Chapter 11
SUMMARY AND CONCLUSIONS

The present study has attempted to explore some aspects of analysis of financial flows in the Indian economy. The focus here is on the structure, trend and determinants of financial flows in the economy.

Neither financial flow account nor flow of funds accounts has a generally accepted meaning in economics. Different countries use different concepts and statistical coverage in their national accounts. However, the generally accepted view is that the flow of funds accounts cover financial and non-financial transactions, whereas financial flow accounts cover only financial transactions.

Flow of funds accounts is one component of national account system. It shows financial transactions between broad sectors of the economy, thus linking the saving and investment aggregates in the other components of the national accounts with their associated lending borrowing activities. Like these other components the flow of funds accounts is designed to provide a framework which gives a systematic, comprehensive and consistent description and analysis of facts. It brings the various financial activities of the economy into explicit statistical relationship with one another and with the data.
on non-financial activities that generate income and production.\footnote{Bain A D, op.cit. 1973}

Thus it suggests that the flow of funds accounts concentrates on financial transactions in the economy and tries to link the financial transactions with non-financial transactions. Other components of national accounts such as a) national income accounts, b) input-output accounts and c) national balance sheet deal with different aspects of the economic activities. National income accounts measures, in money terms, the main element in nation’s income, expenditure, investment and savings whereas the input-output accounts concentrates on the general problem of inter-industry relation at production level. The national balance sheet shows assets and liabilities of different sectors in the economy.

This indicates that each set of accounts has different coverage in their scope. The financial flow accounts or flow of funds accounts has an advantage over other system of national accounts.

The national income accounts covers the production and income aspect of the economy whereas the flow of funds accounts deal with the role of money and credit in the economy. The national income accounts does not emphasise the financial transactions, but flow of funds accounts explain in detail, the financial transactions in relation to corresponding to
non-financial transactions of sectors. The role of Banks and Other Financial Institutions which is totally ignored in the national income accounts is included in greater detail in the flow of funds accounts to show the role of money and credit in the economy.

The coverage of input-output account is relatively different than other accounts. Here output of one industry is related with input of other industries. The concentration is on the total production of each sector, and final output of the economy. The national balance sheet is relatively close to the flow of funds accounts if the former is carefully designed.

The national accounts ends at aggregate saving-investment balances at the economy level whereas this is the starting point of the flow of funds accounts. The flow of funds accounts begin with sectoral saving and investment figures and corresponding to these non-financial flows, detailed lending borrowing activities are shown through financial flows.

As stated earlier, flow of funds accounts has distinct advantage in analysing the financial behaviour of different sectors. The flow of funds accounts can give insight which is not possible within the aggregate national income accounts. In particular, changes in monetary and fiscal policy, the effects of which can be observed in the national accounts.
very indirectly, can be traced more explicitly through sectoral flows to changes in financial position which affect spending decisions. This is not to say that flow of funds accounting explains the mechanism of monetary and fiscal policy; but rather traces some of the channels through which it works.\textsuperscript{1} The accounts includes many items which have no place in other system of accounts. The flow of funds accounts are significantly useful for financial planning and projection. This has special advantage in less developed countries; because here the flows are at times governed by policies rather than by market forces. The identification of the present financial structure can provide unique insight for the planners in such countries.

However the development of the theory of flow of funds is rather slow and less comprehensive on theoretical and empirical ground. As Goldsmith has remarked that 'a Keynes of flow of funds has yet to appear';\textsuperscript{2} On theoretical side, contributions by Stone, Cohen, Dawson and Divatia\textsuperscript{3} are remarkable. Goldsmith and K L Gupta's work are more fruitful on empirical side. Some aspects of the financial behaviour of the Indian economy is analysed in this study.

