2008 SNA- FINANCIAL SECTOR

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Moorashin Javan

Statistic centre of Iran

Outline of presentation

- **Financial Corporations Sector**
- **Measurement of financial Services other than Insurance & Pension**
  - **Central Bank**
  - **Other financial services**
    - **Provided in return for explicit charges;**
    - **Provided in association with interest charges on loans and deposits;**
    - **Associated with the acquisition and disposal of financial assets and liabilities in financial markets;**
    - **Associated with insurance and pension schemes**
- **Financial Assets & Liabilities**
  - **Transactions**
  - **Classification**

Financial Corporations Sector – in 2008 SNA

Financial corporations consist of all resident corporations that are principally engaged in providing financial services, including insurance and pension funding services, to other institutional units.

- facilitate means of payments between other units
- provide the means whereby units seeking additional funds to finance capital formation, acquire financial assets or even for consumption can utilize the funding set aside by other units as saving.

Financial corporations can be divided into three broad classes:

- Financial intermediaries
- Financial auxiliaries and
- Other financial corporations

Financial Corporations – sub-sectors

Financial Intermediaries

i. Central Bank [ISIC 6411]

ii. Deposit-taking corporations except the central bank [ISIC 6419]

iii. Money market funds (MMFs) [ISIC 6419]

iv. Non-MMF investment funds [ISIC 6419]

v. Other financial intermediaries except insurance corporations and pension funds

vi. Insurance corporations [ISIC 651 & 652]

vii. Pension funds (PFs) [ISIC 653]

viii. Financial auxiliaries [ISIC 66] → Financial auxiliaries

ix. Captive financial institutions and money lenders [ISIC 6499] → Other financial corporations

Financial Intermediaries

Financial intermediaries : (including insurance corporations and pension funds)

- incur liabilities on their own account for the purpose of acquiring financial assets by engaging in financial transactions on the market;
- activity involves financial risk management and liquidity transformation.

Financial Auxiliaries

Financial auxiliaries [ISIC Div. 66] : Financial corporations

- principally engaged in serving financial markets
  - in transactions in financial assets and liabilities or
  - providing the regulatory context
- but without ownership of financial assets and liabilities they handle.

This sub-sector includes:

- brokers (insurance, loan, securities)
- financial advisers & consultants; foreign exchange bureau;
- managers of (pension/ mutual) funds or of issue of securities & shares
- NPIs that are market producers of financial services;
- head offices of financial corporations.

Other Financial Corporations

These are institutional units providing financial services, where most of their assets or liabilities are not available on open financial markets. [ISIC 649]

It includes entities

- transacting within only a limited group of units (such as with subsidiaries)
- holding corporations and SPEs or conduits that qualify as institutional units
- legal entities such as trusts, estates, agencies accounts or brass plate companies
- Units which provide financial services exclusively with own funds, like moneylenders, pawnshops and corporations engaged in lending from funds received from a sponsor – government or NPIs..

This consists of captive financial institutions and money lenders.

Measurement of Financial Services other than Insurance & Pension

Output and Related Transactions

The measurement issues of financial services are discussed separately for

- **Central Bank** and
- **Other financial institutions** in general

Central Bank

There are three broad groups of central bank services:

- **Monetary policy services** » non-market output
- **Financial intermediation** » market output
- **Borderline cases** (like supervisory) » can be either

Central Bank – non-market output

The monetary policy services provided by the Central Bank:

- should valued at cost
- represents collective consumption
- forms part of the expenditure of general government
- but the costs incurred by the central bank.

Therefore, the value of the non-market output should be recorded as a current transfer from the central bank to the general government.

Market output

- The financial intermediation services provided by the central bank, if possible, be compiled as a separate establishment.
- These services should be shown as payable by the units to whom they are delivered.
- Supervisory services treated as market output are recorded similarly.

Other Financial Services - Four broad types

Four main ways in which financial services are provided and charged are those:

- Provided in return for explicit charges;
- Provided in association with interest charges on loans and deposits;
- Associated with the acquisition and disposal of financial assets and liabilities in financial markets;
- Associated with insurance and pension schemes.

