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**THE PRODUCTION OF FINANCIAL CORPORATIONS AND  
PRICE/VOLUME MEASUREMENT OF FINANCIAL SERVICES  
AND NON-LIFE INSURANCE SERVICES**

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OF FINANCIAL SERVICES AND NON-LIFE INSURANCE SERVICES  
SNA UPDATE ISSUE 6A**

**This paper has been drafted by Anders Nordin - OECD and will be presented by Philippe Stauffer, OFS**

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**THE PRODUCTION OF FINANCIAL CORPORATIONS AND PRICE/VOLUME  
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*SNA UPDATE ISSUE 6A*

**Executive summary**

The OECD Task Force on Financial Services ('The Task Force') has examined issues related to the definition of the financial corporations sector, the measurement of output, the allocation of production of financial services and price and volume measurement for financial and non-life insurance services. The task force met for the last time 9-11 May 2005, in Paris.

Developments on financial markets over the past years have significantly changed the way in which financial corporations are managed and operate with implications on the definition of financial corporations. In this respect the Task Force concluded that "Risk Management" and "Liquidity transformation" are better suited to describe the "Intermediation" activities to better capture the nature of the activities of financial corporations than "risk-taking" and "repackaging" put forward in the SNA 93. Moreover, units that provide financial services exclusively with own funds or units that produce financial services for only one unit or a group of units should be considered as financial corporations under certain conditions.

Financial services constitute the output produced by financial corporations and provided to their customers. Some of the services are priced implicitly in the form of interest margins i.e. by paying or charging different interest rates to borrowers and lenders whereas other are priced explicitly i.e. directly charged by financial corporations to their customers. The SNA 93 uses the concept of FISIM (Financial Intermediation Services Indirectly Measured) - to value financial services that are not explicitly priced but it is not totally clear about the method of calculation and in the allocation of FISIM to consuming sectors. The Task Force proposes a calculation method and clarifies the allocation. In practice the valuation and allocation of financial services is limited to loans and deposits.

The SNA 93 provides a framework for compiling price and volume measures for flows of goods and services in the national accounts context. However, the lack of adequate price and volume indicators for FISIM and non-life insurance services causes conceptual and practical problems. Thus the measurement of price and volume for FISIM and non-life insurance services has to be based on conventions that were described by the Task Force.

The work of the task force resulted in nine carefully worded recommendations entailing:

- A definition of financial corporation based on the nature of their output (financial services) instead of their activity. "Risk Management" and "Liquidity transformation" activities are added to "Financial intermediation" to better capture the nature of the activities of financial corporations.

- That no FISIM is recorded for non-financial corporations. Only explicit financial services are recorded for such units.
- That units which provide financial services exclusively with own funds would be considered financial corporations and will thus be productive in the sense of SNA if they provide loans to a range of clients and incur the financial risk of the debtor defaulting.
- That units producing financial services for only one unit or a group of units are considered as financial corporations if they keep a complete set of accounts and is capable of acquiring assets and incurring liabilities on their own account.
- That expected holding gains and losses should presently not enter into the measurement of financial services output.
- That FISIM should be systematically allocated and that primarily deposits and loans attract implicit charges and these instruments are included in the calculations of FISIM. The calculation of FISIM should be based on the formula  $(r_L^t - rr^t)y_L^t + (rr^t - r_D^t)y_D^t$  (see page 11) which implies the use of a reference rate ( $rr$ ). This implies a change to the SNA 93 that recommended calculating FISIM as “the total property income receivable by financial intermediaries minus their total interest payable, excluding the value of any property income receivable from the investment of their own funds, as such income does not arise from financial intermediation” (paragraph 6.125)
- That the reference rate used in the compilation of FISIM should be a risk-free reference rate that has no service element in it and that reflects the maturity structure of the financial assets and liabilities to which FISIM applies. A single rate should be used for transactions in the local currency, whereas different rates may be used for transactions in other currencies.
- That with respect to market making and trading services, the measurement of the implicitly priced elements -- margins on foreign exchange and buying and selling of all securities by all financial corporations-- be made regardless of the purpose for which the securities and other instruments are being bought or sold.
- That in the absence of direct deflators for the output of implicitly priced financial services at current prices, the rate of change of the volume indicator should be derived using the rate of change of stocks of loans and deposits deflated by a general price index (e.g. the GDP deflator) or using a direct output indicator method.
- That in the absence of a direct deflator of non-life insurance output, to compile a direct volume indicator using one of two methods described in recommendation 9, and obtain the price index as the ratio between the current price series and the volume series:

*The AEG should focus on the wording of the nine recommendations. It is fair to say that, as usual, there were diverging views in the Task Force. However, the careful wording of the recommendations reflects a large consensus. After each recommendation, an explanation is given on the scope of changes implied in the SNA.*

### **February 2004 AEG meeting**

The OECD Task Force on Financial Services submitted three recommendations to a previous AEG meeting: A new definition of financial corporations • The principle of non-exclusion of own funds in the measurement of output • A reference rate approach for the measurement of financial intermediation services indirectly measured (FISIM). The Group discussed the definition at some length. The following comments were made: The new definition is broader than the present 1993 SNA treatment, which is a good development. The term “financial intermediation” should not disappear from the definition. The AEG invited the OECD Task Force to produce a comprehensive presentation of all the inter-related issues of sector and industry definition, valuation of output, allocation of output to users, role of own funds, treatment of unincorporated money lenders, and ancillary units such as companies` treasury departments, etc. The AEG agreed that own funds should not be excluded as a source of funds for the provision of financial services. However, the AEG recommended that the Task Force elaborate further on that. There was large support for using the reference rate approach in measuring FISIM, although not necessarily using a single rate. Nevertheless, the AEG agreed there is a need to consider alternative approaches as well, since the reference rate approach may not be applicable in many developing countries. The present report takes into account the recommendations of the February 2004 AEG.

