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**Report of the Technical Advisory Working
Group on
Financial Services**

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Report of the Technical Advisory Working Group on Financial Services

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I. INTRODUCTION

The financial services component of the bilateral purchasing power parities (PPPs) compiled by the ICP comprises directly and indirectly measured financial services in final expenditure on GDP. Most countries will have compiled national accounts under the *System of National Accounts 1993* (1993 SNA), but not all. Hence, as of 2011 there will be a mix of versions from 1953, 1968, 1993, and 2008 (Australia). The treatment of financial services differs to some extent in all of these versions of the SNA. This report inventories the types of financial services in the national accounts and appearing in final expenditure, identifying issues and approaches to measuring international parities for them, focusing on the 1968, 1993, and 2008 versions of the SNA.

II. FINANCIAL SERVICES IN THE SNA

According to the 2008 SNA, financial services comprise

Directly measured financial services

- Financial services provided in return for explicit charges
 - Mortgage origination
 - Portfolio
 - Tax advice
 - Estate management
 - Initial public offerings of stock (shares)
 - Corporate restructuring
 - Credit card transaction fees
 - Others, such as
 - Safe deposit box services.
- Financial services associated with the acquisition and disposal of financial assets and liabilities in financial markets (price times transactions processed)

¹ We would like to acknowledge consultation with Paul Schreyer in preparing this note. The views expressed herein are those of the author and should not be attributed to the IMF, its Executive Board, or its management.

Indirectly measured financial services

- Financial intermediation services indirectly measured (FISIM) (user cost rate times average account value in account class times number of accounts in class)
 - Loans and deposits (2008 and 1993 SNA only)
 - Other financial assets and liabilities and nonfinancial assets (1993 SNA only)
- Financial services associated with insurance and pension schemes (service charge per nominal unit of insurance in force, times average number of nominal units of coverage in policy class times number of policies)
 - Non-life insurance
 - Life insurance and annuities
 - Reinsurance (2008 SNA)
 - Social insurance schemes
 - Standardized guarantee schemes (2008 SNA)

Neither the 2008 SNA nor the 1993 SNA say whether insurance is among the indirectly measured financial services, but neither sees the insurance premium as the price of the insurance service itself. Analogously with FISIM, which is that part of interest paid that is the payment for intermediation services, a synthetic calculation also is used to calculate the part of the insurance premium that is the payment for the insurance service. Accordingly, we consider it along with FISIM as an indirect measure of the value of a market financial service. Table A1 in the Appendix compares the 2008 and 1993 SNA in some detail on treatment of these services.

A. Approaches to and issues in international comparisons by financial product

Directly measured financial services

In principle, comparing prices between countries for directly measured financial services should be as straightforward as for any other service. The value transacted is price times quantity charged, and the bilateral relative price between countries is the ratio of the price on one country over the price of the same service in the other. The principal issue in constructing these international price relatives will be whether the data are available, and whether the services priced are comparable between countries on detailed characteristics that have an impact on the within-country price. The ICP will need to acquire from each participating country's national accounts unit what SNA services are covered and the units in which it defines the service.

Volume based (Type 1) directly measured financial services

For these services, such as brokerage charges, the service is priced according to a “physical” unit, such as a stock transaction. The price of these items is straightforward in principle, as is the volume, and the relative price between countries is straightforward, as is the relative volume.

The assumption here is that we can measure a country specific price for the service, say P_S , and the corresponding number of units purchased by final demanders of that service, Q_S , and that these units of measurement are standardized across the ICP countries. Thus the value of the service, V_S , is simply price times quantity and we have:

$$(1) V_S = P_S Q_S.$$

Thus the ICP basic heading price or item price for this type of service is P_S and the corresponding quantity is Q_S ; i.e., we have

$$(2) PPP_S \equiv P_S ; Q_S \equiv Q_S.$$

Note that any two of the three symbols in (1) (value, price and quantity) need to be known in order to implement this approach.

Rate-based (Type 2) directly measured financial services

These services, such as loan originations, initial public offering (IPO) placements, and the like, are priced according to a rate applied to a nominal amount, such as, respectively, the nominal size of the loan or the value of the IPO.

