MARKET STATISTICS

Introduction

Collective Risk Statistics - Belgium

Collective Risk Statistics - France

Collective Risk Statistics - Germany

Collective Risk Statistics - Holland

Market Statistics - UK

Sources of Experience Statistics in the US

MARKET STATISTICS

Following the meeting at Norwich the Working Party on Market Statistics considered that the most valuable contribution they could make was to bring together information on the availability and quality of statistics in the main insurance markets around the world. Attached is a short note on the UK position, summarising the situation which will be fairly well known to UK actuaries. A comprehensive note on the USA, plus notes on other major territories, are also attached. As might be expected, the collection, collation and availability of figures in the USA is a long way ahead of most other territories in quality but they meet with the same problems as other parts of the world in producing actuarially reliable data.

The survey has revealed that the collection of statistics on a market basis, or for large sections of the market, are generally related to statutory returns or to the preparation of insurance tariffs. It is basically the latter which are prepared for the purposes of handling the insurance business (as against statutory returns which are required for confirming solvency in most cases). In those territories where rating structures have to be agreed in some detail with the authorities it is a common feature for bureaux or other representative bodies to accumulate statistics on behalf of the whole, or a part, of the market preparatory to negotiating on rates. With its strong and detailed control of insurance the USA provides a prime example of the extent to which the market can co-operate in this work when it is in its interests to do so. On the other hand, the virtually uncontrolled situation on rating structures in the UK has now led to the position where only limited statistics are collected with the FOC... producing Fire and Consequential Loss tariffs on a confidential basis, and currently the only other available market statistics being produced are those of MRSB.

It is not unreasonable to assume that insurance markets are only likely to co-operate in producing their information on a basis compatible with others in their market where it is in their commercial and economic interests to do so. In the UK, with no requirements imposed by governmental authorities, the market has now reached the point where only Fire and Consequential Loss continue to fall into this category. (No comment is passed on the MRSB position as this will be the subject of another discussion session.) However, there is obviously some feeling in the market that there are gaps which ought to be filled if a viable basis can be found and agreed between offices, and this has led to the voluntary group efforts through the BIA. Extending this to other types of insurance requires an assessment of both the value of the information and the problems in producing it. The value depends on the market structure in the individual class of business, but generally our market is dominated by a few large companies, the smaller ones tending for much of their operations to quote similar or slightly discounted rates. It therefore seems to follow that the only real areas where progress can be made are those where the larger offices, or at least a substantial proportion of them, feel it to be in their interests to expend time, effort and money in the work involved in setting up such arrangements. This seems most likely to happen for classes where the individual office does not have sufficient data to discriminate between various types of risk, and where it is necessary to have a much larger spread of business than does any individual office in order to produce reasonably accurate figures.

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In the past the pressure on offices to produce acceptable rates was basically competitive. If the rating discrimination was not in line with practice opportunities would be left for competitors to charge lower rates in those areas where over-charging was taking place, thus leading to a loss of business to them. In a nutshell, that was what happened with the Motor tariff leading to its disbandment in early 1969. However, increasing government intervention and changing social attitudes make it likely that the industry will have to prove its case for discrimination more firmly in the future. Pressure from various types of manufacturers has always been present and recognised by the Fire tariff - an example of which was the pressure exerted by plastic manufacturers which led to a complete revamping of the section of the tariff applying to such risks. However, the rise in consumerism in all its aspects can be expected to lead to the insurance market having to justify its practices in the Personal Insurances field. Discrimination on grounds of sex should only be allowed where it can be statistically justified, whereas discrimination on race grounds looks likely to be outlawed completely, though no doubt if statistical justification could be produced in the latter case it would have to be considered by government. Intervention of government into pricing is fortunately very limited at the present time as far as insurance is concerned, but it must always be borne in mind that this also could increase in the future.

Apart from the economic and self-interest approach to market statistics normally taken by companies there is also the question of the technical problems of producing statistics of value to underwriters. Actuaries traditionally prefer to look at risk factors as related to units of exposure rather than to premium, but it is clear from the survey of the rest of the world that apart from Motor insurance, exposure is usually related to premiums. In Workmens Compensation, where it might be thought that one workman could be taken as the unit of exposure, the fact that the rating structure is directly related to payroll in virtually every country (though in some cases turnover can be used) has meant that what might have been an obvious unit of exposure is ignored. Once the basis for consideration of statistics is premium difficulties immediately arise in ensuring that, firstly, premiums charged are as per the rating structure being tested and are not variations made on commercial or other grounds, and, secondly, in any period of twelve months it is likely that a change in rating will mean that the portfolio will include policies where the premiums have been charged on different bases. Indeed, if calendar year bases were taken in looking at Motor insurance in the UK at the present time it is likely that many companies would have renewed policies on two, or even three, bases whilst the premiums earned brought in from earlier years could add to the number of bases used. When consideration is given to market statistics consistency is required between the practices of companies both in the charging of premiums and in recording losses. In the latter case even if the unit of exposure can be agreed as the base instead of premiums on the claims side consistency is needed in the practice in respect of nil claims, and even more important in the estimation of outstanding losses. In a period of changing rates of inflation it becomes immensely difficult to obtain agreement on the level of inflation to be incorporated in outstanding losses, including IBNR loss reserves, in each year ahead over a period which could be as many as five years or longer. Even when these problems have all been solved

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or at least agreement reached on an acceptable compromise, the problem arises of ensuring that data is kept accurately on computer or other files before being amalgamated to produce market statistics - a problem which MRSB have had experience in tackling.

