

The Flow of Funds Accounts and Monetary Theories

Their Relevance for Financial Planning with Special
Reference to Nepal

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1.0 Introduction:

This paper is directed to the following four specific questions:

- a. What is the purpose of the flow-of-funds accounts ?
- b. How is it structured ?
- c. How it can bring improvements in contemporary models of money and finance ? and,
- d. What are its policy implications as against those of contemporary monetary theories ?

The first two questions are answered in part 1 with the help of a hypothetical model flow-of-funds matrix. The last two questions are answered in Part 2. In this part a separate section has been devoted to a discussion regarding the efficacy of the changes made in the recent past by the Nepal Rastra Bank in its interest policy.

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Part 1. Introduction to Flow-of-Funds Accounts

1.1 The Purpose of the Flow-of-Funds Accounts :

The accounting framework of the flow-of-funds accounts was originally designed by Morris Copeland. His work is being continued and refined by the Federal Reserve Board of U. S. A. This type of account highlight two basic facts: (a) interdependence between real and financial transactions and, (b) the linkage of the financial uses of funds of one sector with the financial sources of funds of another sector in the national economy.

Real transactions means dealings in savings and capital formation (i. e. physical investments) which ultimately determine the level of income and production. Financial transaction means dealings in financial assets which ultimately determine the volume of credit available for lendings and borrowings.

The linkage between the financial uses of funds of one sector with the financial sources of funds of another sector in the economy is established through the process of 'financial intermediation'. The term 'financial intermediation' refers to activities which consist of borrowing for the purpose of lending.

1.2 The Model Account Structure :

A severely condensed model of the flow-of-funds matrix is presented in Table 1. The matrix consists of the following ten items:

1. 2. 1 Sector: The economy is divided into a number of transactor units, such as households and unincorporated business, corporate nonfinancial, financial institutions, and government. Each sector consists of sets of commonly identifiable economic units and refers to **institutional categories** rather than to types of activities.

1. 2. 2 Sector Uses and Sources: A pair of columns, one for payments i. e., uses of funds and one for receipts i. e. sources of funds, is established for each sector, and all transactions are recorded in one or the other of these two columns.

1. 2. 3 Transaction Categories: A sharp distinction is made between nonfinancial transactions and financial transactions. In Table 1, nonfinancial transactions are recorded in line I and II and financial transactions in line III and its sub-categories.

TABLE: 1

MODEL FLOW-OF-FUNDS MATRIX
(\$ Million)

	1) House- holds and Unincorp. Business		2) Corps. Nonfinan- cial		3) Financial Institu- tions		4) Govt.		5) Total Economy	
	U	S	U	S	U	S	U	S	U	S
	I. Gross saving (=II+III)		6		2		†		5	
II. Gross domestic capital formation	2		6		†		4		12	
III. Net financial investment (=A+B)	4		-4		0		1		1	
A. Net increase in domestic assets‡	4		-7		2		1		0	
a) Money	10		8			20	2		20	20
b) Other deposits	3		2			7	2		7	7
c) Equity in life insur. and the like	4					3		1	4	4
d) Govt. securities-	-1		1		3			3	3	3
e) Corp. securities	7			12	4		1		12	12
f) Consumer credit		10	2		8				10	10
g) Mortgages		2		2	4				4	4
h) Other loans		7		6	13				13	13
B. Net increase in foreign assets‡	0		3		-2		0		1	
a) Gold and foreign exchange						1				1
b) Other			3		1				3	1

†Amount assumed insignificant.

‡That is, increase in assets (less any reductions) minus increase in liabilities (less any reductions); equal to uses of funds (U) minus sources (S).

1. 2. 4 Nonfinancial Transactions: Current receipts (of income) and payments (expenditure or outlay) are netted into a sector total of saving while purchases (investment) of physical capital are shown separately as gross domestic capital formation. When cumulated across the columns for sectors, the row of saving (line I in Table 1) adds to total saving in the economy. The gross domestic capital formation row (line II) adds across in a similar way to total gross capital formation in the economy.

1. 2. 5 Financial Transaction Categories: Summation of all uses of funds along a row and across the sectors of the matrix gives a total of expenditure made to acquire a particular kind of financial asset. Summation of sources along a row yields a total of funds borrowed in that particular manner to acquire a particular kind of financial asset. And uses offset sources. (Line III and its sub-categories in Table 1).

