

D.O.T. RETURNS UNDER THE 1980 REGULATIONS

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Introduction.

The Insurance Companies (Accounts and Statements) Regulations 1980 come into force on 1 January 1981 and insurance companies will have to submit annual returns in accordance with these Regulations for accounting years starting on or after that date. These 1980 Regulations [1980 Regs.] will materially change the format of the returns to be made to the supervisory authority, the Department of Trade [DOT], by insurance companies operating in the U.K. The DOT prepared a preliminary guidance note in January 1980 explaining the 'broad purpose and effect of the regulations' and will be providing more detailed guidance in due course.

The purpose of this note is to outline the differences between the information to be submitted in the new-style returns from that currently required under the 1968 Regulations [1968 Regs.] This note deals solely with the Forms for non-life business and concentrates on those items likely to be of interest to actuaries. It should therefore not be taken as a complete guide to the 1980 Regs especially by anyone who will be closely involved in the production of the returns within a company.

The paper falls into three parts.

Section 1 contains some brief comments on the reasons for the new regulations.

Section 2 deals Form by Form with the new items of information to be provided.

Section 3 gives some personal views on the possible ways in which the new returns might be used to examine the position of general insurance companies.

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Section 1.

1.1. The principal reasons for the full scale revision of the Regulations were:

- (a) to consolidate the numerous amendments made to the returns required by the 1968 Regulations. These amendments are contained in six Statutory Instruments and amendments to amendments were making the position unsatisfactory.
- (b) to correct any remaining known inadequacies in the 1968 Regulations
- (c) to incorporate the calculations of the solvency margin following the introduction of the EEC requirement on solvency.
- (d) to take account of new thinking on Forms required by new types of long term business
- (e) to increase the information to be provided by the actuary in his valuation summary for long term business
- (f) to redesign the Forms for non-life business in a standard format suitable for computer input documents.

The opportunity was also taken to add a number of new items of information considered likely to be of use in arriving at an assessment of a company's position.

Hopefully the reason at (a) above will not cause further detailed revisions in the near future, although some amendments will be needed when the EEC Life Directive is implemented.

In general the amendments are developments of the 1968 requirements rather than based on any radical rethinking of the methods to be used to supervise non-life business and the information required.

## Section 2

2.1. The Statutory Instrument consists of 23 Regulations and 6 Schedules. The Regulations include a considerable number of definitions and the rules on the Forms to be completed. The latter depends upon the nature of the company as separate provisions apply to U.K. companies, non-UK EEC companies with UK branches and other overseas companies. The detailed requirements will be fully described in the DOT guidance notes.

The number of definitions has been considerably increased to improve consistency between companies in the figures submitted. The only one which may affect an 'actuarial' consideration of the returns is on the treatments of claims expenses. The amounts of expenses to be included in 'claims paid' and 'claims outstanding' have been more closely defined. They are the expenses which can be directly attributed to the relevant claim. Separate reserves or amounts paid are to be shown as 'expenses of settling claims' for general overhead expenses relating to claims.

The Regulations require the returns to be submitted in the precise format laid down by the Schedules. Previously only the Revenue Account and Premium Analysis were in a standard format although the Balance Sheet and Profit and Loss Account had at least to include certain specific items. Now all of the information is standardised into Forms of which 22 relate to non-life business. Although the titles of some of the Schedules may appear somewhat unconventional when the Forms are considered, the names are preserved as they are referred to in the 1974 Insurance Companies Act as the information to be submitted.

### 2.2. Schedule 1: Balance Sheet, Profit and Loss Account.

This Schedule consists of Forms 10 to 16. When pieced together Forms 10, 13, 14 and 15 make up the Balance Sheet. Form 14 relates only to long term business.

Form 10, the Statement of Solvency, collects together the totals for assets and insurance liabilities from later forms, shows the required statutory solvency margin and the actual solvency margin and details the liabilities in respect of shareholders. Provided the figures can be taken at face value it thus shows the extent to which the free assets exceed the required solvency margin.

Form 13, the analysis of assets, is equivalent (with some minor changes) to the Statement of Assets under the 1968 Regs. As before, long term business assets are to be shown separately and assets are to be valued in accordance with the Valuation of Assets Regulations.

