THE 1993 SYSTEM OF NATIONAL ACCOUNTS AND ITS IMPLICATIONS ON STATISTICS CANADA'S BUSINESS AND TRADE STATISTICS:

THE CASE OF FINANCIAL SERVICES*

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I. INTRODUCTION

The purpose of the revision that led to the 1993 System of National Accounts (SNA) was to update the 1968 system to fit new circumstances, to clarify and simplify it, and to harmonize it more completely with other international statistical guidelines. The updating included, among other things, changes to recognize the increasing importance of financial services industries, the increasing sophistication of financial instruments and markets and to revisit some of the issues related to the measurement of financial intermediation activities. In particular, the proposed treatment of measurement of the activity of financial intermediaries in the 1993 SNA departs significantly from its predecessor, the 1968 SNA.

The new financial intermediation production framework proposed by the 1993 SNA along with its operational implications on Statistics Canada's business and trade statistics field are the focus of this paper. The extension of this framework to the measurement of regional production activity and interregional trade of financial intermediation services, in which Statistics Canada is engaged, is also discussed. Given the strong interest shown by statistical agencies to these issues, the Canadian experience could be useful to many countries and in many other areas of financial services.

The paper reaches two main conclusions: First, the recommendation for allocating financial intermediation services to users in the 1993 SNA is quite different from the approach specified in the 1968 SNA. In the 1968 SNA, imputations for financial intermediation services are made; however, such services are allocated exclusively to the business sector rather than to all borrowers and lenders. The 1993 SNA recommends that the output of the financial sector be allocated to both business and final demand sectors.

The 1993 SNA also proposed several changes that affected the delineation and measurement of the financial sector. The 1968 SNA limited financial institutions to those that incur financial liabilities and acquire financial assets on their own behalf. In the recent past there has been considerable growth in enterprises providing related services such as brokers, mortgage and financial advisors. The 1993 SNA includes all such services with an enlarged financial institution sector. For instance, more accurate criteria have been established for the delineation and coverage of the financial sector and for the identification of financial instruments in light of the many innovations in this area in recent years resulting from financial deregulation. Some ambiguity is caused by the use of the 'word' bank since this has a specific legal connotation in some countries that is different from the SNA interpretation. It is therefore proposed in the new SNA that the term depository institution will be used in place of bank and financial intermediation in place of the expression banking services.

The 1993 SNA has, in particular, enlarged the 1968 SNA financial sector to include auxiliaries engaged primarily in activities that facilitate financial intermediation or provide financial services without placing themselves at risk. This was in addition to financial corporations that incur financial liabilities and acquire financial assets on their own account. The financial corporate enterprise sector is sub-sectored along the following lines:

1. Central banks
2. Other depository institutions
   - Deposit money institutions
   - Other
3. Other financial intermediaries, except insurance companies and pension funds
4. Financial auxiliaries
5. Insurance companies and pension funds.

2. The Measurement of Financial Intermediation Activities

A. The Case of Depository Institutions

The treatment of the imputed service charge for financial intermediation (previously bank output) will be changed to distinguish between services provided to enterprises that constitute intermediate consumption and those that constitute final demand. In particular, some of the demand for these products will appear as exports, and, as a result of countries that pay considerable interest overseas, imports of these services will also be shown. Within the domestic economy the incidence of these service charges are disaggregated not only by institutional sector but also by type of activity within the corporate sectors. This is a radical change, if not a reversal of the treatment in the previous SNA. These proposals are expected to change not only the allocation by sector of interest flows but also the absolute levels of GDP.

receipts and expenditure on property and casualty insurance for the insurance purchasers, with the same imputation added to property and casualty insurance industry's interest payments and premiums income. This argument parallels the argument for imputed interest in the banking industry. In both banking and property and casualty insurance the industry is bartering services for the use of customers' funds.

After having added these imputations, the property and casualty insurance industry would be treated like any other industry, with interest imputed (cash and imputed) being a distribution of surplus. The result will be the elimination of the anomalous negative surplus. There will be an increase in the industry GDP equal to the imputed increase in final expenditure on property and casualty insurance.

