Mapping India's Finances
60 Years of Flow of Funds

AMAY NARAYAN, ARJUN JAYADEV, J W MASON

As a useful adjunct to other macroeconomic accounts, this paper describes financial flows between different sectors of the Indian economy from 1955 to 2015. It finds that the consolidated government sector has the largest net deficit, while the households sector has the largest net surplus. The private corporate sector is running larger deficits than at any other time in the past, implying more reliance on external credits. With liberalisation and globalisation, the rest of the world sector is now the second-largest net surplus sector in the economy.

Amay Narayan (*amay.narayan@apu.edu.in*) is a research associate at Azim Premji University, Bengaluru; Arjun Jayadev (*arjun.jayadev@apu.edu.in*) teaches Economics at Azim Premji University; J W Mason (*profjwmason@gmail.com*) teaches Economics at John Jay College, City University of New York.

1 Flow of Funds

Capitalism is a financial system. Every entity in the economy, whether an individual, a household, a business, or a state institution, faces monetary constraints in the sense that cash-inflow and cash-outflow operations form a key set of conditioning factors on behaviour. Depending on the extent to which an entity effectively manages these flows, it faces greater or fewer liquidity and solvency constraints. In periods of generalised crisis, it is the network of these constraints that first become noticeable as being under threat.[1] There is now an increasing recognition that financial operations and money flows, rather than being just a "veil" reflecting "real" flows, have an independent existence that determine economic outcomes (Mehrling 2012). Money flows, from this viewpoint, are autonomous but shape real outcomes. Put another way, money flows may or may not correspond tightly with "real" flows of expenditure, but may be greatly important to understanding the macroeconomy (for example, households may borrow to accumulate assets, and though this does not result in increased consumption or investment, it does have effects on the fragility of the financial system).

From such a perspective, an effective accounting structure for the evolution of an economy needs to capture the pattern, duration, and timing of money flows within it. This was an insight Morris Copeland (1952) had and his inspiration for creating "flow of funds" (FoF) accounts in the United States (US). The FoF accounts measure financial flows and commitments across sectors of the economy, tracking funds as they move from net surplus sectors to net deficit sectors, which use them for current expenditure or to acquire physical and financial assets. Examining these provides a simple but effective portrait of the nature of financial claims in an economy, and acts as a very useful adjunct to the national income accounts to understand its current and likely future trajectories.

In this paper, we provide such a portrait of the Indian economy from 1955 to 2015 using the country's underused FoF accounts data. We undertake a broad-brush portrait of the sources and uses of funds, and the evolution of the financial instruments issued over the period. The key features that emerge are as follows:

(i) The consolidated government sector is the largest net deficit sector and households are the largest net surplus sector.

(ii) Since liberalisation, while the financial deficits of the government exceed the deficits of the private corporate sector (PCS)

in most years, the PCS has been running larger deficits as a fraction of gross domestic product (GDP) than in the past.

(iii) The rest of the world (ROW) has moved to becoming the second-largest net surplus sector in the economy.

(iv) The pattern of financing for the large deficit sectors varies substantially with the PCS still relying on bank-based loans and advances rather than market-based security issuances to undertake expenditure.

(v) Sectoral transfers have changed over time. For example, the PCS relies much more heavily on households and the ROW for their financing now than in the past.

The rest of this paper is divided as follows. In Section 2 we briefly explain the background of FOF, and how it is in India. Section 3 provides an overview of the net surplus and deficit sectors from 1955 to 2015, and the evolution of patterns of funding. The final section uses these findings to provide pathways for further research and understanding.

2 Background

The FOF approach traces its roots back to the work of Copeland in the late 1940s. Titled "Tracing Money Flows through the United States Economy" (1947), his paper laid the foundation for this method of analysis, which was further developed in his book in 1952. Since microdata on every transaction are not available, Copeland suggested that we divide the economy into several key institutional sectors and account for aggregate money flows between each sector. The resultant FOF model consists of a set of interrelated sectoral balance sheets, each containing the credits and debits to the sector. Typically, FOF data contain two sets of balance sheets—aggregate flows of assets ("Uses") and liabilities ("Sources") for all sectors, and the composition of assets issued and held by each sector, listed by financial instrument.

The first principle of financial accounting is that, for any economic unit, total sources of funds must equal total uses of funds and that these must tally across sectors. While there are many ways of organising accounts, this equality must always hold. Organising accounts with this principle in mind allows for a deeper understanding of the level of financial activity and the extent to which surplus units are experiencing a net accumulation of assets, while net deficit units experience a net accumulation of liabilities. These can serve to provide some indication of the financial fragility of any sector or unit. Macro-economic analyses based on understanding "sectoral balances" have been used to assess the structure of economies, their potential evolution, and their propensity for fragility (see, among others, Godley and Cripps 1983; Godley 1999).

As noted, the relevance of this type of analysis is arguably higher in a liberalised or "de-repressed" financial system where balance sheets can evolve more freely (in a system of financial controls and repression, financial balances are constrained to follow real activity in predictable ways). Financial deregulation, the opening of national economies to global capital flows, and increasingly fluid and diverse forms of financial capital imply that many critical dimensions of economic activity embodied and reflected in financial markets are not adequately captured by traditional measures such as GDP.

