

CONSTANT PRICES
FINANCIAL AND INSURANCE SERVICES

**Training Workshop on Banking,
Insurance and Financial Statistic**

08-11 January 2017, Dhaka, Bangladesh

Moorashin Javan

Statistic centre of Iran

Outline of presentation

- **Financial services, except insurance and pension funding**
- **Insurance, reinsurance and pension funding services, except compulsory social security services**
- **Services auxiliary to financial services and insurance services**

A methods	most appropriate methods
B methods	those methods which can be used in case an A method cannot be applied
C methods	those methods which shall not be used

Introduction

The products and services are many in number and can be subject to rapid change

Output, at current prices, for the part of financial intermediation that is indirectly measured (FISIM) and for insurance is measured by convention in the national accounts.

These conventions make measurement in volume terms even more problematic, especially where quality change is considered an important factor.

Financial services, except insurance and pension funding

activities associated with management of accounts,
loans and saving,
and investment instruments.

output

- financial intermediation services directly charged by financial intermediaries to their clients (measured as the sum of fees and commissions charged)
- FISIM(financial intermediation services indirectly measured)
- FISIM is still the largest component
- But the importance of fees and commissions is increasing over time.

Financial intermediation services indirectly measured (FISIM)

Financial intermediaries pay lower rates of interest than would otherwise be the case to those who lend them money and charge higher rates of interest to those who borrow from them.

Differences between the reference rate (a 'virtual' interest rate between the two effective interest rates) and the effective rate on loans or deposits represents the margin earned by the financial intermediary.

Financial intermediation outside FISIM

Output

fees or commissions (charged directly to the customers)

- A flat rate fee for a transaction or service. For example, a charge for the provision of a credit/charge card or a handling fee associated directly to a financial transaction;
- A fee based on the value of a transaction stock or flow, i.e. ad valorem charge. For example, the fee for the management of an investment fund is likely to be linked directly to the value of the fund whereas the fee charged for the sale of a security is linked to the value of that sale;
- A combination of a flat rate fee and ad valorem charge. For example, the charge associated with the conversion of one currency into another where the total charge to the customer can be on the basis of a flat rate fee and a percentage of the value of the currency being converted.

Financial intermediation outside FISIM

Change in quality is a factor that needs to be reflected a

- The length of opening hours for bank branches,
- the proximity of a local branch,
- the availability of direct access to a full range of services and products,
- the quality of investment advice and the performance of investment fund managers

Exception where direct charging is not appropriate

- central bank.

Financial services, except insurance and pension funding Data availability

Financial intermediation services are not well covered by price indices. Some CPIs do exist, but these relate only to the prices charged to households and are unlikely to reflect adequately the range of services and charges made to businesses.

Volume indicators are more readily available and are being used by some countries in their calculation of volume output for banking services.

Financial services, except insurance and pension funding

A, B and C methods

- use of a combination of direct and indirect charges by financial institutions creates a problem
- because over time there may be a move away from the use of FISIM to direct charges or vice versa.
- Solve the problem by keeping the base year and weights for the FISIM calculation up-to-date. Because period margin being applied better reflect any change between the use of direct charges and FISIM.

Financial services, except insurance and pension funding FISIM B method

The price of FISIM has two components:

- 1. the difference between the bank rate of interest and the reference rate (or the reverse in the case of deposits) which represents the margin earned by the financial intermediary; (price component)**
- 2. the second is the price index used to deflate the stocks of loans and deposits to base period prices. (volume component)**

The evolution of FISIM at current prices depends of the change in the two components of the calculation

Financial services, except insurance and pension funding

FISIM

B method

FISIM on loans at constant prices =

FISIM on loans/Price index margin x Base period margin/Effective margin

FISIM on deposits at constant prices =

FISIM on deposits/Price index margin/Effective margin x Base period

where:

- Base period margin on loans = Effective interest rate on loans - Reference rate
- Base period margin on deposits = Reference rate - Effective rate on deposits
- effective margin = FISIM / Stocks

Financial services, except insurance and pension funding

FISIM

B method

replacing the effective margin by this expression in the two formulas gives the following:

FISIM in volume on the loans granted to the institutional sector = stocks of loans granted to the institutional sector/price index * base period margin

FISIM in volume on the deposits of the institutional sector = stocks of deposits of the institutional sector/price index * base period margin.

Financial services, except insurance and pension funding

FISIM

B method

This formula illustrates the double deflation needed to calculate FISIM at constant price.

stocks /Price index:

accounts for change in the current value of loans and deposits due to a price component, this is show by the first step of the simplification. Because changes in the volume of FISIM is determined only by the volume of loans and deposits, the effect on their value of price changes must be removed by adjusting them to base year prices by reference to a suitable deflation index.

base period margin :

accounts for change in FISIM due to the evolution of the effective margin compared to the base year margin.

Financial services, except insurance and pension funding

FISIM

B method

Some countries use a variation of this formula where the second term is written as:

FISIM base year / Stocks base year.