III. IMPLICATIONS OF THE 1993 SNA AT THE OPERATIONAL LEVEL

1. Implementation of the 1993 SNA Using the Existing Statistical Information

A. The Case of Depository Institutions

i) Financial Services Indirectly Measured (FISIM)-Domestic

In the 1993 SNA, FISIM is calculated as the total property income receivable by financial intermediaries minus their interest payable, excluding the value of any property income receivable from the investment of own funds. For chartered banks, the current practice at Statistics Canada already follows more or less the 1993 SNA. The value of FISIM is calculated as the value of property income receivable by chartered banks less the interest payable by them. Unlike the 1993 recommendations, the value of property income receivable from own funds is not excluded from the value of net interest received.

The value of FISIM is then divided between borrowers and depositors on the basis of the ratio between deposits and loans; deposit and loan FISIM are, in turn, allocated by sector in proportion to stocks of loans and deposits. The portion attributed to non-financial business is an intermediate expense and therefore does not contribute to GDP in that sub-sector, while the personal and government sectors are final demand sectors and do contribute to GDP. This is a major change from the 1968 SNA, where no allocation of output was recommended to the final demand sector.

An example will illustrate the measurement of FISIM. Consider the following balance sheet account of chartered banks:

be included in the CSNA and reconciliation with the Balance of Payments will need to be made as International Monetary Fund BPM5 does not recommend this treatment.[2]

In order to estimate the value of FISIM import, information on Canadian deposit assets abroad, loan liabilities of Canadians outside Canada, from the balance of payment capital account, and, from the current account, the information on interest payments to foreign institutions and deposit receipts from Canadian deposits abroad are needed.

The estimates of FISIM import, which consist of applying the same rate as domestic calculations to total deposit assets abroad plus loan liabilities, will be allocated to different sectors in the same way as domestic FISIM.

B. Insurance Activity

The proposals for the treatment of investment income in the SNA are different for the two types of insurers. Investment income of property and casualty insurers is treated as revenue of the insurers. For property and casualty insurers, not including investment income results in negative operating surplus and often negative value-added. The treatment of investment income of life insurance will be unchanged in that it will continue to be considered income of persons.

The 1993 SNA offers little guidance as to how to properly measure the aggregate value of nominal and real output and its breakdown by commodity line. It also left unsettled the issue on the distinction between direct insurance and reinsurance activities. Given their importance not only in the the proper implementation of the new recommendations and the collection of the appropriate data, these issues are discussed in detail below. As far as possible, administrative data collected by the Office of the Superintendent of Financial Institutions will be used in order to implement the 1993 SNA recommendations.

i) Aggregate Measure of Output

There are several issues related to direct insurance and reinsurance activities. First, which type of investment income should be included in revenue? Second, how should net underwriting revenue be measured?

The suggested response to the second question is that all investment income should be included, including capital gains. The rationale for this inclusion is that policyholders have bartered to the insurer the rights to the income from investing those funds in return

[2] The implicit value of financial intermediation services are embed in the investment income.

The argument for the proposed treatment is that insurers take into account the expected return on investments to set rates. This is especially true for whole life insurance—which includes a savings element—and annuities. In addition, property and casualty insurers generally have a negative return on underwriting operations and an overall positive return due to investing activities.

Investment income is not segregated by product. However, the reserves (actuarial liabilities for life insurers and provision for unpaid claims and unearned premiums for property and casualty insurers) are available by product. The proposal is to use the actuarial liability by product to distribute the investment income by product.

iii) An Illustration

A simplified example is presented in Table 2 which reports figures for the Canadian property and casualty industry in 1996. For the purpose of illustration, the average rate of return on the industry's investments is used as a proxy for the rate of return. The imputed interest income recorded in Table 2, which equals the imputed premium payments by policyholders, is estimated as the proportion of reported investment income of the industry attributable to policyholders. This proportion is the ratio of liabilities to policyholders (unearned premiums plus additional policy reserves plus provisions for unpaid claims) to total liabilities plus equity. This ratio is 0.62.