1. 2. 6 Financial Sources and Uses: Financial claims are shown in the sources column of a sector only to the extent that the sector issued such claims as liabilities to raise funds. Similarly, transactions in the uses columns refer only to dealings in the claim as an asset. Sale of the claim as an asset is a regative offset against acquisition of claims in the uses columns (line III A (d) - \$ 1 million under sector 1 in Table 1), and debt repayment is an offset to borrowing in the sources column.

Every transactions in financial claims appears in the matrix of Table 1 as both a source of funds and a use of funds, since all borrowings by anyone sector is some other sector lendings. For example, line III A (b) of Table 1 indicates that financial institutions lent \$ 7 million in the form of other deposits which was borrowed by household and unincorporated business (\$ 3 million), corporate nonfinancial (\$ 2 million) and government (\$ 2 million) sectors.

The money supply is one of the sub-categories of financial claims. Demand deposits (i. e. other deposits) are liabilities of and sources of funds to financial institutions, and money held by sector 1, 2 and 4 in Table 1 are a claim on and sources of funds to the monetary authorities (grouped under sector 3).

Gold is treated as a source of fund but not as a claim or liability. It is used as a monetary reserve by the monetary authorities, but it is not owed by and one to the holder. Accordingly, in line III B (b) no amount is recorded under use columns across the sectors. This is an exception.

1.2.7 Financial Market Summaries: Each purchase of a claim (i.e. use) by a sector is always other sector's sale (i.e. source) of that same claim. For example, purchase of corporate securities (line III A (e)) by household and unincorporated business (\$ 7 million), financial institutions (\$ 4 million) and government (\$ 1 million) adds up to \$ 12 million sale of corporate securities by the corporate nonfinancial sector. Hence for the economy as a whole, total funds raised by issuing a particular type of claim (such as corporate securities of \$ 12 million) are necessarily equal to total funds used to acquire that claim as an asset. Accordingly under total economy \$ 12 million is recorded under both use and source columns. Total borrowing then equals total lending in any type or set of financial claim. Each row or set or rows for financial claims therefore is a summary of all funds coming into and going out of a particular financial market or set of markets. Accordingly, the financial market summaries is indicative of the process of "financial intermediation" which in turn establish the linkage existing between the financial use of funds of one sector with the financial source of funds of another sector. As such, it is a circular flow model of sources and uses of funds.

As shown in the use column of the financial institutions, this sector lent all together (\$ 32 million, $\$3 + \$4 + \$8 + \$4 + \$13$) to the other three sectors. To lend \$32 million it borrowed an equivalent amount ($\$20 + \$7 + \$3 + \$1 + \$1$) from the financial market (shown under source column). This is an example of "financial intermediation" i.e., borrowing for the purpose of lending. The \$ 32 million of borrowing of the financial institutions however consists of an equivalent amount of lending by the remaining three sectors. For example, \$ 20 million (line III A (a)) came from the money holdings of households and unincorporated business sector (\$ 10 million) corporate nonfinancial sector (\$ 8 million) and government sector (\$ 2 million). Another amount of \$ 7 million (line III A (b)) came from the other deposits held by the three sectors ($3+2+2$) and finally another amount of \$ 3 million came from the \$ 4 million of equity in life insurance and the like held by the households and unincorporated business sector of which, the remaining \$ 1 million went to the government sector as lending. This is an example of the linkage existing between the financial use of funds of one sector with the financial source of funds of another sector.

1.2.8 Sector Balance-Saving and Investment: As an accounting identity, every source of fund by a sector is reflected in one or more uses of funds, if only to increase cash balances. In the matrix presented in Table 1, sectoral identity (or sector account balances) are shown by an equality between gross saving of each sector (line I)

and its investment in gross domestic capital formation (line II) plus net financial investment (line III). This is true for the total economy also. However, for the economy as a whole gross saving equals gross domestic capital formation plus net increase in foreign assets (line III B). The changes in domestic financial assets and liabilities of the various sectors recorded in line III A are cancelled out (\$4 million of sector 1 is offset by -\$4 million of sector 2). The reason for this cancellation lies in the fact that the financial assets that are owned by any one sector are the debts owned by the other sectors. Consequently in consolidating the accounts of all the sectors, only the debts between domestic sectors and foreigners remain. This is indicated by the \$1 million worth of net increase in foreign assets (line III B) for the total economy.

