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The Measurement of FISIM and Effects on the Statistics

**Prepared by the Statistics Department
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I. ANNEX: FISIM

A. Overview

Reference *BPM6* Chapter 10 (Section g. Financial services); and 2008 SNA, Chapter 6 (Section F.7 Financial services provided in association with interest)

(Having read and understood the BPM6 methodology is a prerequisite for being able to follow the text below)

1. The 2008 SNA and *BPM6* financial intermediation services indirectly measured (FISIM) comprises financial service output for which producers do not explicitly charge. Instead, they levy an implicit charge in the spread between interest rates receivable on financial assets and interest rates payable on financial liabilities. The 2008 SNA and *BPM6* recognize FISIM produced only by financial corporations and only on their loan assets and deposit liabilities.
2. On loans, FISIM is the difference between interest receivable and the interest cost of funds calculated at a *reference rate* on the loan balance. On deposits, FISIM is the difference between interest payable at the *reference rate* on the deposit balance and interest actually payable to depositors. Depositors receive both the interest payable and financial services for maintaining a balance with a deposit-taking financial corporation. The value of the financial services depositors receive is an implicit rather than explicit charge. The reference rate is described in both the *BPM6* and the 2008 SNA as a rate “contain[ing] no service element and reflect[ing] the risk and maturity structure of deposits and loans.”
3. The focus of the *BPM6* is on FISIM as a component of exported and imported services, also appearing in the 2008 SNA external goods and services account. FISIM exports comprise the indirectly measured financial services sold on the loan assets and deposit liabilities of resident financial corporations for which the counterparty is a nonresident unit. FISIM imports comprise indirectly measured financial services purchased by resident units from all institutional sectors on their loan liabilities and deposit assets with nonresident financial corporations.

Table 1 shows FISIM exports in the context of international classifications of products, activities (establishments), financial instruments, and enterprises (institutional units). Notice that FISIM exports with the rest of the world originate from the loan *assets* and deposit *liabilities* of resident financial corporations vis a vis nonresident counterparties. Table 2 shows FISIM imports in the context of the same international classifications.

Table 1. Exports of FISIM (BPM6 1.A.b.7.2) in the context of international classification standards

Products		Establishments	Financial instruments	Institutional units	Counterparty
System of National Accounts 2008 (2008 SNA)	Central product Classification, version 2.0 (CPC, ver. 2.0) – product code 71 – Financial services, except investment banking, insurance services and pension services	International Standard Industrial Classification of All Economic Activities, revision 4 (ISIC, rev. 4) – activity code 64 – Financial service activities, except insurance and pension funding	2008 SNA – financial instruments with asset/liability status of resident institutional units	2008 SNA institutional sector1	2008 institutional sector
Exports (SNA P62)					
Central bank market services (paragraphs 6.151-6.156)	7111- Central banking services	6411 – Central banking	<i>Liabilities</i> AF22 – Transferrable deposits AF221 – Interbank positions AF229 – Other transferrable deposits AF29 – Other Deposits <i>Assets</i> AF4 – Loans	S121 – Central bank	S2 – Rest of the world
Financial services provided in association with interest charges on loans and deposits (paragraph 6.160b, 6.163-6.169)	7112 – Deposit services 71121 – Deposit services to corporate and institutional depositors 71122 Deposit services to other depositors	6419 – Other monetary intermediation	<i>Liabilities</i> AF22 – Transferrable deposits AF221 – Interbank positions AF229 – Other transferrable deposits AF29 – Other Deposits	S122 – Deposit-taking corporations S123 – Money market funds	S2 – Rest of the world
	7113 - Credit-granting services 71131 - Residential mortgage loan services 71132 - Non-residential mortgage loan services 71133 - Personal non-mortgage loan services for nonbusiness 71134 - Credit card loan services 71135 - Non-mortgage loan services for business purposes 71139 - Other credit-granting services 7114 – Financial leasing services	6419 – Other monetary intermediation 6491 – Financial Leasing 6492 – Other credit granting	<i>Assets</i> AF4 – Loans	S122 – Deposit-taking corporations S123 – Money market funds S125 – Other financial intermediaries, except insurance corporations and pension funds S127 – Captive financial institutions and money lenders	

Table 2. Imports of FISIM (BPM6 1.A.b.7.2) in the context of international classification standards

