BOPCOM-02/66

Fifteenth Meeting of the
IMF Committee on Balance of Payments Statistics
Canberra, Australia, October 21–25, 2002

Insurance—Conceptual Issues

Prepared by the Statistics Department
International Monetary Fund

Insurance—Other Conceptual Issues

A. Introduction

Issues associated with the treatment of catastrophes (BOPCOM-02/67), and international discrepancies (BOPCOM-02/65) dealt with in other papers. This paper covers inconsistencies between the fifth edition of the *Balance of Payments Manual* (*BPM5*), the *System of National Accoun*ts 1993 (*1993 SNA*), and the *European System of Accounts 1995* (*ESA95*) and some other issues that have arisen for insurance services.

B. Direct Insurance

Direct insurance involves a policy between an insurer and a customer who is not an insurer. Direct insurance can be contrasted with reinsurance, where insurance risk is shifted between insurers. (Reinsurance raises some additional issues, which are discussed in the next section.)

The basic formula for the value of insurance services:
Premiums earned
+ Premium supplements (which arise from the income on insurance technical reserves attributed to policyholders)
- Claims due

In addition, the income on insurance technical reserves attributed to policyholders appears in the income accounts. Net premiums (i.e., premiums less the service charge) and claims due appear as current transfers. The prepaid premiums and claims incurred but not yet paid are financial assets and liabilities, with changes shown in the financial account.

(a) *BPM5* and the *1993 SNA*

BPM5 (paras. 257 on services and 304 on transfers) adopts the same basic principles as the *1993 SNA*. However, there are some variations in detail:

(i) The terms of "premiums" and "claims" are used in *BPM5*, rather than the careful use of "premiums earned" and "claims paid" in the *1993 SNA*. This terminology seems to suggest that data on payments and data on an accrual basis are interchangeable;

(ii) Premium supplements may be ignored "in practice" in *BPM5*. That possibility is also referred to in the rest of the world accounts chapter of *1993 SNA* (see para.14.113), while *1993 SNA* Annex IV recognizes the difficulties without endorsing their omission (para. 26);

(iii) Imports of insurance services may be calculated by applying the ratio of service to premiums from exports averaged over a "medium- to long-term period" in *BPM5*. (This treatment is further elaborated and extended to exports in the *Balance of Payments Textbook,* paras. 344-350 and *Balance of Payments Compilation Guide*, paras. 551-561);

(iv) Gross premiums and claims are memorandum items (Table 7 Standard Components and Additional Detail, *BPM5* page 132); and

(v) The *Balance of Payments Textbook* (paras. 345-349) provides a method for allocation of insurance services to users, while the *1993 SNA* has none.

(b) *ESA95* and the *1993 SNA*

The treatment of insurance in *ESA95* follows the *1993 SNA* with some exceptions:

(i) Technical reserves are extended to include equalization provisions (i.e., saving by insurers to cover the possibility of higher than usual claims in the future, including future catastrophic events, is treated as a transfer to policyholders) (*ESA 1995*, para. 5.119);

(ii) For direct insurance between resident policyholders and nonresident insurers, the service charge is calculated as the difference between premiums and claims (i.e., with income on technical reserves ignored). This method is explained as being a result of the difficulties of obtaining data from nonresident insurers *(ESA 1995*, Annex III, para.38).

(iii) *ESA95* (Annex III para. 34) provides a method for allocation of insurance services to domestic users (*1993 SNA* has none; it uses the same basis as the one in the *Balance of Payments Textbook*).

(c) Comments

The lack of clarity on the timing issues for premiums and claims in *BPM5* is unfortunate because timing presents particular difficulties in a balance of payments context. As premiums are normally prepaid, and claims paid some time after the insured event, recording on a cash basis would tend to overstate the value of insurance services. While the practicalities will often give no alternative, the potential problems of omission could be more clearly identified.

Omission of premium supplements brings a downward bias in the value of international trade in insurance services. As well, it requires that all premium supplements must be attributed to domestic policyholders, so the value of domestic insurance services would be overstated.

Short-cuts endorsed by *BPM5*, such as omitting premium supplements or averaging for imports, can create asymmetries in partner countries' balance of payments data. While some short-cuts are necessary in practice, it would be preferable to state the conceptual basis first and limit the use of short-cuts to cases where the values are relatively small.

C. Reinsurance

Reinsurance transfers a risk undertaken by one insurer to another insurer. The problems already discussed for direct insurance also apply, and as well there are some additional statistical problems specific to reinsurance. The statistical treatment for reinsurance is different from direct insurance, and moreover there are two completely different methods used for reinsurance. (There is an illustration of these calculations in Appendix I.)

(a) Statistical Guidelines

In *BPM5*, the reinsurance service charge is derived as the balance of all flows between reinsurers and their customers, and the income, transfers, and financial account items are shown as zero, by definition. The *1993 SNA* and *ESA95* also have the same treatment of international reinsurance (except the varying degrees of permissiveness of the omission of premium supplements).