In the more general case, then, the equality between gross saving and gross domestic capital formation plus changes in financial assets and liabilities of any one sector as well as for the economy as a whole can be summarized by the following two sets of equations as formulated by William I. Abraham¹:

- a. For any one sector-
 - i. $\text{Gross saving} + \text{increase in liabilities} = \text{sources of funds}$
 - ii. $\text{Gross domestic capital formation} + \text{increase in financial assets} = \text{uses of funds}$
or, $\text{Gross saving} = \text{gross domestic capital formation} + \text{net financial investment}$,
 - iii. $\text{Sources of funds} = \text{uses of funds}$
- b. For the economy as a whole-
 - i. $\text{Gross saving} + \text{increase in foreign liability} = \text{sources of funds}$
 - ii. $\text{Gross domestic capital formation} + \text{increase in foreign assets} = \text{uses of funds}$
or, $\text{Gross saving} = \text{gross domestic capital formation} + \text{net increase in foreign assets}$, and
 - iii. $\text{Sources of funds} = \text{uses of funds}$.

1. 2. 9 Balance of the Matrix as a Whole: The effect of the preceding eight items in the structure of the accounting matrix presented in Table 1 is to produce a severely constrained accounting system that undertakes to place every nonfinancial as well as financial transactions in the same dimension as its counterparts. In other words, receipts of funds by way of saving out of real income and borrowings from the

1. William I. Abraham, National Income and Economic Accounting (New Jersey: Prentice Hall, 1969) p. 194.

financial markets are juxtaposed to their counter parts i. e., payment items recorded against expenditure on gross capital formation as well as expenditure on acquisition of financial assets. Vertically, the accounting matrix is constrained by the equality between saving and investment (gross domestic capital formation plus net financial investment) for each sector and for the economy as a whole. This is indicative of accounting balance established for individual sector as well as for the economy as a whole.

Horizontally, the accounting matrix is constrained by three different types of equalities. They are: (a) total gross saving and total gross investment, (b) total nonfinancial sources and nonfinancial uses of funds and between net financial investment and net foreign investment and (c) total borrowing and total lending in each financial market. These equalities are indicative of accounting balance in each nonfinancial and financial markets.

The upshoot of these constraints is that in using this organization of data as framework for analysis—construction of models, simulation exercises, forecasting, or estimation of the date—no one cell of the matrix can be altered without changing at least three others: one in another row of the same sector column, one in another column in the same row, and at least one other for the second column and second row.²

For example, if we want to change \$6 million amount of line I of sector 1 into \$5 million, we must first change its line II figure into \$1 million. Otherwise we cannot obtain the figure of \$4 million in line III. Second, we must change in line I either the figure of \$2 million of Sector (2) into \$3 million or the figure of \$5 million of sector (4) into \$6 million. Otherwise the figures will not add up to \$13 million shown under the total economy. Third, as soon as we change the figure in line I of either sector (2) or sector (4) we must change the corresponding figure in line III of either sector (2) or sector (4). If the \$2 million figure in line I of sector (3) is made \$3 million (–) \$4 million must be made (–) \$3 million in line III. Otherwise, we cannot get \$1 million in line III of the total economy.

1.2.10 Matrix as Capital Account: The flow-of-funds matrix, such as the one presented in Table 1, represents the capital account for the economy as a whole by deconsolidating it among a number of institutional sector. As such it is a statement of financial

2. Board of Governors of the Federal Reserve System of the U. S. A., *Introduction to Flow of Funds* (Washington, D. C.: Publication Services of the Board of Governors of the Federal Reserve System, 1975) p. 29.

and nonfinancial assets being acquired together with a statement of how necessary funds were raised to make payments for such acquisitions.