Products		Establishments	Financial instruments	Institutional units	Counterparty
System of National Accounts 2008 (2008 SNA)	Central product Classification, version 2.0 (CPC, ver. 2.0) – product code 71 – Financial services, except investment banking, insurance services and pension services	International Standard Industrial Classification of All Economic Activities, revision 4 (ISIC, rev. 4) – activity code 64 – Financial service activities, except insurance and pension funding	2008 SNA – financial instruments with asset/liability status of resident institutional units	2008 SNA institutional sectors	2008 SNA institutional sector S2 – Rest of the world (indicative codes for S2 subsectors shown in brackets)
Imports (SNA P72)					
Central bank market services (paragraphs 6.151-6.156)	7111- Central banking services	6411 – Central banking	<i>Assets</i> AF22 – Transferrable deposits AF221 – Interbank positions AF229 – Other transferrable deposits AF29 – Other Deposits <i>Liabilities</i> AF4 – Loans	S11 – Nonfinancial corporations S12 – Financial corporations S13 – General government	[S221] – Central bank
Financial services provided in association with interest charges on loans and deposits (paragraph 6.160b, 6.163-6.169)	7112 – Deposit services 71121 – Deposit services to corporate and institutional depositors 71122 Deposit services to other depositors	6419 – Other monetary intermediation	<i>Assets</i> AF22 – Transferrable deposits AF221 – Interbank positions AF229 – Other transferrable deposits AF29 – Other Deposits	S11 – Nonfinancial corporations S12 – Financial corporations S13 – General government S14 – Households S15 – NPISH	[S222] – Deposit-taking corporations [S223] – Money market funds
	7113 - Credit-granting services 71131 - Residential mortgage loan services 71132 - Non-residential mortgage loan services 71133 - Personal non-mortgage loan services for nonbusiness 71134 - Credit card loan services 71135 - Non-mortgage loan services for business purposes 71139 - Other credit-granting services 7114 – Financial leasing services	6419 – Other monetary intermediation 6491 – Financial Leasing 6492 – Other credit granting	<i>Liabilities</i> AF4 – Loans	S11 – Nonfinancial corporations S12 – Financial corporations S13 – General government S14 – Households S15 – NPISH	[S222] – Deposit-taking corporations [S223] – Money market funds [S225] – Other financial intermediaries, except insurance corporations and pension funds [S227] – Captive financial institutions and money lenders

Table 2 shows that FISIM imports are received by resident holders of deposit *assets* and loan *liabilities* vis a vis nonresident financial corporations. Notice that the resident units receiving imported FISIM are normally in all resident institutional sectors, not just financial corporations. Consequently, the data on their interest receivable from and payable to, as well as their deposit asset and loan liability positions with, nonresident financial institutions must come from sources other than resident financial corporations.

4. The paragraphs below briefly introduce the concept of indirectly measured financial services following *BPM6* methodology in Box 10.5 and as described in the 2008 SNA, paragraphs 6.163-6.169 and 17.249-17.257.

B. The reference rate

Note: the text in this section is indicative only, because clarification of BPM6 and 2008 SNA language on determining the reference rate is the subject of a current Eurostat task force and a prospective Inter-Secretariat Working Group on National Accounts international task force.

5. As noted in section A, for loans FISIM is the difference between loan interest and the cost of funds at the reference rate, and for deposits FISIM is the difference between the cost of funds at the reference rate and the interest actually payable to depositors. The 2008 SNA refers to the cost of funds at the reference rate as “SNA interest.” The reference rate thus is a key quantity in compiling FISIM and in determining interest flows to and from deposit taking and/or loan making financial corporations in the income accounts. According to the *BPM6*:

10.129 FISIM payable by each of the depositors and borrowers are calculated by using the concept of a “reference” rate of interest. The reference rate should contain no service element and reflect the risk and maturity structure of deposits and loans. The rate prevailing for interbank borrowing and lending may be a suitable choice as a reference rate. A single rate should be used for transactions in the domestic currency, whereas different rates should be applied for loans and deposits in other currencies. The reference rate will change over time with market conditions.