## **I The definition of financial corporations and of financial services**

### *1.1 Identifying financial corporations: current definition and issues*

1. The SNA 93 classifies the institutional units based on the kind of economic activity they perform. Financial corporations are defined as "... all resident corporations or quasi-corporations principally engaged in financial intermediation or in auxiliary financial activities which are closely related to financial intermediation" (Paragraph 4.77).
2. Financial intermediation is defined as "...a productive activity in which an institutional unit incurs liabilities on its own account for the purpose of acquiring financial assets by engaging in financial transactions in the market. The role of financial intermediaries is to channel funds from lenders to borrowers by intermediating between them. They collect funds from lenders and transform, or repackage, them in ways that suit the requirement of borrowers. They obtain funds by incurring liabilities on their own account, not only by taking deposits but also by issuing bills, bonds or other securities. They use these funds to acquire financial assets, principally by making advances or loans to others but also by purchasing bills, bonds, or other securities. A financial intermediary does not simply act as an agent for other institutional units but places itself at risk by incurring liabilities on its own account" (Paragraph 4.78).
3. The SNA 93 definition of financial corporations puts particular emphasis on financial intermediation, i.e. on an activity, and does not specify particular services provided by financial corporations. Two elements characterise the description of the activity put forward in the SNA 93, namely “risk-taking” and “repackaging”. However, the rapid development, in recent years, of various financial markets has significantly changed the way in which financial corporations operate. In this respect, the terms “financial risk management” and “liquidity transformation” seem to better describe the activities of financial corporations.

### **The changing nature of financial activities**

**Financial risk management** is a central activity of financial corporations. Changes on financial markets have, however, modified this activity. Traditionally financial risks taken by financial corporations were linked to collecting funds mainly by accepting deposits and providing funds mainly by granting credits. This “traditional” risk management has lost in importance. Nowadays, traditional bank lending is a much smaller part of finance, with traded products including securities and OTC derivatives playing a much more significant role than previously. A significant development is also securitization, which allows firms to address asset-liability risk by removing assets or liabilities from their balance sheets. In response to these trends, banks have diversified their activities into new areas such as investment banking, fund management and insurance where the risks are materially different from those of the traditional credit business. Deregulation, globalisation and increased capital mobility have sharpened competition. Major new non bank competitors have emerged which compete with banks in a number of these activities and which face similar risks, but are not subject to a credit based approach to setting capital adequacy standards. Investors have moved substantial parts of their funds from banks into non-bank financial corporations and accumulated assets with new features that are more complex.. Risks are now traded so that more risk-averse agents bear less risk than those who are risk-friendly. This kind of risk trading is therefore achieved through exchanges of risk among individuals at a given point in time.

**Liquidity transformation** shares common features with risk management and in practice it is difficult to distinguish between the two. Investors, on the one hand, have always been concerned with liquidity because they are uncertain about the time at which they may want to increase or reduce their holdings of a financial asset. Borrowers, on the other hand, are concerned with liquidity because they are uncertain about their ability to raise added funding in the future. A “new” liquidity transformation has risen in importance with financial deregulation and capital markets integration.

Arbitrage activities, counterpart activities and underwriting facilities have a common feature: they provide liquidity. By creating new assets and liabilities with different liquidity profiles financial corporations provide services on both sides of their balance sheets. Here again the remuneration of this “new” liquidity is different: while commissions remunerate some of these actions, others –like arbitrage- are remunerated through holding gains or losses.

4. It is also worth observing that the definition of financial intermediation in paragraph 4.78 does not make reference to any particular composition of assets or liabilities. A unit that exclusively collects funds for investment by issuing interest-bearing securities would clearly qualify as a financial corporation. This means that channelling deposits into loans is not a necessary condition for identification as a financial corporation.

5. However, there is some ambiguity about the role of ‘own funds’ as a source for financial intermediation. Paragraph 4.78 allows for funds to be obtained by issuing all kinds of securities, and by implication this includes shares and therefore part of equity which can reasonably be equated with ‘own funds’. However, paragraph (6.125) of the SNA explicitly excludes own funds as a source for intermediation activity and the associated services. Furthermore, the SNA indicates that the exclusive use of a unit’s own funds as a source of lending and investment does not give rise to financial intermediation.

#### *1.2 Units lending own funds<sup>1</sup>*

6. The issue of lending of own funds relates essentially to the status of some units that finance themselves exclusively via equity: mutual funds, venture capitalists, and money lenders (important for instance in India) and whether or not they are financial corporations.