Form 15 gives details of the general business liabilities. Reserves for IBNR claims and 'expenses for settling outstanding claims' have to be shown explicitly. It should be remembered that the definition of the claims outstanding reserve requires expenses directly attributable to individual claims, e.g. medical fees, to be included. The reserve for 'expenses for settling outstanding claims' relates to other general overhead expenses of the claims settlement process. Unlike the other technical reserves the claims equalisation reserve is not derived from other forms and no longer has to be split by class. However transfers to it have to be made from the relevant class revenue account!

Forms 11 and 12 are completely new and show the calculations of the required statutory solvency margin in accordance with the EEC solvency margin requirements. Most of the figures are available from other forms but it is necessary to estimate the gross claims outstanding for business accounted for on a funded basis in order to calculate the average incurred claims over the past three years for the company's total business. This includes gross claims outstanding on the open years of 3-year business and the estimate for gross incurred but not reported claims.

Form 16, the 'Statement of Other Income and Expenditure' is equivalent to a Profit and Loss account. There is no longer a requirement to give auditors remuneration separately, no need to split the taxation between UK and overseas nor to give the basis on which the tax charges are calculated.

## 2.3. Schedule 2: Revenue Account and Additional Information.

2.3.1. This Schedule consists of Forms 20 to 36 and is broadly equivalent to that information in the 1968 Schedules 2 and 3 dealing with general business. Forms 20 to 28 comprise the revenue accounts and the supporting information used in their construction. Forms 31 to 35 are equivalent to the former Claims Frequency and Claims Settlement Analyses.

The main general changes dealt with in more detail later are

(a) Two new accounting classes, non-proportional treaty and proportional treaty, have been created and treaty business is to be accounted for rather differently than before. For details of the required accounts see the comments on Forms 24 to 28.

(b) In the one year 'Revenue Accounts' items relating to the current year's business (premiums earned, claims paid and outstanding) are separately distinguished from movements in the previous year's reserves.

(c) The revenue accounts and supporting information on premiums and claims are expanded to show the gross figures, reinsurance payable or recoverable and the net position. This does not apply to the statistics Forms 31 to 35 but in general applies to the revenue items again split in <sup>62</sup>(b) above.

(d) A run-off of past reserves for net outstanding claims by class is to be provided in Form 23. Information relating to risk groups not analysed in detail in Schedule 3 is not required to be analysed by year of origin.

(e) For non-proportional treaty business a three-year account similar to that used for MAT business is prescribed. Accounting items on portfolio transfers are to be shown.

2.3.2. Form 20, the Revenue Account, is essentially a summary of information on premiums, claims and expenses brought together from later Forms. One Form is required for each class and a summary one for the total business is to be produced.

The format is significantly different from the equivalent 1968 Regs information. The main change is that for business accounted for on a one-year basis, the current year's experience of earned premiums and the corresponding incurred claims is to be split from movements in reserves brought forward. The combination of these two factors in one account has always been a major problem when trying to analyse the profitability of current underwriting using the conventional revenue account. Although the ideal approach would be to have separate accounts for each year's business, the new Forms are a significant improvement. Indeed taken together with Form 23, the run-off of reserves, there has been a considerable move towards following the net results of a cohort through to extinction.

It may be noted that no provision is made for showing the origin of adjustments in amounts brought forward. Provided these are due entirely to currency changes no explanation is required.

2.3.3. Form 21 includes details of the premium income for 1-year business i.e. for direct and facultative business. Separate Forms are needed for each accounting class. The equivalent 1968 statement is the current Schedule 2 Part V. However that also included treaty business which is now dealt with in specially designed Forms.

The information required expands on the 1968 Regs primarily to effect two changes which are

- (a) to introduce greater detail of the (Gross-Reinsurance = Net) equation and
- (b) to relate all the premiums more accurately to the correct exposure period.

In order to achieve these two objectives the following information is to be provided, showing separately the gross premiums receivable in the year, reinsurance payable and net premiums each of which is to be split between the amount earned and unearned:

- (i) risks incepted in previous financial years,
- (ii) risks incepted in the current financial year for 12 monthly policies split by month of inception,
- (iii) risks incepted in the current financial year for less than 12 months and for greater than 12 months.