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\textsuperscript{1} Bank of England, op.cit, 1972
\textsuperscript{3} Chapter 2.
\end{flushleft}
Household is the key surplus sector in the Indian economy, as true for other developed and underdeveloped countries and the deficit of the Government sector increases at a faster rate than that of Private Corporate sector. The non-equality of saving and investment is reflected as surplus or deficit of a sector. When saving exceeds investment, there is surplus of funds and when investment exceeds saving there is deficit of funds. The important aspect is reflected in the corresponding lending activity of the surplus sector and borrowing activity of the deficit sector. Financial flow accounts emphasises on the lending borrowing activities of different sectors. The gross savings of the Household sector was Rs.621 crores in 1951-52 increased to Rs.21521 crores in 1980-81 and the gross investment of the sector has gone up from Rs.607 crores to Rs.12822 crores during the same period. The saving was around 70% to 75% of the total domestic saving and its share to GDP went up from 6.2% to 16.8% during the above period. The share of Household's capital formation was around 40% to 45% of the domestic capital formation. In the case of net savings and net investment; the earlier has increased from Rs.278.8 crores to Rs.16747 crores and the latter from Rs.320 crores to Rs.7951 crores during the same period. The above figures suggests substantial growth in both savings and investment in last three decades. Household's saving to NNP with three yearly moving averages show that the ratio increased from 3.72% in 1951-54 to 15.61% in 1978-79. Similarly, saving to disposable income ratio went up
from 3.51% to 16.19% during the same period. The composition of saving between physical assets and financial assets shows that, the physical asset's share was around 60% during 60's has declined to around 50% in 70's. In the structure of financial assets; currency and deposit and contractual savings are key financial instruments. The currency and deposit constitute around 50% to 60% of the total financial use of the Household sector during 60's and 70's. The other useful instrument is the contractual savings; the share of which remained around 25% to 30% during the period of three decades. Small saving, though voluntary type of saving, its share remained around 15%. The loans and advances also showed less than 5% share. The direct financing in government and corporate securities play a negligible role. The financial behaviour of Household sector in selected developed countries also shows the dominance of financial intermediaries and significant role of indirect financing through above instruments compared to direct financing through securities.\[\text{1/}

Regarding determinants of financial flows of the Household sector; the sector behaviour is examined by considering non-financial expenditure, interest rate and budget constraints. The currency and deposit is divided in three components, cash in hand, demand deposit and time deposit. In the case of cash in hand; interest cost is found to be significant as opportunity cost variable. Disposable income and total

\[\text{1/ See Appendix to Chapter 4.}\]
financial use of the Household also found to be significant.
This results indicate that the sector makes economic use of
the cash that they hold. Demand deposit does not show similar
behaviour. Here interest rate is not found to be significant.
The other variables such as lag effect of endogenous variable
and disposable income are found to be significant. The result
indicates that due to the heterogeneous nature of the sector,
the effect of interest rate is found to be insignificant.
The time deposit is key financial use of the Household sector.
The regression results are given below:

\[
\text{Log TDUH} = f (\log R_{12} \log \text{TUH}) \quad (1)
\]
\[
\ln \text{TDUH} = -2.4 + 1.42 \ln R_{12} + 0.797 \ln \text{TUH}
\]
\[
(3.004)^a \quad (3.754)^a
\]
\[
R^2 = 0.923
\]

\[
\text{TDUH}^* = f (R_{12} \text{TUH}^*) \quad (2)
\]
\[
\text{TDUH}^* = 160.40 + 30.28 R_{12} + 0.22 \text{TUH}^*
\]
\[
(2.77)^a \quad (3.48)^a
\]
\[
R^2 = 0.81
\]

where, TDUH = time deposit use of Household sector
\[ R_{12} = \text{time deposit interest rate} \]
\[ \text{TUH} = \text{total financial use of Household sector} \]
\[ * = \text{real flows} \]

(Figures in the brackets indicate t values and 'a' suggests
that it is significant at 5% level of significance)

The above results indicate that time deposit flows
are responsive to the rate of interest rate. The real time
deposit flows are also responsive to interest rate. This emphasises the financial repressionist's hypothesis of providing high interest rate for financial and economic growth.

Regarding contractual saving obviously provident fund or life fund are not responsive to economic variable, however, the share of life fund to total financial use has remained within the range of 7% to 10% of the total financial use of the Household sector. The provident fund's share declined from around 25% to less than 20%. The small savings are also found to be not responsive to the interest rate paid on such deposits.