Actuaries are not only interested in producing information of direct value to underwriters. There have always been a number of actuaries who are interested in more fundamental research, mainly of a mathematical nature, into the underlying forces affecting insurance business, much of which can be expressed in statistical terms. In General insurance ASTIN, particularly through continental actuaries, has spent a lot of time on risk theory in its various aspects. In our own discussion we have considered that it is desirable that we should not treat this as more than a very limited part of the actuary's contribution, since we believe that our practical contributions are likely to be of far more value than those in the theoretical area. Nonetheless, some actuaries may be interested in using statistical information produced either in this or other countries for testing theories they hold on General insurance, and it could be interesting to hear of any ideas in this area. It is doubtful that more than very limited information could be made available from UK sources, but if any actuaries wish to proceed in this area it should be possible to find some information sources for them.

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COLLECTIVE RISK STATISTICS - BELGIUM

The U.P.E.A. in Belgium collates statistics in three classes of business at the present time. These are :

1. Compulsory Motor Third Party
2. Industrial Fire
3. Workman's Compensation

1) Motor Third Party (Statau - Statistique Automobile)

Tabulations are produced showing analyses by sub-classes of vehicle (cars by various types of use, sports cars, lorries, and also cars by size) at a series of years of development for each origin year :

Frequencies of claims

Average Cost of claims

Pure Premium

Numbers of New Vehicles

Vehicle Years

Numbers of Claims

Total Cost of Claims

Total Claims Reserve

This information is produced for each contributing company and for the market as a whole.

2) Industrial Fire (Statin - Statistique Incendie)

This is the scheme where information is collated according to the sub-divisions of the tariff and tabulations are circulated showing for each contributor and for the industry claims experience analysed by buildings/contents, range of sum insured, such information as numbers of claims, average cost of claims, pure premium, actual premium.

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3) Workman's Compensation

The exercise here is less well developed and consists of run off statistics based on a sample of proprietory companies. There are also official statistics on accidents and claims including costs analysed by broad types of claim which are used by U.P.E.A.

COLLECTIVE RISK STATISTICS - FRANCE

So far it has been possible to investigate only the statistical activities of the Association Generale des Societes d'Assurance Contre les Accidents in respect of Motor insurance business. It is understood that a similar agency exists in respect of Fire business and produces collective statistics analysed by risk classes of premiums, sums assured and claims. It is believed also that other agencies may exist which produce statistics on behalf of the non-proprietary offices.

The A.G.A. is responsible for a number of complex statistical exercises. These fall broadly into two groups.

Statistics based upon a 100% sampling of the more important companies carried out annually. This survey gives general information relating to the broader characteristics of the collective account and their current development. Details are not available at present. It is intended to augment this exercise with a limited range of information collected monthly, in order better to survey current developments in times of rapid change. It is the intention, for example, to relate the development of the separate components of claim cost (material damage and bodily injury) to current economic indicators.

Otherwise every three or four years a 2% sample is carried out of the portfolios of all of the companies comprising the A.G.A. This sampling is on a very detailed basis and takes account, for example, of a large selection of risk factors including some which are not in current use as rating factors. The factors employed include the equivalents of all of those currently used in this country. Claims experience is divided between accidental damage and bodily injury. The analysis of this claim experience is carried out by two different approaches: one based upon the elimination of association of rating factors by the use of standardised populations: the other a method of multivariate analysis based upon the assumption of appropriate distributional forms for the distributions of claim cost and frequency.

On the results of the above exercises the A.G.A. recommends the tariff to be followed by its component companies and negotiates on their behalf with the authorities.

COLLECTIVE RISK STATISTICS - GERMANY

Claim Statistics in the field of German Non-Life business, which represent a major portion of the Market Volume

Industrial Fire/Fire LOP

The so-called Kontenstatistik is divided up according to classes of risk (Konten). This division into classes of risk is, however, based on one risk factor only, namely the type of production or occupancy.

The Kontenstatistik contains information on year, class number, number of contracts, sum insured, premium, premium expressed in ‰ of sum insured, number of losses, number of losses expressed in % of the number of contracts, overall loss amount in DM, overall loss amount in % of the premium, overall loss amount in ‰ of the sum insured. Similar statistics are available for the simple and agricultural Fire business too.

Monthly Fire Loss Statistics

These supply information on major losses exceeding a certain size, including the risk class number, loss amount, code indicating the cause, location and date of the loss. Details of the sum insured, premium, etc. o of the affected risk are not supplied.