For these products, there is a sliding commission scale; i.e., typically, commissions decline as the property transacted or at risk, say V_S , increases in value. In order to implement our suggested treatment of Type 2 products, we need to have three pieces of information:

- V_S , the value of fees paid out by the final demanders for the service;
- V_T , the value of the underlying transactions for which fees were charged and
- P_C , the country’s overall consumption PPP (relative to a numeraire country) for all consumption components, excluding the financial sector components.

The V_S here is conceptually the same as the Type 1 V_S . An example for V_T would be the total value of real estate transactions during the reference year for the reference country and V_S would be the corresponding value of real estate commissions.

We first calculate a constant consumption equivalent Q_T (in units of constant consumption purchasing power across all countries in the ICP comparison) by dividing the total value of transactions, V_T , by the country's consumption (excluding financial products) PPP, P_C :

$$(3) Q_T \equiv V_T / P_C.$$

We also calculate an average margin rate m on all of the transactions for the reference year for the product under consideration, m , as the ratio of the fee income, V_S , to the total value of transactions:

$$(4) m \equiv V_S / V_T.$$

Now rearrange equation (4) as follows:

$$(5) V_S = m V_T \\ = m P_C Q_T.$$

Thus a suitable decomposition of V_S into price and quantity components that could be compared across countries emerges from the second line in (5): set the price of the service in the country equal to the margin rate for the service in the country m times the consumption PPP for the country, P_C , and set the corresponding quantity equal to the country's transaction volume in constant across countries units of purchasing power, Q_T ; i.e., for Type 2 products, the ICP basic heading price or item price for this type of service is PPP_S^* and the corresponding quantity is QQQ_S^* defined as follows:

$$(6) PPP_S^* \equiv m P_C ; QQQ_S^* \equiv Q_T.$$

Thus products subject to rate-based pricing are treated in a manner that is similar to the treatment of retailing or wholesaling as a margin industry.

The Working group recommends that the most practical approach to bilateral prices and volumes for rate-priced directly measured financial services is to base the relative volume of service use between countries on relative values of the rate base (e.g., nominal loans originated or nominal IPO value) deflated by the PPP for all goods and services other than rate-priced financial services, including indirectly measured financial and insurance services and directly measured financial services. The PPP for rate-priced directly measured financial services is then the implicit relative price index derived from deflating the ratio of final expenditures on rate-priced directly measured financial services with this relative volume index. It would be conceptually more satisfying to measure the price in terms of the average charge for services delivered per service delivered by class of service, but the data requirements of this approach are unlikely to be met within the ICP's survey schedule.

It foresees the following work program leading to PPPs for rate-priced directly measured financial services:

- Inventory data on the various bases for pricing these products, such as loans originated and IPOs floated for households, NPISHs, general government, and the rest of the world, and charge rates for the corresponding services rates across ICP participants
- Perform preliminary calculations to assess the volatility of rate-priced directly charged financial service PPPs across ICP participants

Indirectly measured financial services

Intermediation services

Since 1953, the SNA has recognized indirectly measured intermediation services (FISIM), but has been adjusting the notion incrementally version by version since. In GDP by final expenditure most countries will have (1) no FISIM (1968 SNA, because it treats all FISIM as intermediate consumption, and 1993 SNA, if the country elected to take its “second best,” (that is, the 1968) approach), (2) FISIM as a final consumption share of the property income of depository corporations (1953² and 1993³ SNA), or (3) FISIM as the sum of “user cost”

² See 1953 SNA, Chapter V, Section 2, p. 32, in the paragraph on financial intermediaries. The 1953 SNA suggests allocating the net property income of banks to using sectors in proportion to the sectors' deposits. Fixler and Zieschang, (*Economic Inquiry*, 1991) point out that this is equivalent to a 1993 SNA “user cost” allocation of net property income where the reference rate is taken to be the return on assets.