It is clear from this formula that FISIM at constant prices only includes the evolution of stocks of loans and deposits, deflated by a general price index, i.e. the volume component, since the base year margin is a constant.

$$\text{FISIM at constant prices} = \frac{\text{Stocks reporting period}}{\text{General price index}} \cdot \frac{\text{FISIM base year}}{\text{Stocks base year}}$$

Financial services, except insurance and pension funding outside FISIM

Separate prices exist for any charged services,

- output price of a representative set of those services as a deflator with quality adjustment  A method
- The use of price indices without quality adjustment  B method.
- To be considered representative, price indices must cover a major part of the entire range of charged-for services.
- The use of detailed volume indicators that reflect adequately the output would be B methods.

Financial services, except insurance and pension funding outside FISIM

Ad valorem charges:

it is possible to construct price indices that reflect both changes in the percentage charged and the changes in value of the underlying asset to which this percentage rate is applied  A method

Volume indicators that reflect adequately the output  B methods

Examples of suitable volume:

- For the transfer of funds (payments, etc.), the number of transfers or a volume indicator based on the amounts transferred is a B method.
- For money funds, using the amounts managed deflated by a price index that measures the change in the underlying purchasing power of money (as described for FISIM) is a suitable volume indicator.

Financial services, except insurance and pension funding outside FISIM

- Leasing price can mix service charges and FISIM. The decomposition of these two elements into separate parts will be difficult in practice.
- Where it is possible to separate the service charge from FISIM then appropriate price indices can be used to deflate the service charge element for this to be an A method.
- Use of output price indices to deflate the output of leasing in total should be considered a C method as it fails to measure the output from FISIM appropriately.
- The value of the outstanding credits deflated by a price index that measures the change in the underlying purchasing power of money would be a suitable volume indicator for a B method.
- Output prices or volume indicators that reflect a small limited range of financial products or services, or use of a general price index are C methods.

Financial services, except insurance and pension funding outside FISIM

Services of holding companies, trusts, funds and similar financial entities:

- similar in nature to head offices.
- Little data is available, so the best approach is to apply a detailed input method, in which wages and salaries are deflated in such a way that changes in the composition of the workforce are included in the volume component  B method here.

Insurance, reinsurance and pension funding services, except compulsory social security services

Output of life insurance =

premiums earned

plus premium supplements

less benefits due

less increases (plus decreases) in life insurance technical reserves

Output of non-life insurance services=

total premiums earned

plus implicit premium supplements (equal to the property income earned on technical reserves)

less adjusted claims due

Insurance, reinsurance and pension funding services, except compulsory social security services

bundling of products

- For example, to offer a package of house and car insurance at a different price to that for the two products if purchased separately

output of non-life insurance

- different from those of life insurance
- because of the relatively short-term nature of the risk being transferred or pooled

Quality

- is an important aspect of non-life insurance with the introduction of different methods of purchase

So,

- wide variety of products
- particularly important issue when considering the suitability of volume indicator methods.

Insurance, reinsurance and pension funding services, except compulsory social security services

Data availability

- **Wide source of data on insurance industry about the number of policies, financial activities of insurance enterprises,...**
- **CPI s for some type of insurance(not appropriate)**
 - ❑ **CPI measure changes over time in gross premiums for insurance**
 - ❑ **not a good reflection of the changing price of the actual insurance service charge**

Insurance, reinsurance and pension funding services, except compulsory social security services

A, B and C methods

- impossible to implement a concept of deflating the service output on the basis of output price statistics
- Because there is no directly observable price or quantity that is truly representative of the output
-  A method not possible.
- Volume indicator methods that make use of detailed indicators, such as the acquisition and administration of policies and the administration of claims
-  B method
- requires indicators at a very detailed level that take account of changes in the product mix
- accounting for quality may be difficult.

Insurance, reinsurance and pension funding services, except compulsory social security services A, B and C methods

- use of provisions adjusted for claims deflated by a price index that measures the change in the underlying purchasing power of money

-  B method

Non-life insurance

- the number of policies, by product
(household, motor vehicle, third party liability etc.)
 - type of purchaser
- } B method(VI)

Life insurance

- Pension funds  C method

Services auxiliary to financial services and insurance services

- These are generally provided against payment of a fixed fee or ad valorem based charges

Notes

- the transaction fee that should be measured, not the value of the stock that is traded.

Services auxiliary to financial services and insurance services

Data availability

PPI

- do not exist and will be potentially difficult to collect because of the large number of different services covered by the group and the limited nature of the product classification.

CPI

- potentially covers some of these services that are provided to households, but this is not comprehensive

volume indicators

- are available, but again these are currently unlikely to cover fully all the services produced.

Services auxiliary to financial services and insurance services

Data availability

PPI if changes in quality are reflected  A method

PPI if quality change is not reflected.
volume indicators  B method

Volume indicator such as:

- number of transactions broken down by value size classes
- deflated transaction amounts
- number of insurance policies by type
- deflated gross premiums, using a price index of gross premiums

Thank You