Financial institutions provide services for both explicit fees and implicit charges.

- Explicit fees, are always recorded as payable by the service-receiving unit to the service-provider.
- Implicit charges for financial services are measured indirectly.

Other Financial Services

Financial Services provided in return for explicit charges

Explicit fees received by the provider, constitutes its output.

Explicit charges for the services form part of

- Export
- intermediate consumption when rendered to a corporation or to government,
- final consumption when rendered to households, unless
  - financial service is performed in relation to an unincorporated enterprise, including the ownership of a dwelling.

Explicit charges paid in acquiring financial assets are not included in the value of the asset

Financial Services - Intermediation

With interest charges on loans and deposits

These are financial services provided by means of **financial intermediation**.

- process whereby a financial institution (a bank) accepts deposits from units with ‘excess’ funds to other units in need of funds.
- Each of the two parties to the transaction pays a fee to the bank for services provided.

Depositors accepts a lower rate of interest than that paid by the borrower,

- the difference = combined fees implicitly charged by the bank to the depositor and to the borrower.
- represents charges for financial intermediation services indirectly measured (**FISIM**).

Financial Intermediation

FISIM is measured as

= (rate paid to banks by borrowers - the reference rate) x loans + (reference rate - rate actually paid to depositors) x deposits

"Reference" rate of interest:

The reference rate applies to both interest paid on loans and interest paid on deposits

The indirect service charge is imputed in respect of all loans and deposits offered by a financial institution irrespective of the source of the funds.

Implicit Service Charge

The 2008 SNA defines:

SNA interest: the amounts based on the reference rate recorded in the SNA as interest.

Bank interest: the total amounts actually payable to or by the financial institution.

Thus, the **implicit service charge**

= sum of the bank interest on loans

less SNA interest on the same loans

plus SNA interest on deposits

less the bank interest on the same deposits.

FISIM

The implicit service charge is FISIM.

The FISIM is payable by or to the unit in receipt of the loan or owning the deposit as appropriate.

FISIM – the output of financial intermediation services – should be allocated to the borrowers and depositors accordingly.

However, there is normally little if any FISIM payable between banks, since

banks usually borrow from and lend to each other at a risk-free rate.

Measuring FISIM – 1993 SNA

- 1993 SNA: FISIM (on loans (f_L) and deposits (f_D))
  = Property income 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: Property income comprise interest on loans 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

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

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

Financial Services - Intermediation

Implications

FISIM derived from the two formulas are equal when the stock of loans is equal to the stock of deposits

Advantages of the formula:

- services provided to depositors and borrowers are independently estimated irrespective of what the deposits are used for and funds for providing loans come from; and
- facilitates the distribution of indirect service charges to its users in a consistent way by allowing calculations at a detailed level
- When units are lending exclusively from own funds, it is equivalent to

$$(r_L - rr)Y_L$$

Financial Services - Intermediation
Compilation issues

A single reference rate should be used.

Different reference rates should be used for transactions in other currencies

The rate prevailing for inter-bank borrowing and lending may be a suitable choice as a reference rate.

However, different reference rates may be needed for each currency in which loans and deposits are denominated, especially when a non-resident financial institution is involved.

For banks within the same economy, there is often little if any service provided in association with banks lending to and borrowing from other banks.

Financial Services - Intermediation
Compilation issues

Reference rate

- Is between bank interest rates on deposits and loans
- Cannot be as a simple average of rates on loans or deposits, because there is no necessary equality between the level of loans and deposits
- Should contain no service element
- Should reflect the risk and maturity structure of deposits and loans
- The prevailing for inter-bank borrowing and lending may be suitable choice

Financial Services - Intermediation
Measurement in volume terms

The measurement of the volume change in the output of financial intermediation should take into account the total output, including the direct charges

In the absence of direct deflators for the output of FISIM, one of the following approaches may be used:

a. rate of change of the volume indicator can be derived using the rate of change of average stocks of loans and deposits deflated by a general price index (e.g. the GDP deflator) (GDP deflator should exclude FISIM) adjusted for quality change in the output of financial services

b. the output indicator method which involves breaking down the different characteristics linked to financial services (numbers and values of loans and deposits, savings, money transfers, etc). For each characteristic, an appropriate volume indicator is derived, and volume indicators are then weighted together

Financial Services associated with acquisition & disposal of financial assets & liabilities

Acquisition and disposal of :

- debt securities
- equity and investment fund shares
- foreign currency

embodies transaction of financial services.

