

Financial Intermediation Services Indirectly Measured

Overview

A3.1 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 certain financial corporations and only on the loan and deposit instruments on their balance sheets.

A3.2 From the financial corporations' viewpoint, FISIM on loans 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 actual interest payable to depositors. Depositors receive both the monetary 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.” In general, FISIM on the loan assets and deposit liabilities of financial corporations is expected to be positive and a part of their output.

A3.3 The focus of the BPM6 is on FISIM as a component of exported and imported services. FISIM exports comprise the indirectly measured financial services supplied 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

(mostly nonfinancial) on their loan liabilities and deposit assets with nonresident financial corporations.

A3.4 Table A3.1 shows FISIM exports in the context of international classifications of products, activities (establishments), financial instruments, and companies (institutional units). Table A3.2 shows FISIM imports in the context of the same international classifications.

A3.5 Table A3.2 shows that FISIM imports are purchased by resident holders of deposit *assets* and loan *liabilities* vis-à-vis nonresident financial corporations. Notice that any resident institutional sectors may import FISIM. For FISIM exports the data collected from the resident financial corporations suffices, while for FISIM imports, data should be collected from all resident institutional sectors.

A3.6 The following paragraphs 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.

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 review by international bodies.

A3.7 As noted in Overview, 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 variable in compiling FISIM and in determining interest flows to and from deposit-taking and/

Table A3.1 Exports of Financial Intermediation Services Indirectly Measured (FISIM) in the Context of International Classification Standards

Products	Financial instruments	Balance of payments institutional units
Central Product Classification, version 2.0 (CPC, ver. 2.0)—71—Financial services, except investment banking, insurance services and pension services	2008 SNA—financial instruments of resident institutional units that have nonresident counterparties	BPM6 institutional sector (2008 SNA sector code)
Exports (SNA P62)		
Central bank market services (paragraphs 6.151–6.156)	Liabilities AF22: Transferrable deposits AF221: Interbank positions AF229: Other transferrable deposits AF29: Other Deposits Assets AF4: Loans	Central bank (S121)
Financial services provided in association with interest charges on loans and deposits (paragraph 6.160b, 6.163–6.169)	Liabilities AF22: Transferrable deposits AF221: Interbank positions AF229: Other transferrable deposits AF29: Other Deposits Assets AF4: Loans	Central bank (S121) Deposit-taking corporations except the central bank (S122)
	Assets AF4: Loans	Central bank (S121) Deposit-taking corporations except the central bank (S122) Other financial corporations Money market funds ² (S123) Other financial intermediaries, except insurance corporations and pension funds (S125) Captive financial corporations and money lenders (S127)
	Liabilities AF22: Transferrable deposits AF221: Interbank positions AF229: Other transferrable deposits AF29: Other Deposits Assets AF4: Loans	Central bank (S121) Deposit-taking corporations except the central bank (S122) Other financial corporations Money market funds ² (S123) Other financial intermediaries, except insurance corporations and pension funds (S125) Captive financial corporations and money lenders (S127)

¹ Central banking services (71110) include “services of maintaining deposit accounts for major financial institutions and for the central government” (United Nations, CPC version 2.0 Explanatory Notes). Loan/credit services of the central bank are not explicitly mentioned under this category.

² Money market funds (S123) are classified as monetary and financial institutions in monetary statistics along with the central bank (S121) and deposit-taking corporations (S122). Their investment fund shares (AF521) are generally included in the monetary position along with deposits (AF229) in monetary statistics. Like other investment funds, the service charge of money market funds is the difference between the yield on the investment portfolio and the rate paid to shareholders. Normally, investment funds publish this margin as a so-called expense ratio. As such, the calculation of their output is similar to FISIM, except that it applies to securities assets and investment fund share liabilities rather than deposit and loan instruments and is considered an explicit service charge rather than FISIM.