Of these (i) and (iii) are new although many companies at present provide the data voluntarily.

#### 2.3.4. Form 22 is the Analysis of claims and expenses.

The information on this Form gives further accounting information from which are produced the summary claims and expenses figures in Form 20. Much of the information is new.

As in Form 20 the claims data is split between items in respect of incidents occurring in the financial year and those relating to previous years taken together. For each of these figures are required the gross claims, reinsurance recoveries and the resulting net amounts and each of these is to be split between brought forward, payable in year, and <sup>carried</sup> forward so that the 'earned' amount can be calculated. (Previously all that was given were the net amounts from the above, together with an item of 'reinsurance recoveries' which presumably related solely to amounts payable and receivable in the year.) Thus the gross claims carried forward are now reconcilable with the net figures. This enables the gross revenue account to be constructed as well as the net so that a fuller investigation of the profitability can be made.

The second part of the Form deals with expenses and commission and is considerably expanded. As with the claims, the amounts brought forward, payable and carried forward are to be shown. Thus the deferred acquisition costs previously implicitly allowed for in the UPR will now be shown explicitly. The expenses are to be split between those related to settling claims (excluding, remember, those including in claim payments or reserves) and the remainder. The former are to be divided between those relating to current year's claims and those for prior years.

IBNR reserves are to be shown split between this years incurred claims and those from prior years.

#### 2.3.5. Form 23 is the Analysis of Claims Outstanding net of reinsurance recoveries.

The information to be produced in this Form is entirely new. It carries one stage further the process of segregating years of origin. Form 20 splits the current year from all preceding years. Form 23 splits out all the preceding years by requiring the development of the net reserves held for claims outstanding for each year of origin starting from 1981.

This can enable two basic 'run-offs' to be constructed. Firstly the development of the reserves for each year of origin which will show the apparent accuracy of reserving. Secondly the net claim payments run-off can be constructed although there may be a minor problem with reconciliation if an attempt is to be made to include first year's payments. If required such run-offs can then be analysed using the well known triangulation methods.

These 'net run-offs' are to be produced separately for each class for which a 1-year style of account is produced. However the business for which the reserves are to be run-off is to be restricted to that which is returned in detail in the 'Statistical Forms 31-33' and will thus cover only the major territories.

2.3.6. Form 24 is the basic 3-year revenue account and as before may be used for MAT business. It is also to be used for non-proportional treaty reinsurance so that the information for that type of business is now considerably expanded.

The 1968 Statement showed the full 3 year account including figures in previous returns. That is no longer needed so that only the current year's additional information on the most recent three underwriting years is required. In addition the same information is to be provided for years <sup>combined</sup> prior to these three.

2.3.7. For both types of business accounted for in Form 24 a considerable amount of information is required on premiums. This is to be in the format of Form 25 for MAT business and Form 26 for non-proportional treaty business. This information is unlikely to be of significant value to actuaries and the classifications are rather too complicated to be covered briefly in this note.

2.3.8. Form 27 provides the revenue account for proportional treaty business. It is significantly different from the 1968 Regs format although a number of reinsurers' returns have been along the lines of the new Form in recent returns.

Basically in Form 27 separate revenue accounts are to be provided in respect of (a) treaties for which closing information on reserves has been received, i.e. the 'closed treaty year', and (b) treaties where no such information is yet available, where the accounting consists of building up the balance of premium and claims. Profits can only be released on the closed account.

2.3.9. Form 28 will consist of various accounting items on premiums split between the closed and open year. As with Form 26, to be included in the premiums are various portfolio transfers in eg. 'Amounts receivable to assume outstanding claims portfolios'. The main purpose of this would appear to be to ensure that all the desired items are included as premiums for use in connection with the calculation of the required statutory solvency margin.

2.3.10. Forms 31-35

These correspond to the Claims Frequency and Claims Settlement Analyses ie. Schedules 3 Parts II and III of the 1968 Regulations. The information required to be submitted is broadly similar to the previous data. However the following changes have been made.

