

Measuring and recording financial services

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Outline

- **Background**
- **Financial services and financial intermediation services indirectly measured (FISIM) in international statistical standards**
- **Recommendations to improve the calculation of FISIM**
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Background

- Discussions of an **appropriate method to compile FISIM** in the context of
 - Updating the 1993 System of National Accounts (**1993 SNA**); and
 - Revising the 1995 European System of Accounts (**1995 ESA**)
- Concerns have arisen from the **financial crisis**, but the shortcomings of the current framework are more general
- ECB research project launched in 2007
- Discussion of an ECB issue paper at the Committee of Monetary, Financial and Balance of Payments Statistics (CMFB) meeting in July 2008

Financial services and FISIM in statistical standards (1/3)

- Within the framework of **1995 European System of Accounts (ESA)**
 - **Financial services cover**
 - Financial intermediation services directly measured (include insurance and pension funding services)
 - Financial intermediation services indirectly measured (FISIM)
 - Services for which fees or commissions are explicitly charged
 - **FISIM**
 - Are imputed for all loans and deposits vis-à-vis residents and non-residents (excluding interbank-transactions);
 - Are provided by deposit-taking corporations and other financial intermediaries, excluding insurance corporations and pension funds
 - **Estimates of FISIM**
 - Are derived by comparing **bank interest rates** on loans and deposits to a reference rate
 - Refer to a single **reference rate** reflecting the inter-bank market (risk-free [?] and short-term)

Financial services and FISIM in statistical standards (2/3)

- From **1993 SNA** to **2008 SNA**
 - Report of the OECD Task Force on Financial Services of 13 September 2005
 - Advisory Expert Group (meeting in Jan/Feb 2006) adopted various recommendations related to financial services and FISIM
 - Extended definition for financial services - the production of financial services is the result of financial intermediation, risk management, liquidity transformation and auxiliary financial activities
 - Lending of own funds is also a financial intermediation service
 - Use a reference rate to calculate and allocate FISIM
 - Reference rate has no service element in it and reflects the risk and maturity structure of financial assets and liabilities to which FISIM applies
 - Different reference rates should be used in other currencies
 - Recommendations are reflected in **2008 SNA**

Financial services and FISIM in statistical standards (3/3)

- **FISIM in 2008 SNA**
 - **FISIM should be compiled on the basis of the difference between market interest rates on loans and deposits and a reference rate as a rate between bank interest rates on deposits and loans**
 - **The reference rate should contain no service element and reflect the risk and maturity structure of deposits and loans**
 - **The inter-bank rate may be a suitable choice**
 - **Various reference rates for loans and deposits have been proposed**
 - **By user (internal and external); and**
 - **By currency denomination (domestic currency and foreign currencies)**
- **FISIM in draft 2010 ESA, Chapter 14, is fully in line with 2008 SNA**

Recommendations to improve the calculation of FISIM (1/10)

- **General agreement that the current method as reflected in the standards (*2008 SNA* and draft *2010 ESA*) offers room for improvement**
 - **The *2008 SNA Research Agenda* includes the issue of calculation of FISIM**
 - **A *Special Topic Contributed Paper Meeting (STCPM)* organised by the ECB at the 57th ISI Session in August 2009 provides an overview of the methods proposed for the FISIM calculation**
 - **A European *Task Force on FISIM* will be launched in October 2010 and will finalise its work by-end 2011**

Recommendations to improve the calculation of FISIM (2/10)

- The STCPM at the ISI 57th Session provides an overview of the methods proposed for the FISIM calculation
 - **Two camps - the *single reference rate method* versus the *multiple reference rates method***
 - **The single reference rate method**
 - Fixler, Reinsdorf and Villones (U.S. Bureau of Economic Analysis)
 - Davies (Australian Bureau of Statistics)
 - **The multiple reference rates method**
 - Wang (U.S. Federal Reserve Bank of Boston)
 - Hagino and Sonoda (Bank of Japan)
 - Colangelo and Mink (European Central Bank)
 - Eichmann (Destatis)