³ The 1993 SNA prefers allocation of aggregate FISIM, measured as the net property income of financial corporations, to using sectors according to what amounts to the “user cost” value of the service flows from the asset-liability positions of the sectors with financial corporations.

calculations on the eligible financial instruments held by final consumers (households, general government, and the rest of the world), where the eligible financial instruments are loans and deposits only (2008 SNA). In all three cases, the ICP will have to know the details of country practices to know how these final expenditure flows for households, general government, and the rest of the world are actually constructed. ICP also will need to know how the volume index for final consumption of financial services is constructed. Some countries extrapolate reference FISIM using the employment of the depository corporations sector. Other countries use a deflated (real) value of the underlying financial assets (mainly, if not exclusively, loans and deposits) as the volume measure. The presence of these two different volume measures creates a conundrum for the ICP, which would like to take a single volume concept for international comparisons of intermediation services. The implication of this is that relative volumes of intermediation services from the ICP may not be consistent with extrapolations of those relative volumes by temporal volume indices to the next ICP, because the volume indicators are not fully consistent.

The Working group recommends that the most practical approach to bilateral prices and volumes for indirectly measured intermediation services is to base the relative volume of FISIM between countries on relative values of loans and deposits deflated by the PPP for all goods and services other than rate-priced financial services, including indirectly measured financial and insurance services and directly measured financial services. The PPP for FISIM is then the implicit relative price index derived from deflating the ratio of final expenditures on FISIM with this relative volume index. It would be conceptually more satisfying to the price in terms of the average charge for services delivered per account by class of account, but the data requirements of this approach are unlikely to be met within the ICP's survey schedule.

It foresees the following work program leading to PPPs for FISIM:

- Inventory data on deposits and loans held by households, NPISHs, general government, and the rest of the world, deposit interest rates, loan interest rates, and government bond rates (for the reference rate) across ICP participants
- Perform preliminary calculations to assess the volatility of FISIM PPPs across ICP participants

Insurance services

The SNA has remained fairly steady in how it measures insurance services, as

Premiums plus
Premium supplements less
Claims or redemptions less
Increase in technical reserves.

The 2008 SNA now requires “adjusted claims” rather than claims per se, in the interest of smoothing claims to approximate an ex ante value on which insurers could have been expected to base their premiums. For (whole) life insurance, adjusted claims and claims are the same, because redemptions are fully predictable. The 2008 SNA also no longer subtracts the increase in technical reserves from the first three terms for non- (whole) life insurance.

Insurance premiums are set as a rate per nominal unit of insurance in force, and the other components of the SNA service charge can be so expressed, so insurance is a rate-priced indirectly measured financial service.

The Working group recommends that the most practical approach to bilateral prices and volumes for indirectly measured insurance services is to base the relative volume of FISIM between countries on relative values of insurance in force deflated by the PPP other than rate-priced financial services, including indirectly measured financial and insurance services and directly measured financial services. The PPP for insurance is then the implicit relative price index derived from deflating the ratio of final expenditures on FISIM with this relative volume index. It would be conceptually more satisfying to the price in terms of the average charge for services delivered per policy by class of policy, but the data requirements of this approach are unlikely to be met within the ICP’s survey schedule.

It foresees the following work program leading to PPPs for insurance:

- Inventory data on insurance in force held by households, NPISHs, general government, and the rest of the world, deposit interest rates, loan interest rates, and government bond rates (for the reference rate) across ICP participants
- Perform preliminary calculations to assess the volatility of insurance PPPs across ICP participants

