy as a whole"[1] . Thus, the flow of funds system involves three broad points : dividing the economy into a number of sectors, preparing the sources and uses of funds (or flow of funds) statement for each sector and making the flow of funds matrix for the whole economy by placing the sources and uses of funds statements of all the sectors side by side. A detailed consideration of these points is presented below.

SECTORING THE ECONOMY

The sectoring of the economy is primary task in any social accounting system. The sectoring in the flow of funds system is more elaborate than in any other system. In other systems, the sectoring is done usually on functional basis, i.e., on the basis of the transactors performing the homogeneous economic functions.[2] Thus, other national accounting systems divide the economy usually into three domestic sectors—consumers' sector, producers' sector and government sector. Under the flow of funds system the sectoring is done on institutional basis.[3] The flow of funds system is concerned with the flow of money and credit, and the flow of money and credit, in turn, is the result of the multitudes of decisions taken by the nation's economic decision makers. These nation's economic decision makers are, under the

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flow of funds system, grouped into institutionally homogeneous sectors functioning on broadly similar lines.[4] The upper limit of the number of sectors is determined by the degree of the homogeneity of the institutional groups and the availability of data. Whatever may be their number, all the sectors taken together must be equal to the economy as a whole. The Reserve Bank of India, which prepares the flow of funds accounts for the nation, divides the economy into six broad sectors. The broad sectors have further been divided into smaller sectors making a total of about fourteen sectors. The U.S. economy, due to its complex financial system, is divided into twenty sectors. The financial institutions are always singled out and subdivided into separate sectors.

CONSTRUCTING FLOW OF FUNDS STATEMENT OF A SECTOR

General Balance Sheet of a Sector

For the proper understanding of the flow of funds statement of a sector, let us first consider its balance sheet in general form as given in Table 1.

Assets : The assets are divided into two groups—financial assets and real assets. Financial assets are claims against other sector(s); they include money, accounts receivable and securities.[6] Every financial asset appears on two balance sheets—on the balance sheet of its owner as an assets and on the balance sheet of its issuer as a liability. Money, though a financial asset, has traditionally been accorded special treatment by separating it from other financial assets. The real assets are nonfinancial in nature, and, as such, are not claims against someone else. The real assets, for example, of corporate sector include inventories, plants and equipments, and those of households sector include houses, automobiles and consumer durables.

TABLE 1.

Generalised Balance Sheet of a Sector

Liabilities and Net Worth		Assets
1. Liabilities		1. Financial Assets :
		(i) Money
		(ii) Other Financial Assets
2. Net Worth		2. Real Assets
Total	=	Total

TABLE 2.

Generalized Flow of Funds Statement of a Sector

Sources		Uses
△ Liabilities (Borrowing)		△ Money (Hording) △ Other Financial Assets (Lending)
△ Net Worth (Saving)		△ Real Assets (Investment)
Total	=	Total

NOTE : △ stands for 'change in'.

Liabilities : All liabilities are financial in nature—they represent claims by other sectors. As stated above, every liability of a sector stands as a financial asset in the balance sheet of some other sector. A special mention may be made of corporate stocks and shares. In financial accounting of a company, the stocks and shares are not treated as liabilities; they are treated as a part of net worth. Under the flow of funds system of social accounting, the stocks and shares are treated as liabilities, and, as such, no distinction is made between them and debentures.[7]

Net Worth : It is the balancing entry in the balance sheet; the total of assets minus liabilities is called net worth.

Identities : Since a balance sheet must balance, the total of the liabilities and net worth of a sector must be equal to the total of its financial assets (including money) and real assets. The liabilities of a sector need not be equal to its financial assets, and, also, the net worth of a sector need not be equal to its real assets.

The balance sheet of the economy as a whole can be made by adding up the corresponding entries in the balance sheets of all the sectors. Obviously, this balance sheet will also balance, and, in contrast to a sector balance sheet, the financial assets will be equal to the liabilities, and the real assets will be equal to the net worth. Since the existence of a financial asset in the balance sheet of one sector implies the existence of a liability of an equal value in the balance sheet of some other sector, the sum of the financial assets of all the

sectors must be equal to the sum of their liabilities. And because of this and the fact that the total sources are equal to the total uses, the net worth of the economy will automatically be equal to its real assets.