For resident-to-resident reinsurance, *ESA95* also uses the same method. However, the *1993 SNA* treatment for resident-to-resident reinsurance is consolidation, i.e., transactions between insurers and reinsurers are omitted. The rationale given by the *1993 SNA* for the treatment of domestic transactions is that consolidation results in the same results without regard to the divisions within the industry between direct insurance and reinsurance. However, consolidation cannot be applied in a balance of payments context because units could not be consolidated across borders. As well, the *1993 SNA* states a general principle against consolidation (para. 2.82). The rationale given in the *1993 SNA* for the different treatment of international reinsurance is that it is "simpler and more comprehensible."

(b) Comments

The treatment of reinsurance in *BPM5*, the *1993 SNA* and *ESA95* raises a number of difficulties:

(i) The treatment of international reinsurance is quite inconsistent with the treatment of international direct insurance;

(ii) The treatment of international reinsurance is quite inconsistent with the treatment of domestic reinsurance in the *1993 SNA*;

(iii) The defining of income and transfers associated with international reinsurance as zero means that important economic processes and transactions that occur are omitted;

(iv) Defining international reinsurance transfers as zero gives the right current account balance only if net premiums earned and claims due are equal for each country, which seems to contradict the function of insurance as being to redistribute losses between policyholders. (It also contradicts the method of allocation to users given in the *Balance of Payments Textbook* and *ESA95)*; and

(v) Both *BPM5* and the *1993 SNA* are written as if reinsurance cannot occur between reinsurers, although chains of reinsurance may be used to spread risk further. However, the principles would appear to be the same.

(vi) Financial innovation is raising some new difficulties concerning reinsurance:

- Financial or finite risk insurance is motivated by financial reasons, rather than purely reinsurance and only a limited amount of risk is passed. For example, the Bank of Japan reported an example of a reinsurance contract that provided that the reinsurer pay out in the event that the insured event occurs, but that the amount would be repaid by the original insurer later with interest. In this case, it can be seen that the ultimate risk for loss remains with the original insurer; the reinsurance provides the original insurer the financial benefits of smoothing out its claim payments and assured financing for peaks in claims.

- Catastrophe bonds involve repayment that is diminished in the event of a catastrophic event, in return for a higher rate of return.

In the first case, a transaction takes the form of reinsurance but achieves a result like a loan; in the second case a transaction takes the form of a debt security, but acts like reinsurance.

Questions for the Committee:

(1) Does the Committee see a need to review the treatment of insurance?

(2) If so, what direction should such a review take?

REINSURANCE: EXAMPLE OF CALCULATIONS

Statements of methods for reinsurance:
BPM5: para. 257
1993 SNA: para. 14.113 and Annex IV paras. 28-29
ESA 1995: Annex III para.38

A. Basic data

Resident reinsurers:	
Premiums received from abroad	55
Nonresidents' share of income on technical reserves	7
Claims paid to abroad	40
Change in technical reserves due to prepaid premiums	5
Change in technical reserves due to unpaid claims	4
Average claims rate	0.8
Resident dealings with nonresident reinsurers:	
Premiums paid	105
Residents' share of income on technical reserves	12
Claims received	100
Change in technical reserves due to prepaid premiums	6
Change in technical reserves due to unpaid claims	8
Average claims rate	0.9

B. Derived Items

	1993 SNA Method	*BPM5* Method	*BPT* Method	Direct Insurance Method
Resident reinsurers:				
Insurance services	13	15	11	13
Income attributed to policyholders	0	0	0	-7
Net premiums	0	0	0	44
Claims	0	0	0	-44
Resident dealings with nonresident reinsurers:				
Insurance services	-3	-5	-11	-3
Income attributed to policyholders	0	0	0	-12
Net premiums	0	0	0	-108
Claims	0	0	0	108

(CR. shown as positive, DR. as negative.)

Details of calculations

(calculations are shown for resident reinsurers only; the same principles apply for nonresident reinsurers)

***1993 SNA* method for international reinsurance:**
Insurance services = (55 - 5) + 7 – (40 + 4) = 13
Income and transfer items are zero, by definition.

***BPM5* method for reinsurance:**
(i.e., using premiums and claims on a cash basis and omitting income attributed to policyholders. *BPM5* does not preclude the *1993 SNA* method in principle, but invites this method in practice)
Insurance services = 55 – 40 = 15
Income and transfer items are zero, by definition.

***Balance of Payments Textbook* method**
Insurance services = 55 * (1 – 0.8) = 11
Income and transfer items are zero, by definition.

***1993 SNA* Direct Insurance method**
(i.e., using the same formula as used for direct insurance)
Insurance services = (55 – 5) + 7 – (40 + 4) = 13
Income = -7
Net premiums = (55 – 5 + 7) -13 = 44
Claims = (40 + 4) = 44

Comments:

- The *1993 SNA* and *BPM5* methods give fairly similar results in this case because the downward bias caused by omitting income attributed to policyholders offsets the upward bias from premiums and claims on a cash basis.

- The equality between the value of services in the *1993 SNA* direct insurance and reinsurance methods is not a coincidence—the methods are consistent.

- The results differ in their effect on the current account balance.

- Only the general insurance method shows any transfers.