For each sector the entry for gross saving is the net sum of internal sources of funds—a residuum of current receipts less current outlays—and constitutes in the matrix an addition to sector net worth plus capital consumption reserves. Investment is stated gross of capital consumption and net of borrowing and is thus a use of funds consistent with the saving concept as a source.³ (see Appendix 1)

Part 2. Flow-of-funds Accounts and Monetary Theory and Policy

2.0 Loose Ends in Monetary Theory:

As correctly pointed out by Jacob Cohen, “monetary theory is less than satisfactory in its discussion of: 1) the real-financial process; 2) the equilibrium conditions for markets and sectors; 3) the adjustment process following a disturbance under neoclassical and Keynesian conditions; 4) the money supply process and suitable monetary indicators.”⁴ These deficiencies can be repaired if monetary theories are recast in a moneyflows framework similar to the flow-of-funds accounts presented in Table 1.

2.1 Description of the Real-financial Process:

Traditional monetary theories are unsatisfactory to explain the interaction of the real and financial process in the sense that they fail to express financial expenditures in the same dimension as real expenditures. The resultant effect is to obscure the obvious economic role played by finance in affecting spending and production. In the flow-of-funds accounts, the interaction between these two types of expenditures are made explicit by the equality of sources with the uses of funds for each individual sector and the national economy as a whole. By introducing explicit recording of financial flows among sectors, detailed by type of instruments, a flow-of-funds matrix, such as the one presented in Table 1, is capable of indicating the routes—direct or through financial intermediaries—by which sectors, such as households and unincorporated business that have excess of saving over gross domestic capital formation of \$4 million lend to

3. Ibid., pp. 29—30.

4. Jacob Cohen, Tying Loose Ends in Monetary Theory in a Moneyflows Framework (Pittsburgh: Graduate School of Business, Reprint Series No. 177, 1974) p. 246.

sectors such as corporate nonfinancial sectors that have excess of spending (i.e. gross domestic capital formation) of \$4 million over its own saving of \$2 million. This is indicative of how financial activities affects the nonfinancial activities in the economy. Similarly, it was only because of the fact that the households and the unincorporated business sector could save \$6 million, whereas it decided to spend only \$2 million in gross capital formation, that it could make an investment of \$4 million in financial assets which subsequently through financial intermediation process to the corporate nonfinancial sector of the economy for gross capital formation purpose. This is indicative of how the nonfinancial activities affects the financial activities in the economy. Accordingly, theorizing in terms of a moneyflows framework can establish the missing linkage between real and financial markets in traditional monetary theories and thereby relate the decision makers in these market in one inter-locking matrix. Such an inter-locking matrix highlights how financial developments affect nonfinancial developments and also how nonfinancial developments affect financial developments.

2.2 Description of the Equilibrium Conditions for Markets and Sectors:

A general equilibrium situation presupposes a balance simultaneously among stocks, among flows, and between the stocks and flows.

Contemporary stock-flow analysis [in monetary theories however] compartmentalizes the new issues and existing asset markets under equilibrium conditions. Such a dichotomy is based on an artificial distinction between "active" and "idle" money balances and between market for "new" and "old" securities. It is as if saving finances investment in the new securities market with "active balances" while idle balances and securities outstanding stay unchanged in sector portfolios.⁵

Recasting of monetary theories in a moneyflows framework designed after the flow-of-funds matrix, such as the one presented in Table 1, can do away with such an artificial compartmentalization between stock and flows. The horizontal equity established between total assets and total liabilities in terms of net financial investment as flows (line III) after netting it from similar outstanding stocks in existence [line A (a to h) and B (a to b)] is indicative of a simultaneous balance established among stocks, among flows, and between the stocks and the flows.

As regards the sectoral equilibrium condition as against the market equilibrium condition described in the preceding paragraph, the vertical equality of sources of funds with the uses of

5. Ibid. p. 254.

funds for each sector is indicative of the fulfillment of sector plans and hence the establishment of stability conditions.

2.3 Statement of the Optimization Process on the Micro-level:

In the model matrix presented in Table 1, it is self evident that the household and unincorporated business sector resorts to borrowings in financial markets inspite of the fact that their gross saving is in excess of their investment in gross domestic capital formation and net financial investment. Similarly, it is also self evident that the corporate nonfinancial sector do not limit its borrowing from the financial markets to the minimum amounts needed to cover its deficit but rather have found it worthwhile to borrow extra amounts that allows it to add some to its asset position even if it leads to holding of idle money by \$8 million. This is indicative of the maximization process at the micro-level whereby marginal costs of raising funds are equalized to the marginal returns from using funds (assuming different yields from different types of financial assets). Such a comprehensive statement of the maximization process at the micro-level cannot be provided by traditional monetary theories as transactions in financial assets and liabilities are expressed in terms of just net financial investment or disinvestment.