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<sup>1</sup> Own funds are defined in paragraph 16.

7. SNA paragraph 6.134 says that money lenders on own funds are not financial intermediaries: “Some money lenders lend only their own funds. The activity of such small-scale money lenders, including many village money lenders, is not financial intermediation as they do not channel funds from one group of institutional units to another. Lending as such is not a process of production and the interest received from the lending of own funds cannot be identified with the value of any services produced.” However, in some countries unincorporated money lenders are important source of financing and should be seen as financial corporations. Therefore, it seems reasonable to consider unincorporated money lenders in some countries that on-lend their own funds as well as on-lending deposits as financial corporations and thus a producer of output of financial services.

***1.3 Units producing financial services to only one unit or a group of units: Current recommendations and considerations about the classification***

8. The SNA 93 makes a distinction between corporations, quasi-corporations and ancillary corporations. Corporations and quasi-corporations are recognised as institutional units and are classified to a sector according to their principal economic activity whereas ancillary units are not recognised as institutional units, but together with their parent company.

9. In the SNA 93 ancillary units are defined as being “subsidiary corporations, wholly owned by a parent corporation, whose productive activities are ancillary in nature: that is, are strictly confined to providing services to the parent corporation, or other ancillary corporations owned by the same parent corporation (paragraph 4.40).” According to paragraph 4.44, ‘ancillary corporations are not treated as separate institutional units because they can be regarded as artificial units created to avoid taxes, to minimise liabilities in the event of bankruptcy, or to secure other technical advantages under the tax or corporation legislation in force in a particular country.’

10. Related to the discussion of ancillary corporations are Special Purpose Entities (SPEs) that are units set up through the transfer of assets, liabilities or rights to carry out well-specified activities or series of transactions directly related to the specific purpose for which they were formed. The scope of activities that can be conducted by SPEs is very broad. Although they historically originated in the non-financial corporate sector, the use of SPEs has spread to all sectors in the economy. In the financial services industry, they are commonly set up for providing financing and asset holding services to one company or a group companies (asset management, corporate treasury services, trusts etc.) In the public sector, the activities of SPEs are related to public-private partnerships, securitization programs, manage financial assets and liabilities, deliver services on behalf of the government etc.

11. SPEs often have little or no employment, or physical presence. Most SPEs are established in economies other than that of the parent company. Incorporation of SPEs is often associated with offshore financial centers but may also be found in other jurisdictions. SPEs are not explicitly dealt with in the SNA 93 and other related manuals

12. For the treatment of such units in the SNA, the following should be followed:

- Determine whether to recognise them as separate institutional units
- If they are institutional units, determine to which institutional sector the units belong.

13. When SPEs are regarded as institutional units, the general principles of sector classification guidelines should be used to determine the sector classification of SPEs. The following should be considered:

- Determine in which economic territory the unit is resident

- Determine whether the activities of domestic SPEs are financial or non-financial: The recognition of SPEs as separate financial institutional units should depend on if they are actively engaged in managing their portfolio and placing them themselves at risk.

14. If classified as financial corporations, SPEs are considered as producers of output of financial services. Nevertheless, the question that arises is whether SPEs classified as financial corporations can be considered producers of FISIM. The Task Force has not specifically discussed this issue but it may be noted that Eurostat considers that SPEs are not to be regarded as generators of FISIM.

#### **1.4 Recommendations**

15. In the light of the changing nature of financial activities and units and the work carried out to define specialised units, the Task Force agreed on the following recommendations:

##### **Recommendation 1**

Financial corporations consist of all resident corporations and quasi corporations that are principally engaged in providing financial services including insurance and pension funding services to other institutional units. The production of financial services is the result of financial intermediation, financial risk management, liquidity transformation and/or auxiliary financial activities.

In principle, financial services can be provided as a secondary activity. In practice, however, in many countries, the provision of financial services is so strictly regulated that there may be no other unit providing financial services than financial corporations. By convention, even if financial services are provided by non financial corporations, no indirect charges (FISIM) are imputed. On the other hand, financial services provided for explicit charges are recorded as such.

Financial intermediation, financial risk management and liquidity transformation are productive activities in which an institutional unit incurs financial liabilities for the purpose of acquiring mainly financial assets. Corporations engaged in these activities obtain funds by taking deposits and issuing bills, bonds or other securities. They use these as well as own funds to acquire mainly financial assets by making advances or loans to others and by purchasing bills, bonds, or other securities.

Financial services provided include monitoring services, convenience services, liquidity provision services, risk assumption services, underwriting services and trading services<sup>2</sup>.

16. In the present paper, own funds are defined as the sum of the net worth (B.90) and shares and other equity (AF.5). The following more precise definition was brought forward by the Eurostat Working Group on Unquoted Shares (WGUS) (originally suggested by the Sub-group on shares and other equity of European Monetary Institute's Monetary Financial Accounts Task Force (MUFA TF) and slightly modified by Working Group on balance of Payments and External Reserves Statistics (WG BP&ER)). The definition consists of the following components:

- paid-up capital net of own shares

<sup>2</sup> The present recommendation should, in principle, lead the editor of the SNA 93 Rev.1 to use a new name for "FISIM", which is dominated by the term "financial intermediation". However, the Task Force has not discussed a new name, but something more general such as FSIM (Financial Services Indirectly Measured), could be in the view of the moderator a good compromise. Nevertheless, the present paper continues to use the term FISIM.