As shown in Table 2, the results of the proposed imputation are rather substantial, almost doubling GDP from $619 million to $1,056 million. The effect on surplus as calculated in the CSNA is even greater, increasing it from $97 million to $534 million in 1996. Since the CSNA surplus figure for this industry has been negative in about fifty percent of recent years, the effect of the proposed imputation would be to eliminate an anomalous result very similar to the anomalous negative surplus which would be recorded for banks in the absence of the imputations made by the CSNA for that industry.

The effect of the new treatment of property and casualty insurance on aggregate GDP would be to raise it by about one tenth of one percent via increased investment income of persons of about $218 million and increased personal consumption expenditure on insurance services of the same amount. This follows from the fact that very nearly fifty percent of cash insurance premiums (and therefore of imputed premiums) are paid to the personal sector with the remainder almost entirely allocated to the business sector.
The imputed value of insurance services to business changes the industrial distribution of output in favour of the property and casualty insurance industry and does affect aggregate output.

For the past year and half there has been a major expansion in Statistics Canada's business and trade field production of analytical statistics to develop annual estimates of the value of provincial output and trade among Canada's twelve provinces and territories. The work was motivated by a growing interest, from a policy perspective, in the inter-relatedness of Canada's regional economies and in the problem of inter-provincial trade barriers. It was prompted by a concern over internal non-tariff barriers to the free circulation of financial services. The new statistics are part of a matrix of interprovincial trade itself linked to the provincial input-output tables. As a by-product of this survey, data of international trade of insurance services of the different provinces will also be collected.

This new statistical information will enable companies to evaluate international and regional trends in the industry, compare their performance with that of other companies, and identify the most dynamic product lines. They would then be able to evaluate potential opportunities and threats on the basis of high quality and timely data.

B. The Data Gap

Even though the data on insurance businesses that is available from the Statistics Canada survey on financial institutions and from administrative data offer many attractive features, it is still not sufficient to meet the needs of measuring the production and trade of insurance services. While the administrative data are based on a definition of residency that is not necessarily consistent with the CSNA framework, the existing insurance survey overlooks the reinsurance activity as it collects data net of reinsurance transactions. As a result, a new survey more oriented toward the collection of production statistics data is badly needed. The survey launched in the course of this year, collects the items described below:

1. The measurement of aggregate production and production by product line for the different activities (direct insurance and reinsurance) for Canada and the provinces. The only conceptual problem here is to correctly identify where the establishment's production takes place. The data collection should focus on the components of the operating costs and outputs of each establishment of the legal entity.

> A) On the operating expenses side, the focus should be on each establishment's explicit expenses on both intermediate and primary inputs purchased on the market, but also on their implicit expenditures on the services acquired from other establishments of the same legal entity.

2. The measurement of interprovincial trade in insurance services requires the residence of both the supplier of services and the policyholder. The province of origin is the one where the inputs necessary to provide the service are expensed.

A) The survey collects also the relevant information on the number of policies and their face value in order to estimate production and trade of insurance services in constant prices. Estimates of implicit price indices of insurance services can also be used to extend the scope of Statistics Canada's program on the producer price index to non-goods producing goods.

B) The data are collected for life and non-life insurance business and for both direct insurance and reinsurance activities for the following commodity lines:

- **Life insurance**
  - Life insurance with a savings component-Individual
  - Life insurance with a savings component-Group
  - Life insurance without a savings component-Individual
  - Life insurance without a savings component-Group
  - Annuities- Individual
  - Annuities-Group
  - Dental plans
  - Extended health care
  - Disability Income

- **Non-Life insurance**
  - Automobile insurance
    - Commercial
    - Non-Commercial
  - Property insurance
    - Commercial
    - Non-Commercial
  - Liability Insurance
    - Commercial
    - Non-Commercial
  - Other

IV. CONCLUSION

The purpose of this paper was to 1) describe the major changes implied by the 1993 SNA in the treatment of financial intermediation activity in comparison with the 1968 SNA and 2) outline the operational implications of the proposed treatment of financial services on Statistics Canada's business and trade field. As a by product, the paper also describes the changes made by Statistics Canada in the extension of the 1993 SNA