2.4 The Adjustment Process in a Neoclassical Setting:

The typical adjustment problem in a neoclassical monetary model is to provide the description of the closing of the inflationary gap following a disturbance in the equilibrium conditions. For the present purpose, let that disturbance be assumed to have been emanated from a once-for-all increase in investment demand of the corporate nonfinancial sector for gross domestic capital formation purpose occasioned by technological change which it intends to finance by sale of corporate securities.

In a moneyflows framework designed after the flow-of-funds matrix, such as the one presented in Table 1, sale of corporate securities by the corporate nonfinancial sector will lead to the transfer of money holdings from the households and unincorporated business sector to the corporate nonfinancial sector. The shift in money balances will be in response to increase in interest rate as a consequence of an increase in investment demand of the corporate nonfinancial sector. The household and unincorporated business sector buys corporate securities with money balances as a result of which the money balances of the corporate nonfinancial sector as a whole will show a net increase while that of households and unincorporated business sector will show a corresponding net decrease.

Following the disturbance, the higher money balances of the corporate nonfinancial sector leads to an increased demand for labour. However, the higher price level in the product market occasioned by activation of the money balances which hitherto had remained idle will cause a higher price for labour. The effect is a higher money wage bill for the same volume of employment. The high price of labour by itself would have been sufficient to cause a decrease in the volume of employment had there been no income effect of higher wages for goods and services. However, since the income effect of higher wages cannot be ignored, the increased demand for goods and services precludes any decline in the volume of employment. Accordingly, the increase in the price of labour closes the inflationary gap emanating from the sale of corporate nonfinancial securities. In short "it is the substitution effect of higher interest rates on household portfolios that leads to the release of money balances and in this way to higher levels of moneyflows and prices."⁶

2.5 Difference Between "Real Balance" Effect and Monetary Dissaving :

There is a considerable controversy as well as confusion regarding the working of Patinkin's "real balance" effect emanating from changes in the economy's stock of money balances. The controversy and confusion centers around the question as to whether the consequent impact of changes in the stock of money balances will be confined to changes in the wealth variable only or will also lead to a more pervasive effect on aggregate spending via the "wealth effect". Such controversy and confusion in monetary theories can be avoided if monetary dissaving factor is explicitly brought into the picture as we did in section 2.4 with respect to the households and unincorporated business sector.

The effect of higher interest rate on monetary dissaving of the type discussed in section 2.5--

Is to be distinguished from the 'real balance effect'. Real money balances will be an independent variable in the function explaining monetary dissaving and the partial derivative of dissaving with respect to money balances measure the real balance effect.⁷

6. Ibid. p. 259.

7. Ibid

The equation formulated by Jacob Cohen to describe regular reductions in money balances by the household sector for the purpose of bonds is as follows:

$$MB_h = f \left(\text{Pay}, \frac{\bar{M}_h}{P}, r_B \right)$$

where

Pay = payment structure of the household sector

$\frac{\bar{M}_h}{P}$ = stock of household real balances at beginning of period

r_B = the market rate of interest on bonds.

Accordingly, Jacob Cohen writes further that—

Defined in this way Patinkin's real balance effect plays its role in the adjustment process by inducing the leftward shift of the MB (1/r) function. The decline in household money balances and the higher price level causes $\frac{M_h}{P}$ to fall and monetary dissaving to decline.⁸

In final equilibrium (the only adjustment stage assuming tatonnement) the shift in MB (1/r) to the left eliminates excess demand in the money submarket of the bond market An increase in the money supply should exert a real balance effect in the sense of a monetary dissaving effect. Moreover, disequilibrium flows in stock and flow markets during the adjustment process would then "match up" in a consistent flow-of-funds framework Monetary dissaving can have a direct effect on the product market in addition to an indirect effect via the purchase of bonds.⁹

2.6 The Adjustment Process in a Keynesian Setting:

The typical adjustment process in a Keynesian monetary model is to provide the description of the closing of excessive aggregate spending. Assuming an initial disturbance in equilibrium condition emanating from the supply of bonds for the purpose of buying output, Jacob Cohen provides a step-by-step description as to how equilibrium condition will be restored

