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INSURANCE

Investment of the technical reserves of insurance concerns in the country where the premium income arises

Report by the UNCTAD secretariat

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I. The recommendation concerning the investment of technical reserves

1. By covering every type of risk, insurance undeniably plays a vital economic role. The services which it can render to industry, agriculture, and other sectors, as well as to private persons, are essential to any process of economic development, as was recognized by the United Nations Conference on Trade and Development (New Delhi, 1968) when it unanimously adopted its resolution 13 (II) on insurance.[1/]

2. However, in addition to this primary rôle, insurance can also play another very important economic rôle, inasmuch as it entails the accumulation of fairly considerable sums which thus become available for investment in the economy. These sums are the technical reserves representing the value of insurance concerns current commitments towards policy holders and third party beneficiaries.

3. The technical reserves of insurance concerns may easily reach very large amounts. In the developed market economy countries, investments covering the technical reserves of insurance concerns are estimated to be in the region of US $350,000 million.[2/] The magnitude of this figure will be more readily appreciated if it is remembered that the annual gross national product of the entire African continent (excluding South Africa) is less than one-fifth of this amount.[3/]

4. In the developing countries the volume of technical reserves is of course far less impressive; nevertheless, in view of the general shortage of capital in these countries, the sums accumulated there by insurance concerns are of vital importance. The United Nations Conference on Trade and Development, desiring to enable the developing countries to benefit from these funds, recommended at its first session (Geneva, 1964), inter alia, that "Technical reserves and guarantee deposits of insurance and reinsurance companies or institutions should be invested in the country where the premium income arises".[4/]

1/ Report of the United Nations Conference on Trade and Development on its second session (document TD/97, vol.1, annex I).

2/ Figure taken from insurance trade journals for the year 1968.

3/ Yearbook of National Accounts Statistics, 1968, vol.II, International Tables, Department of Economic and Social Affairs, United Nations Statistical Office.

4/ Proceedings of the United Nations Conference on Trade and Development, vol.1, Final Act and Report (E/CONF.46/141, vol. 1) - annex A.IV.23: Insurance and Reinsurance.

5. On the basis of this recommendation, an Expert Group on Reinsurance, meeting at Geneva from 26 September to 6 October 1966 pursuant to a decision of the Trade and Development Board,[1] sought to spell out in greater detail the modalities of its application in the field of reinsurance, by making the following proposal with regard to the investment of the technical reserves of reinsurance concerns:

"13. The Expert Group recommends that, subject to compliance with national laws, where applicable, reinsurance treaties concluded (in non-life business) between direct insurers in developing countries and reinsurers abroad should provide for the participation of the reinsurers in the setting up of technical reserves of the ceding company, it being understood that the funds provided by the reinsurers would be invested under adequate conditions of security, liquidity and yield and that the interest income and the funds themselves, to the extent they are in excess of requirements, could be transferred, subject to compliance with national laws, where applicable. Bearing in mind the special situation of the developing countries, the experts feel that where the contribution of reinsurers in the setting up of the technical reserves by the direct insurer is not based on an agreed percentage of the actual figures of the reinsurer's proportion in the technical reserves, it should be calculated on a pre-determined percentage covering the premium reserves and/or the outstanding loss reserves. Such percentage should amount to 60 per cent of the gross reinsurance premiums.

14. It is understood that this recommendation shall not apply to countries where legal, conventional or contractual provisions already impose a higher amount of investment from insurance or reinsurance bodies. Special conditions existing in non-proportional reinsurance treaties should be taken into consideration in the application of this recommendation in the light of their structure and experience."[2]

6. At its second session (April 1967), the Committee on Invisibles and Financing related to Trade expressed its appreciation to the Expert Group on Reinsurance for its useful report, and commended the Group's recommendations to the attention of Governments of member States and of the insurance industry, with a view to their considering the possibility of implementing them.[3] However, the presentation of this partial solution, which concerns reinsurance only, in no way affects the validity of the general principle relating to insurance as a whole, which was adopted at the first session of UNCTAD and is set forth at the end of paragraph 4 above. Accordingly, and in view of the practical difficulty of carrying out any direct survey of reinsurance business, the present report will be mainly concerned with direct insurance, which undeniably occupies the key position in the establishment of technical reserves and whose operations can be more easily supervised at the national level.

1/ TD/B/66, decision 28 III, annex A.

2/ TD/B/C.3/29

3/ TD/B/C.3/51/Rev.1

II. Theoretical aspects of the implementation of the recommendation

7. The principle that technical reserves should be invested in the country where the premium income arises is not new. In fact, the practice of localizing technical reserves by national portfolio has long been observed in very many industrialized countries for the national portfolios insured with them. However, the application of the principle is not uniform in all these countries and it presents certain technical difficulties, some of them connected with the definition and valuation of technical reserves and others with the investment and supervision of the corresponding funds.

