Session on Macro Financial Statistics

Measurement of Financial Services in 2008 SNA–Implementation Issues

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Outline

- Importance of Financial Services
- Measurement of Output of Services-Conceptual Issues
- Output of Financial Services in 2008 SNA
- Central Bank in 2008 SNA
- Measuring FISIM in 2008 SNA
- Issues for Further Research

Importance of Financial Services in the Economy

Structural Changes in GDP during 1950-51 to 2014-15

Industry	1950-51	1970-71	1980-81	1993-94	1999-2000	2006-07	2011-12	2014-15
1. Primary	58.2	47.3	41.3	33.5	27.3	20.5	21.6	19.3
2. Secondary	14.8	21.4	22.6	23.7	23	24.7	29.9	28.1
3. Tertiary or service sector	27	31.3	36.1	42.8	49.3	54.8	48.5	52.6
3.1 trade, hotels & restaurant	8.5	10.7	12	12.7	14.2	15.4	10.8	12.0
3.1.1 Trade	8	10.1	11.3	11.9	13	13.9	9.7	10.9
3.1.2 Hotels & Restaurants	0.5	0.6	0.7	0.8	1.2	1.5	1.1	1.1
3.2 Transport, storage & comm.	3.1	4.3	6.1	6.5	7.5	11.4	6.5	6.9
3.2.1 Railways	1.2	1.4	1.5	1.2	1.2	1.2	0.7	0.8
3.2.2 Transport by other means	1.4	2.2	3.6	4	4.6	5.3	4.2	4.2
3.2.3 Storage	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
3.2.4 Communication	0.4	0.6	0.9	1.2	1.6	4.9	1.6	1.8
3.3 Financial, real estate and business services	5.8	5.6	6.4	11.5	13.1	14.3	18.8	21.0
3.3.1 Financial Services	1.1	1.7	2.3	5.3	5.9	6.7	5.9	6.1
3.3.2 Real estate, Ownership of dwellings & business services	4.7	3.9	4.1	6.2	7.2	7.6	12.9	14.9
3.4 Community, social and personal services	9.7	10.7	11.5	12	14.9	13.6	12.6	12.7
3.4.1 Public Admin & Defence	2.5	4.1	5.2	5.6	6.9	5.6	6.0	5.8
3.4.2 Other services	7.2	6.6	6.3	6.4	8.1	8	6.5	6.9
4. Total GVA	100	100	100	100	100	100	100	100

Importance of Financial Services in the Economy

- In most economies the service sector activities in general and financial services in particular account substantially in terms of contribution to GDP/ total GVA
- ‘Financial, real estate and business services’ sector share grew at a much faster rate than other sectors during the recent years
- Increased from 5.8 per cent in 1950-51 to 21.0 per cent in 2014-15,
- Financial services increased from 1.1 per cent in 1950-51 to 6.1 per cent in 2014-15

Measurement of Macro-economic Aggregates in 2008 SNA

- Output, GVA, IC, HFCE, NPISH FCE, PFCE, GFCE, GFCF, CII, Valuables, E, M, GNI, NNI, GNDI, saving, etc. made following guidelines of international Standard on System of National Accounts (SNA)
- SNA has been revised over time from 1953 SNA to 1968 SNA to 1993 SNA to the latest 2008 SNA
- Implementation of 2008 SNA recommendations on financial services in the Indian National Accounts are important

Measurement of Output of Products in 2008 SNA - Conceptual Issues

- Output of a Unit is defined as the products produced by the unit (establishment), excluding
  - value of any products used in activity for which establishment does not assume risk of using the products in production
  - value of products consumed by the same establishment
  - except for products used for capital formation or own final consumption
- Market and Non-market Output are distinguished and valued differently

Market and Non-market Output

- **Market output** is at economically significant price where ,
  - producer decides what/ how much to produce
  - has incentive to adjust supply with goal of making profit in long run covering capital and other costs
  - consumers have freedom to purchase or not for the prices charged
- Output of market producers for own final use is valued
  - at average basic prices of product sold on market
  - if not, it is valued at total production costs incurred, including CFC + any taxes (less subsidies) on production + net return on the fixed capital (new 2008SNA concept)

Market and Non-market Output (Contd.)

- **Non-market output** of services consists of individual or collective services produced by government units or NPISHs supplied free, or at prices not economically significant, to other institutional units or community. *Ex: education, health services, IT services, currency issue, monetary policy, supervision banks*
- Value of non-market output provided without charge to households is estimated as the sum of costs of production, as:

  CE + IC + CFC + *(t-s)* on production

No net return to capital is included for non-market production

- No net return to capital is included in the estimates of production for own final use by non-market producers ,estimated at costs

Output of Financial services

- Mostly **not defined** as sales or receipts from the activity
- For non-market activities component , the output is obtained conceptually at cost as:

  CE + IC + CFC + *(t-s)* on production

- For financial intermediaries, like banks, output obtained as :

  Financial Intermediary Services Indirectly Measured (FISIM) + direct charges receivable

  [FISIM is the major component]

- For other financial services output is obtained generally by way of kind of fees

Classification of Financial Institutions in 2008 SNA

- 2008 SNA considers financial institutions as financial corporations
- Classify them into following 7 types:
  - Central bank
  - Deposit-taking corporations
  - Money Market Funds (MMF)
  - Non-MMF investment funds
  - Other financial intermediaries
  - Financial auxiliaries; and
  - Captive financial institutions
- Each one further categorized into public, national private and foreign controlled units; and Insurance corporations and Pension funds.