Thus, we have the following relationships.

For a sector :

Liabilities + Net Worth = Financial Assets + Real Assets (1)

(Usually) Liabilities ≠ Financial Assets (2)

(Usually) Net Worth ≠ Real Assets (3)

For the economy :

Liabilities + Net Worth = Financial Assets + Real Assets (4)

Liabilities = Financial Assets (5)

Net Worth = Real Assets (6)

Flow of Funds Statement of a Sector

The balance sheet shows the stocks of various items at a particular date and the sources and uses of funds or flow of funds statement shows the changes in various items over the period of time between two balance sheet dates.

The flow of funds statement in its skeleton form is given in Table 2. The flows above the broken line are called financial flows as they relate to the financial items (i.e., liabilities and financial assets including money) of the the balance sheet, and the flows below the broken line are called nonfinancial flows as they relate to non-financial items (i.e., net worth and real assets) of the balance sheet.

Financial Flows : Borrowing, Lending and Hoarding

Borrowing : An increase in liabilities (including share capital) is called borrowing. Borrowing is a source of funds, and a decrease in liabilities, i.e., repaying debts is a use. Though both borrowing and repaying debts take place during the period, it is difficult to collect separate data for each of them. Hence, the published flow of funds accounts usually contain only the net increase in liabilities (net borrowing) or net decrease in liabilities (net repayment of loan). Again, rather than showing the net decrease in liabilities as a use of the funds, it is customary to show it on sources side with the minus sign.

Lending : An increase in financial assets other than cash is called lending. Lending is a use of funds, and a decrease in financial assets, i.e., selling off financial assets is a sourse.

Though both lending and selling off financial assets take place during the period, yet for want of separate data for each of them, the change in financial assets is written on net basis, net decrease (though a source) being shown on uses side with the minus sign. It is to be noted that money has been excluded from financial assets.

Hoarding : Money is given a treatment separate from other financial assets. An increase in money is called hoarding. Hoarding is a use of funds, and a decrease in money, i.e., dishoarding is a source. Here again, for want of separate data for each of them, the change in money is written on net basis, net decrease (though a source) being shown on uses side with the minus sign.

Some sectors may be legally empowered to create money (e.g., commercial banking sector creates money by accepting demand deposits and government sector creates money by printing currency notes). Money is the liability of the sector issuing it and the asset of the sector holding it. Thus, the creation of money increases the liability of the sector creating it and, as such, can be treated as a form of borrowing. However, borrowing through creating money is given a treatment separate from borrowing by selling off liabilities, and, as such, is given a separate entry of its own on the sources side under the heading '△ Money Creation' (this entry has not been shown in Table 2).

Money creation may also be treated as an additional form of dishoarding, which, too, is a source of funds.[8] Since money creation has no entry of its own in Table 2, it may, for the purpose of our analysis, be treated as dishoarding (negative hoarding).

Thus, it may be observed that the entries borrowing, lending and hoarding shown in Table 2 are, in fact, on net basis with the possibility of their being negative as well.

Nonfinancial Flows : Investment and Saving

Investment : The acquistion of real assets during the period, i.e., capital expenditure is called investment. Investment is a use of funds, and a decrease in real assets, i.e., capital consumption or depreciation is a source. The investment may be shown on gross basis (i.e., without subtracting the depreciation) or net basis (i.e., after substracting the depreciation). If the net investment happens to be negative (disinvestment), it is still shown on uses side with the minus sign. 'Investment' should not be confused with 'financial investment', a term used for the acquisition of financial assets including money (i.e., for lending and hoarding)

Saving : An increase in net worth is a source of funds and is due to saving. Saving is defined as the excess of current income over current expenditure. Saving, like investment, may be shown at gross value (i.e., without deducting the depreciation) or net value (i.e., after deducting the depreciation), but saving and investment must either both be

shown at net value or both be shown at gross value. In corporate sector, the net saving is called 'retained earning'. Saving may also be negative (i.e., dissaving, excess of current expenditure over income) and in that case, though it being a use of funds, it is still shown on sources side with the minus sign. Thus, saving and investment as shown in Table 2 are either both gross or both net with the possibility of their being negative as well.