8. In other words, for technical reserves to be invested in a suitable manner in the country where the premium income arises, with maximum benefit and without endangering the primary function of insurance (the covering of risks with absolute security and at a reasonable cost), it is essential that the relevant requirements should take due account of a number of factors of which the most important are:

(a) the nature of the technical reserves of insurance concerns;
(b) the correct evaluation of technical reserves;
(c) reserves with or without deduction for reinsurance;
(d) the type of investment suitable for insurance purposes;
(e) the correct evaluation of investments;
(f) the practical application of the principle.

ad (a) - The nature of the technical reserves of insurance concerns

9. The technical reserves of insurance concerns represent the value of the concerns' commitments towards policy holders and third party beneficiaries; their nature varies considerably according to the technique employed and generally depends on the classes of business involved. First of all, in life insurance, an element of saving is expressly included in certain types of contracts (endowment policies, annuities, etc.) A form of tacit saving is also inherent in any long-term contract with a steady (level) premium, where the risk increases with the age of the insured (life insurance, sickness, disablement). As the levelled premium is excessive at the beginning of the contract and insufficient towards the end, financing is ensured by the establishment of a reserve accumulated during the period when the premium was too high. The mathematical reserves, calculated on an actuarial basis, take due account of all these factors.

10. Non-life insurance, on the other hand, contains neither a savings element nor levelled premiums. The obligation of the insurer ceases at the end of the period for which the premium has been paid. Thus no reserve would be necessary if the end of the contract coincided with the date of the balance sheet and if all the losses occurring during the period were known and the relevant claims had been paid on that date. Since, as a rule, neither of these conditions is realised, non-life insurance concerns must also establish technical reserves, in particular reserves for unexpired risks (premiums paid in advance for the period beyond the date of the balance sheet) and reserves for outstanding claims (arising before and payable after the date of the balance sheet).

11. Since the technical reserves of non-life insurance concerns do not as a rule contain any savings element and are intended to be disbursed fairly soon after the end of the financial year for which they were established they obviously do not seem to be long-term funds. In practice, however, before reserves constituted for a given year are spent, they are replaced by new reserves established for the following year, which has already started. The reserves are thus constantly renewed, which means that, in practice, much longer term investments can be made than the actual duration of the current commitments would suggest.

12. The mathematical reserves in life insurance and the reserves for unexpired risks and reserves for outstanding claims in non-life insurance are the three main forms of technical reserves and are generally regarded as the classical technical reserves. Once they have been properly valued, these three reserves should normally suffice to cover the whole of an insurance concern's current commitments arising from the risks of its portfolio. Of course, in really exceptional cases (extraordinary accumulation of costly claims), they alone will clearly be inadequate for this purpose and it will be necessary to draw also on the concern's capital and free reserves, sometimes to the point of depletion, unless suitable arrangements are made for reinsurers to assume responsibility for the excess amount.

13. In addition to the three classical technical reserves mentioned above, the regulations of some countries provide for other reserves (or additional provisions or guarantees) for specific purposes, e.g. excess mortality reserves, reserves for depreciation of assets, etc. All these additional reserves are in fact simply palliatives which are used in an attempt to correct errors made in the evaluation of the classical technical reserves themselves or the assets allocated to cover them. In the opinion of the experts, it is preferable to increase as far as possible the accuracy of the evaluations and to dispense with the various additional reserves, the usefulness of which is often more apparent than real.

ad (b) - The evaluation of technical reserves

14. In life insurance business, the mathematical reserves are calculated exactly (for each individual contract) on the actuarial principle, and rarely give rise to any kind of controversy. A careful choice of the technical bases (mortality table, technical rate of interest and loading for expenses) is all that is required in order to obtain entirely valid mathematical reserves which are adequate in the large majority of cases. It is only when life insurance portfolios are too small or too recent or when they contain practically no savings element (insurance of short-term risks), that certain additional reserves appear to be necessary.

15. Nor does the evaluation of reserves for unexpired risks in non-life insurance present any difficulty, if it involves only the carry-over of premium income from one financial year to the next, which is generally the case. Both the pro rata temporis (contract by contract) method and the various global methods (e.g. 50 per cent of premiums, assuming that the conclusion dates are spread evenly over the entire year), are usually entirely satisfactory. If the premium is inadequate, the reserve based on it will obviously also be insufficient. But this is more a matter of rate-fixing and solvency and there is no need to deal with it in the present report, which is concerned with the investment of available technical reserves.