Table A3.2 Imports of Financial Intermediation Services Indirectly Measured (FISIM) in the Context of International Classification Standards

	Products	Financial instruments	Balance of payments institutional units
	2008 SNA—Central Product Classification, version 2.0 (CPC, ver. 2.0)—71—Financial services, except investment banking, insurance services and pension services	2008 SNA—financial instruments with asset/liability status of <i>resident</i> institutional units	BPM6 institutional sectors
Imports (SNA P72)			
Central bank market services (paragraphs 6.151–6.156)	7111: Central banking services	Assets AF22: Transferrable deposits AF221: Interbank positions AF229: Other transferrable deposits AF29: Other Deposits Liabilities AF4: Loans	Central bank (S121) General government (S13) Other financial corporations (S121–S127) Nonfinancial corporations (S11)
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	Assets AF22: Transferrable deposits AF221: Interbank positions AF229: Other transferrable deposits AF29: Other Deposits Liabilities AF4: Loans	Central bank (S121) General government (S13) Other financial corporations (S121–S127) Nonfinancial corporations (S11) Households (S14) NPISH (S15)
	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	Liabilities AF4: Loans	Central bank (S121) General government (S13) Other financial corporations (S121–S127) Nonfinancial corporations (S11) Households (S14) NPISH (S15)

Source: IMF Staff

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.

A3.8 This is closely similar to the language regarding the reference rate in the *2008 SNA*, paragraph 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 nonresident 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

A3.9 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 may be

¹ The qualifier “For banks within the same economy” allows that FISIM may be significant for interbank positions whose counterparty institutions are resident in different economic territories, the context of this appendix.

suitable.² If the interbank rate is deemed suitable, the reference rate can be calculated as the interbank rate used for calculating FISIM for domestic sectors.³ Economies have implemented or tested a few other alternatives.

A3.10 Ideally reference rates for imported FISIM (from nonresident financial corporations with deposit liabilities to or loan claims on residents) should be calculated for each economy of residence of the financial corporation that supplies the import services, preferably the reference rate used in the calculations of FISIM by the statistical authorities of that economy. If these data are not available, then reference rates considered relevant for assets/liabilities denominated in different currencies or groups of currencies may be used, if data are available for each currency/group of currencies.

Estimation of Export and Import of FISIM

Export of FISIM

A3.11 Exports of FISIM for loans granted to non-residents should be compiled using the reference rate for domestically produced FISIM as interest receivable less the product of the loan position and the (domestic) reference rate, if it can be assumed that most loans to nonresidents are in national currency. Exports of FISIM for deposits of nonresidents (excluding financial corporations) can be estimated as the product of the deposit position and the domestic reference rate, less interest payable.

A3.12 In calculating loan and deposit positions, it is useful to obtain data on beginning and end of period positions, so that average positions can be calculated. Thus, data needed for the estimations of export of FISIM could be collected in the following format:

² The interbank rate is not suitable when it does not “reflect the risk and maturity structure of deposits and loans.” As such, alternatives, such as the average cost of funds to the financial corporations sector, are likely to be better choices for the reference rate.

³ There also has been some discussion that a different rate may be needed for each currency in which loans and deposits are denominated, but this question has not been fully resolved.

	Position at the beginning of period	Position at the end of period	Interest receivable by resident financial corporations		Position at the beginning of period	Position at the end of period	Interest payable by resident financial corporations
Loans to nonresident nonbanks				Deposits of nonresident nonbanks			

Import of FISIM

A3.13 Imports of FISIM for loans received from nonresidents can be estimated as interest payable to nonresident financial corporations less the product of the loan position and the reference rate for the applicable funds lent. Imports of FISIM for deposits with nonresident financial corporations can be estimated as the product of the deposit position multiplied by the reference rate for the funds deposited,

less the deposit interest receivable from the nonresident FISIM provider.

A3.14 The data needed for the estimations of import of FISIM could be collected for each institutional sector in the following format:

Negative FISIM

A3.15 In cases where calculation of FISIM by financial corporations is negative, for practical reasons, the compiler may wish to assume that FISIM is zero.

	Position at the beginning of period	Position at the end of period	Interest payable by resident to nonresident financial corporations		Position at the beginning of period	Position at the end of period	Interest receivable by resident users from nonresident financial corporations
Loans received from nonresident financial corporations (by economy of lender) (encouraged)				Deposits with nonresident financial corporation (by economy of issuer) (encouraged)			

Balance of Payments Entries Related to FISIM

A3.16 Box A3.1 presents entries that should be registered in balance of payments related to FISIM.