Surplus and Deficit Sectors : When the saving of a sector exceeds its investment, it is called a surplus sector; when its investment exceeds its saving, it is called a deficit sector. If saving and investment happens to be equal the sector is called a balanced sector. Historically, households sector has been a surplus sector and private corporate business sector and government sector have been the deficit sectors. The surplus sector must use the surplus (the excess of saving over investment) in lending, repaying debts or hoarding. The deficit sector must finance its deficit (the excess of investment over saving) by borrowing, selling off financial assets or dishoarding.

Identities : The sum of all the sources of a sector must equal the sum of all its uses, though its financial sources (borrowing) need not equal financial uses (lending and hoarding) and nonfinancial sources (saving) need not equal nonfinancial uses (investment).

The flow of funds statement of an economy as whole can be made by adding up the corresponding entries in the flow of funds statements of all the sectors, Obiously this flow of funds statement will also balance, and, in contrast to the flow of funds statement of a single sector, the financial sources will equal the financial uses and the nonfinancial sources will equal the nonfinancial uses. Since the financial assets of an economy equal its liabilities (see equation 5), its financial uses must equal its financial sources. Similarly, since the real assets of an economy equal its net worth (see equation 6), Its investment must equal its saving.

Thus, we have the following relationships :

For a Sector :

$$\text{Borrowing} + \text{Saving} = \text{Lending} + \text{Hoarding} + \text{Investment} \quad (7)$$

$$\text{(Usually) Borrowing} \doteq \text{Lending} + \text{Hoarding} \quad (8)$$

$$\text{(Usually) Saving} \doteq \text{Investment} \quad (9)$$

For the economy :

$$\text{Borrowing} + \text{Saving} = \text{Lending} + \text{Hoarding} + \text{Investment} \quad (10)$$

$$\text{Borrowing} = \text{Lending} + \text{Hoarding} \quad (11)$$

$$\text{Saving} = \text{Investment} \quad (12)$$

TABLE 3

Generalized Flow of Funds Matrix

	Sector 1		Sector 2		Sector 3		...	All Sectors	
	Sources	Uses	Sources	Uses	Sources	Uses		Sources	Uses
△ Money (Hoarding)		H_1		H_2		H_3	...		$\sum_i H_i$
△ Other Financial Assets (Lending)		L_1		L_2		L_3	...		$\sum_i L_i$
△ Liabilities (Borrowing)	B_1		B_2		B_3		...	$\sum_i B_i = \sum_i L_i + \sum_i H_i$	
△ Net Worth (Saving)	S_1		S_2		S_3		...	$\sum_i S_i$	
△ Real Assets (Investment)		I_1		I_2		I_3	...		$\sum_i L_i = \sum_i S_i$
TOTAL	T_1	T_1	T_2	T_2	T_3	T_3	...	$\sum_i T_i$	$\sum_i T_i$
Surplus/Deficit	$S_1 - I_1$		$S_2 - I_2$		$S_3 - I_3$		...	$\sum_i S_i - \sum_i I_i = 0$	

NOTES : 1. L_i , H_i , B_i , S_i , I_i and T_i respectively denote lending, hoarding, borrowing, saving, investment and total of soures/uses of ith sector.

2. △ Stands for 'Change in'.

THE FLOW OF FUNDS MATRIX

Placing the flow of funds statements of all the sectors side by side, we get the flow of funds matrix for the economy as a whole. Table 3 presents a generalized flow of funds matrix for an economy.

From (53), we have $\sum_i B_i = \sum_i L_i + \sum_i H_i$ and from (54), $\sum_i S_i = \sum_i I_i$.

Other entries of the matrix are self-explanatory. The matrix has the interlocking character—the relationships among rows, among colums and between rows and columns are such that no entry in any cell can be changed without changing at least three others.

The matrix presents the picture of the economy and its sectors. It gives information regarding the economic health of sectors, the method of financing, the direction of international financial flows and the interrelations among sectors.