Recommendations to improve the calculation of FISIM (3/10)

- **The single reference rate method**
 - **Dennis Fixler, Marshall Reinsdorf and Shaunda Villones (U.S. Bureau of Economic Analysis)**
 - Treatment of interest margins as implicit services of banks
 - However, the financial crisis has raised challenges not just in measuring bank services, but also in (i) computing adjustments to remove capital losses from financial profits; (ii) filling data gaps in accounting for instrument-type and by maturity and ownership; and (iii) valuation issues, from derivatives to the real value of bank output
 - **Michael Davies (Australian Bureau of Statistics)**
 - Current method produces FISIM estimates which are difficult to interpret, but price estimates (and volatility thereof) of FISIM are considered plausible against a background of significant price volatility and constant volumes
 - Current price output is not a function of changes in input and technology: inputs, technology and volumes of output can stay the same leaving current price output to vary with price

Recommendations to improve the calculation of FISIM (4/10)

- **The multiple reference rates method**
 - **Christina Wang (U.S. Federal Reserve Bank of Boston)**
 - Risk-related income should not be considered as value added of banks
 - Value added should cover only financial services produced by a bank (processing financial information and transactions like any other professional service, e.g., accounting and consulting)
 - To take account of the risk in financial instruments, the reference rates for loans are proxied by yields on debt securities
 - **Satoru Hagino and Katsurako Sonoda (Bank of Japan)**
 - The reference rate on the deposits side should be based on the interest (money market rates) for claims between other depository corporations
 - For FISIM on the lending side, multiple reference rates might be necessary (exclusion of the term premium and deduction of credit costs (based on write-offs and provisions) — as opposed to the credit risk premium

Recommendations to improve the calculation of FISIM (5/10)

- **The multiple reference rates method (cont'd)**
 - **Antonio Colangelo and Reimund Mink (European Central Bank)**
 - Term premium and the credit default risk should not be treated as financial services
 - It is demonstrated that this approach can be applied in the regular and timely compilation of quarterly and annual national accounts
 - **Wolfgang Eichmann (Destatis)**
 - Exclude the risk component from the calculation of FISIM
 - Only intermediation services should be recorded in the production account and cost of borrowing plus the risk premium recorded in the income account
 - Calculation of a standard service component for deposits and for loans

Recommendations to improve the calculation of FISIM (6/10)

- For the **multiple reference rates method**, two different approaches are distinguished:
 - **Term premium adjustment: Output excluding term premium**
 - Term premiums are to be identified on the basis of a risk-free yield curve (government bond yield or swap curve for maturities above one year) and of secured inter-bank rates (for maturities below one year)
 - When adjusting for term premium the method leads to lower the FISIM approximately one fifth to one fourth lower than FISIM compiled based on the single reference rate method (current framework)
 - **Credit default risk and term premium adjustment: Output excluding credit default risk premium and term premium**
 - When adjusting for term premium and for credit default risk in the case of loans it would be appropriate to rely on a pool of debt securities with the same maturity/risk characteristics
 - When adjusting for term premium and default risk premium the method leads to FISIM approximately 40 to 50 percent lower than FISIM compiled based on the single reference rate method

Recommendations to improve the calculation of FISIM (7/10)

- The draft mandate of a new European **Task Force on FISIM** has been prepared
 - Timetable (three meetings: October 2010, March and June 2011)
 - Final report by end-2011
 - Change **2010 ESA** if appropriate by modifying the current text
 - This means that a **proposed solution** (if agreeable) can still be implemented according to the **2010 ESA** in 2014
- The Task Force will address **conceptual and practical aspects** related to FISIM
- The issues to be discussed by the Task Force will be:
 - How to reflect **different maturities, different currency denominations and varying degrees of default risks** of deposits and loans in FISIM?
 - How to derive **price and volume measures**?