Table A1. Financial Services in the System of National Accounts

1993 SNA	2008 SNA
Financial services provided in return for explicit charges	
Financial corporations other than the central bank	
<p>6.123. Financial intermediaries are also increasingly tending to provide various kinds of auxiliary financial services, or business services, as secondary activities: for example, currency exchange, or advice about investments, the purchase of real estate, or taxation. The output of such services is valued on the basis of the fees or commissions charged, in the same way as other services. The measurement of the production and consumption of these services poses no special conceptual or practical problems. ...</p>	<p>6.161 Many services come under this heading and may be provided by different categories of financial institutions. Deposit taking institutions, such as banks, may charge households to arrange a mortgage, manage an investment portfolio, give taxation advice, administer an estate, and soon. Specialized financial institutions may charge nonfinancial corporations to arrange a flotation of shares or to administer a restructuring of a group of corporations. However, the most pervasive and probably largest direct fee is likely to be that charged by credit card issuers to the units that accept credit cards as a means of payment for the goods and services they provide. The charge is usually calculated as a percentage of the sale; in the case of retailers the sale value corresponds to turnover and not output. Although the percentage is usually small in absolute terms, maybe one or two percent, the fact that it is applied to such large totals means that the total value of the charge is very large. The charge represents output of the credit card companies and intermediate consumption of the corporations that accept credit cards as means of payment. Ignoring the role of the credit card company does not affect the measurement of the expenditure (usually final consumption or exports) on the goods and services concerned but does underestimate the costs of the provider of goods and services and the output of the credit card company. This in turn leads to a misallocation of value added from the credit card company to the provider of the goods and services paid for by credit card.</p> <p>6.162 The example of the credit card company is one that clearly demonstrates that a financial corporation may provide services that are paid for by different means by different customers or in different circumstances. The fee charged to the corporations accepting a credit card as means of payment has just been discussed. A card holder may also be charged an explicit fee, usually each year, for holding the card. In addition, if a card holder uses the credit facilities offered by the card, he will pay indirect charges associated with interest payable on the outstanding credit (which is treated as a loan in the SNA).</p>
Central Bank	
<p>6.132. The services of financial intermediation provided by central banks should be measured in the same way as those of other financial intermediaries. Because of the unique functions which may be performed by central banks, the value of their output may sometimes appear exceptionally large in relation to the resources employed. Services other than financial intermediation which may be carried out by central banks should be valued by the fees or commissions charged, in the same way as for other financial enterprise.</p> <p>[The presumption is that all output of the central bank is market and, if not subject to explicit fees, valued indirectly using FISIM. Still, it will be necessary to check individual country practices on this.]</p>	<p>6.152 In principle, a distinction should be made between market and non-market output [of central banks] but in practice the possible resource intensiveness of the exercise and the relative importance of making the distinction should be considered before implementing the conceptual recommendations. In cases where market output is not separated from non-market output, the whole of the output of the central bank should be treated as non-market and valued at the sum of costs.</p> <p>[The presumption is that all output of the central bank is nonmarket unless market and nonmarket output can be separately measured on the basis of data from distinct establishments within the central bank and added together. National accountants felt that if FISIM were applied to the central bank the same as for any other financial corporation, the central banks would be shown as having a very high current price value of output, as foreshadowed in the 1993 SNA language of paragraph 6.132. However, the unfortunate consequence of a decision to value output at cost is that it eliminates valuation of central bank output at the effective prices (spreads) and explicit service fees it is charging the depository corporations sector for its services. Contrary to initial fears, there is little FISIM from the asset side of the central bank balance sheet, even under the 1993 SNA, as it is usually risk free government securities, whose returns are the source of the reference rate. Fortunately, the language of this paragraph is rather nonprescriptive.]</p>

Table A1. Financial Services in the System of National Accounts

1993 SNA	2008 SNA
Financial Intermediation Services Indirectly Measured (FISIM)	
Indirectly measured services from financial assets/liabilities other than loans/deposits	
Financial corporations other than the central bank	
<p>6.125. 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.</p> <p>6.127. When the output is allocated among different users, one possible way of proceeding is to base the allocation on the difference between the actual rates of interest payable and receivable and a "reference" rate of interest. When the requisite information is available, estimates of the following may be calculated and used to allocate the total output:</p> <p>(a) For those to whom the intermediaries lend funds, both resident and non-resident, the difference between the interest actually charged on loans, etc. and the amount that would be paid if a reference rate were used;</p> <p>(b) For those from whom the intermediaries borrow funds, both resident and non-resident, the difference between the interest they would receive if a reference rate were used and the interest they actually receive.</p> <p>6.128. The reference rate to be used 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. The type of rate chosen as the reference rate may differ from country to country but the inter-bank lending rate would be a suitable choice when available; alternatively, the central bank lending rate could be used.</p> <p>[The implication of paragraph 6.125, combined with paragraphs 6.127-6.128, is that <i>all</i> assets and liabilities on the balance sheets of financial intermediaries are sources of indirectly measured financial services. In this case, the sum of all net incomes from the balance sheet would be net interest, plus dividends, plus rent as stated in paragraph 6.125. However, this is contravened somewhat by the qualifier "excluding the value of any property income receivable from the investment of their own funds, as such income does not arise from financial intermediation." The 1993 SNA is apparently inconsistent on this point. As for FISIM in final expenditure, the 1993 SNA is not as prescriptive as it might be, but as a first best option, says this total should be allocated in proportion to FISIM paid on the asset/liability positions of the using sectors (households, government, and the rest of the world, enterprises being intermediate consumers of FISIM). In the end, international comparisons will have to assess the individual country practices to reflect actual GDP by expenditure.]</p>	<p>6.165 By convention within the SNA, these indirect charges in respect of interest apply only to loans and deposits and only when those loans and deposits are provided by, or deposited with, financial institutions. [The 2008 SNA makes no provision for indirectly measured services from financial assets/liabilities other than loans/deposits.]</p>
<p>Central bank</p> <p>6.132. The services of financial intermediation provided by central banks should be measured in the same way as those of other financial intermediaries. Because of the unique functions which may be performed by central banks, the value of their output may sometimes appear exceptionally large in relation to the resources employed. Services other than financial intermediation which may be carried out by central banks should be valued by the fees or commissions charged, in the same way as for other financial enterprise.</p>	