Output of the Central Bank (RBI)

- As per 2008 SNA, Central Bank (RBI in the Indian context) is in Corporate-financial sector (not in Gen. Govt.), its non-market activities are to be estimated at cost.
- Non-market output is recorded as payable by Central Bank (RBI) and receivable by Gen. Government as a current transfer
- In Indian National Accounts, until 2015, the earlier series considered activities of RBI as market only for banking division and non-market for rest of the activities.
- In the new series (base year 2011-12) of national accounts **entire operations of RBI is taken as non-market** and thus valued at cost resulting in lower value of output

Output of RBI in new Series of NAS

S.N.	Department of RBI	Market + Non-market as in earlier series	Non-market as in New Series
		Output (in Rs. Crores)	
1.	Issue Department	3157	3157
2.	Banking Department		6730
2.1	FISIM on Loans	208	
2.2	Margin on Securities (rate=difference between lending rate and reference rate taken as 1.01)	5500	
2.3	Other market Output (other earnings excluding capital gain)	1021	
2.4	FISIM for RBI (for base year 2011-12 as per methodology of earlier base 2004-05)	32280	
3	RBI Output (non-market component)	9975	9887

Measuring FISIM – 1993 SNA

- As per 1993 SNA: FISIM (on loans (f_L) and deposits (f_D))
  = interest receivable (R_L) *less* interest payable (R_D),
  = difference between the stock of loans and deposits (Y_L and Y_D) multiplied by their interest rates (r_L and r_D)
- Assumption: Intermediation takes place from deposits to borrowers only

1993 SNA

$$f_L + f_D = R_L - R_D$$

$$f_L + f_D = r_L Y_L - r_D Y_D$$

Measuring FISIM – 2008 SNA

- **2008** SNA: FISIM (on loans (f_L) and deposits (f_D))
  = stock of loans multiplied by the difference between the interest rate on loans and a reference interest rate (rr) plus the stock of deposits multiplied by the difference between a reference interest rate and the interest rate on deposits

2008 SNA

$$f_L + f_D = (r_L - rr)Y_L + (rr - r_D)Y_D$$

$$f_L + f_D = rr(Y_D - Y_L) + \underbrace{r_L Y_L - r_D Y_D}_{\text{1993 SNA}}$$

FISIM for Money lenders

- In earlier series it was incorporated in output of financial services by taking it as one third of the contribution of Non-government Non-banking financial companies.
- In new series, ratio of loans on agriculture and personal loans to HHs by all financial institutions to that of moneylenders from AIDIS 2012-13 and data on outstanding credit of all commercial banks have been used to estimate volume of loan advanced by money lenders.
- Based on Report of RBI Technical Group, 27% is taken as estimated interest rate charged by money lenders
- Based on analysis of unit level data of 67th round NSS survey IC came out as 9.518% of the interest receipts.

Financial Services- Issues requiring review/research

- Estimation of output of RBI in the new series needs review
- Reference rate to be used in the calculation of SNA interest is a rate between bank interest rates on deposits and loans. AM/ HM of the two rates or rate prevailing for inter-bank borrowing and lending may be alternatives. However an appropriate reference rate is still a research area
- For capturing Unorganised Financial sector contribution , more relevant data and research needed
- More work needed to further improve on Other Financial Services and informal sector contribution .
- Regional estimates , particularly of corporate sector needs research

Valuation of Goods and Services

- Valuations recommended in 2008 SNA:
  'basic prices'**, **'producers prices' and ***'purchasers prices'***

	Purchasers' price
Less	trade and transport margins
Equals	**producer's prices**
Less	taxes *less* subsidies on products payable/receivable by their producers
Equals	**basic prices**

GVA at basic price

Gross Value Added at basic prices (GVA_{bp})

= Gross value of output at basic prices (GVO_{bp})

minus Intermediate Consumption at purchasers prices (IC_{purp})

$$GVA_{bp} = GVO_{bp} - IC_{purp}$$

Which gets distributed as

$CE + OS + MI$ + other production (t-s)

Where, CE is compensation of employees, OS is gross operating surplus and MI is mixed income (mix of CE and OS)

Production: GDP - at Market Prices

- GDP the measure of production is always at market prices

- *GDP* at market prices is defined (1993 / 2008 SNA):

$$GDP_{mp} = \Sigma GVA_{bp} + \text{taxes less subsidies on all products} \ (t\text{-}s)$$

- GDP_{mp} also represents the primary income generated from the production undertaken within the domestic economy
- Taxes on products is a part of income
- GDP_{mp} also represents the Final Expenditures/Demand

Main Identities - Recap

Commodity balance:

$GVO_{mp} \equiv IC + PFCE + GFCE + GFCF + CII$
$+$ *acquisition less disposal of valuables* $+ X - M$ … [1]

Production-side identity:

$GDP_{mp} \equiv GVO_{bp} - IC + (t\text{-}s) on\ products + (t\text{-}s) on\ imports$ … [2]

Main Identities (Contd.)

Income-side identities:

$GDP_{mp} \equiv (CE + OS + MI)$ generated in domestic economy
+ $(t\text{-}s)$ on products + $(t\text{-}s)$ on imports … … [3]

$GNI \equiv GDP_{mp}$
+ (net) primary income earned from abroad (RoW)) … … [4]

$GNDI \equiv$ GNI + (net) current transfers receivable from ROW
+ (net) taxes on income and wealth from RoW … [5]

Main Identities (Contd.)

Expenditure-side identities:

GDP_{mp} ≡ PFCE + GFCE + GFCF + CII

+ *acquisition less disposal of valuables* ***+ X – M*** … … [6]

Use of income

Gross Saving ≡ GNDI – (PFCE + GFCE) … … … … [7]

Accumulation

Net lending from RoW **≡**

Gross Saving + (net) Capital transfer receivable

minus (***GDCF +*** *acquisition less disposal of valuables*)

- *acquisition less disposal of non-produced non-financial assets* … … … … [8]

THANKS