16. The reserve for outstanding claims is undoubtedly the most difficult one to value. The so-called "file-by-file" method is highly vulnerable to subjective influences, as well as being very difficult to verify. The various statistical methods (e.g. number of recorded claims x average cost of a claim extrapolated from previous years) also present serious drawbacks, especially in periods of price instability. Only an a posteriori verification can confirm how accurately, in general, an insurance concern calculates its reserves for outstanding claims; where verification reveals a consistent under-estimation, appropriate action must be taken.

ad (c) - Reserves with or without deduction for reinsurance

17. This is a very important question on which satisfactory application of the principle of localization of technical reserves largely depends. The definition of technical reserves given in paragraphs 2 and 7 of this report implies that they must correspond to the value of an insurance concern's contractual commitments towards its policy holders, which remains in principle the same, regardless of any reinsurance arrangements, since the latter obviously will not affect the contractual rights of the policy holder. This definition therefore constitutes an argument in favour of the establishment of gross technical reserves, i.e. without deduction for reinsurance.

18. However, there are certain technical arguments against this rather formalistic approach. The rigid allocation of reinsurance reserves to each of the portfolios covered excludes the possibility of inter-portfolio compensation, which is precisely the <u>raison d'être</u> of reinsurance. Consequently, a middle course must be adopted in which these two considerations are taken into account. In order to facilitate this task, a distinction should first be made between the various forms of technical reserves which were mentioned earlier and the type of reinsurance involved (quota-share, surplus, stop-loss, etc.) should then also be taken into account, if necessary.

19. In the case of life insurance, the mathematical reserves are usually established in "gross" form, i.e. without deduction for the share ceded to reinsurers. A further argument in favour of this solution is that, in life insurance, aleatory fluctuations for which reinsurance is mainly intended to provide, play only a subsidiary role, the reserves being established mainly on a capitalization basis, which is generally a stable, long-term operation.

20. In non-life insurance the reserves for outstanding claims, i.e. for losses which have already occurred, likewise contain no aleatory element for which there can be adjustment between portfolios. Thus it seems entirely logical that these reserves, too, should be established in "gross" form, and that the reinsurers should place at the disposal of the direct insurers any funds which have become due, regardless of the type of reinsurance contract under which their liabilities arise.

21. It is therefore mainly in the case of reserves for unexpired risks (often called "premium reserves") that the "gross" method of establishment seems incompatible with the mechanism of reinsurance. Provided that the reinsured proportion does not exceed a certain percentage of the total risk (e.g. 50 per cent, calculated on the basis of the corresponding premiums), it seems advisable to accept that the reserves for unexpired risks be established net of reinsurance, i.e. with deduction of reinsured part. If this percentage is exceeded, however, it may be no longer a question of genuine reinsurance and the argument advanced in paragraph 16 becomes invalid. Above this percentage, therefore, reserves should be established in "gross" form.

22. The foregoing covers virtually all cases of reinsurance allocable on a "contract by contract" basis to individual commitments (quota-share, surplus, etc.). As regards "stop-loss" cover this is really insurance of the insurer's capital and free reserves. It does not directly concern the technical reserves, which, according to the most widely accepted modern theory, really belong to the policy holders. It should be noted, however, that this applies only in the case of ordinary insurance and not in the case of extraordinary risks (nuclear risk, giant aircraft and other risks which are very large as compared with the remainder of the portfolio).

ad (d) - The type of investment suitable for insurance purposes

23. The main characteristics of investments which are suitable for insurance purposes are the subject of the next clause in the same UNCTAD recommendation, which provides that "adequate conditions of security, liquidity and income must ... be assured"[1/], so that investments may be made in the country where the premium income arises without prejudice to the operation as a whole. Of these three factors, security is certainly the most important, as it must be virtually absolute. As for liquidity and income, these need only attain a good average level, for, in insurance, neither the need for liquidity nor the need for income usually arise in an extreme form.

24. Another factor which developing countries with limited economic resources must take into account is the danger of an accumulation of risk which would arise if investments were made in assets exposed essentially to the same risks as those for which the assets were supposed to provide cover. For example, if the technical reserves of an "earthquake" insurance portfolio of a given region were invested in buildings in that same region, the occurrence of an earthquake would wipe out the reserves precisely when they were needed. This is doubtless an extreme example, but less extreme cases of risk accumulation may easily occur in countries with limited economic resources, where insurable assets are precisely those which offer the most attractive investment.

