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Insurance—Treatment of Catastrophes

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Insurance—Treatment of Catastrophes

The first meeting of the OECD's Task Force on the Treatment of Non-Life Insurance in the National Accounts and Balance of Payments was held during June 12–13, 2002. The establishment of the Task Force resulted from concerns about fluctuating or negative values of insurance services caused by recent catastrophes. A report prepared by the OECD on the Task Force meeting is attached.

The work of the Task Force is of particular interest to balance of payments statisticians. The effect of catastrophes is typically spread internationally through reinsurance, and the problems of fluctuations and negative values occur in data on exports and imports of services. The proposed solution is to use a measure of "expected claims" rather than actual claims due in deriving estimates of insurance services. "Expected claims" would take into account the likelihood of a catastrophic event and other fluctuations in the rate of claims, so that catastrophic claims would be allocated over several periods. This solution is compatible with the smoothing techniques already adopted in *BPM5* (for imports) and *Balance of Payments Compilation Guide* and *Textbook* (for both exports and imports), but on a comprehensive basis and with the theoretical underpinning that insurance takes a multi-year perspective towards fluctuations in claims. There seems to be a degree of consensus among Task Force members on the general approach to the treatment of catastrophes in the estimation of the value of insurance services. The Task Force is now moving to focus on alternative estimation techniques (e.g., averaging claims over a number of years or identifying and allocating specific catastrophic events; which periods to average over; which formula for averaging).

The Task Force also discussed a related proposal to treat catastrophic losses as capital transfers. This proposal is significant because it would change the scope of the current account. It is also inconsistent with the current treatment of reinsurance, which is defined as undertaking no transfers. The proposal also appears to be inconsistent with the definition of capital transfers and would present practical difficulties.

The proposal also seems to contradict the existing definition of capital transfers, which includes payments that are:

> "linked to, or conditional on, the acquisition or disposal of a fixed asset… A fixed asset should result in a commensurate change in the stocks of assets of one or both parties to the transaction. Capital transfers also may be distinguished by being large and infrequent, but capital transfers cannot be defined in terms of size or frequency." (*BPM5* para. 295)

However, some insurance payouts resulting from catastrophes are spent directly on current items like repairs, medical expenses, and income payments. Conversely, some noncatastrophic losses may be tied to acquisition of fixed assets. Indeed, many insurance payouts are not tied to being spent on any particular purpose.

At a practical level, to split claims between current and capital transfers, compilers would be required to make distinctions between catastrophic and noncatastrophic events when the border between them is somwehat indistinct. The view may differ between insurance exporters and importers, to the extent that a particular event may be a rare catastrophe for the country that experiences it, but not unusual to the global company that provides reinsurance.

Questions for the Committee

1. Do Committee members have experience with fluctuations in exports and imports of insurance services as a result of catastrophic events?

2. Does the Committee agree with the use of the Task Force's proposed concept of "expected claims" to measure insurance services? Do Committee members have advice concerning methods for estimating expected claims?

3. Does the Committee support the splitting of insurance claims between the capital and current accounts based on whether they arose from catastrophes or not?

TASK FORCE ON THE TREATMENT OF NON-LIFE INSURANCE IN THE NATIONAL ACCOUNTS AND BALANCE OF PAYMENTS

Report of First Meeting – 12-13 June, 2002. OECD, Paris.

The task force had two main items for discussion: (1) the measurement of output of insurance services in the context of catastrophic losses, and (2) the treatment of insurance services in international trade. Only the first issue was really discussed, leaving the second for future discussions.

Introduction

1. The task force confirmed that the method proposed in the current SNA to estimate the production (and thus consumption) of non-life insurance services can lead to uninterpretable figures in the case of catastrophic losses, and that this is not satisfactory. However, the task force did not propose revisions to the basic concepts of SNA93 or BPM5, but proposed the implementation of a new method of estimation, based on the concept of expected claims.

2. The task force discussed the following issues, reaching a conclusion in some cases and recognising that further work is needed in others :

- The concept of expected claims;
- The options for measuring expected claims;
- The implications for the rest of the accounts of using expected claims in the output calculation;
- The inclusion of changes in equalisation or catastrophe-type provisions in the output calculation;
- The inclusion of holding gains in premium supplements;
- The treatment of some claims payments as capital transfers at times of catastrophic or exceptional loss;
- Discrepancies in international flows of insurance and reinsurance services and transfers.

Main conclusions and discussion points

3. The task force accepted the current 1993 SNA position that the measurement of the output of insurance is based on the idea of a margin charged on the difference between explicit and implicit premiums receivable and claims payable. There has been extensive discussion elsewhere about whether a measure of output based on premiums only might be more appropriate. One reason given is that in measuring prices associated with insurance it is the prices of premiums which are used. However, the issue of an alternative measure of the output of the insurance industry was not on the agenda for the meeting.