Data Sources

Reference Rate

A3.17 For exports, the reference rate is, in principle, the cost of funds from the liability side of resident financial corporations' balance sheets. For imports, the reference rate is, in principle, the cost of funds from the liability sides of nonresident financial corporations' balance sheets by economy of residency. The data sources available for economies' own financial corporations sectors and for those of their FISIM

trading partners will, however, tend to control the specific approach to determining the relevant reference rates for international trade in FISIM.⁴

⁴ The Advisory Expert Group to the Inter-Secretariat Working Group on National Accounts, which includes national accountants experts from a number of government statistical agencies and central banks, recommended at its meeting in May 2013 the following practical guidelines for setting the reference rate for the financial corporations sectors of a given economy:

The calculation (definition) of the reference rate should be determined according to national circumstances, using preferably any of the following approaches:

- (1) A reference rate based on a single observable rate for a specific instrument, such as interbank lending rates
- (2) A reference rate based on a weighted average of observable rates of maturities with different terms (weighted by the positions of loans and deposits in each maturity)
- (3) A weighted average of the interest rates on loans and deposits.

Box A3.1 Balance of Payments Entries Related to Financial Intermediation Services Indirectly Measured (FISIM)

Services account

Financial services

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

FISIM exports = interest receivable on deposits held at resident financial corporations by nonresidents at the domestic reference rate of interest (the product of deposits position and the domestic reference rate) – actual interest payable on deposits held at resident financial corporations by nonresidents + actual interest receivable on loans issued by resident financial corporations to nonresidents – interest (property income) receivable on loans issued by resident financial corporations to nonresidents at the domestic reference rate of interest (the product of loan position and the domestic reference rate)

FISIM imports = interest payable on deposits held at nonresident financial corporations by residents at the reference rate of interest of the economy of issuer (the product of deposits position and the reference rate for the economy of residence of the financial corporation issuing the deposits – actual interest receivable on deposits held at nonresident financial corporations by residents + actual interest payable on loans issued by nonresident financial corporations to residents – interest (property income) payable on loans issued by nonresident financial corporations at the reference rate of interest of the economy of issuer to residents (the product of loan position and the reference rate for the economy of residence of the financial corporation that supplies the loan)

Primary income account

Interest (at the reference rate)

Secondary income account

None

Financial account

Deposits¹

Loans

¹Including interbank positions, other transferable deposits, and other deposits.

A3.18 For exports, data for directly calculating the reference rate can be the same reference rate used to calculate total domestic FISIM output, if it can be assumed that transactions are mostly in national currency.

A3.19 For imports, in the interest of global consistency of international trade statistics, the reference rates by supplying economy can be the respective domestic reference rates from the FISIM calculations of those economies' national accounts. For that reason, it would be helpful if economies disseminate their domestic reference rates for possible use by nonresident compilers.

A3.20 For economies where the interbank market does not exist, considering that no internationally accepted methodological guidance exists, the compiler may pick, for practical purposes, a reference rate from a representative government debt security.

Deposit and Loan Interest Flows and Positions between Residents and Nonresidents

A3.21 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.

Financial corporations—FISIM exports and imports

A3.22 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. Coverage of captive financial corporations and money lenders

may require fielding a supplementary survey, depending on the regulatory and legal environment. International banking statistics (IBS) available from the Bank for International Settlements (BIS) may also be a useful source of information on deposits and loans with nonresidents.

A3.23 The balance of payments compiler should coordinate with the national accounts compiler, to assure that the calculation of FISIM in the balance of payments accounts is consistent with estimates included in the national accounts.

Nonfinancial corporations, households, and NPISH—FISIM imports

A3.24 Data on residents' accounts with financial corporations resident in other economies may be available from sample surveys. These surveys are selected from a survey frame list built on special filings of resident individuals and corporations report-

ing positions with nonresident financial corporations to the tax authorities or treasury/finance ministry. A sample survey of units selected from this frame can be used for routine reporting of positions with nonresidents. IBS available from the BIS may also be a useful source of information on deposits and loans with nonresidents by the nonbank sector.

A3.25 As for financial corporations, also here the balance of payments compiler should coordinate with the national accounts compiler, to assure that the calculation of FISIM in the balance of payments accounts is consistent with estimates included in the national accounts.

General government—FISIM imports

A3.26 Balances and interest flows on general government accounts with nonresident financial corporations should be available from the government financial accounts.