- shares premium accounts, investment grants excluding goodwill,
- all types of reserves,
- non-distributed profits net of losses and including the results for the current year

### **Recommendation 2**

The 1993 SNA states that lending own funds does not give rise to production. While it is true that units lending own funds do not engage in financial intermediation, with a broader definition of financial services, units lending own funds may provide a financial service. At a minimum, an incorporated enterprise (thus with a full set of accounts) which, as its main activity, provides loans to a range of clients and incurs the financial risk of the debtor defaulting, should be treated as a financial corporation providing financial services. Its allocation to the appropriate sub-sector of S.12 (financial corporations) has yet to be determined.

In addition, some unincorporated enterprises which provide loans to a range of clients other than just to family and friends on a regular business basis may also be treated as providing financial services. The advice of experts from countries where this practice is widespread is needed to specify when and how such units are to be identified and whether they are to be treated as unincorporated enterprises in the household sector or quasi-corporate enterprises in the financial sector.

### **Recommendation 3**

An entity providing financial services as specified in Recommendation 1 to only one unit or a group of units is considered to be a separate institutional unit (and a financial corporation) if it keeps a complete set of accounts and is capable of acquiring assets and incurring liabilities on its own account.

A similar entity which does not have a complete set of accounts is treated an institutional unit (and a financial corporation) only if it is resident in a country other than any of the units to which it is providing the services, in accordance with SNA/BPM practice of treating non-resident unincorporated enterprises as quasi-corporations.

17. **Warning to the AEG:** It should be pointed out that the second part of recommendation 3 is in conflict with the recommendations of the Task Force on Harmonisation of Public Sector Accounting (TFHPSA) which recommend that government special purpose entities which might be set up abroad for activities which are specific to government (privatization, defeasance, securitization etc.) should be consolidated with the rest of the government accounts.

#### **Implications for the SNA:**

- *Paragraphs 4.77-4.80 concerning the definition of financial corporations and their activity*
- *Paragraphs 4.40-4.44 concerning ancillary corporations;*
- *Paragraphs 6.133 and 6.134 concerning money lenders; and*
- *Paragraphs that require exclusion of own funds from ‘intermediation’ activity, in particular 6.125.*

18. These recommended changes to SNA involve:

- Defining financial corporations by the nature of their output (financial services including insurance and pension funding services) instead of their main activity (intermediation) while still preserving the term “financial intermediation” to reflect their main activity<sup>3</sup>. This will increase the number of units defined as financial corporations and probably the level of the overall production of financial services in the SNA 93 Rev.1.
- Treating all sources of funds symmetrically, in recognition of the fact that financial services are produced by taking and investing funds, independently of their origin. In particular, they do not exclude a financial corporations’ own funds as a source of financing. This will increase the value of production of financial services in the SNA 93 Rev.1.
- Making specific reference to services included in the concept of financial services (e.g. liquidity provision services and risk assumption services).
- Those units that provide financial services exclusively with own funds would be considered financial corporations if they provide loans to a range of clients and incurs the financial risk of the debtor defaulting. This will increase the value of FISIM in the SNA 93 Rev. 1.
- Those units that produce financial services for only one unit or a group of units are considered as financial corporations providing financial services if they keep a complete set of accounts and are capable of acquiring assets and incurring liabilities on their own account. This will lead to an increase in the value of the production of financial services in the SNA 93 Rev.1.

## II Measurement of output and allocation of FISIM

### 2.1 *Financial services and financial instruments*

19. *Financial services* constitute the output produced by financial corporations and provided to their customers. Some of the services are priced implicitly in the form of interest margins i.e. by paying or charging different interest rates to borrowers and lenders whereas other are priced explicitly i.e. directly charged by financial corporations to their customers.

20. *Financial instruments* are the only observable form through which some financial services are provided to their customers. Some financial instruments could be considered as functioning as ‘inputs’ into the production process of financial services, but they are not ‘inputs’ in the SNA sense of being intermediate consumption to the production process. They are only inputs in the sense that they are needed to generate financial services. Thus, financial instruments cannot and should not be classified into categories of inputs or outputs in the SNA.

21. The total value of output of financial corporations consists of two components: (1) commissions and fees (directly measured) and (2) revenues from financial intermediation services indirectly measured. The Task force did not propose any changes to (1), but only to (2).

### 2.2 *Financial intermediation services indirectly measured (FISIM): current recommendations*

22. In the SNA 93 (paragraph 6.124) it is stated that “some financial intermediaries are able to provide services for which they do not charge explicitly by paying or charging different interest rates to borrowers and lenders”. They are able to defray their expenses and have an operating surplus by receiving rates of return on the funds they lend that are higher than the rates they pay on the funds they borrow. This leads to

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<sup>3</sup> As recommended by the February 2004 meeting of the AEG.

a situation where the part of services that are not explicitly charged must be indirectly measured, financial intermediation services indirectly measured (FISIM).