2.1 India

Given the complexities of data collection, somewhat surprisingly, India has one of the most extensive and current sets of data on money flows among developing countries. We owe this to the Union Finance Minister in 1955, C D Deshmukh, who supported the idea of having money flow accounts. The Reserve Bank of India (RBI) has been publishing FOF data since 1967, with the data stretching back to 1951–52 and the most recent release covering 2014–15. Very few have attempted to use the RBI's data in recent years, with only a handful of researchers publishing papers or articles on the subject. Earlier work using Indian FOF data can be found in Bhatt (1971), Sen et al (1996), Sen and Vaidya (1997), Green et al (2000, 2002), and Moore (2007), among others.

Despite the availability of data, there have been no descriptive accounts on the evolution of the FOF in the last two decades, other than periodic reports of the RBI. Given the changes in the Indian economy because of financial deregulation, financial development, and global dislocations such as financial crises, such an exercise may be useful now. Since the early 1990s, there has been a sea change in the functioning of Indian financial markets with a host of new institutions and regulations, including a revolution in capital markets, the entry of private banks, changed RBI regulatory norms, increased capital inflows from abroad, and so on.[2] For our basic analysis, we compare the pre-liberalisation and post-liberalisation financial accounts in greater detail.

2.2 Data

FOF data are provided online in matrix form, with columns representing sectors, and rows representing either a sector, or an instrument.[3] Sample tables of both sector-wise and instrument-wise FOF data are included in Figure 1 (p 51).

Each column (sector) is further divided into two sub-columns—"Sources" and "Uses." As per RBI definitions, "the sources column provides data on funds available to the specific sector, raised from other sectors," while the uses column "represents the sector's investment in financial assets and net increases in financial assets over the period covered in the accounts." Theoretically, in the aggregate, total sources and total uses should balance. However, in practice, this is rarely achieved, partly due to "lags in the availability of information and partly due to inadequate quality of data" (RBI 2000).

The economy is divided into the following sectors, based on institutional structure and activity status: (i) Banking, (ii) other financial institutions (OFI), (iii) private corporate sector (PCS), (iv) government, (v) rest of the world (ROW), and (vi) households.

The banking sector includes the RBI, commercial banks, cooperative banks, and credit societies. The OFI sector contains financial corporations and companies, and insurance, while the PCS includes non-credit societies and non-government non-financial companies. The government sector includes central and state governments, as well as their departmental commercial undertakings, local authorities, and "non-departmental

non-financial commercial undertakings" (for example, state electricity boards).

The ROW sector contains all international institutions, including the International Monetary Fund (IMF), World Trade Organization (WTO), and Asian Development Bank (ADB), among others. The household sector is a residual sector, comprising "the individuals, non-government non-corporate enterprises of farm/firm business and non-farm/firm business, like sole proprietorships and partnerships, trusts and non-profit institutions" (RBI 2000). Having noted this, communication with the RBI suggested that while the household sector is "technically" a residual sector, balances are calculated from the Central Statistics Office (CSO) estimates of household saving. So, the sectoral balances do not add up, and there is need for a "not elsewhere classified" sector.

For the instrument-wise data, financial instruments are grouped into the following categories:
(i) Currency and deposits
(ii) Investment, which includes
    (a) Government securities
    (b) Other government securities
    (c) Corporate securities
    (d) Bank securities
    (e) OFI securities
    (f) Foreign securities
    (g) Others
(iii) Loans and advances
(iv) Small savings
(v) Life fund
(vi) Provident fund
(vii) Compulsory deposits
(viii) Trade debt
(ix) Foreign claims not elsewhere classified
(x) Other items not elsewhere classified.

The RBI sources most data from official publications such as the RBI *Bulletin*, government reports, and company annual reports to construct the FOF tables on an annual basis. Detailed sources for all data are provided in RBI (2000). A comprehensive account of the methodology followed for data compilation in every sector can also be found in the same document.

Apart from some discrepancies at the aggregate level, the FOF data are subject to certain other limitations. Data are collected using samples and then scaled up to generate aggregate figures

Figure 1: Sample Flow of Funds Tables

Statement 1.44: Financial Flows—Instrument-wise, 1994–95 (₹ crore)