Recommendations to improve the calculation of FISIM (8/10)

- Should **different maturities** be reflected in FISIM calculations?
 - Transforming short-term deposits into long-term loans is inherent to financial intermediation and provides "matching benefits" to financial intermediaries.
 - Should this transformation element be included into FISIM output (in this case, there is no need to calculate reference rates by maturity), or should the transformation element be excluded from FISIM output (in this case, it would be necessary to introduce several reference rates by maturity)?
 - Is it feasible to introduce several reference rates according to the maturities of loans and deposits, as this would require breaking down by maturity the stocks of loans and deposits and the corresponding interest?

Recommendations to improve the calculation of FISIM (9/10)

- Should **different currency denominations** be reflected in FISIM calculations?
 - Is it relevant and feasible to have different reference rates by currency, which would necessitate a breakdown of loans and deposits by currency in which they are denominated?
 - Would it not be sufficient and more relevant to try to improve the measurement of imports and exports of FISIM on the basis of reference rates by main groups of currencies?

Recommendations to improve the calculation of FISIM (10/10)

- Should the **varying degrees of (default) risk** be reflected in the service element (FISIM), in accrued interest or in other flows?
 - Should riskier clients pay higher service charge, considering that risk-taking is inherent to the activities of financial intermediaries; or
 - Should FISIM be calculated excluding this risk element, considering that it is better and possible to separate production and risk?
- How to **measure prices and volumes** of FISIM?

Treatment of credit default risk (1/3)

- The most controversial issue is the **treatment of credit default risk: Is bearing the credit default risk part of financial services or not?**
 - Interest receivable by creditor = interest payable by debtor
 - Interest receivable/ interest payable contains:

Description	May be replicated by
Price charged for providing capital or price set for receiving 'capital' for a specified period of time (risk free)	Interest swap with the same life time (corresponds to interest (coupon par rate) or a synthetic debt security with an AA rating)
Cost directly attributable to input of capital and labour	
Operating surplus	
Price charged to pay for credit default (credit default risk)	Credit default swap (CDS); the loan loss will be covered in the case of a credit event (default) in exchange of paying a premium; valuation of credit risk on the market. (In cases in which CDS data are not available compilation of default rate based on standardised guarantees or internal or external rating procedures.)

Treatment of credit default risk (2/3)

- In analogy to the treatment of non-life insurance (especially credit insurance)
- FISIM related to loans could be derived as:
Interest –
(refinancing cost + direct cost + operating surplus + credit default cost)

	Loans	Non-life insurance technical reserves
Resources	Interest (covers default risk premium)	Premiums earned plus implicit premium supplements (covers default risk premium)
Uses	Price charged for receiving 'capital' for a specified period of time (risk free)	Adjusted claims incurred
	Cost directly attributable to input of capital and labour	
	Operating surplus	
	Credit default risk	
Financial services	FISIM Interest less refinancing cost, direct cost, operating surplus, credit default cost	Premiums earned plus implicit premium supplements less adjusted claims incurred

Treatment of credit default risk (3/3)

- **Are there options to measure financial intermediation services directly?**
 - **Would it be possible to get - via the profit and loss account of deposit-taking corporations and other financial intermediaries - more detailed data on various components which determine financial intermediation services (to grant loans and to provide deposits)?**
 - **Such components would be:**
 - **Refinancing cost**
 - **Direct cost (capital and labour)**
 - **Operating surplus**
 - **Credit default risk premiums**

Conclusions

- **General agreement that the current method to compile FISIM as reflected in the standards (*2008 SNA* and draft *2010 ESA*) offers room for improvement**
- **One controversial issue is the treatment of credit default risk: Is credit default risk part of financial services or not?**
- **In analogy to the treatment of non-life insurance FISIM related to loans should exclude credit default risk**
- **Further conceptual and practical work on this topic is needed as foreseen by the Task Force on FISIM**