#### General Changes

- (i) The Forms are now to be audited.
- (ii) The Overseas business is now to be shown in the currency of the country concerned rather than, as at present, in sterling. Some of the totals are then in sterling.
- (iii) Home Foreign business is to be regarded as a separate country and thus split from other UK business.
- (iv) Private Motor Car risks must now be regarded as a separate risk group. In addition this has to be further subdivided between comprehensive and non-comprehensive risks. For the remaining business the choice of risk group is still at the discretion of the directors.

2.3.11. As before, these Forms are not required for small amounts of business. The exemption limits have been changed mainly in line with inflation. However there is a new requirement to produce a reconciliation return for each Form for all the business exempted from the detailed analyses. These reconciliation returns have to be split by class and UK / Overseas and the information required is considerably less than for the full Forms. The detailed changes in exemptions are as follows. (It should be remembered that whenever figures in respect of a year of origin have been commenced it is necessary to run-off the information to extinction even if later years of origin are exempted.)

(a) Forms 31-35 are not required for a country if the gross direct and facultative premium income is less than  $2\frac{1}{2}\%$  of the total (including treaty business) worldwide premiums. Previously treaty premiums for the relevant country were included in this test for exemption so there has been a slight relaxation.

(b) For a class in any country the direct and facultative premiums have to be at least £100,000 before returns are required. Previously the limit was £25,000 total premiums ie. again including treaty business.

(c) If the UK premium income (direct and facultative) is less than £100,000 no returns are required.

#### 2.3.12. Forms 31-32

These provide an analysis of the exposed to risk, that based on premiums being in Form 31 and that on vehicle years in Form 32. Taken together these are equivalent to the old Form No 1 of Schedule 3 Part II, excluding the part on numbers of Claims incurred and reopened.

The information on premium exposure has been expanded considerably so that all the premiums receivable in the year are now analysed by the exposure to which they are attributable. The 1968 Form had caused some considerable problems especially in relation to late or early premiums and premiums for contracts covering more than one year.

Equivalent amendments have taken place in the information on exposure by vehicle year.

#### 2.3.13. Form 33. Analysis of claims by number and cost.

This Form is equivalent to the former Claims Settlement Analysis, ie. Schedule 3 Part III, and provides for the run-off of claims by year of origin.

One significant change is that data produced for previous returns is no longer to be repeated. This will tend to cut down the volume of the returns which for some companies was becoming considerable. However the information to be provided for each accounting year for each year of origin has been expanded. The previous returns required 9 new items of data each year for each year of origin. The new returns will require 39 such items. Under both regimes some of the items are 'totals' or brought forward amounts. Removing these derivable figures there were 6 new items each year under the 'old' returns and, I estimate, 25 under the new requirements. The main changes are that

(a) reopened claims now have to be shown explicitly both in number and amount and

(b) payments have to be analysed by type of claim eg nil, reopened etc.

Many of the items in the 1980 Form are a more detailed breakdown of a single figure in the 1968 Form. The following table shows the correspondence between such items in the old and the new Forms.

Col.	1968 Regs.	1980 Regs.	Item in Form 33 (ignoring 33.)
2. No. of Claims Closed at No Cost		( Claims Closed at no cost ( (other than reopened Claims) { Claims Closed:- reopened Claims *	11.1  13.1
3. No. of Claims Closed at some cost		( Claims closed at some cost ( (other than reopened) { Claims Closed:- reopened Claims *	12.1  13.1
4. No. of Claims outstanding at end of year		( Claims outstanding:- reported ( non-reopened { Claims outstanding:- IBNR { Claims outstanding:- reopened	14.1  15.1 16.1
5. Amount of payments made in year		( Payments corresponding to above ( (excluding of course IBNR's) ( ( (	11.2 12.2 13.2 14.2 16.2
7. Claims outstanding:- payments on account		{ Claims reported:- made in year { (not reopened)-made in prev. { year { Outstanding reopened:- made in year { :- made in prev. { year	14.2  14.3 16.2 16.3
8. Claims outstanding:- estimated payments to be made.		( Claims closed in year at no cost(!) ( Claims closed in year at cost ( Reopened claims closed ( Claims outstanding:- reported not ( reopened ( IBNR ( Reopened claims still outstanding	11.4 12.4 13.4 14.4 15.4 16.4

\* Note that previously some were in col. 2 and some in col. 3.