Table A1. Financial Services in the System of National Accounts

1993 SNA	2008 SNA
<p>[The presumption is that all output of the central bank is market and, if not subject to explicit fees, valued indirectly using FISIM. Still, it will be necessary to check individual country practices on this.]</p>	
<p>Indirectly measured loan and deposit services</p>	
<p>Financial corporations other than the central bank</p>	
<p>6.125. 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.</p> <p>6.127. When the output is allocated among different users, one possible way of proceeding is to base the allocation on the difference between the actual rates of interest payable and receivable and a "reference" rate of interest. When the requisite information is available, estimates of the following may be calculated and used to allocate the total output:</p> <p>(a) For those to whom the intermediaries lend funds, both resident and non-resident, the difference between the interest actually charged on loans, etc. and the amount that would be paid if a reference rate were used;</p> <p>(b) For those from whom the intermediaries borrow funds, both resident and non-resident, the difference between the interest they would receive if a reference rate were used and the interest they actually receive.</p> <p>6.128. The reference rate to be used 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. The type of rate chosen as the reference rate may differ from country to country but the inter-bank lending rate would be a suitable choice when available; alternatively, the central bank lending rate could be used.</p> <p>[The implication of paragraph 6.125, combined with paragraphs 6.127-6.128, is that all assets and liabilities on the balance sheets of financial intermediaries are sources of indirectly measured financial services. In this case, the sum of all net incomes from the balance sheet would be net interest, plus dividends, plus rent. However, this is contravened somewhat in the same paragraph by the qualifier "excluding the value of any property income receivable from the investment of their own funds, as such income does not arise from financial intermediation." The 1993 SNA is apparently inconsistent on this point. As for FISIM in final expenditure, the 1993 SNA is not as prescriptive as it might be, but as a first best option, says this total should be allocated in proportion to FISIM paid on the asset/liability positions of the using sectors (households, government, and the rest of the world, enterprises being intermediate consumers of FISIM). In the end, international comparisons will have to assess the individual country practices to reflect actual GDP by expenditure.]</p>	<p>6.163 One traditional way in which financial services are provided is by means of financial intermediation. This is understood to refer to the process whereby a financial institution such as a bank accepts deposits from units wishing to receive interest on funds for which the unit has no immediate use and lends them to other units whose funds are insufficient to meet their needs. The bank thus provides a mechanism to allow the first unit to lend to the second. Each of the two parties pays a fee to the bank for the service provided, the unit lending funds by accepting a rate of interest lower than that paid by the borrower, the difference being the combined fees implicitly charged by the bank to the depositor and to the borrower. From this basic idea the concept emerges of a "reference" rate of interest. The difference between the rate paid to banks by borrowers and the reference rate plus the difference between the reference rate and the rate actually paid to depositors represent charges for financial intermediation services indirectly measured (FISIM).</p> <p>6.164 However, it is seldom the case that the amount of funds lent by a financial institution exactly matches the amount deposited with them. Some money may have been deposited but not yet loaned; some loans may be financed by the bank's own funds and not from borrowed funds. However, the depositor of funds receives the same amount of interest and service whether or not his funds are then lent by the bank to another customer, and the borrower pays the same rate of interest and receives the same service whether his funds are provided by intermediated funds or the bank's own funds. For this reason an indirect service charge is to be imputed in respect of all loans and deposits offered by a financial institution irrespective of the source of the funds.</p> <p>The reference rate applies to both interest paid on loans and interest paid on deposits so that the amounts of interest recorded as such in the SNA are calculated as the reference rate times the level of loan or deposit in question. The difference between these amounts and the amounts actually paid to the financial institution are recorded as service charges paid by the borrower or depositor to the financial institution. For clarity the amounts based on the reference rate recorded in the SNA as interest are described as "SNA interest" and the total amounts actually paid to or by the financial institution are described as "bank interest". The implicit service charge is thus the sum of the bank interest on loans less the SNA interest on the same loans plus the SNA interest on deposits less the bank interest on the same deposits. The service charge is payable by or to the unit in receipt of the loan or owning the deposit as appropriate.</p> <p>[The 2008 SNA attempts to correct the 1993 SNA inconsistency introduced by the "own funds" exclusion by eliminating that exclusion, and by saying that total FISIM is the sum of its components by instrument, rather than being all net property income earned by depository corporations. To delineate "intermediation" it restricts the instruments from which indirectly measured services are produced to loans and deposits. While arbitrary, the latter is internally consistent.]</p>