Financial Services associated with acquisition & disposal of financial assets & liabilities

Debt Securities

Debt securities are of three types:

- amount payable at the <u>end of the period</u> same as initial payment for the security, with associated 'coupons' – intermediate payment of interest
- <u>issue price less than redemption price</u> and no other payment made: the difference represents interest
- hybrid of the two

All embodies transaction of financial services.

Financial Services associated with acquisition & disposal of financial assets & liabilities

Debt Securities (Contd.)

Debt securities give rise to interest payments by the issuer - to the owner of the security.

The financial institution levies charges both during sale and purchase of securities.

Ask Price: at which the securities are offered for sale by the financial institution – which represents the market value of the security plus a margin.

Bid price: that offered to sellers of securities - representing the market value less a margin.

Mid price: the average of bid and ask prices, at a given point in time.

Debt Securities (Contd.)

Apart from FISIM, the output of the financial institution should include the charges levied during purchase and sale of securities

= margin on the purchases of a securities + margin on sales of securities

= (# securities purchased) *(ask price – mid price)

+ (# securities sold) * (mid price - bid price)

Equities & investment fund shares or units

Equities and investment fund shares or units give rise to property income other than interest – i.e. **profit**

They are offered for sale and purchase at different prices.

As in the case of securities, their sales & purchases involves provision of financial services, and is measure as

= margin on the purchases of a equities and units + margin on sales of equities and units

= (# equities and units purchased) *(ask price – mid price)

+ (# equities and units sold) * (mid price - bid price)

Financial Services associated with acquisition & disposal of financial assets & liabilities

Buying & selling of foreign currency

Involves provision of financial services, though no property income flows are involved.

This should similarly be measured as

= margin on the purchases of a foreign currency + margin on sales of foreign currency

= (Amount of foreign currency purchased) *(ask price – mid price)

+ Amount of foreign currency sold) * (mid price - bid price)

OR

(Amount of foreign currency purchased) *(reference price – buying price)

+ Amount of foreign currency sold) * (selling price - reference price)

Official exchange rate may be taken as the reference price

Financial Asset and Liability

Liability: the obligation of one unit (the debtor), under specific circumstances, to provide a payment or series of payments to another unit (the creditor).

It is usually a legally binding contract that specifies the terms and conditions of the payment(s).

Financial claim: payment or series of payments due to the creditor by the debtor under the terms of a liability.

Financial assets: consist of all

- financial claims,
- shares or other equity in corporations plus
- gold bullion held by monetary authorities as a reserve asset.

Financial Asset and Liability (Contd.)

Financial assets include:

Gold bullion held by monetary authorities - though they do not have a claim on other designated units.

Shares – though the claim is not a fixed or predetermined monetary amount.

All (financial) assets (except gold billion) have a counterpart liability.

Liability can arise out of non-financial transactions.

Contingencies - excluded

Contingencies are contractual financial arrangements between institutional units that do not give rise to unconditional requirements

either to make payments or

to provide other objects of value.

Often the arrangements themselves do not have transferable economic value.

Example: One-off guarantees of payment by third parties are contingencies since payment is only required if the principal debtor defaults.

These are <u>not</u> treated as financial assets or liabilities.

Exchange of Financial Asset and Liability

Financial Transactions

These are exchange of financial assets and liabilities, e.g whenever one financial asset is exchanged for another or when a liability is repaid with a financial asset;

Transactions:

Recorded only in the financial account

Change the distribution of the portfolio of financial assets and liabilities

May change the totals of both financial assets and liabilities,

but they do not change the difference between total financial assets and liabilities.

Valuation of Financial Transaction

The actual payment in financial transaction almost always represent more than one transaction in the SNA.

For example, payments of interest on loans and deposits involve both interest and a service fee.