Instrument/Sector	Banking		Other Financial Institutions		Private Corporate Business		Government		Rest of the World		Households		Total		Discrepancy
	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	(Sources—Uses)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1 Currency and deposits	96,408	1,530	9,045	1,269	2,696	7,705	11,372	1,629	-5,970	-1,921	–	83,297	1,13,551	93,509	20,042
2 Investments	4,899	14,120	26,593	46,774	41,831	8,833	27,063	2,453	13,700	15,420	–	17,474	1,14,086	1,05,074	9,012
a Central and state govt securities	–	19,518	–	20,835	–	529	25,186	–	–	-29	–	23	25,186	40,876	-15,690
b Other govt securities	–	-2,146	–	-644	–	–	1,877	–	–	–	–	175	1,877	-2,615	4,492
c Corporate securities	–	2,787	–	18,875	41,831	–	–	588	–	15,449	–	8,538	41,831	46,237	-4,406
d Bank securities	4,899	–	–	-5,019	–	239	–	-469	–	–	–	140	4,899	-5,109	10,008
e OFI securities	–	-1,343	26,593	–	–	7,772	–	877	–	–	–	8,598	26,593	15,904	10,689
f Foreign securities	–	-4,643	–	61	–	197	–	–	13,700	–	–	–	13,700	-4,385	18,085
g Others	–	-53	–	12,666	–	96	–	1,457	–	–	–	–	–	14,166	-14,166
3 Loans and advances	9,394	57,010	11,523	34,997	50,742	23,856	9,808	4,455	–	5,196	24,770	–	1,06,237	1,25,514	-19,277
4 Small savings	–	–	–	165	–	–	13,269	–	–	–	–	13,140	13,269	13,269	–
5 Life fund	–	–	10,298	–	–	–	1,125	–	–	53	–	11,370	11,423	11,423	–
6 Provident fund	–	–	–	–	–	–	8,856	–	–	–	–	21,295	21,295	21,295	–
7 Compulsory deposits	-10	–	–	–	–	–	–	–	–	–	–	-10	-10	-10	–
8 Trade debt	–	–	534	–	-1,682	–	435	-1,068	–	–	–	-1,149	-713	-2,217	1,504
9 Foreign claims ne classified	–	24,320	–	–	–	–	–	46	-6,309	1,922	–	–	-6,309	26,288	-32,597
10 Other items ne classified	2,449	856	6,424	2,705	16,597	490	-121	-438	–	–	–	–	25,349	3,613	21,736
Total	1,13,140	97,836	76,856	85,910	1,10,184	40,884	71,807	7,077	1,421	20,670	24,770	1,45,381	3,98,178	3,97,758	420

Source: Report on Currency & Finance, Volume II 1997–98.

Statement 2.44: Financial Flows—Sector-wise, 1994–95 (₹ crore)

	Banking		Other Financial Institutions		Private Corporate Business		Government		Rest of the World		Households		Total	
	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1 Banking	–	–	3,295	-2,704	32,889	4,188	22,008	908	13,700	-5,506	21,618	71,524	93,510	68,410
2 OFIs	13,293	-331	–	–	30,876	7,772	17,917	1,598	-23	7,920	2,409	38,426	64,472	55,385
3 PCS	2,650	35,423	22,287	30,080	–	–	-7	2,208	–	16,842	326	10,639	25,256	95,192
4 Government	11,237	16,016	1,569	43,021	2,390	4,285	–	–	-5,957	-533	417	24,792	9,656	87,626
5 RoW	3,609	19,677	828	-183	13,491	197	5,475	345	–	–	–	–	23,403	20,036
6 Households	71,524	21,618	38,426	2,409	10,639	326	24,792	417	–	–	–	–	1,45,381	24,770
7 Sector ne classified	10,827	5,388	10,451	13,287	19,899	24,116	1,622	1,601	-6,299	1,947	–	-	36,500	46,339
8 Total	1,13,140	97,836	76,856	85,910	1,10,184	40,884	71,807	7,077	1,421	20,670	24,770	1,45,381	3,98,178	3,97,758
Sources—uses	15,304		-9,054		69,300		64,730		-19,249	–	1,20,611		420	

Source: Report on Currency & Finance, Volume II 1997–98.

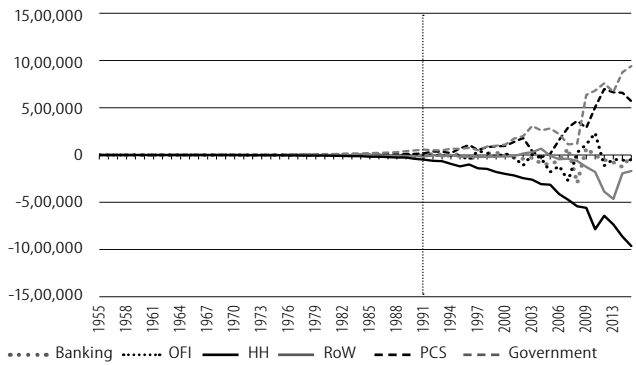**Figure 2a: Sectoral Balances for All Sectors**   (₹ crore)

