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Mini-presentations on Turnover/Output and Price Indices for Banking and intermediation activities: The experience of 5 countries

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Papers

- Turnover/output
  - Norway (Tore Halvorsen and Sindre Sollien)
  - Mexico (Ramón Bravo Zepeda)
  - United States (Mark E. Wallace and Steven M. Roman)
  - Canada (Mario Vella)
- Price Indices
  - United Kingdom (Matt Berger)
  - United States (Deanna Bathgate)
  - Canada (Fred Barzyk, Alexandra Eatock and Min Xie)

Outline : Turnover/Output

- Definition
- Unit measured
- Classification structure
- Institutional Characteristics of the market
- Market conditions
- Seed events
- Output
- Issues

Definition

- Establishments that are primary engaged in financial intermediation.
- In Norway it covers banks and credit granting services, as well as financing shipping operations (insurance is covered elsewhere NACE 66).
- In Mexico, US and Canada it also includes establishment engaged in the pooling of risk (insurances)

Unit measured

- Services explicitly charged as commissions and fees to their customers.

- Services indirectly charged to customers through interest margins. (FISIM- Financial intermediary Services Indirectly Measured)

Classification Structure

Norway

- The sector is classified according to chapter 65 of NACE rev. 1.1 which includes: Financial intermediation (except insurance and pension funds, which is Chap 66), Central Bank, Other banking and other credit banking
- The product classification is CPA 2002 disaggregated in 4 items (central banking, other banking service, financial leasing services and other credit granting services)
- In CPA 2008 the classification will be expanded to 11 items.

Classification Structure

Mexico, United States and Canada:

- The sector is classified according to NAICS Sector 52 – including monetary authorities (Central Bank), credit intermediation and related activities, securities, commodity contracts, other financial investments and related activities
- Data is provided according to type of product line

Institutional characteristics

- The financial sector in the 4 countries is very diversified (financial groups, commercial and investment banking, credit unions, etc)
- The sector is highly regulated in the 4 countries
- In all countries the collection of data is coordinated between regulatory agencies, central banks and NSO.
  - Norges Bank, Kredittilsynet (Financial Supervisory Authority) and Statistics Norway
  - OSFI, Canada Deposit Insurance Corporation, Bank of Canada and StatCan
  - Federal Deposit Insurance Corporation, Bureau of Census
  - Secretaría de Hacienda (Finance depart), Comisión Nacional Bancaria, etc

Market conditions

- In all countries the banking sector is concentrated and dominated by large banks. However in the US and Mexico there are many small banks.
- Contribution to GDP of financial intermediation:
  - Canada (6.0 %)
  - Norway (6.0%)
  - US (5.4%)
  - Mexico (3.3 %)

Seed events

- In Norway there has been a dramatic consolidation (549 institutions in 1970 to 162 in 2007) taking advantage from the economy of scale and rapid technological changes
- In Canada, the government allowed foreign-owned banks to establish full service branches. New domestic bank servicing credit card business and online banking niches and virtual banking.

Number of enterprises by type of institution in Norway, 1970-2007 (Tore Halvorsen)

Type of institution	1970	1980	1990	2007
Central bank	1	1	1	1
Commercial banks	40	24	23	149
Savings banks	493	322	142	
Credit granting institutions	15	15	14	12
Total	549	362	180	162

Seed events

- In the US the number of credit intermediation and related activities has grown over the year to reach 196,451establishments in 2002.

- In Mexico the same phenomenon occurred reaching where the number of establishment grew 7.1% between 1999 and 2003

Data

- In all countries the data is available annually and quarterly (since Sept 09 in the US)

- It covers balance sheet data, interest rates on deposits and loans, incomes and profits

Output

- The services with explicit fees in all countries are directly measured using the data provided by the financial reporting institution

- In all countries FiSIM is calculated separately for various customer using interest rate on loans (L), deposits (D) and reference rates

$$F = F(L) + F(D) = L(r^L - r^R) + D(r^R - r^D)$$

Output

- In the US, the reference rate is an average rate earned by banks on US Treasury and US agency security.

- In Canada, the reference rate is also an average rate for each financial instrument, while in Norway , distinct inter-bank interest rates are used for national and international parts

Issues

- There are issues with:
- Consolidation of data (national vs. Worldwide)
- The lack of categorization of bank customers to industry (ship industry),
- Measuring FISIM (what is excluded – fiduciary services , brokerage, securitization) and taking accounts of risk
- Pricing information to deflate FISIM

Price indices

- Papers
  - United Kingdom (Matt Berger and Kat Pegler)
  - United States (Deanna Bathgate)
  - Canada (Fred Barzyk, Alexandra Eatock and Min Xie)

Price indices

- Pricing:
  - Implicit fees on loans and deposits
  - Explicit fees on loans and deposits, and other “visible” fees (letter of credit, service charges, etc)
- Product line (for example):
  - Personal loans for non-business
  - Residental mortgages
  - Non-residential mortgages
  - Deposits

Prices

- Methodology:
  - User cost approach

$$\text{Loan Price} = \left[\left(\frac{\text{Earned interest income} + \text{Fees}}{\text{Average loan balance}} \right) - \text{Reference rate} \right] * \$1000$$

$$\text{Deposit Price} = \left[\text{Reference rate} - \left(\frac{\text{Interest Payments} - \text{Deposit fees}}{\text{Average deposit balance over the period}} \right) \right] \times £1000$$

Issues

- Other methodologies for calculating the index
- How to adjust for quality
- How the asset should be re-evaluated over time
- Negative prices – Causes and solutions
- Choice of the reference rate