25. These general observations are a sufficient guide to the choice of investments suitable for insurance purposes. In view of the differences between the markets of the various countries, it does not seem advisable to draw up a restrictive itemized list of such investments. Even supposing that a given type of investment actually exists in all the countries concerned - which is not always the case - local factors (state of the market, commercial law, etc.) may make that investment highly attractive in some countries and quite unsuitable as insurance cover in others. To mention only one example, in some countries of western Europe, mortgages on private immovable property are regarded as one of the best investments (very favourable legislation), whereas in several other countries they are considered entirely unsuitable.

1/ Proceedings of the United Nations Conference on Trade and Development, Volume I: Final Act and Report (E/CONF.46/141, vol. 1) - Annex A. IV.23: Insurance and Reinsurance

26. Obviously, even in a developing country, which must see that insurance funds are invested in the manner which will be of most benefit to its overall economy, the first principles to be observed are those mentioned above (security, liquidity, income, no risk accumulation); then, among the investments meeting these criteria those may be chosen which best serve the national economic interest, in the broadest meaning of the term. The normal method employed to apply such an investment policy is to have a list of acceptable investments made mandatory under the national legislation on insurance supervision.

ad (e) - The correct evaluation of investments

27. If investments covering the technical reserves (commitments) of an insurance concern are to be considered properly valued, it seems essential that their market value should not be less - at the time of realization - than the value shown in the balance sheet of the concern. Since the future market value of investments is obviously not known at the time of their valuation, a probable value must be carefully chosen, having regard to the particular features of each type of investment (bonds, direct loans, shares, immovable property etc.).

28. The way in which the value of investments must be shown in the balance sheet of insurance concerns is generally laid down in the national legislation (commercial law), the relevant rules being adapted to the legal conditions and economic needs of the country concerned. In insurance business, account must also be taken of the fact that the need to realize assets at short notice (sale of securities temporarily quoted below their redemption value) can be considerably limited by a rational planning of income and expenditure. This possibility lends a certain degree of stability to the evaluation of the investment portfolio of an insurance concern.

ad (f) - The practical application of the principle

29. In order, therefore, to verify at any given moment the observance by an insurance concern of the recommendation that technical reserves should be invested in the country where the premium income arises, the following procedure must be followed: first, the evaluation of the technical reserves must be verified; next, the list of investments serving as cover for the reserves must be checked to ensure that the investments satisfy the requirements; and, lastly, a check must be made to ensure that the investments shown in the list are actually located in the country and are owned by the insurance concern.

30. The last requirement - the actual presence in the country of the assets allocated to cover the technical reserves - is by no means easy to verify. One very convenient method is, of course, to require that all such assets be deposited with a State bank or office. This method is not very advisable, however, because, in an essentially financial activity such as an insurance concern, any immobilization of funds is a severe handicap and is prejudicial to rational management. Another fairly acceptable solution is the use of frequent random controls without previous notice, according to a method adapted to the particular circumstances of the country concerned.

III. Present situation with regard to the implementation of the recommendation

31. No direct information is available at present which would indicate the extent of application by the developed countries of the principle of investment of the technical reserves of insurance concerns in the country where the premium income arises. In the absence of such direct information, a few indirect conclusions may, perhaps, be drawn from those countries' replies to the questionnaire on insurance sent to them by UNCTAD in January 1967.[1/] In this connexion, it should be mentioned that information is available concerning fifty-six African, Asian and Latin American countries, forty-five of which dealt in their replies with partial problems relating either to technical reserves or to their investment.

32. Before we analyse this information systematically, adopting roughly the same plan as in the preceding chapter, it should be explained that in many developing countries the fact of enacting insurance legislation does not necessarily mean that the provisions adopted are in fact enforced. Because of the complexity of insurance, the bodies responsible for enforcing insurance law frequently encounter very considerable technical difficulties which sometimes lead them to refrain tacitly from applying the law too strictly. In other words, the existence of a law is not always a true indication of the real situation and any too rigid conclusions in this connexion must therefore be avoided.

33. As regards the definition of technical reserves, nearly all of the forty-five countries which dealt with the problem of reserves in their replies to the questionnaire are acquainted with the three classical forms of such reserves (mathematical reserves, reserves for unexpired risks and reserves for outstanding claims) and recognize either explicitly (formal requirements) or implicitly that every insurance concern must establish these three reserves. According to the replies received, however, no country prescribes any technical reserves (or provisions or guarantees) other than the three just mentioned. The situation with regard to the evaluation of technical reserves is as follows;

Mathematical reserves

34. In thirty-three countries, the mathematical reserves of life insurance concerns must be calculated according to the usual actuarial methods. Of these thirty-three

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1/ The contents of the questionnaire on insurance are reproduced in annex I to document TD/B/C.3/42.

countries, thirteen state that the technical bases of the calculations in question must be the same as those used for determining premium rates or those previously approved by the supervisory authority. In a few rare instances limitations are imposed: for example, the interest rate used may not exceed a figure specified in the law. The other twenty countries of this group do not require the use of particular technical bases for this purpose. Some merely require the production of a certificate made out by an actuary - and not always an independent actuary - stating that the reserves have been correctly calculated. In the other countries, no provisions exist except perhaps some vague general requirements which are difficult if not impossible to enforce.