..... Banking   .... OFI   —— HH   —— RoW   --- PCS   --- Government

Figure 2b: Sectoral Balances for All Sectors, Normalised by GDP

..... Banking   .... OFI   —— HH   —— RoW   ---- PCS   --- Government
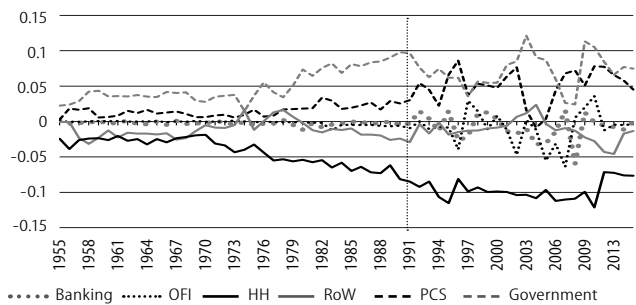
Figure 3a: Total Sources, Normalised by GDP   (Total/GDP)
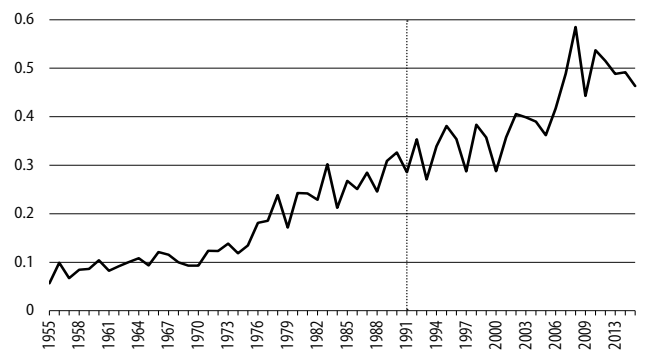
Figure 3b: Total Source, All Sectors—Uses, Normalised by GDP
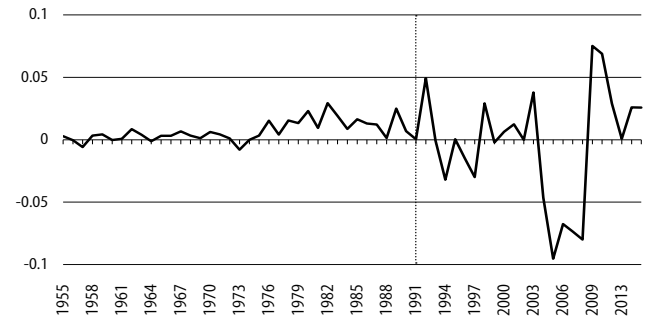
for each sector due to the unavailability of detailed micro-level data. Flows for most sectors are obtained as the difference between outstanding positions at the end of each financial year as opposed to "actual" flows (apart from the household sector). These flows are not bifurcated into transactions, revaluations (capital gains/losses, changes owing to movements in the exchange rate, and so on), and other changes in volume account (for example, write-offs) due to non-availability of data. Finally, because these flows are estimated, they may not tally with other published data to which they are expected to correspond.

Frustratingly, official data on levels are not published along with flows. While data on levels must exist to compute differences between outstanding positions, we have been unable to access such data despite repeated requests to the RBI.[4]

3 Evolution of Indian Sectoral Balances

3.1 Overall Story

The basic story of Indian FoF is told in Figures 2a and 2b. The lines show the net deficit position of each sector as the difference between sources of funds and uses of funds. If inflows exceed outflows, the sector has added more to the claims on itself for that year than it has added to the claims it has on other sectors. Figure 2a provides these positions in nominal terms, and Figure 2b depicts the same graph normalised by gross domestic income. Further, the figures show that there has been increasing use of financial markets since net positions are larger as a fraction of GDP. This is seen more easily in Figure 3a, which provides the finance ratio (total sources/GDP) for the period. Clearly, this measure has increased over time. It stands at around 60% of GDP now.

From 1955 to the late 1980s, the direction and use of funds was quite straightforward. The government sector ran net

deficits throughout the period, with an acceleration from about 5% of GDP to about 10% of GDP from the 1980s to the mid-1990s. After the period of liberalisation, its net deficit was more volatile, decreasing before it increased again in the early 2000s, with another cycle to follow in the succeeding decade. The PCS was the other major net deficit sector, running deficits of around 2%–5% of GDP starting in the 1970s, which was decidedly smaller than the government's till the period of liberalisation. Following liberalisation, the PCS began to run much higher and more volatile deficits, regularly to the order of 8% of GDP. It appears that the PCS's deficit now mirrors that of the government.

Banking and other financial institutions have, as may be expected, not taken very sharp net positions. This was especially true of the period before liberalisation. After the 1990s and the deepening of financial markets, they have been more willing to take larger net deficit or surplus positions, but almost never of very significant magnitudes (in the order of 2%–3% of GDP on average).

The household sector is the largest net surplus sector. It should be remembered that household balances are counted as a residual and that the figures are not derived from any underlying balance sheets. With this caveat, the household sector ran increasing surpluses in the period from 1950 to 1990. Since then, it has maintained a relatively steady yearly net surplus of about 10% of GDP. Most interestingly, the RoW has moved in the last few years to being the second-largest net surplus sector (substantially higher than both banking and other financial institutions) at nearly 4% of GDP.[5]

3.1.1 Caveats and Checks

While the figures tell a story that is consistent with broad expectations, it should be noted that there may be considerable noise due to statistical discrepancies. While aggregate sources should be

Figure 4a: Government Sectoral Balance vs Gross Fiscal Deficit, Normalised by GDP