Table A1. Financial Services in the System of National Accounts

1993 SNA	2008 SNA
Central bank	
<p>6.132. The services of financial intermediation provided by central banks should be measured in the same way as those of other financial intermediaries. Because of the unique functions which may be performed by central banks, the value of their output may sometimes appear exceptionally large in relation to the resources employed. Services other than financial intermediation which may be carried out by central banks should be valued by the fees or commissions charged, in the same way as for other financial enterprise.</p> <p>[The presumption is that all output of the central bank is market and, if not subject to explicit fees, valued indirectly using FISIM. Still, it will be necessary to check individual country practices on this.]</p>	<p>6.152 In principle, a distinction should be made between market and non-market output [of central banks] but in practice the possible resource intensiveness of the exercise and the relative importance of making the distinction should be considered before implementing the conceptual recommendations. In cases where market output is not separated from non-market output, the whole of the output of the central bank should be treated as non-market and valued at the sum of costs.</p> <p>[The presumption is that all output of the central bank is nonmarket unless market and nonmarket output can be separately measured on the basis of data from distinct establishments within the central bank and added together. National accountants felt that if FISIM were applied to the central bank the same as for any other financial corporation, the central banks would be shown as having a very high current price value of output, as foreshadowed in the 1993 SNA language of paragraph 6.132. However, the unfortunate consequence of a decision to value output at cost is that it eliminates valuation of central bank output at the effective prices (spreads) and explicit service fees it is charging the depository corporations sector for its services. Contrary to initial fears, there is little FISIM from the asset side of the central bank balance sheet, even under the 1993 SNA, as it is usually risk free government securities, whose returns are the source of the reference rate. Fortunately, the language of this paragraph is rather nonprescriptive.]</p>
<p>Financial services associated with insurance and pension schemes</p>	
<p>Non-life insurance</p>	
<p>6.138. The value of the total output of insurance services is obtained residually from an accounting relationship in which the following elements are involved:</p> <p>(a) Actual premiums earned: these refer to those parts of the premiums payable in the current or previous periods which cover the risks incurred during the accounting period in question. They are not equal to the premiums actually payable during the accounting period, as only part of the period covered by an individual premium may fall within the accounting period in which it is payable. The prepayments of premiums, which refer to those parts of the premiums which cover risks in the subsequent accounting period or periods, form part of the technical reserves. Thus, total premiums earned are equal to premiums receivable less the value of the changes in the reserves due to prepayments of premiums;</p> <p>(b) Income from investment of the insurance technical reserves, as described above. Although the reserves are held and managed by the insurance enterprises, they are treated in the System as assets of the policyholders. The income earned on the investment of the reserves is, therefore, attributed to the policyholders for whose benefit the reserves are held. The income is recorded as receivable by the policyholders who pay it all back again to the insurance enterprises as premium supplements. These premium supplements must therefore always be equal in value to the corresponding income from the investment of the technical reserves;</p> <p>(c) Claims which become due for payment during the accounting period: claims become due when the eventuality takes place which gives rise to a valid claim; they are equal to claims actually payable within the accounting period plus changes in the reserves against outstanding claims;</p> <p>(d) Changes in the actuarial reserves and reserves for with-profits insurance. These changes consist of allocations to the actuarial reserves and reserves for with-profits insurance policies to build up the capital</p>	<p>6.185 The basic method for measuring non-life insurance output is the following: Total premiums earned, plus premium supplements, less adjusted claims incurred.</p> <p>6.189 In setting the level of premiums, which obviously the insurance corporation must do ex ante, it makes an estimate of the level of claims it expects to be faced with. Within the SNA there are two ways in which the appropriate level of claims (described as adjusted claims) can be determined. One is an ex ante method, described as the expectation method, and estimates the level of adjusted claims from a model based on the past pattern of claims payable by the corporation. The other means of deriving adjusted claims is to use accounting information. Within the accounts for the insurance corporations there is an item called "equalization provisions" that gives a guide to the funds the insurance corporation sets aside to meet unexpectedly large claims. Adjusted claims are derived ex post as actual claims incurred plus the change in equalization provisions. In circumstances where the equalization provisions are insufficient to bring adjusted claims back to a normal level, some contribution from own funds must be added also.</p> <p>6.190 On occasion, the levels of technical reserves and of equalization provisions may be altered in response to financial regulation and not because of changes in the expected patterns of premiums and claims. Such changes should be recorded in the other changes in the volume of assets account and excluded from the formula to determine output.</p> <p>6.191 In circumstances where information is not available for either approach to deriving adjusted claims, it may be necessary to estimate output instead by the sum of costs including an allowance for normal profits.</p>