Reserves for unexpired risks

35. In twenty-eight of the countries considered, the reserves for unexpired risks must be calculated on the basis of a certain percentage of the premiums written in the past year - usually 35 to 45 per cent (except in the case of marine risks and certain special classes of insurance). However, the assumptions on which these percentages are based are not always valid. This is true, in particular, when the rates are not adapted to the risks, when the losses are not spread evenly over the entire year, when the insured portfolio is not homogeneous and gives rise to wide statistical divergences, etc. The other countries also require the establishment of a reserve for unexpired risks, but leave it to the concerns themselves to define the bases of its calculation. The supervisory authority may perhaps reserve the right to require certain corrections to be made. Clearly, in these cases, all kinds of inadequate solutions may be adopted.

Reserves for outstanding claims

36. Most of the countries require the establishment of reserves for outstanding claims, but, except in a few rare instances, no rules are laid down concerning the method of calculation of these reserves. The latter are therefore the result of estimates made by the concerns themselves. There is consequently no assurance that the estimates are based on an objective appraisal of the commitments involved and in many cases economic and monetary factors (particularly inflation) have made the reserves established by insurance concerns inadequate. In four countries, the estimated amount must be increased by 5 per cent to cover administrative costs. In three countries only, the supervisory authorities require, in addition to the simple aggregation of the file-by-file estimates, the use of a global method which consists in applying to the premiums written during the year a certain coefficient based on the experience of previous years. The system to be adopted is the one giving the highest valuation.

Reserves with or without deducation for reinsurance

37. In fourteen of the countries considered, insurance concerns are authorized to deduct from their reserves an amount corresponding to the reinsured risks (system of net reserves), while in sixteen countries this deduction is not authorized (system of gross reserves). In a few rare instances, the requirement is different, depending on whether the reinsurance is placed abroad (in which case the gross system must be applied), or locally. There are also three countries in which the gross system must be used only for the mathematical reserves and the other technical reserves may be established according to the net system.

Investment requirements

38. It will thus be seen that a fairly large number of developing countries deal with the question of the establishment of technical reserves by insurance concerns, although, generally speaking, the methods of calculating these reserves still leave something to be desired. The situation with regard to the coverage of these inadequately calculated reserves, by suitable investments in the country where the insured risks are located, is even less satisfactory. Only fourteen out of the forty-five countries considered pay serious attention to the question of ensuring appropriate coverage of all these technical reserves; a number of other countries have some rules concerning reserves for unexpired risks, but reserves for outstanding claims are not subject to any requirement. Furthermore, since most of the countries appear to opt for - or simply tolerate - the establishment of net reserves, i.e. with deduction for reinsurance, the reserves corresponding to reinsured risks are not subject to the local investment rule.

IV. Conclusions

39. Summing up, therefore, the developing countries as a whole appear still to be a long way from achievement of the objective set in the recommendation of the first session of UNCTAD (1964) that the technical reserves of their insurance concerns should be invested locally. It is obviously impossible to determine with any degree of accuracy the difference between the level of the reserves actually invested in the developing countries and the corresponding level if the recommendation were faithfully implemented. Whatever the extent of the difference, however, the present situation is to be deplored, because the developing countries are suffering generally from a perennial dearth of investment and cannot afford to forego any investment to which they are entitled.

40. Accordingly, it would appear desirable that the Committee on Invisibles and Financing related to Trade, having taken note of the present report by the secretariat, should:

(i) Invite Governments of developing countries to consider, in the light of this report, the extent to which they have implemented the recommendation of UNCTAD that the technical reserves of insurance concerns should be invested in the country where the premium income arises;

(ii) Invite the same Governments to inform the UNCTAD secretariat as soon as possible concerning the progress made in implementing the said recommendation in their respective countries and concerning any further measures they may contemplate with a view to improving the present situation;

(iii) Instruct the secretariat to make available to developing countries, upon request, any assistance they may need in connexion with the implementation of the recommendation;

(iv) Request the secretariat to report to the Committee, at its sixth session, on the mandate entrusted to it and on the progress of implementation of the recommendation by the developing countries.