Figure 4b: Rest of the World Sectoral Balance vs Current Account Balance, Normalised by GDP
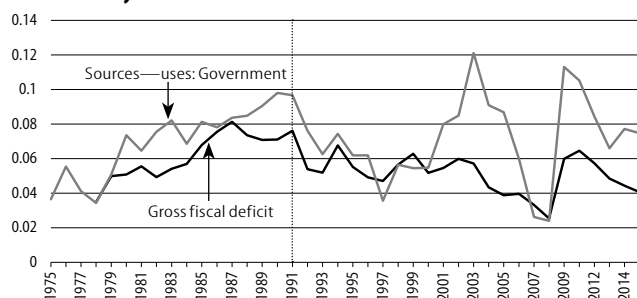
Figure 5a: Sources for the Government Sectorm, Normalised by GDP
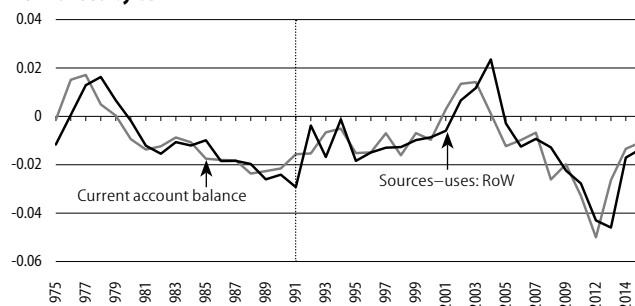

Figure 5b: Sources for the Government Sector, by Instrument
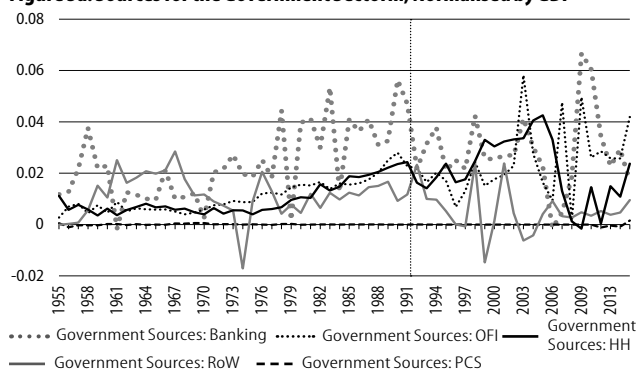
equal to aggregate uses, in practice this is not the case. As Figure 3b (p 52) shows, the difference between sources and uses can be substantial, especially after 2000 when these figures reach 10% of GDP in one year. Nevertheless, we can only go with the published data from the RBI, which suggest these levels of uncertainty.

The FOF makes little to no attempt to reconcile its implied flows with national accounts statistics. In theory, one should expect a rough correspondence between the deficit of a sector, as measured by the difference in flows in national accounts, and the net flows into the sector, as measured by the FOF, since the deficit of that sector will need to be financed. In other words, if there is, say, a current account deficit, we should expect to see a net surplus accruing to the RoW. Similarly, to run a government deficit, we should expect to see a corresponding net surplus of other agents to the government of the same magnitude.

To examine this, in Figure 4b we plot the current account balance (from national accounts statistics) and compare it with the RoW sectoral balance from the FOF. There is very close correspondence. In Figure 4a we undertake the same exercise with the gross fiscal deficit (as measured by national accounts) and the government sectoral balance. Here, while there is a rough correspondence between the series, there is one period, the middle 2000s, in which this breaks down. Assessing the reasons for this would be an important task for government statisticians. Taken together, however, these figures suggest that there is broad correspondence between FOF and other measures of the evolution of economic activity.

3.2 Deficit Sectors

Figure 5a provides an indication of the major sources of funding of the government's net deficit position. In the pre-liberalisation period, banking was by far the largest source of funding for
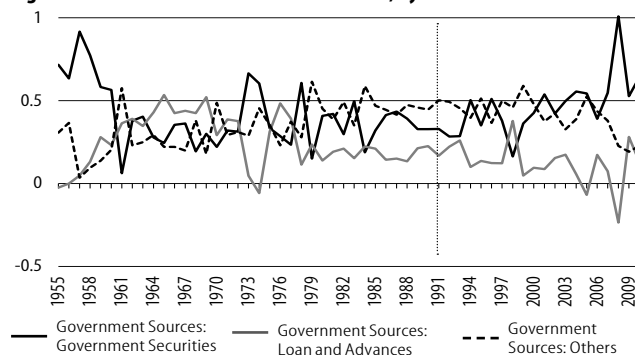
the government, with annual transfers of about 4%–6% of GDP. This was in keeping with the captive banking of nationalisation. Since liberalisation, however, the government began to rely on other financial institutions and also households' direct purchase of government claims. Thus, for example, through the late 1990s and early 2000s, households and other financial institutions contributed between 3% and 7% of GDP in terms of annual sources of funds for the government. With the deepening of financial markets and the development of capital markets, other financial institutions now rival banking as the main source of funding for the state.

The RoW accounts for as much as 2% of GDP in sources of funding to the government. Figure 5b provides an indication of the break-up of instruments used by the government to borrow. Government securities were the most common instrument, certainly from the late 1970s, accounting for 20% to 80% of all sources. Again, this is broadly in keeping with the idea that several sectors, including OFIs and banks, possess government securities to a larger amount than may have been expected, primarily because of regulations coercing them to do so (Shah and Patnaik 2011). The "other" category includes currency and deposits, small savings, life funds, provident funds, trade debt and other items not elsewhere classified. Loans and advances (that is, direct borrowing from banks, has fallen significantly from the mid-1970s when they accounted for nearly 50% of all sources).