4. The SNA93 formula is that output = actual premiums *plus* premium supplements *less* claims due. The task force accepted this but thought that the identity should hold only over a period longer than a single accounting period. The task force therefore proposed that the claims due in a single year should be replaced by "expected claims". Conceptually, this corresponds to the idea that, although most policies provide cover for one year only, insurance services are provided, and priced, in the context of medium- to long-term considerations about risk, including catastrophic risk in particular.

5. The c**oncept of expected claims** as the basis of claims due in the output calculation was accepted by the task force for all classes of non-life insurance. The task force provisionally accepted a definition of 'expected' as follows, where the definition is designed to cover all types of non-life insurance:

From the insurer's point of view, the level of expected claims is based on the probable incidence of the type of risks acknowledged at the time the insurance is issued.

So, the level of expected claims in the given accounting period takes into account both 'normal' claims and the probable impact of claims resulting from a catastrophe. Insurers base their expectations both on claims history and on knowledge/forecasts of possible future events. This formulation was chosen to include risks envisaged but not yet experienced (such as some types of nuclear disasters) but to exclude risks which had not been foreseen at the time the insurance policy was issued (for example the September 11^{th} type of terrorist attack.).

6. Therefore, on a conceptual basis, there is e no need to distinguish between normal and catastrophic claims/insurance services for recognised types of risk. There may, however, be a need to distinguish between them for estimation purposes[1].

7. **Measurement of expected claims** – ideally we would consider the expectations of the insurers. Viviane Leflaive, from the French Insurance Supervisory Board explained that this is unrealistic because correctly assessing expectation is the insurers' "art", and expectations are not calculated explicitly, and even if they were, insurers would be extremely reluctant to share this information even with national statistical offices. So, expected claims would have to be estimated statistically by national accountants.

8. The following options are either in use, or under consideration by countries:

a. <u>Case by case adjustments</u> to remove excessive volatility in current price GDP and GDP deflators caused by catastrophic losses, e.g. used by France. This approach requires judgement/decision about what constitutes a catastrophe, and thus qualifies for special adjustment.

b. <u>Smoothing using a moving average</u>, as is done in Australia. As in France, catastrophe claims are identified using a judgement process, but are then smoothed using a 19 point simple moving average for classes affected by catastrophes, since catastrophes are found to occur roughly every ten years on average. A five point moving average is used for all other claims. In their current method Australia revises past estimates of insurance production when taking into account a new observation. This may make significant differences to the last five or 19 years accounts after the smoothing is redone. Part may be due to a new incidence (or in fact non-incidence) of a risk currently recognised. Part may be due to the incidence of a new type of risk. The majority of the task force rejected the principle of revising past periods for either of these reasons on the basis that expected claims are those expected at the beginning of the period and should not be affected by actual claims at the end of the period or future periods. It was noted that alternative means statistical smoothing are possible which do not imply revisions of past

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[1] Chairman's note – it seems that (some) countries are worried by the effects of exceptional events on the national accounts, and are looking for a way of eliminating such 'disturbances'. So, although countries may accept the concept of expected claims, they may not be ready to implement them in their accounts, as a solution to the issue raised by catastrophic losses. This is the chairman's personal view.

estimates. Smoothing methods should try to take into account evolving trends in risk patterns, including growing catastrophic risks. This will change the pattern of claims expected at a point in time and for the future (and it is assumed premium rates) but not past expected claims.

c. A bottom-up approach can be used to estimate the expected service charge, as expected costs plus expected operating surplus (or assumed return to capital). Premiums less this expected service charge will then be equal to expected claims. This approach is used in Canada.

d. Alternatively, an accounting approach could be used, based on the fact that insurance companies hold technical provisions, and use their own funds, for catastrophic loss events. More generally, many companies hold equalisation provisions to help smooth loss ratios, and changes in these types of provisions could be taken into account in the estimation of expected claims.

Although Eurostat follows this accounting approach, other members of the task force found several problems with it. First, these provisions are usually insufficient to cover the claims for major catastrophes, in which case own funds are used (the UK and Germany were given as examples). Second, in many countries, companies use equalisation provisions as a tax avoidance measure, not simply as a method for smoothing flows. Third, because of this tax-avoidance, many countries do not permit companies to hold equalisation provisions.

Moreover, it was noted that, although insurance companies set aside equalisation provisions as a liability, they have no counterpart creditors. As such these provisions are not recognised as financial assets in the 1993 SNA. It was however noted that ESA95 does include changes in equalisation provisions as a component of the changes in provisions for outstanding claims (AF .62).

9. A priority in the future work programme of the task force is to discuss how these and other methods of estimating "expected claims" might be implemented in practice (see last paragraph).