8. Ibid.

9. Ibid. pp. 259-60.

as a consequence of the constraints emanating from the sources of funds for making expenditures. Accordingly he concludes that in a Keynesian setting-

The movement to a new equilibrium is a "source constrained" rather than an "income constrained" process. An initial decline in expenditures financed by bond sales triggers a continued decline in bond-financed and money-financed expenditures in addition to labour (income)-financed expenditures. Given a "sticky" prices and wages, sources of funds are now not only necessary but they are sufficient conditions for expenditures in the product market.¹⁰

2.7 The Effect of Monetary Policy:

The growth impulses of monetary policy is transmitted through its impact on external finance (credit) rather than its impact on either the quantity of money or the rate of interest. Accordingly, the target of monetary policy should be external finance (credit) rather than the volume of money or the rate of interest. Following Cohen¹¹ the present writer contends that external finance is a better target for monetary policy than traditional monetary indicators such as the stock of money and the rate of interest.

Let us evaluate on *a priori* reasonings the effectiveness of an expansionary monetary policy effected through an open market purchase of government securities by the Central Bank. Either directly or indirectly, its effect is to increase the reserves of the commercial banks. The resulting increase in free reserves of the commercial banks will induce additional purchases of corporate securities at all yields. As a result, yields of corporate securities will fall which in turn will induce further borrowing so that in the new equilibrium situation an increased excess demand for securities in the money market will correspond to an increased excess supply of securities in the capital market. In the money market on the other hand the lower interest rate will equate a greater excess demand for additional money balances with an increased supply of new money balances in the capital market.

The key factor in the transmission process of monetary policy is increased purchase of corporate securities in the capital market induced by increased money supply generated by open market purchase. It is here that monetary policy makes contact with the real sector of the econo-

10. Ibid. pp. 266-67.

11. Ibid. pp. 267-70.

my that produces goods and services. If open market purchase of government securities cannot induce additional purchase of corporate securities, no expansionary effects of monetary policy can be felt in the real sector of the economy that produces goods and services. It is precisely because of the conspicuous absence of a capital market or the insensitivity of this market to the money supply situation that monetary policy in an underdeveloped country like Nepal cannot generate growth impulses in the real sector of the national economy.

One type of moneyflow in reality constitutes a leakage in the expansion of moneyflows. When income is allocated to time deposits this destroys demand deposits which are only partly replaced as banks expand their earning assets on the basis of the increase in excess reserves. The potential loss of money-flows due to the destruction of demand deposits can be estimated in a Markov Chain."¹²

Let us evaluate the effectiveness of a "tight" monetary policy effected through an increase in the interest rates of financial intermediaries such as the commercial banks again on a *priori* basis. This will induce asset—substitutions which will ultimately increase the aggregate supply of loanable funds in the capital market. Demand deposits will be substituted by time deposits and time deposits by corporate securities. Similarly, deposits in financial intermediaries will be substituted by bonds of financial intermediaries such as savings and loan shares which in turn will be substituted by corporate securities.

The increase in financial flows will be greater, the greater the shift into "other" intermediary claims (such as savings and loan shares) as compared with the shift into commercial bank time deposits. In this way, a tight monetary policy directed at curbing the volume of external finance for real expenditures will suffer from "slippage". An increase in the interest rate on open market securities relative to intermediary claims will have similar slippage effects as intermediary claims are shifted into marketable securities, "Slippage" can also operate through other markets. Inter-firm lending (trade credit) may offset a tight money policy by encouraging liquid firms, thus increasing the activity of money balances.¹³

2.8 Nepalese Experience with an Active Interest Rate Policy:

The Nepal Rastra Bank imitating the active interest rate policy followed by countries

12. Ibid. p. 269.

13. Ibid. pp. 269—70.

like Taiwan, South Korea, Indonesia, Japan and Germany at different periods of their history, substantially raised the interest rates on commercial bank deposits twice in 1965 and in 1975 with the intention of stepping up bank loans in priority sectors. Consequently, there was a phenomenal accumulation of bank deposits emanating either through the "saving effect" (i. e., higher marginal propensity to save in response to increase in interest rate) or through the "substitution effect" (i. e., substitution of inferior types of real assets such as commodities, gold and silver ornaments for bank deposits) in household portfolios. There was also inflow of funds from India especially in 1975.