Table A1. Financial Services in the System of National Accounts

1993 SNA	2008 SNA
<p>sums guaranteed under these policies. Most of these reserves relate to life insurance but they may be needed in the case of non-life insurance when claims are paid out as annuities instead of lump sums.</p> <p>All changes in insurance technical reserves referred to (a), (c) and (d) are measured excluding any nominal holding gains or losses.</p> <p>6.139. Items (a) and (b), i.e.: Actual premiums earned; and Premium supplements (= income from investments) determine the total resources of an insurance enterprise arising from its insurance activities. Items (c) and (d), i.e.: Claims due; and Changes in actuarial reserves and reserves for with-profits insurance determine the total technical charges to be met out of these resources. The difference between the total resources and total technical charges represents the amount available to an insurance enterprise to cover its costs and provide for an operating surplus. It is therefore taken as measuring the value of the output of services produced by the enterprise. Insurance enterprises take all the items (b) to (d) into consideration when fixing the levels of the premiums they charge in order to ensure that the excess of total resources over total charges provides sufficient remuneration for their own services.</p> <p>6.140. Thus, the basic accounting used to estimate the value of the output of insurance services is as follows: Total claims due plus Changes in actuarial and reserves for with-profits insurance plus Value of the output of insurance services = Total actual premiums earned plus Total premium supplements The value of the output of insurance services is determined residually as the item that balances both sides of the above account. The outputs of both life and non-life insurance services are estimated by means of this identity.</p>	
Life insurance and annuities	
<p>Same as life insurance.</p>	<p>6.194 The method of calculating output for life insurance follows the same general principles as for non-life insurance but because of the time interval between when premiums are received and when benefits are paid, special allowances must be made for changes in the technical reserves.</p> <p>6.195 The output of life insurance is derived as: Premiums earned, plus premium supplements, less benefits due, less increases (plus decreases) in life insurance technical reserves.</p> <p>6.196 Premiums are defined in exactly the same way for life insurance as for non-life insurance.</p> <p>6.197 Premium supplements are more significant for life insurance than for non-life insurance. They consist of all the investment income earned on the reserves of the policyholders. The amount involved is earnings forgone by the policyholders by putting the funds at the disposal of the insurance corporation and are thus recorded as property income in the distribution of primary income account.</p> <p>6.198 Benefits are recorded as they are awarded or paid. There is no need under life insurance to derive an adjusted figure since there is not the same unexpected volatility in the payment due under a life policy. It is possible for the insurance corporation to make robust estimates of the benefits due to be paid even years in advance.</p>