23. The value of FISIM is defined as “the total property income receivable by financial intermediaries minus/ their total interest payable, excluding the value of any property income receivable from the investment of their own funds, as such income does not arise from financial intermediation” (paragraph 6.125).

24. For the calculation of the value of the financial services, SNA 93 (6.127 and 6.128) recommends using the “difference between the actual rates of interest payable and receivable and a ‘reference rate’ of interest”. The latter rate “represents the pure cost of borrowing funds – that is a rate from which the risk premium has been eliminated to the greatest extent possible and which does not include any intermediation services”.

#### European Union Legislation on FISIM

In its FISIM Regulation<sup>4</sup>, Eurostat uses this approach to determine and allocate FISIM by users sectors. While the SNA 1993 left open various possibilities the reference rate chosen by Eurostat is a computed rate based on interbank loans and production is restricted to deposits and loans. Eurostat FISIM is then calculated as  $(r_L^t - rr^t)y_L^t - (r_D^t - rr^t)y_D^t$ . This is often presented as  $(r_L^t - rr^t)y_L^t + (rr^t - r_D^t)y_D^t$  because the reference rate will normally exceed the deposit rate in the presence of implicitly-priced services to depositors.

In the discussion on the FISIM regulation, which considered the results of the 4-year trial exercises of various methods in calculating FISIM allocation, the EU countries and Eurostat decided to calculate FISIM allocation on loans and deposits only. The decision was based on the following arguments:

- The banks control the interest rates of loans and deposits, and do not control the interest rates of the other financial instruments, such as bonds and other securities.
- The interest rates on loans and deposits are easy identifiable with a clear distinction of interest rate charged on loans (being higher) and on deposits (being lower). This distinction is very important because the calculation method of FISIM allocation is based on the difference between actual interest rates and reference rate. This distinction is not very clear for bonds or other securities.
- In some cases, calculation of FISIM allocation on bonds resulted in negative FISIM margins. This is because, the reference rate is not always lower than actual interest rate received on bonds. It was found that sometimes banks hold in their assets treasury bonds that have very low interest rate.

### 2.3 Securities as carriers of financial services

25. An important question in the context of the calculation of FISIM is whether (in addition to loans and deposits) securities (shares owned and issued, bonds owned and issued) are carriers of financial services and whether returns from all these securities should be included in an estimate of the total value of financial services.

26. A difficulty in this context is whether the calculation of FISIM for *bills* and *bonds* should use the current yield to maturity, or only the yield to maturity at time of issue. If the former is chosen, this will introduce the creditor principle of income (contrary to the debtor principle). The debtor principle will frequently produce negative FISIM because of changes in the reference rate of interest. Hence, in order to avoid negative FISIM the creditor principle (current market yield) would have to be used. This is, however, undesirable because the ISWGNA and the AEG (and the CMFB) have confirmed that the debtor principle should apply in the SNA 93 and ESA 95. The results of trial exercises made in the European

<sup>4</sup> Council Regulation (EC) No 448/98 of 16 February 1998

Union (EU) show that the inclusion of bills and bonds lower the value of FISIM, and result in some cases in negative FISIM. Moreover it would be difficult to attribute FISIM generated by bills and bonds to user sectors.

27. Particular attention has to be paid to *shares*. Equity can be seen as one particular way of providing liquidity and risk assumption services to non-financial units. It is more difficult to make this case for equity held by financial institutions with a view to achieving short-term trading gains. However, even in this case, there may be a portfolio management service rendered, for example to holders of securities issued by the financial corporation. In the event, this may also be a service for the financial corporation's own shareholders who bought equity of the financial corporation in expectation of returns following successful portfolio management services. An argument in the consideration against the inclusion of shares is the fact that an important part of the returns to shares consists of *holding gains or losses* that receive special treatment in the system of national accounts.

28. Because of these difficulties, the Task Force agreed that FISIM should be systematically calculated and allocated primarily to deposits and loans and that the calculation of FISIM be based on the use of reference rates.

#### **Recommendation 4**

Financial institutions charge for some services explicitly and some implicitly. From an economic perspective, all financial instruments are potentially involved in the production of financial services. Some financial instruments attract only explicit charges but several may attract implicit charges alone or in addition to explicit charges. Deposits and loans attract implicit charges and these instruments are included in the calculations of FISIM. Other instruments may attract FISIM but will not be included unless a clear allocation to users is possible. Thus, in practice, FISIM may be limited by convention to loans and deposits.

#### **Implications for the SNA:**

- Paragraphs 6.124-6.131 and 7.108 as well as Annex III regarding the measurement of FISIM, and the use of the reference rate method.
- Paragraph 6.125 should be changed. **Deletion of:** "the total value of FISIM is measured in the System as the total property income receivable by financial intermediaries minus their total interest payable, excluding the value of any property income receivable from the investment of their own funds, as such income does not arise from financial intermediation". **Replacement by:** "The value of FISIM is measured in the System by the formula  $(r_L^t - rr^t)y_L^t + (rr^t - r_D^t)y_D^t$ , where the  $r_L$  is the loan rate,  $r_D$  the deposit rate and  $rr$  the reference rate of interest. The amount of the loan is  $y_L$  and the amount of the deposit is  $y_D$ ."
- Paragraph 6.126 should be changed. **Deletion of:** "In practice, however, it may be difficult to find a method of allocating the total output among the different users in a way which is conceptually satisfactory from an economic viewpoint and for which the requisite data are also available. Some flexibility has therefore to be accepted in the way in which the output is allocated. Some countries may prefer to continue to use the convention proposed in the convention proposed in the 1968 version of the SNA whereby the whole of the output is recorded as the intermediate consumption of a nominal industry". **Replacement by:** "The total value of output should be allocated among the various recipients or users of financial services for which no explicit charges are made".