In addition information is now provided on past payments on closed claims split between nils, claims at cost and reopened claims. This corresponds to a breakdown of an amount which could be derived from differencing figures in the 1968 style returns.

Finally, in respect of claims which remained closed throughout the year, the figures required are the number (17.1), the amount paid in the past (17.3) and the estimated outstandings (17.4). Note that this is not simply a carry forward of last year's figures as some claims closed at the end of last year may have reopened during the year.

The new returns provide for a number of esoteric items of information which are unlikely to be significant and at first glance appear impossible, e.g. the estimated outstandings on claims closed in previous financial year and still closed (17.4).

I am however assured that all boxes not blanked off in the S.I. can conceivably contain figures, although some will be estimates based on past experience, e.g. in the above example, reopened claims.

#### 2.3.14. Form 34 - Analysis of Premiums where 3-year accounting has been used.

This is equivalent to the old Schedule 3 Part II Form No 2.

There are two significant changes:

(a) Information on numbers of claims is no longer required. (Note that this also applies to the claims run-offs on Form 35).

(b) Previously gross premiums were given for the two open years and the year just closed. The premium income for prior years is now also to be provided so that all premium income will be recorded in the Form.

#### 2.3.15. Form 35 - Analysis of Claims for 3 year accounted classes.

Previously the claims data requirements for 3-year business was identical to that for one-year business. However the new requirements have been considerably relaxed so that information on numbers of claims and partial payments are no longer required. As with Form 33 previous years figures are no longer repeated in the returns.

Thus the data to be provided for the current financial year for each year of origin are now only

(i) payments made and

(ii) estimated outstandings.

The figures are to be given in both original currency and sterling.



### Section 3

3.1 The first returns submitted in the new format will not be available until the middle of 1982. Even then, if experience of the early years of the 1968 Regs is followed, it will be around a further two years before companies will have ironed out the problems. Then, depending upon the exercise to be carried out, it may be a number of years before a satisfactory data base is available. However in spite of this it seems worthwhile at this stage to look briefly at how the new data may be used to augment the familiar methods applied to the 1968 Regs returns.

#### 3.2

3.2.1 The part of the returns with which actuaries are most familiar is the statistical data, previously the Schedule 3 returns and now to be Forms 31-35. The original reason for obtaining this sort of data was to enable tests to be made of the balance sheet reserves, mainly the reserve for outstanding and IBNR claims. There is some evidence that merely requiring companies to submit data in a cohort form has improved the quality of reserving in some cases. In particular a number of companies appear to have introduced or else considerably strengthened IBNR reserves.

However there is still some doubt as to how successfully the main objective has been met. A number of papers, including some presented at the 1979 GIRO conference have shown the considerable variations present in the run-offs. These variations, which are greater in the smaller companies which require closest scrutiny, make it doubtful if projections can be sufficiently reliable for supervisory purposes. In addition there are practical problems in relying upon these statistics for monitoring reserves, especially for larger companies, as substantial tranches of business are not included. In particular treaty reinsurance business, which can be very large for some of the major composites, and much overseas business is exempt.

There is also the problem of deciding upon how a reliable allowance can be made for reinsurance recoveries as the data base is gross but the balance sheet reserves are net of reinsurance.

The new Forms 31-35 have not attempted to deal with all these knotty problems - although some net of reinsurance figures are now available in Form 23. Indeed it may not be possible to solve them all simply by amending the DOT returns.

32.2 The increase in the numbers of items of information in the claims run-off statistics, Form 33, has arisen mainly from an attempt to identify reopened claims, whose present treatment is largely at the option of the company, and to subdivide the claim payments and claims outstanding for each year according to the type of claim concerned i.e. open, closed, reopened, 1BNR. Allowing for all possible combinations has given rise to some items which seem likely to be zero or minimal and even more which seem likely to be of little value in assessing overall reserves. It is even doubtful if there will be any real gain in having reopened claims separately distinguished given the amounts involved and the likely effect on any analysis. Most, if not all projection methods, e.g. separation technique, average claim methods etc., make an implicit allowance for reopened claims and with the random uncertainties involved in all estimates minor second order refinements may be out of place.