Recording of these transactions in the SNA requires partitioning the actual payments.

In some cases more than one adjustment may be needed

> to identify and re-route both the service charge and interest associated with the asset

Financial Asset Classification

The broad categories are:

- Monetary gold and SDRs
- Currency and deposits
- Debt securities
- Loans
- Equity and investment fund shares
- Insurance, pension and standardized guarantee schemes
- Financial derivatives and employee stock options
- Other accounts receivable/payable.

Monetary gold

Gold to which the monetary authorities have title and is held as a reserve asset. It comprises

- gold bullion (included in ***allocated gold*** accounts) and
- ***unallocated gold*** accounts with non-residents that give title to claim the delivery of gold.

Gold bullion can be a financial asset only for the central bank or central government.

The **unallocated gold** accounts are treated as financial assets and liabilities

If held by non-residents, these are treated as deposits in foreign currency.

Special Drawing Rights (SDR)

Special Drawing Rights (SDRs): international reserve assets created by the IMF

These are allocated to its members to supplement existing reserve assets.

Creation of SDR: allocations of SDRs

Extinguished SDR: cancellations of SDRs

These are recorded at the gross amount in the financial accounts of

- the monetary authority of a member country and
- the counterpart in that of the RoW

SDRs are held exclusively by official holders.

SDRs are assets with matching liabilities.

Classification of Financial Assets & Liabilities

Currency and deposits

This category consists of:

Currency: Currency consists of notes and coins - issued or authorized by the central bank or government.

Transferable deposits: Further classified in 2008 SNA as

- **Inter-bank positions**: deposits and liabilities of deposit- taking corporation with the Central Bank (in most cases)
- **Other transferable deposits**: one party or both parties to the transaction, creditor or debtor, is not a bank.

Other deposits: Other than transferable deposits.

Currency and deposits (Contd.)

Other deposits: This includes deposits like

Savings deposits , fixed-term deposits and nonnegotiable certificates of deposit.

Shares issued by savings and loan associations, building societies, credit unions

Claims (non loans) on the IMF that are components of international reserves

The unallocated gold account: deposit denominated in gold

Debt securities

These are negotiable instruments serving as evidence of a debt.

This category was called “Securities other than shares” in the 1993 SNA

They include:

- bills,
- bonds,
- negotiable certificates of deposit,
- commercial paper,
- debentures,
- asset backed securities, and similar instruments normally traded in the financial markets.

Loans

Loans are financial assets that are:

a. created when a creditor lends funds directly to a debtor, and

b. evidenced by documents that are not negotiable.

A securities repurchase agreement is an arrangement involving

- the provision of securities in exchange for cash
- with a commitment to repurchase the same or
- similar securities at a fixed price
- either on a specified future date or with an “open” maturity.

Securities repurchase are treated as collateralized loans.

Equity and investment fund shares

Called “Shares & other securities” in the 1993 SNA.

Equity: claims on the residual value of a corporation or quasi-corporation after the claims of all creditors have been met.

Equities are subdivided into:

a. listed shares;

b. unlisted shares; and

c. other equity.

Valuation of unlisted shares:

they usually do not have observable market prices.

Alternative methods of approximating market value of shareholders’ equity given in the 2008 SNA.

Financial derivatives

A component of the category 'Financial derivatives & employee stock options' newly introduced in the 2008 SNA.

Financial derivatives: These are linked to a specific financial instrument or commodity trading of a specific financial risk.

- **Options**: gives the purchaser the option to buy (a 'call' option) or sell (a 'put' option) at a predetermined ('strike') price on a given date.
- **Forwards**: unconditional financial contract – represents obligation for settlement on a specified date.

Classification of Financial Assets & Liabilities

Employee stock option (ESO)

An employer-employee agreement made on

- *a given date (the “grant” date) about purchase*
- *a given number of shares*
- *at a stated price (the “strike” price)*
- *either at a stated time (the “vesting” date) or within a period of time (the “exercise” period) immediately following the vesting date.*

Transactions in employee stock options are

recorded in the financial account

as the counterpart of compensation of employees represented by the value of the stock option.

Thank You