On the financial source side, the advance rate and total financial source of the sector are found to be significant variables, which indicates that the sector economise funds they borrow from other sectors.

In the case of Rest of World sector, the aggregate behaviour suggests that the sector prefers to lend their funds through loans and advances rather than by securities.

Private Corporate and Government are the deficit sectors in the economy. The share of Government's saving was 25.1% to total domestic saving declined to 17.4% in 1979-80. The Private Corporate's saving to domestic saving also declines from 13.1% to 7.4% during the same period. The share of capital formation of the Government sector increased remarkably from
26.1% to 47.2%, and the share of Private Corporate's capital formation declined from 21.6% to 11.0% during the same period. The Household sector's capital formation also declined from 52.2% to 41.5% during the period of three decades. This means that the investment requirement of the Government sector increased substantially in three decades. The net saving of the Private Corporate sector increased from Rs.63.3 crores in 1951-52 to Rs.842 crores in 1980-81 and the net investment from Rs.144 crores to Rs.2524 during the same period. The Government sector showed remarkable rise in their investment from Rs.243 crores to Rs.11961 crores whereas saving of the sector went up from Rs.187 crores to Rs.3594 crores during three decades.

The saving of the sector invested within the sector is defined as self financing ratio. This ratio also reflects the need for outside funds. In the case of Private Corporate sector, its self-financing ratio fluctuates widely in the first decade of planning but during 60's and 70's the ratio has remained around 25% to 30%. Marginal efficiency of capital and interest rate are the factors which determine investment in economic theory, but the views on role of interest rates with specific reference to the short run or long run investment are not conclusive. Keynes and Wicksell are in the first group which strongly believe that interest plays an effective role in the long run and not in the short run. However, Hawtray believes that interest rate play an important
role in the short run rather than in the long run. Wickesell Lutz and Hayek believe that either interest cost plays negligible role in the total cost structure or other factors are more important than interest rate and that is why the response with interest rate is not negative. It is true that generally long term investment is generally financed through securities and short run inventory expenditure is financed by bank borrowing. The financial deficit of the Private Corporate sector increased from Rs.117.1 crores in 1951-52 to Rs.2319.6 crores in 1980-81. In the composition of the financial source of the Private Corporate sector, paid up capital and borrowings were important in 50's but in 60's and 70's; borrowing remained a key financial source to finance the deficit of the sector. The share of this instrument remained around 50% to 90% of the total financial source of the sector. The behaviour of the different financial instruments of the Private Corporate sector, suggests that in the case of paid up capital, the interest rate shows negative sign but the result is not significant. The borrowing of the sector is found to be positively related with interest rate rather than negatively as expected in theory. This means that factors other than interest cost are more important and that is why the borrowings are not responsive to interest rate. The trade credit plays a secondary importance in the financial source of the Private Corporate sector.

The activities of the Government sector is different than that of Private Corporate sector. Here the purpose is
not to maximise utility or profit but to maximise output or welfare. The self-financing ratio of the sector has remained around 30% which means that 70% of the funds are collected from outside sources. The composition of the financial source of the sector indicates that borrowing remained an important source of finance especially after 1960-61. In case of long term debt; total source of the Government sector and lag effect of the endogenous variable are found to be responsive but not the interest rate. Borrowing from Bank source of the Government sector is responsive to interest rate. The total financial source and inventory expenditure of the Government sector are positively related.