**Warning:** Recommendation 2 states that units lending exclusively own funds generate financial services. This recommendation in conjunction with recommendation 4 implies that their FISIM is obtained as  $(r_L^t - rr^t)y_L^t$

#### 2.4 Holding gains/losses

29. The SNA 93 makes an important distinction between property income and holding gains and losses (HG/L). HG/L are defined as amounts accruing during an accounting period to the owners of financial and non financial assets as a result of a change in prices. HG/L are thus neither the result of production nor income and are to be recorded independently of whether they are realised or not. In this respect, holding gains or losses cannot enter the valuation of financial services.

30. However, it can be argued that expected holding gains are part of the price at which some financial services are exchanged. The perspective of HG/L is a main incentive for financial institutions to engage in a productive process, using labour inputs to produce services. Thus, if holding gains were to be considered, ex-ante (expected), not ex-post (actual) holding gains/losses would be the appropriate variable. Nevertheless, due to conceptual and practical problems in incorporating holding gains/losses into the measurement of output of financial services, the Task Force recommended to persevere with the present SNA recommendations i.e. exclude holding gains and losses (even expected) from the production and income measure.

#### Recommendation 5

When measuring the implicitly valued output of financial institutions, the question arises of whether expected holding gains and losses of financial institutions on their own account should be included in the measure. There is no question of including holding gains and losses as such in a direct measure of output in the SNA. However, for certain financial instruments, expected price changes constitute an important part of expected returns. In principle, therefore, they could be considered when approximating the value of financial services indirectly

Despite this conceptual position, given the empirical difficulties in estimating expected holding gains and losses, it is presently not recommended to include expected holding gains and losses in the measurement of financial services output.

It should also be noted that the issue of expected holding gains and losses has arisen in other contexts as well (e.g., insurance, depreciation, inventories). It is recommended that further investigation of the role of expected holding gains and losses throughout the system should be added to the research agenda of the SNA.

#### Implications for the SNA:

- *None at the moment*

#### 2.5 The choice of reference rate

31. The SNA 93 (paragraph 6.128) defines the reference rate as ‘the pure cost of borrowing funds’, that is a rate from which the risk premium has been eliminated to the greatest extent possible and which does not include any intermediation services.

32. The reference rate approach for measuring and allocating indirectly-priced financial services across institutional sectors has become common practice in most OECD countries. This convergence in approaches should be reflected in the SNA, although differences remain with regard to the choice of the reference rate. A majority of countries use interbank rates whereas others use treasury rates.

33. A special issue is to determine FISIM imports and exports. Typically exports and imports of FISIM are done in different currencies. Therefore it seems reasonable to distinguish several external reference rates according to currencies in which the transactions of imports and exports are denominated.

34. The Task Force agreed that a single risk-free reference rate should be used that has no service element in it and that reflects the maturity structure of risk-free financial instruments. In addition, the fact that different currencies have different reference rates has to be considered, in particular for the calculations of imports and exports of financial services.

### **Recommendation 6**

The reference rate used in the compilation of FISIM should be a risk-free rate that has no service element in it and that reflects the maturity structure of the financial assets and liabilities to which FISIM applies. It is recommended that a single reference rate be used for transactions in the local currency, but different reference rates may be used for transactions in other currencies.

### **Implications for the SNA:**

- *Paragraphs 6.124-6.131 as well as Annex III regarding the measurement of FISIM, and the use of the reference rate method.*

### **III Market making services**

35. Market makers (such as Forex, Securities and Derivative dealers) are entities that continuously are ready to quote “bid-ask” prices on the securities. They commit to purchase or sell at those prices to whoever contacts them. Hence, the “bid-ask” quote reduces the uncertainty that customers face. Market makers are very important for maintaining liquidity and efficiency for the particular securities that they make markets in. They are financial corporations because they arbitrate in financial transactions by buying and selling (and therefore taking risks, unlike “brokers”), although the financial services are different from the other type that involves incurring liabilities to acquire assets. Their output is a result of risk transformation or liquidity provision.

36. Net spread earnings enable a measurement of service income (value added) from dealing activities. It is often argued that SNA does not cover the activity of market-makers, because it rules against the inclusion within income of any holding gains/losses generated on the purchases/sales of securities activities. However, gains arising - from purchasing at a “bid” quote with reselling at a “ask” quote - should not be seen as a holding gain - for no price need have changed on the market. Instead, such gains are fully expected and they should be seen as income. Indeed, it seems natural that market makers ought to be seen as providing a service, which could be measured for each transaction by the difference between the sale/purchase price and the mid-market price at the time of the transaction.