The PCS's net deficit position is very differently constructed. First, the net deficits were about half the size of the government sector till the period of liberalisation. As Figure 6a (p 54) shows, the sector has relied significantly on both banking and other financial institutions to finance itself since the 1990s. Between 2005 and 2008, the sector began to issue claims that

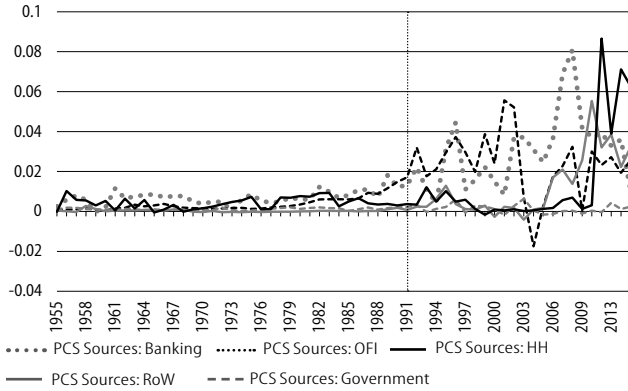**Figure 6a: Sources for Private Corporate Sector, Normalised by GDP**

· · · · PCS Sources: Banking   · · · · · · PCS Sources: OFI   —— PCS Sources: HH
—— PCS Sources: RoW   – – – PCS Sources: Government

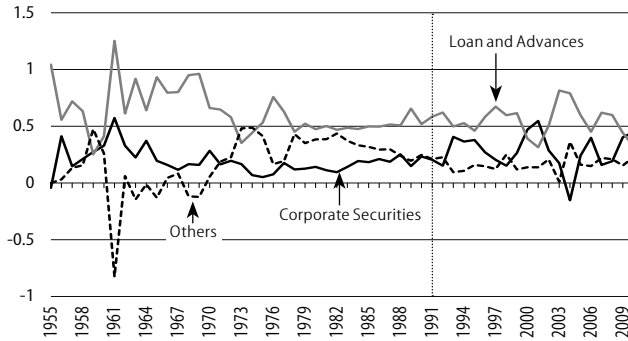**Figure 6b: Sources for Corporate Sector, by Instrument**

Figure 7a: Uses of the Household Sector to Banking, Private Corporate Sector, and Government, Normalised by GDP
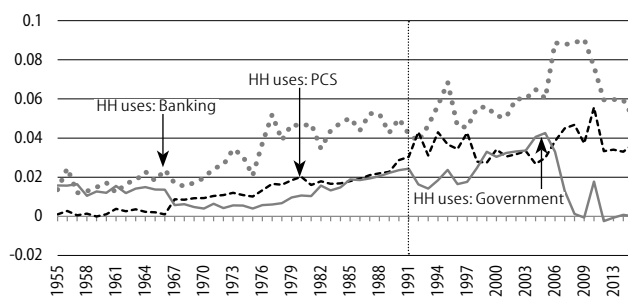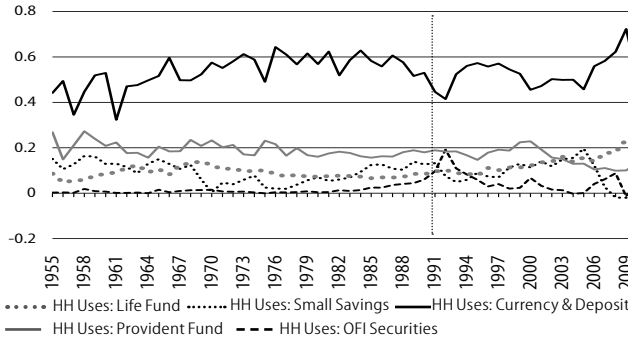

Figure 7b: Uses of the Household Sector, by Instrument

· · · · HH Uses: Life Fund   · · · · · · HH Uses: Small Savings   —— HH Uses: Currency & Deposits
—— HH Uses: Provident Fund   – – – HH Uses: OFI Securities

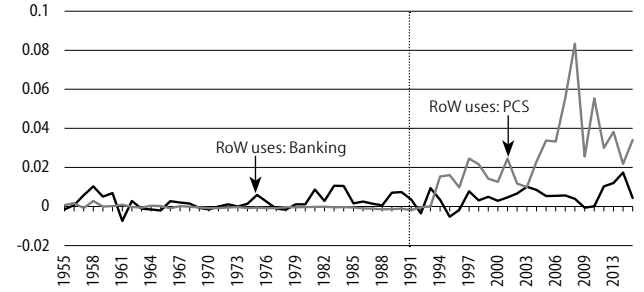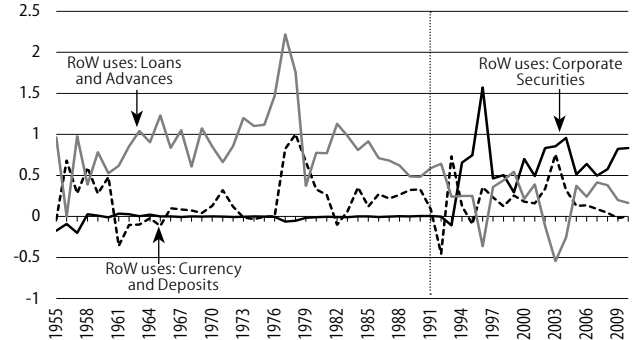**Figure 8a: Uses of the Rest of the World Sector to Banking and Private Corporate Sector, Normalised by GDP**

Figure 8b: Uses of the Rest of the World Sector, by Instrument

were financed by banks at an unprecedented level (at its highest, 8% of GDP in one year). This is the same period that was described as a debt-led cyclical bubble by Nagaraj (2013). Since the peak of 2008, the PCS has reduced its reliance on banking.