Bank and Other Financial Institutions are the sectors which establish the link between savers and investors. The separation of saving and investment activities has generated the importance of financial intermediaries. Here the lender has not to search every potential borrower and on the other side the borrowers have also not to search the lender. The financial intermediaries issue different financial instruments which satisfies different type of choices of savers. The small as well as big savers are motivated by financial intermediaries and the short term as well as long term finance also can be available from financial intermediaries. Thus financial intermediaries provide a significant advantage to the savers and investors.
The financial source structure of the Banking sector indicates that currency notes, demand deposit and time deposit are the key instruments and time deposits share has remained around 30% to 40% of the total financial source of the sector. The Household is the main surplus sector which holds the major portion of the above instruments. The response of interest rate is significant in the case of cash in hand and time deposit. On the financial uses side of the Banking sector; except for few certain years the share of loans and advances remain around 50% to 60% of the financial use of the sector and investment constitute 30% to 40% share. The loans and advances at aggregate level are responsive to advance rate and total financial uses of the Banking sector. The investment of the sector in government securities is obviously not responsive to rate of interest due to captive market of such securities. This type of behaviour is also true for the Other Financial Institutions' investment in such securities. Financial source side of the Other Financial Institution indicates that provident fund and life fund flows are the key sources and provident funds dominates the life fund flows. The lending activities of the Other Financial Institution sectors are obviously not determined by market forces.

The inter-sectoral analysis emphasises on the sectors relationship with other sectors. Here the borrowing/lending activities of the sector from/to other sectors are also taken into consideration. The behaviour of three groups of sectors
such as surplus sectors, deficit sectors and financial intermediaries are considered. The important aspect here is to examine the role of direct financing vs indirect financing. Household is a key surplus sector in the economy which borrows from the Banking sector and leads to the same sector also. The financial source of the Household sector is found to be not significantly responsive to advance rate but other indicators such as Household's investment and total financial source of the sector are significant. The Household sector borrows from Other Financial Institution (HSO) is related with total use of Other Financial Institution (TUO) (considering the inter-sectoral dependency) and with the investment of the Household (HI) sector. The results are given below.

\[
\log HSO = \log TUO + \log HI
\]

\[
\log HSO = 9.20 + 1.92 \log TUO - 1.22 \log HI
\]

\[
R^2 = 0.764
\]

This shows that both the variables indicated above are significant at 5% level of significance. On the lending side of the Household's sector, lending to Banking sector is not found to be significant with the interest rate due to demand deposit and cash in hand component in the sector's lending to the Banking sector. The Household's lending to Other Financial Institution is related with the lag effect of the endogenous variable and total financial use of the Household sector. This type of behaviour is found due to contractual
nature of the lending activities of the Household sector. The sector's uses to Government sector is obviously not determined by market variables. Household's direct financing has remained around 20% to 30% during 70's, and the indirect financing to Bank and Other Financial Institution has remained a dominant character of the Household's activities. Rest of World sector does not show surplus continuously. The sector showed deficit during some years. The lending activities of the Rest of World is useful for us. Here the composition of financial uses shows that the sector prefers to provide funds to the Banking sector and Government sector rather than Private Corporate sector funds.

Private Corporate sector can borrow funds directly from the surplus sectors like Household or borrows indirectly from financial intermediaries like Bank and Other Financial Institution. The direct borrowing from the Household sector was more prominent in the first decade of planning. In the subsequent two decades, the share of this sector in the total financial source of the sector remained around 20% to 30%. Banking and Other Financial Institution together constitute nearly 50% to 95% of the total financial source of the Private Corporate sector. In the sector analysis, advance rate showed positive sign rather than negative. The net borrowing of the Private Corporate sector indicates that the Household's share fluctuates considerably from 4.17% in 1968-69 to 79.27% in 1972-73. However Banking and Other Financial Institution's
share remained around 50% to 80% of the net financial
source of the sector ignoring exceptional years like 1958-59,
and 1972-73. The share of Government has remained at less
than 10% level.

In the case of the Government sector, the sector
collects less than 10% directly from the Household sector.
The share of Rest of World was relatively high during 1958-
59 to 1969-70. The share remained around 50% during this
time but after that it declined to less than 10% only. This
facts suggest that after 1970-71, the financial intermediaries
become the biggest source of funds for the Government sector.
During this period nearly 60% to 70% of the funds is supplied
by financial intermediaries. This is also because of the
control over resources by the Government sector and also due
to the policy of channelising funds for the priority sectors.
The inter-sectoral borrowing activities of the Government
sector is not determined by market forces. The net borrowing
of the sector indicates very useful criteria, that here Bank
and Other Financial Institution play a very dominant role in
financing the deficit of the sector. The share of these two
sectors comes to around 70% to 80%. The Rest of World showed
similar trend as stated earlier. The share of Household
sector remained around 15% in 60's and 70's. The role of
Bank and Other Financial Institution sector is obviously
explained when we have examined the behaviour of the surplus
and the deficit sectors. The surplus sectors prefer indirect financing to invest their funds on the other side, deficit sectors also now rely more and more on the financial intermediaries. The Government, being the key deficit sector, collects 60% to 80% of their funds from these sectors.\(^1\) The inter-sectoral analysis emphasises the role of financial intermediaries in the 'Indian Financial Structure'\(^1\).