Unfortunately, all the savings embodied in bank deposits could not be lent for investment purposes because of insufficient demand for external finance. Fragmentation of money and capital market, wrong procedural and institutional set up, and lack of suitable policy measures to support the active interest rate policy of the Nepal Rastra Bank, led to the emergence of a paradoxical situation under which profits of the commercial banks was adversely affected on account of high liquidity ratio and inverted interest rate structure. And all this happened at a time when each and every sector of the Nepalese economy was literally starving of institutional finance. Why this happened? Does this mean that there are no investment opportunities in Nepal and therefore, no need for accumulation of saving in the form of bank deposits? The answer is obviously in the negative. There exists in Nepal several profitable investment opportunities such as in agriculture, transport and construction sectors where the internal rate of return may be as high as 30 percent. Therefore the problem is not that of saving in the form of bank deposits being excessive in relation to investment opportunities. The problem is that of devising appropriate policy measures such that accumulated savings in the form of bank deposits can be effectively used to facilitate external finance. This entails promotion of accessibility of institutional finance to small farmers and businessmen and similar other domestic entrepreneurs. And it is in these respects that His Majesty's Government of Nepal, the Nepal Rastra Bank as well as the entire banking and financial system of the country failed. In the Nepalese context, this failure provides one more example of what Griffin has called the "fallacy of elasticism" i. e., the indiscriminate use of bits and pieces of policies that are alleged to have been successful in other settings.¹⁴ Bank loans to agriculturists could not be stepped up because they could not pledge securities other than land and buildings. What is wrong in accepting land and buildings as collaterals provided the projects to be financed are "sound" projects? If the banks were

14. Keith Griffin, "Rural Development: The Policy Options", *Employment in Developing Nations*, E. O. Edwards (ed.) (New York: Columbia University Press, 1974) p. 181.

unwilling to advance loans to agriculturists, why an active interest rate policy was pursued in the first place, knowing that Nepalese agriculture does not possess assets worth the name other than land and buildings. Finally, how does policy measures such as these square with the oft repeated phrase that agriculture is the back bone of the Nepalese economy ?

Against the above mentioned background it may be argued that had the Nepal Rastra Bank while anticipating a sharp rise in deposit flows to banks made use of the conceptual framework of the flow-of-fund matrix, such as the one presented in Table 1, it would have been forced to think before hand as to how the funds are going to be used. Accordingly, either the imperative to find ways and means for funds utilization would have been apparent or the idea of an active interest rate policy itself would have not been implemented at all. As soon as a certain flow of fund is anticipated, that flow must be placed in its appropriate cell of the flow-of-funds matrix and, a minimum possible conjunct set of entries must be worked out in order to keep the matrix in balance. Even hypothetical text-book exercises such as Table 1, could have led the Nepal Rastra Bank to suggest measures to His Majesty's Government of Nepal as to what needs to be done in order to be prepared for absorbing the bank deposits in priority sectors.

The usefulness for the flow-of-funds accounts can also be illustrated by considering the question of what happens when the money supply increases.

Money is a liability of the banking system and an asset of the public; if it increases, the increase must be accompanied by some combination of decrease in bank liabilities, an increase in bank assets, and an offsets in the accounts for other sector. The organization of the accounts forces these contra-entry questions to the surface and in the process spells out the initial question in a complete form. Analysis of this kind can be applied to an actually expected set of developments by using the matrix structure as a device in forecasting or projecting the future, with the specific function fo keeping individual parts of the forecast with one another. The merit of such constrained systemwide forecast is that each element can be tested by the plausibility of its counterparts in other areas of the matrix. The structure as a whole is reasonable only when all of its parts are reasonable. Whether the elements are derived econometrically from empirical models or put together judgementally by hand, there is room in the procedure for successive approximations that approach the final result by working out the

effects of each on the rest of the structure and by then working back from the effects to revised version of the initiating change.¹⁵

With appropriate modifications, the flow-of-funds accounts can also be used for sectoral allocation of financial resources in our development plans. India has already introduced this technique in her recent plans.