This is closely similar to the language regarding the reference rate in the 2008 SNA:

6.166 The reference rate to be used in the calculation of SNA interest is a rate between bank interest rates on deposits and loans. However, because there is no necessary equality between the level of loans and deposits, it cannot be calculated as a simple average of the rates on loans or deposits. The reference rate should contain no service element and reflect the risk and maturity structure of deposits and loans. 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.¹

6. The 2008 SNA and *BPM6*, while specifying no more than one reference rate per currency of denomination, thus allow some flexibility in determination of those rates, advising that they should reflect the risk and maturity structure of deposits and loans, but that the interbank rate—a very short, safe rate—may be suitable. As a general principle, a straightforward calculation of the reference rate is as an average of safe government security rates across maturities, weighted by the shares of the corresponding maturities of the liabilities of the relevant financial corporations sector or subsector. This captures some of the spirit of *BPM6/2008 SNA* guidance in that it reflects the maturity structure of deposits, among other balance sheet liabilities. However, it does not reflect asset (and thus loan) maturity structure, and it produces a reference rate without a risk premium, effectively allowing loan FISIM and thus the current price output of financial institutions to reflect the risk premia in loan rates. In this calculation, the institution is effectively compensated through FISIM for the generally longer average loan maturity it assumes relative to its position-weighted average liability maturity. It also is compensated for, *inter alia*, the default and other risk it assumes in lending operations. By implication, these two sources of risk compensation thus would be reflected in the institution's current price output and operating surplus.² Regarding exports and imports of FISIM, the above calculation also implicitly takes account of currency effects, because reference rates for imports are, in principle, those of the nonresident financial institutions producing the imported services.

C. Data sources

C.1 Reference rate

7. Data on the reference rate will be available from the central bank (interbank rate) and/or the treasury/ministry of finance (government bond rates). For reference rates calculated as liability maturity-weighted averages of government security rates. For FISIM exports, the financial sector portfolio weights by maturity for this calculation can be obtained in some countries from the administrative data sources collected for bank supervision. For imports, data on portfolio weights by maturity of assets and liabilities of nonresident institutions might be obtained from the financial supervision authorities of FISIM trading partners, or from national accounts compilers following a similar approach to the reference rate. In the absence of these data, recourse might have to be made to the interbank rate.

¹ The 2008 SNA notes, however, that FISIM may be more significant in interbank balances whose counterparty institutions are resident in different economic territories, the current context.

² To the extent that these premia are not already offset by the cost of risk mitigation activity undertaken by the institution through intermediate consumption and compensation of employees expenditures.

C.2 Deposit and loan interest flows and positions between residents and nonresidents.

8. The data sources for interest flows can be sourced from the balance of payments and for deposit and loan positions from the international investment position. We briefly describe these sources here but refer the reader to the respective sections on these datasets for a more detailed treatment.

C.2.1 Financial corporations – FISIM exports and imports

9. The most comprehensive data for exports and imports of FISIM come from surveying resident financial corporations to identify deposits of and loans to nonresidents. In most instances, these data will be available from the administrative data collections of financial supervision authorities, which are usually most comprehensive for deposit-taking corporations (S122). Coverage of captive financial institutions and money lenders (S127) may require fielding a supplementary survey, depending on the regulatory and legal environment.

C.2.2 Nonfinancial corporations, households, and NPISH – FISIM imports

10. Residents may hold accounts with financial corporations resident in other countries. Generally, data on these will be based on sample surveys. A survey frame list is built based on special filings of resident individuals and institutions reporting positions with nonresident financial institutions to the tax authorities or treasury/finance ministry. A sample survey of units can be selected from this frame for routine reporting of positions with nonresidents.

C.2.3 General government – FISIM imports

11. Balances and interest flows on general government accounts with nonresident financial institutions should be available from the government financial accounts.

12. For exports, the reference rate is the cost of money from the liability side of resident financial corporations' balance sheets. For imports, the reference rate is the cost of money from the liability side of nonresident corporations' balance sheets.

Box 1: Entries in the balance of payments related to FISIM:Services account:

FISIM is derived with the following formula (see BPM6 Box 10.5):

FISIM = interest receivable on deposits at a reference rate of interest (SNA interest receivable) – interest payable on deposits

+ Interest receivable on loans – interest payable on loans at a reference rate of interest (SNA interest payable).

Primary income account:

SNA interest (at the reference rate)

Secondary income account:

None.

Financial account:

Transferrable deposits (F22)

 Inter-bank positions (F221)

 Other transferable deposits (F229)

Other deposits (F29)

Loans (F4)