The role of different financial instruments can be better analysed through instrument-wise analysis.\(^2\) The money reduces the difficulties of the barter system and increases the scope of economic activities. Finance further increases the scope of production in the economy. The financial instruments separate savers and investors and increases the scope of investment. The financial intermediation effect and asset transmutation effects also expand the investment activities in the economy. The securities issued by the non-financial sectors such as Household, Private Corporate, Government and Rest of World are considered as primary securities and the securities of Bank and Other Financial Institutions are secondary securities. The growth of primary and secondary securities is related with capital formation as suggested by Goldsmith.\(^3\) The total issues to capital formation

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1/ Chapter 8
2/ Chapter 7
3/ Goldsmith, op.cit. 1969
(FIR) increased from 0.37 in 1951-52 to 1.84 in 1982-83. This indicates that there is substantial development of financial structure in the past three decades. The secondary securities to capital formation ratio (SR) went up from 0.37 in 1954-55 to around 0.70 in 1970's. The share of secondary securities over primary securities (IR) reflects the growth of earlier in comparison to latter. This ratio has increased from 0.38 in 1951-52 to 0.72 in 1981-82. This indicates that the secondary securities increase at faster rate in the past three decades.

The role of different financial instruments in the total financial use of the economy highlights the role of currency and deposit, loans and advances and investment as important financial instruments and Household and Financial Intermediaries as important sectors in the economy. The share of investment has remained around 30% of the total financial use of the economy whereas the loans and advances constitute 35% to 40%. The currency and deposit has remained within the range of 20% to 30%. The contractual saving is less than 10%. The holdings of each financial instrument indicates that in the case of key instruments such as investment, loans and advances and currency and deposit, the role of Household and Financial Intermediaries are very prominent. In the case of currency and deposits nearly 75% to 80% of the funds are held by the Household sector. In the case of investment nearly 80% to 90% of the funds are with the Banks and Financial Intermediaries. The role of Household sector in holdings of investment is negative. The Bank and Other Financial Institutions are the dominant sectors in
loans and advances also. Here their share increased substantially to around 30% in the 70's which was relatively less in the earlier decades. Above facts show the usefulness of financial intermediaries in the financial structure of the Indian economy.

The aggregate macro financial behaviour of different sectors, financial instruments and inter-sectoral relationship can be analysed in the complete system approach. In the present study only a partial analysis is made where the financial holdings of different sectors and instruments are considered.

The behaviour of the sector or instrument is examined with the help of budget shares rather than nominal flows. The independent variables are total financial use and the respective interest rate or time. The format of equation is as follows:

\[ W = f(\alpha + \beta \log \text{TFU}^* + \gamma \log R^*) \]

where, \( W \) = budget share of each instrument or sector
\( \text{TFU}^* \) = total (real) financial use of the economy or sector
\( R^* \) = (real) interest rate (corresponding interest rate for each variable).

The analysis is made here in three ways: (1) Instrument-wise, (2) Household sector's detailed analysis, (3) Inter-sectoral.

Following conclusions can be derived from the results.
1) The opportunity cost criterion seems to be not responsive

\[ \text{// See Chapter 9} \]
to budget shares of financial instruments and sectors of the economy.
2) In order to mobilise resources the policy makers have to rely on Household sector and especially on currency and deposit.
3) The contractual savings and small savings showed negative coefficients but it showed significant response with total (real) financial use of the economy.
4) Changes in the total financial use (real) of the economy does not alter the sectoral shares.
5) The dependency on the Rest of World's sector showed declining trend after 1969-70.
6) Wealth elasticity is highest in the case of Banking sector in the sectoral behaviour.