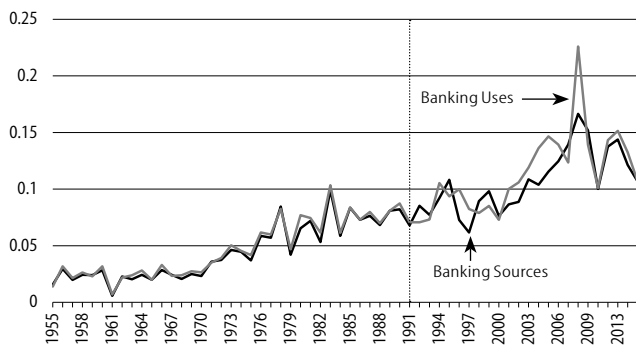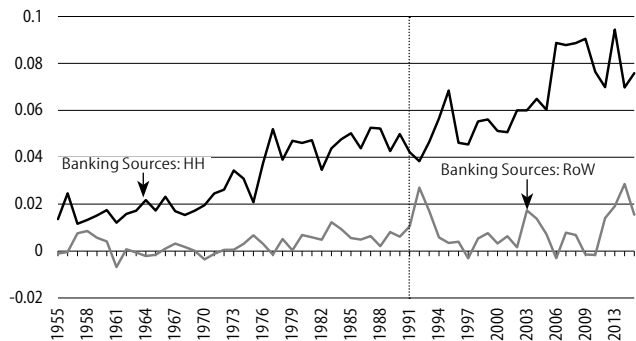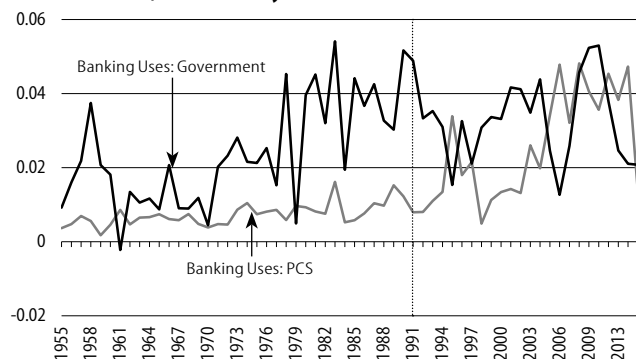It is in this period that we see the first sign of the ROW becoming an important source of funds (in the order of 3%–4% of GDP for the sector as a whole). After 2010, the PCS's funding came primarily from households. While this spike may indeed be the case, it is also possible that we may be observing flows that have not been accurately captured elsewhere. In either case, the PCS became much less reliant on traditional sources of banking and other financial institutions after 2010. Figure 6b depicts the instruments used by the PCS for funding. Unlike the government sector, loans and advances constitute the largest source of funds for the PCS, roughly half of all instruments. Despite market deepening, corporate securities account for about 10% to 20% of sources before liberalisation and roughly the same after that period (with an occasional spike).

3.3 Surplus Sectors

The household sector is the main surplus sector. Figure 7a provides a break-up of the uses of funds from the sector over time as a fraction of GDP. Throughout the period in question, there has been an increase in household surpluses, suggesting an increase in financial savings over time. The household sector's funds were primarily provided to the banking sector, at an annual rate of slightly below 5% of GDP, from the 1970s till the 1990s. There has been a marked increase after that, averaging around 8%.

The second-largest use of household funds is to obtain instruments from the OFI category (health and life insurance, and pension funds). These now account for about 3%–5% of GDP in terms of annual claims obtained by the household sector. The figure also suggests that households may consider OFIs and government claims as broad substitutes, since these appear to vary inversely with each other. Figure 7b provides a break-up of the allocation of the household portfolio across various instruments. What is evident is a remarkable stability in this portfolio. Over the last 50 years, roughly 60%

Figure 9a: Sources and Uses for the Banking Sector, Normalised by GDP

Figure 9b: Sources for the Banking Sector from Rest of the World and Households, Normalised by GDP

Figure 9c: Uses of the Banking Sector to Private Corporate Sector and Government, Normalised by GDP

Figure 10: Total Sources (Loans/Advances)—Total Sources (Investments), Normalised by GDP (Mean of marketshift)

rivalling other financial institutions and banking as the preferred source of funds.

3.4 Banking and Capital Markets

We now turn to the banking sector. As might be expected, given its centrality in liquidity transformation, banks do not take large positions. As Figure 9a shows, sources and uses closely evolve together. Figure 9c shows the evolution of the uses of banking funds over the period. The two main uses are for funding the two principal deficit sectors, government and the PCS (the other sectors are not shown). In the late 2000s, the PCS became the primary use of banking funds. More importantly, while banks are most reliant on households, in the recent past, the RoW has become an important source as well. As Figure 9b shows, banks now obtain funds equivalent to roughly 2% of GDP from the RoW, from virtually nothing as recently as 2010.