One new feature which may be of use is the separate identification of the 1BNR reserve. This can then be compared with the reserve for notified outstanding claims either in total or by comparing the corresponding averages. However it will not be possible to compare the provision with the actual past experience as the actual amounts subsequently paid on 1BNR claims will not be given.

In general it seems likely that any analysis of the claims data in Form 33 (and also the 3 year data in Form 35) will use methods similar to those in use at present.

3.2.3 The most useful change in the Statistical Forms is likely to be the greater breakdown of premium income in Form 31 so that a more accurate estimate of the earned premiums for a cohort of business can be obtained. This can then be compared with the emerging claims in the corresponding Forms 33. Previous analysis of this sort has usually ignored the effect of late premiums which, especially for the liability risk groups, tends to produce artificially high loss ratios. The new data will permit a more accurate figure to be produced and thus produce better estimates of the profitability of the business to be made. Also consideration of the fluctuations from year to year in loss ratios can have implications for solvency margins as shown, for example, in the papers by G. Orros to the 1979 and 1980 GIRO seminars.

However it is always necessary to remember the limitations outlined in 3.2.1 above of any analysis of Forms 31-35.

3.5 The remainder of the returns have received comparatively little attention from actuaries in the past although a few papers have been written on asset portfolios and revenue accounts.

3.3.1 The information on assets is still minimal, especially if the DOT returns are compared with the requirements under U.S. legislation. Having laid down rules as to which assets are admissible and how they are to be valued for the purpose of assessing statutory solvency, the DOT relies upon the auditors to ensure that the figure presented is correct. The breakdown into types of assets enables some assessment to be made of the suitability of the portfolio and its possible exposure to difficulties e.g. liquidity problems or falls in the value of certain types of asset. However other users of the returns are likely to find the information available inadequate. For example investment analysts may be interested in assessing the future investment income and possibly also the movement in the capital values of assets. No information is given analysing the investment income received in the past year or expected in the coming year. Thus estimates of the likely level of the next year's investment income, a significant contributor towards any profit estimate will be fairly speculative if based on the information in the DOT returns. In addition no information is given on the currency of the assets which restricts the possibility of assessing likely movements in capital values.

3.3.2 The new information likely to prove most fruitful in leading to new ways of examining a company's performance seems likely to be the expanded Revenue Accounts, especially Forms 20, 22 and 23. The separation of claim payments relating to the current year's exposure from those in respect of prior years' business together with the run-off of past reserves will enable chain ladder type calculations to be carried out. Although the new Revenue Account data is only subdivided into accounting classes e.g. Liability, Motor, etc., rather than by risk group, so that changes in the mix of business may upset any analysis, the Revenue data does have advantages.

In particular the figures are net of reinsurance. As a company's balance sheet reserves are net of assumed reinsurance recoveries the analysis of the 1968 returns has always come up against a final stumbling block. Conclusions based on the examination of the C.S.A. gross figures may not follow through to the net position and so would not be appropriate for judging the company's actual reserves. This would be especially true for small companies or companies dealing in types of business where non proportional reinsurance cover greatly affected the results.

In addition the split between current and prior years covers the total business of the company, although the Form 23 run off (ignoring the reconciliation) of reserves is restricted to the business covered by Form 33.

This should enable a more accurate assessment of current profitability to be made and the trend and variability in loss ratios examined. This will supplement such analysis using Forms 31-35 (see 3.2.3 above) but has the advantage of covering all the company's 1-year business. However, as always with such analyses, there is the problem of assessing the accuracy of current reserves.

3.4 Finally, there is one further change in the DOT's procedure rather than in the Forms themselves, which could be of significant use. This is the full computerisation by the DOT of the Forms for the non-life returns. To date all of the published papers which have used DOT data or overseas equivalents have been based on samples of companies and types of business. These samples are usually quite small and generally only cover the major companies. Assuming that it is eventually available for research work, the computerised data base should enable more comprehensive research to be carried out and perhaps conclusions to be reached on the value of various methods. In addition it should enable the sort of approach carried out in the U.S. by the NAIC to be tested. Indeed the opportunity to produce comprehensive and more up to date statistics on the U.K. insurance industry and the relative performance of the companies may prove to be the main advantage of the new system.

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