The inter-sectoral behaviour at the aggregate level and the role of saving and investment in the economy is taken care of in the 'Financial Planning and Projection'. It is true that in the planning, if lending-borrowing activities of the sectors are ignored then this type of physical planning has many limitations. Similarly, if only inter-sectoral lending-borrowing activities are considered ignoring the saving-investment of the sectors then also the exercise is not useful. The purpose here is to make use of the technique presented by Dr. Divatia. The usefulness of the above technique is also

\[\text{Chapter 10}\]
tested by taking the IV Plan saving-investment figures. The results suggest that the method is useful in projecting sectoral saving-investment. The investment projection is also made for VI and VII Plan. The supply and demand coefficient matrix for the V Plan are found to be stable which means that such coefficient tables can be used for planning and projection.

The present study of financial flows in the Indian economy concludes following observations.

(1) There has been considerable growth in the real and financial flows of the economy. The saving-investment of the key sectors such as Household and Government sector showed remarkable rise. The growth during the 70's is more significant than in the earlier decades.

(2) The growth of financial assets is also rather fast in the economy and it is more so during the 70's than in the earlier decades. This increases the scope of financial intermediation effect which smoothen the process of saving and investment in the economy.

(3) The Household sector is the key leading surplus sector in the economy. Its lending to Banks and borrowing from Banks are generally determined by market forces. The Rest of World's importance is reduced during the 70's.

(4) The Government is obviously the most dominating deficit sector in the less developed country like India, where the activities of the Government sector are rather wide ranging.
It's financial flows are obviously not determined by market forces. The growth in the deficit of the Private Corporate is far behind than that of Government sector. The long term or short term borrowings of the Private Corporate sectors are not determined by the interest rates. This means that either interest cost is negligible in the total cost of production or other factors are more important than interest rate changes.

5) Financial Intermediaries play a significant role in the financial structure of the Indian economy. The borrowing by the banking sector is to some extent influenced by market forces but lending to Government is not determined by market forces. The behaviour of Other Financial Institution is also determined in a similar way.

6) In the inter-sectoral analysis, the indirect financing is more outstanding than the direct financing. This is not only true for the surplus sector like Household but also for the Private Corporate and Government sector.

7) The financial flows in the nominal flows may be responsive to certain market or non-financial variables but it is not so in the case of budget share form. This reflects the stability in the pattern of financial flows. Not only sectoral flows but inter-sectoral and instrument-wise behaviour also show similar trend.

8) Financial planning and projections can be made by the methodology given here. The stability of the coefficients
can be tested from time to time.

Whatever may be the nature of argument about the role of finance and development in developing countries, but it is true that both the school of thought, namely, financial structuralists and financial repressors, are right in advocating different ways for mobilising funds for economic growth. The financial structuralists group argues that growth of financial institution and services have a direct effect on economic growth whereas the financial repressors argue that high real interest rate can lead to capital formation and growth. The solution cannot be watertight of favouring either high interest rate or expansion of bank branches only. In less developed countries where savers are scattered and when their income flow is uneven the useful way is to increase the bank branches in the rural and urban areas to attract savings.

On the other side it is also true that when there is acute inflation in the country people will certainly prefer physical assets over the financial assets. This suggests that both high real interest rate and opening of bank branches can mobilise savings in the country. In Japan, increase in


Bank branches and relatively high real interest rate (3% on one year bank deposits) have given significant results.

It is also true that the present financial structure requires some reforms. The interest premium on life funds can be reduced to match with the risk it covers or bonus rate must be raised. The public provident fund scheme can be more popularized by providing different incentives to its holders and also to the motivators.

The crop insurance scheme can be introduced to attract the rural savings. The small savings operations can be further intensified by providing the door to door facilities for collection of deposits. This can be made contractual in nature. The role of commercial banks and post offices can be further expanded to reduce the cost of collecting funds and scattered savings can be motivated and collected.