Developing a complete forecast on the basis of the flow-of-funds accounts, illustrates an obvious but hitherto ignored role of real finance in development plans. The accounting framework of the flow-of-funds can correct this shortcoming by indicating that, uses of funds of decision-making sectors are constrained by financial sources of funds in addition to real sources (income) and secondly that, financial uses of funds of one sector are linked to the financial sources of funds of a second sector. Very often, the inability of our planners to establish a linkage between surplus and deficit sectors lead to misallocation of available saving and thereby thwart the growth of domestic entrepreneurial activities. Unless and until the constraints imposed by internal finance is removed, small farmers and businessmen will not be able to make any progress. And it is these small farmers and businessmen whose economic activities account for most of the value added in our economy.

2.9 Suitable Monetary Indicators:

In view of our discussion in section 2.7 and 2.8 we conclude with Jacob Cohen that— the money flows framework since it single out financial flow as the linkage between policy and expenditure goals, would have external finance as the target or indicator of policy. The effectiveness of alternative targets depends on their ability to stimulate movements in external finance. For the money stock to do this, velocity changes which affect the volume of external finance would have to be explained by changes in the money stock. When one considers for example the exogenous disturbances..... this is unlikely.¹⁶

As regards the efficacy of the rate of interest as a policy variable, Jacob Cohen further observes that—

the case for a close relationship between interest rates and external finance is even more tenuous. This relationship can have any algebraic sign depending on the

15. Board of Governors of the Federal Reserve System of the U. S. A., op. cit. p. 6.

16. Jacob, Cohen, op. cit., p. 270.

relative strengths of the demand and supply for credit. These *a priori* arguments for favouring external finance as the monetary target are supported empirically.¹⁷

3.0 Advantages of a Moneyflow Framework:

Summing up his theorizing on monetary, Jacob Cohen provides a list of the following eight advantages of a moneyflows framework as against that of traditional monetary models:

(1) It emphasizes the role of finance by expressing sector expenditures and finance in the common dimension of flows. In contrast, finance "nets out" in contemporary micro-monetary models. (2) It brings out the flow aspects of market equilibrium under both static and dynamic conditions. (3) It offers a comprehensive statement of the optimization process on micro-level. (4) It provides a step-by-step picture of the response to an economic disturbance under neoclassical and Keynesian conditions taking account of the underlying constraints in four markets—product, labour, bonds and money. (5) The wealth or real balance is seen to involve a confusion of the wealth variable with the wealth effect. The missing equation in contemporary theory is the equation explaining monetary dissaving. (6) It replaces stock-flow dichotomies of the money supply and securities markets with one integrated framework. (7) A single framework is provided for general equilibrium models and circular flow models. The latter are limiting cases of the former when the "choice-theoretical" variables (prices) are taken as given so that the functional relationships are solely relationships between flows. (8) Its view of monetary policy and the transmission mechanism ranks external finance ahead of either interest rates or the money stock as an indicator (linkage) variable.¹⁸

3.1 Disadvantages of a Moneyflows Framework:

Disappointments is sometimes voiced that the moneyflows framework designed after the flow-of-funds accounts lack some ground, all embracing theory such as that of Keynes. "The implied suggestion is that the accounts should make peace with theory".¹⁹ But Jacob Cohen observes that "reconciliation may form the opposite direction by recasting monetary theory in a flow-of-funds framework."²⁰

17. Ibid.

18. Ibid. pp. 271—72.

19. Ibid. 247.

20. Ibid,

Appendix 1:

Hypothetical Accounts of Proprietor's Households
(in \$)

I. Income and Outlay Account

1. Consumption expenditures	5,000	4. Income from entrepreneurship and the like	7,000
2. Taxes	600	5. Transfers received	200
3. Saving	1,600		
Outlay and saving	<u>7,200</u>		<u>7,200</u>

II. Investment Account

1. Gross domestic capital formation	1,500	3. Saving	1,600
2. Net financial investment	500	4. Provision for capital consumption	400
		5. Capital transfers received, net	0
Gross investment	<u>2,000</u>	Finance of gross investment	<u>2,000</u>

III. Financial Account

1. Money	600	6. Consumer credit	700
2. Other deposits	-40	7. Trade credit and other loans received	400
3. Life insur. equity and the like	140	8. Net financial invest- ment	500
4. Securities	600		
5. Other loans made (or repaid)	<u>300</u>	Increase in liab. and net financial investment	<u>1,600</u>
Increase in financial assets	1,600		

Source: William I. Abraham, op. cit., p. 196.