Treatment of Capital Gains and Losses

So far, it has been assumed that there are no capital gains or losses (increase or decrease in the value of assets) recorded in the sector accounts. The capital gains losses), if recorded, will increase (decrease) the value of assets and not worth. These capital gains (losses) may be realised or unrealised. The unrealised ones do not affect the flow of funds. Hence, they are netted from both sides of the balance sheet—from assets and from net worth—and then changes in assets and networth are calculated. The realised capital gains (losses) increase (decrease) the supply of funds. Hence, they are treated as flows—which may be shown separately or included in saving.

Treatment of Capital Transfer Receipts/Payments

The capital transfers have also been excluded in the above discussion. A capital transfer receipt is a receipt for no direct consideration by the transferee, for example, grants for investment received by the corporate sector from the government sector, war demages received by the households sector from the government sector, reparations and economic aid received by the government sector from the 'rest of the world' sector. To the transferors, these transfers are capital transfer payments. Though capital transfers appear on two balance sheets-the balance sheets of receiving sector and giving sector-, such transfers cannot be called wholly financial because they do not represent the claim of one sector against the other. Nor can they be treated as nonfinancial, i.e., saving and investment. In fact, these transactions form a special category of their own. These transactions affect the flow of funds like realized capital gains/losses and should be accorded similar treatment. The net capital transfer receipts/payments are shown separately in the flow of funds accounts prepared by the RBI.

Obiously, the capital transfer receipts of a sector will not ordinarily be equal to its capital transfer payments; but the total of all such receipts for all the sectors must be equal to the total of all such payments.

ROLE OF FINANCIAL MARKETS

Since there is little chance of the saving of a sector being equal to its investment, there are both surplus and deficit sectors present in an economy. In fact, the existence of surplus sectors implies the existence of deficit sectors and vice-versa, because the saving of all the sectors together has to be equal to their investment. Under such circumstances—when both surplus and deficit sectors are present in the economy—the role of the financial markets is to make the saving of the surplus sectors available to deficit sectors to finance their investment proposals.

The surplus sector has the option of using the surplus in lending, repaying debts or hoarding, and the deficit sector has the option of meeting the deficit by borrowing, selling off financial assets or dishoarding. Without the financial markets, the surplus sectors are left with only one option-hoarding the surplus-and the deficit sectors are left with the option of dishoarding, if they have sufficient stock of money to dishoard. The financial markets make the other two options available to surplus and deficit sectors : the surplus sectors can buy securities representing the liabilities of others (lending) or their own (repaying debts), and the deficit sectors may sell the securities representing the liabilities of their own (borrowing) or others (selling off financial assets).[9]

Though ex-post saving and investment of an economy must always be equal, there is possibility of there being high or low according as the financial markets are developed, easily accessible and efficient or not.[10] If the financial markets fail to provide the smooth flow of funds, the deficit sectors may not be able to finance their ex ante investment; with the result, the G N.P. will fall below the level that it would have otherwise attained, and the fall in G.N.P. will lead to the reduction in the amount of saving.[11]

Notes :

1. Lawrence S. Ritter, "The Flow of Funds Accounts : A Framework for financial Analysis", in Murray E Polakoff (ed.), Financial Institutions and Markets, Houghton Mifflin Company, Boston, 1970, pp. 21-22.
2. M. Yanovasky, Anatomy of Social Accounting Systems, Surjeet Publications, Delhi, 1982, p. 185.
3. Ibid.,

4. RBI, "Finacial Flows in the Indian Economy-1951-52 to 1962-63", Reserve Bank of India Bulletin, March 1967, p. 246.

5. RBI, "Flow of Funds in the Indian Economy-1970-71 to 1976-77", Reserve Bank of India Bulletin, March 1980, p. 128.

6. Seymour Friedland, The Economics of Corporation Finance. Prentice-Hall, New Jersey, 1966, p. 246.

7. Lawrence S. Ritter, op. cit., p. 23, footnote 1. Also see, ibid., p. 31, footnote 16.

8. Ibid., pp. 30-31, footnote 15. Also see, ibid., p. 33, footnote 18.

9. Ibid., p. 31.

10. Ibid.,

11. Ibid..