It is important to acknowledge that despite the continued centrality of banking, India is moving towards greater reliance on capital markets rather than banking intermediaries. This is seen most clearly in Figure 10, which depicts the difference between loans and advances on the one hand and securities on the other as sources of funds, normalised by GDP. In the period before liberalisation, loans and advances typically accounted for a larger fraction of sources (bars above the axis), but since then, securities account for the larger fraction (bars below the axis) in almost every year.

4 Conclusions

We have provided a broad summary of the evolution of the Indian financial system over the last 60 years. India is quite unique among developing countries in having such an accounting framework, but it remains woefully underused by analysts and policymakers. However, as with any other exercise in data collection, there are caveats that must be made on the quality and reliability of data.

As described at the outset, much of the data must be imputed from samples, some data is calculated from residuals, and stock data is not available (although flows are calculated as differences between stock positions). Given the difficulties of calculating these data, there are somewhat significant statistical discrepancies and it would be somewhat foolhardy to assume very precise estimates. Nevertheless, the FoF

of household funds go to deposits and currency (with some notable exceptions). Funds going to other financial institutions are divided between provident funds, life funds, and OFI securities. Again, these are relatively stable as a fraction of overall uses—ranging from 5% to 20% of all uses.

The other increasingly important surplus sector is the RoW. As Figure 8a (p 54) shows, this was an insignificant source till the late 1990s, but it has been a large source of funds since that for the PCS (and to a much smaller extent, the banking sector). The RoW provides around 4%–8% of GDP in funds to the corporate sector from roughly around nothing before 2000. Figure 8b (p 54) provides a break-up of the portfolio of the RoW. Before 2000, its portfolio consisted of loans and advances, and currency and deposits. Since then, the portfolio is almost entirely in corporate securities.[6] These observations suggest a dramatic and somewhat under-appreciated fact about private debt markets—the RoW is now a major player

does provide a very useful framing and accounting tool to understand macroeconomic history. At the very least, accounts of the macroeconomic evolution of the Indian economy should not be too different from the accounting identities presented in the FOF accounts.

This paper provides some useful insights that complicate some narratives. They can be summarised as follows. First, the household sector is the largest net surplus sector. Households have seen their collective financial surpluses rise to about 10% of GDP year on year. This suggests that, on aggregate, one should not expect households to experience severe financial strains, as is sometimes stated as a matter of great concern (the household debt bubble). Of course, here too the distribution of assets and liabilities within the household sector is likely to matter, but, in aggregate, households' balance sheets are not stressed.

Second, despite substantial changes in financial markets in terms of regulations and new instruments, there is remarkable stability in patterns of financing. Households have maintained roughly the same portfolio balance between deposits and other instruments throughout the period. Although there are newer instruments, particularly the stock market and convenient savings devices such as systematic investment plans (SIPs), in aggregate, there has been very little change in the portfolio balance of households. Similarly, despite the development of capital markets, private corporate businesses rely on loans and advances more extensively than on debt instruments, and the reverse is true for the other major deficit sector, the government.

But this does not mean that there have been no changes at all. Most interestingly, in the last five years, the ROW has become one of the more important sectors. It is currently the second-largest surplus sector in the economy. It has become one of the main sources of funds for the PCS and has begun to be a net creditor to the banking sector as well. The globalisation of finance in India really began fairly late in the liberalisation process, but may now have taken greater hold.

This simple accounting approach allows us a framing that accounts for money flows and gives us very useful anchoring. But this leaves open several questions that need to be asked about the relationship between financial positions and current expenditure on goods and services. It is clear from our framing that nominal government debt and private corporate debt would be rising through the period because they were both net deficit sectors (whether the debt–income ratios of the sector were rising is another question, which is difficult to answer without stock data).

The question of why an economic unit had rising debt over a period is often treated as equivalent to the question of why its expenditure was higher relative to its income in that period. This is shorthand, but it can be misleading. Logically, funding for a sector can be used for myriad purposes, including to obtain assets, maintain cash balances, and undertake expenditure (see Mason and Jayadev 2014, 2015 on why rising debt is not equivalent to rising expenditure). Understanding how the financial positions of various sectors have been linked (or not) to patterns of expenditure and sectoral growth rates is an obvious next step for research, but one that is beyond the purview of the current exercise.

NOTES

1 This was a key insight of Hyman Minsky (1964), which became a cornerstone of his understanding of capitalist crises.
2 For a review of these, see Shah and Patnaik (2011) and Allen et al (2007).
3 See https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/15426.pdf.
4 Further, instrument-wise data was aligned with System of National Accounts (SNA) 2008, starting from 2011–12. Six years later, data from 1955 to 2010 have not yet been rebased to conform to the new standards, and hence cannot be used in conjunction with newer data.
5 This has been more systematically occurring around the world. Some have expressed the concern that those focusing on balance of payment crises are fighting the last war by focusing on sovereign foreign currency borrowing, rather than private borrowing (see Rey 2015).
6 Note that when the fraction of the portfolio going to an instrument is greater than one, it means that there is a negative balance that year in one or more of the other instruments.

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