Table A1. Financial Services in the System of National Accounts	
1993 SNA	2008 SNA
Reinsurance	
Same as life insurance.	6.200 The method of calculating the output of reinsurance is exactly the same as for non-life insurance, whether it is life or non-life policies that are being reinsured.
Social insurance schemes	
Same as life insurance unless operated as a social security scheme.	<p>6.201 There are four different ways in which social insurance may be organized.</p> <p>a. Some social insurance is provided by government under a social security scheme;</p> <p>b. An employer may organize a social security scheme for his employees;</p> <p>c. An employer may have an insurance corporation run the scheme for the employer in return for a fee;</p> <p>d. An insurance corporation may offer to run a scheme for several employers in return for any property income and holding gains they may make in excess of what is owed to the participants in the scheme. The resulting arrangement is called a multiemployer scheme. The output for each of these modes of running a social insurance scheme is calculated in a different manner.</p> <p>6.202 Social security schemes are run as part of the operation of general government. If separate units are distinguished, their output is determined in the same way as all nonmarket output as the sum of costs. If separate units are not distinguished, the output of social security is included with the output of the level of government at which it operates.</p> <p>6.203 When an employer operates his own social insurance scheme, the value of the output is also determined as the sum of costs including an estimate for a return to any fixed capital used in the operation of the scheme. Even if the employer establishes a segregated pension fund to manage the scheme, the value of output is still measured in the same way.</p> <p>6.204 When an employer uses an insurance corporation to manage the scheme on his behalf, the value of the output is the fee charged by the insurance corporation.</p> <p>6.205 For a multiemployer scheme, the value of output is measured as for life insurance policies; it is the excess of the investment income receivable by the schemes less the amount added to the reserves to meet present and future pension entitlements.</p>
Standardized guarantee schemes	
Not specifically dealt with.	6.206 If a standardized guarantee scheme operates as a market producer, the value of output is calculated in the same way as non-life insurance. If the scheme operates as a nonmarket nonmarket producer, the value of output is calculated as the sum of costs.

Table A.2 Treatment of specific directly charged financial services

SNA directly charged financial service	Whether the service uses volume based (type 1) or rate-based (type 2) pricing
<ul style="list-style-type: none">• Mortgage origination	This could be Type 1 (if a flat fee is charged per mortgage no matter what the size of the mortgage is—this seems unlikely to me for most countries) or a Type 2 product.
<ul style="list-style-type: none">• Portfolio management	This could also be a Type 1 or Type 2 product. But for the most part, I think it will be a Type 2 product. Mutual funds charge fees based on the size of the amount invested so this is automatically a Type 2 product. Now, if we have money invested in a full service brokerage, they will charge for their portfolio management services by having very high prices for any stocks traded in the portfolio (\$50-\$200 per “standard” trade whereas a discount brokerage in the US or Canada will charge \$7-\$15 per trade). Thus investors who hold full service brokerage accounts should be treated as purchasing a Type 2 product. Even investors who use discount brokerages (where we might think that we could apply the Type 1 methodology here) might be better treated as purchasing a Type 2 product when we take into account international complications; i.e., trading 100 shares in country x could involve very different “real” values on average as compared to trading 100 shares in country y with a very different scale of prices.
<ul style="list-style-type: none">• Tax advice	This would be treated as a Type 2 product but the corresponding transaction value aggregate would be difficult to calculate.
<ul style="list-style-type: none">• Estate management	Very few lawyers would charge a fixed fee per estate. For those consultants who do, a Type 1 treatment would be appropriate. Otherwise, a Type 2 treatment would be appropriate with the transaction value base set equal to the value of the estates handled.
<ul style="list-style-type: none">• Initial public offerings of stock (shares)	Could be Type 1 or Type 2.
<ul style="list-style-type: none">• Corporate restructuring	Type 1 by default
<ul style="list-style-type: none">• Credit card transaction fees	Type 2 treatment would be the most appropriate in most cases; i.e., I pay a fixed annual fee for my credit cards but the actual cost to me for a dollar’s worth of transaction (in real consumption units foregone) is only the fee divided by the amount transacted.
<ul style="list-style-type: none">• Safe deposit box services.	This is probably one of the few genuine Type 1 products that can be compared around the world.