37. An example is investment banks that provide a significant amount of trading services. Trading services are charged by selling to buyers at higher ‘ask’ prices and buying from sellers at lower ‘bid’ prices (trade margin). The bid-ask spread is the investment bank’s compensation for these services. Another example is the output of investment funds that is normally measured as the sum of fees and commissions

charged, but in the case of some unit trusts it may include the spread between the 'bid' and 'offer' price of the units.

38. The Task Force agreed that the measurement of the margins on foreign exchange and buying and selling of all securities by all financial corporations be made irrespective of whether the securities and other instruments are traded on own account or on behalf of clients.

### **Recommendation 7**

In practice, virtually all transactions in foreign exchange and securities are carried out via financial corporations. Two prices are quoted for transactions in securities: a bid price and an ask price. The first is the price which the potential buyer is to pay, and the second is the price that the owner receives on sale. The mid-price is by convention taken to be the average of these two prices. The difference between the bid price and the mid price is a margin paid by the buyer to the financial corporation, and the difference between mid price and the ask price is a margin paid by the seller. The value of securities in the balance sheet is at mid price and excludes these margins.

Financial corporations buy and sell securities both on their own account and on behalf of clients. Buying and selling on behalf of clients may be on demand, that is in immediate response to an instruction from the client to buy or sell a specific security. Alternatively, a financial corporation may acquire a stock of securities in order to meet future demand immediately. This activity is called market making and may be undertaken by specialised financial corporations or financial corporations providing a wide range of financial services. The SNA should measure the margins on the buying and selling of all securities by all financial corporations and attribute these as being paid by the seller and the buyer respectively, regardless of the purpose for which the securities and other instruments are being bought or sold.

When there is a delay between the purchase and sale of a security, in order to avoid including holding gains and losses, the margins are calculated on the basis of the prices prevailing at the time the purchase and sale take place.

### **Implications for the SNA:**

- *Paragraphs 3.76 and 14.78 concerning the calculation of a service charge as the difference between buying and selling rates and the midpoint rate. Market making services covering transactions in foreign exchange and securities carried out by financial corporations on own account are to be added to these paragraphs, as well as in the sequence of paragraphs 6.120-6.134.*

### **IV Measurement of volume and price for financial services**

39. The output of financial services consists of two main components: financial services directly charged by financial corporations to their clients and financial intermediation services indirectly measured (FISIM).

40. As direct financial services like those attached to activities related to currency exchange, financial advisory services etc., are charged explicitly, prices simply equal the actual fees or commissions charged for providing the services. But the issue becomes more difficult when it comes to financial intermediary services for which the financial corporations do not charge explicitly. Ideally, we should have a price index that reflects the definition of the margin measure of FISIM. However, there are no directly

observable price or quantity units that actually represent the output of FISIM. This causes major conceptual and practical problems regarding the price and volume measurement of FISIM and would therefore have to be based on conventions.

41. The only (indirect) mention of price/volume split of financial services in the SNA is in paragraph 16.70 where it is said that: *“Unfortunately ,however, it is sometimes not even possible to obtain satisfactory estimates of price and volume changes for output – for example, in certain market and non-market industries such as finance, etc. In these cases, it might be necessary to resort to third-best solutions by estimating movements of value-added at constant prices on the basis of the estimated volume changes of the inputs into the industries”*.

42. Measuring the volume output based on inputs is always a fallback solution, but the task force preferred to propose a direct measure.

### **Recommendation 8**

The measurement of output of FISIM is discussed in recommendation 4. Ideally a direct deflator of the output at current prices should be constructed as a PPI that reflects the margin measure of FISIM. However the nature of financial services cannot easily be connected to price and quantity units. Besides, the change in quality is an important issue in financial services. The length of opening hours for bank branches, the proximity of a local branch, the quality of investment advice are some central quality features of financial services. In the absence of direct deflators one of the following approaches is recommended:

- The rate of change of the volume indicator can be derived using the rate of change of stocks of loans and deposits deflated by a general price index (e.g. the GDP deflator).
- Direct output indicator method. Break down the different characteristics linked to financial services (e.g. numbers and value of loans and deposits, savings, money transfers etc.). For each of the characteristics an appropriate volume indicator is to be derived. The volume indicators are then weighted together<sup>5</sup>.

### **Implications for the SNA:**

- *Paragraph 16.70*

### **V Measurement of volume and price for non-life insurance services**

43. The value of output of non-life insurance services is measured as premiums + adjusted premiums supplements – adjusted claims. From this definition, it is clear that there are no directly observable price or quantity components of the services that truly represent the nature of the output. The SNA defines insurance as an activity, but does not give the definition of an individual unit of insurance. Hence it is difficult to find a method to measure the output of non-life insurance in volume terms. Ideally a price index should be obtained directly from insurers that correspond to the concept that underlies the margin calculation. However, in practice such a price does not exist. Only premium prices exist. Premium price indices are indices that measure the change in the price of a policy with all characteristics remaining

<sup>5</sup> The Task Force did not discuss the weights to be used. Though commonly weights are derived through an analysis of the importance of the different activities contributing to FISIM. For example it is assumed that a change of the number of, for instance, saving accounts will lead to a proportional change in the volume of FISIM, while a change of the average value per account will lead to only a limited change of the volume of FISIM.

constant. For example, price statisticians will ask companies to price for subsequent periods the insurance of a given type of car, two years old, with a given set of options, with a given type of driver, etc. The price index will be the aggregation of those individual price changes, all characteristics held constant. However, premium price indices are not the perfect price indices to deflate the insurance output in national accounts. The Task Force did not deal with the possibility of developing such direct price indices of insurance.