10. **Implications for the rest of the accounts**. In the secondary distribution of income account, the 1993 SNA the flows of net premiums from policy-holders to insurance companies and claims from insurance companies to policy-holders are both shown as current transfers. Since they are of equal but opposite sign in total, aggregate balancing items are not altered by this redistribution of income. The task force agreed that it would not make sense to record expected claims in the secondary distribution of income account – actual claims must be recorded. However, since the total of net premiums would now be equal to expected claims, aggregate balancing items would seem to alter If the equality for the whole economy between the balance of primary incomes and disposable income is to be preserved, the difference between these two transfers must be accommodated by some form of adjustment. Four possibilities were discussed.

11. In Australia, no adjustment is made for the difference between net premiums and actual claims, and the inequality between the balance of primary incomes and disposable income is accepted.

12. Anne Harrison proposed that an adjustment equal to the difference between actual and expected claims might be derived and treated as part of the changes in technical provisions/reserves on the part of the insurers since this is presumably how they would meet any differences between expected and actual claims in practice. The adjustment would also be recorded in the financial account and balance sheet.

13. The proposal under b would be applicable in the case of small fluctuations about long–term trends in actual claims. For exceptional claims, a transfer of wealth could be recorded as a special item in the financial account as a transfer from the insurer to the policy-holder. (exceptional ex gratia payments from government under disaster relief schemes might be similarly recorded.) Both exceptional claims and the item for the difference between actual and expected claims in the current accounts would be reflected in the balance sheet If the exceptional claim resulted from the destruction of a fixed asset belonging to the policy holder, this would be recorded as an entry in the other changes in assets account for f the policy-holder. The balance sheet for the policy holder would show the level of net wealth unchanged[2] but the composition of it changed; national net wealth would decrease by the amount of the exceptional claims

14. **Treatment of some catastrophic losses as capital transfers**. In the past, in an effort to deal with the extraordinary effects of catastrophic losses on the national accounts, compilers in some countries have decided to make a distinction between ordinary claims and exceptional claims. The calculation of output and transaction D.72 (non-life insurance claims in the secondary distribution of income account) have been based on actual claims excluding those designated to be exceptional. The exceptional claims have been recorded as capital transfers. This approach has already been used in France, on the basis that claims in respect of catastrophic events are not to be included in income.

15. Several members of the task force expressed their agreement with the idea of identifying some part of exceptional claims as capital transfers to be excluded from income. The main problem with this approach is that it is unclear how ‘catastrophe’ or ‘exceptional’ could be defined – where would the threshold lie? The task force was told that the insurance industry has no definitions of its own.

16. Jacques Magniez and Anne Harrison will prepare a paper discussing the different alternatives for the next task force meeting in October.

17. **Inclusion of holding gains** in premium supplements – although it was agreed that insurers do take account both of expected claims and the expected return on investment when setting their premiums, the inclusion of expected holding gains is a key issue being debated by the financial services task force, and it was agreed that the insurance task force would defer making a decision until the results of that task force are clearer

18. **Balance of Payments issues**. The task force was informed on the current discrepancies between exports and imports of insurance services in the balance of payments. There is also a discrepancy in some countries between the practice of balance of payments (cash recording) and the national accounts (accrual recording). John Walton also explained that the current treatment of reinsurance services in the SNA could lead to an underestimation of the imports of reinsurance services when premiums are ceded to non resident units. A similar point was made in the paper by the Swiss Statistical Office, from the point of view of the exporter of reinsurance services. However, these issues were not fully discussed and are thus on the agenda of future meetings.

Future work

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[2] Assuming for the moment that the value of the exceptional claim exactly matched the balance sheet value asset destroyed.

19. The next meeting of the task force is planned during the OECD meeting of NA experts – October 8-11, 2002. Half a day of the OECD NA meeting will be devoted to non-life insurance, for which a paper will be prepared describing the issues and the conclusions of the task force so far, supported by the following analytical appendices:

a. Options for estimating expected claims.
   i. Statistical smoothing – Australia (Tony Johnson)
   ii. Econometric modelling – BEA (Denis Fixler)
   iii. A bottom-up approach using expected returns to capital
   – Canada (Michel Vallières/John Walton)
   iv. Case by case adjustment, based on a definition of catastrophic losses
   – France (Jacques Magniez)

These analytical appendices are expected before August 15, 2002.

b. The consequences for the rest of the accounts of moving from actual claims to expected claims (as defined above) for the measurement of output and current transfers and the implications of treating other claims as capital transfers – Anne Harrison and Jacques Magniez

(**also expected before August 15, 2002**)

20. Depending on the outcome of the meeting in October, there may be , a task force meeting in early 2003, back to back with the next meeting of the financial services task force meeting.