44. As for financial services, the only (indirect) mention of price/volume split of insurance services in the SNA is in paragraph 16.70 *“Unfortunately ,however, it is sometimes not even possible to obtain satisfactory estimates of price and volume changes for output – for example, in certain market and non-market industries such as finance, etc. In these cases, it might be necessary to resort to third-best solutions by estimating movements of value-added at constant prices on the basis of the estimated volume changes of the inputs into the industries”*.

45. The Task Force favoured instead two different methods: (1) a direct volume measure, (2) a deflated premium method.

46. The direct volume measure is based on an indicator constructed as the aggregation of detailed quantity indicators reflecting the number of policies, for each line of insurance product (household, motor-vehicle, third party liability, etc.). Weights should in principle be the current price margin type measure of insurance output for each line of insurance output. However, it may be that these margin weights are difficult to use in practice, as they even may be negative in some years for detailed line of products. If this is the case, gross weights could be used.

47. The movement of this indicator will essentially reflect the change in the number of policies. This is probably in some way a good indicator of the volume of *activity* of insurance companies. However, it has conceptual and practical drawbacks. For example, the change in the number of policies from one year to another may be affected by changes in the marketing of policies which would be difficult to interpret as a change in the volume of insurance services procured to customers unless one has in mind only a concept of volume of insurance service as the pure *activity* of the insurance companies. The insurance service provided to policy holders does not depend on the number of policies but in the amount of assets and revenues.

48. A better measure of the change in the volume of the output of insurance would be the “deflated premium approach”. The deflated premium approach consists of using as an extrapolation of the level of the output of non-life insurance for the base year, the change of an index corresponding to the deflation of the sum of gross premiums by premium price indices. Deflated premiums have the advantage, over a method based on number of policies, of taking into account the amounts insured. For example, if two homeowner policies are bundled together but the amount of premium paid by the policy holder remain constant, the deflated premium approach will result in an index with no change while the method based on the number of policies will wrongly decrease. Conversely, let us suppose that, in year 1, a customer insures a cheap car, and in year 2, changes to an expensive car. Let us suppose also that there are no price changes at all, neither of cars nor of insurance premiums for these cars. In this case, the insurance premium of this customer is going to increase significantly as it takes into account the fact that the amount insured is much bigger. With the previous method, the “direct output method”, the number of policies remain constant and thus the volume of insurance services remain constant. With a premium deflated approach, the volume of insurance services consumed significantly increases. This appears sound, as, for the customer, the volume output of insurance services rises with the real value of private assets and income insured.

49. The use of a deflated premium indicator has also other advantages. First, the series of gross premiums are easy to obtain. It requires however the availability of premium price indices, but these price

indices tend to be more and more available as they are considered an integral part of CPIs and PPIs. Second, the movements of premiums and of premium prices are relatively easy to interpret and smooth.

### **Recommendation 9**

The measurement of the output of non-life insurance services at current prices is obtained using a formula based on the difference between premiums (plus adjusted premium supplements) and adjusted claims. Ideally a direct deflator of the output at current price should be constructed as a PPI. However, this margin measure of the output of non life insurance does not lead to any easy interpretation of the nature of the quantity and price and, thus, this ideal index is generally not available. Statistical offices do calculate price indices for non-life insurance services included as a PPI or as a CPI. These price indices, called here “premium price indices”, measure the change in the price of insurance policies with fixed characteristics. They are different from the ideal index, and should not be used to deflate the current price output unless there is evidence that the deflator for claims moves with the premium price indices. In the absence of this ideal deflator, it is recommended to compile a direct volume indicator using one of the methods proposed below, and obtain the price index as the ratio between the current price series and the volume series:

- Obtain a direct volume measure of the output (and by extension, the consumption) of non-life insurance services by extrapolating the current price measure of the base year by the rate of change of a volume index, which is obtained deflating gross premiums earned by a premium price index (PPI or CPI, depending of the context). When the premium price index covers premium supplements, it is advisable to use the rate of change of a volume index compiled as gross premiums plus adjusted premium supplements deflated by this extended premium price index.
- In the absence of adequate premium price indices, a volume indicator can be compiled using quantity indicators such as the number of policies, by line of product (house-owner insurance, motor vehicle insurance, third party liability, etc.) appropriately weighted preferably by net premiums or, when not possible, by gross premiums.

For some countries the data requirements for the above methods cannot be met and so, it may be necessary to resort to simplistic measures; for example, estimating the rate of change of the volume of output as equal to the rate of change of the volume of inputs to the industry. The inputs should cover labour, intermediate consumption, and capital services<sup>6</sup>.

### **Implications for the SNA:**

- *Paragraph 16.70*

<sup>6</sup> If “capital services” is adopted by the AEG (issue No 15)