Statistics on the Cause of Fire Losses

These include the number of losses and overall loss amount for each year, divided up according to cause of loss (lightning, spontaneous ignition, explosion, firing and heating installations, machinery, electricity, combustible materials, other sources of fire, light and heat, arson, children, unknown causes).

Statistics on the Miscellaneous Branches

Monthly Loss Amount Statistics for the branches Water Damage, Windstorm, Burglary, Theft; include details of year, month, number of losses, loss amount.

Monthly Individual Loss Statistics (major losses) include details of risk code number, loss amount, code indicating cause, location of loss.

Universal Statistics of the Property Insurers' Association

These include the gross results of the entire direct insurance business conducted in the Federal Republic of Germany and West Berlin, divided up according to Fire/Fire LOP, Windstorm, Burglary/Theft, Water Damage, Plate Glass, Machinery, Hail, Livestock. Some of the individual branches are sub-divided into smaller classes of business.

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The statistics show for each sub-group and for the whole the premium income, earned premium, increase in premium income compared to the previous year, claims, loss ratio.

Annual Report of the Supervisory Office

This contains a summary of the balance sheet figures of all the insurance companies. It also shows for each of the branches the premium income before and after calculation of the reserves and the loss amounts paid out or set up in reserve.

Investigatory Report of the Property Insurers' Association

Apart from the details of premiums and losses already mentioned, this report also contains information on the running off of the loss reserves and, above all, on costs (agents' fees, loss settlement costs, fire protection tax, loss prevention costs, other administrative costs).

Overall Statistics on Motor Insurance

These statistics are divided up into Motor TPL, Full Own Damage insurance with and without retention of the insured, Partial Own Damage insurance (Fire, Theft, etc. only).

Within these categories distinctions are made according to type of vehicle, capacity (different criteria are used for the different types of vehicle, e.g. horsepower for private cars, tonnage for lorries, number of seats for buses, etc.), no-claims category and tariff group (in the case of private cars: town or country; in the case of commercial vehicles: local, long distance or on site only).

For each of these individual risk groups information is given on year, yearly unit, number of losses, loss expenditure (DM), loss frequency, average loss amount in DM, loss expenditure per unit (DM).

Statistics on General Third Party Liability Insurance

These statistics are divided into sixteen different tariff groups: Industry, Trade, Additional Risks, Agriculture and Forestry, Livestock, Hotels and Restaurants, Hospitals and Sanatoria, Architects and Building Engineers, Other Self-Employed Engineers, Surveyors, Building Officials, Clubs and Societies, Building Principals, Home and Landowners, Private TPL risks, Schools and Universities, Local Councils, Entertainers and Places of Amusement, Watercraft, Hunting TPL risks, Water Pollution TPL risks.

The statistics include details of type of risk and/or business, year, number of yearly units, loss frequency per 1,000, loss expenditure in DM, calculated premium amount required to cover losses (DM) according to statistical loss experience.

COLLECTIVE RISK STATISTICS - HOLLAND

The Federation of Dutch General Insurers (N. V. V. A.) has set up a Unit something along the lines of the M. R. S. B. in this country which is collating Motor insurance experience particularly in respect of Private Cars. The approach is in some ways similar to that of the M. R. S. B., but results are produced in a form which is directly relevant to the needs of underwriters in subscribing companies. Thus, for example, from time to time what is in effect a tariff is circulated (on a single sheet of paper) showing an overall rate, together with the additive percentage modifications appropriate to each level of each rating factor. This has involved model building on claim cost per vehicle year followed by a mathematical programming exercise in order to determine a practical implementation of the modelled experience. Plans are in hand for the setting up of the collective risk statistics exercise in Industrial Fire insurance.

MARKET STATISTICS - U.K.

The purpose of this note is to summarise the current position in respect of statistics produced in the UK market and their possible availability for actuarial research.

1) Fire Insurance

The statistics of large losses are produced by the FPA, and these are defined as losses in excess of £20,000. They are intended to provide a base for PR work and are used in estimating monthly fire loss figures issued to the press. There should be little difficulty in obtaining details of these figures.

The Department of the Environment are intending to collect further figures through loss adjusters on a sample basis covering all fire losses from about £100 upwards. These will be used by them in conjunction with the FPA figures in considering the siting of new fire stations. Discussions are taking place between the Department and the BIA as to the possibility of making the figures available to the BIA, and it is likely that in the future we will be able to obtain information from such figures, though it will be at least another twelve months before anything is available.

Apart from the loss figures the only other market information which is collected is that of the FOC. Tariff offices submit information on premiums and losses and are in process of moving towards complete sums insured information as well. It is sub-divided by various trade classifications. The information is clearly treated as confidential and is unlikely to be made generally available. If, on the other hand, propositions are put forward for examining this information in a way which is likely to produce practical results it is not beyond the bounds of possibility that the FOC could co-operate through their statistician. However, it must be realised that the figures are basically produced for rating purposes and as such may not be of all that much value for analytical work.

2) Consequential Loss

The only information available in respect of Consequential Loss business is that collected by the Tariff and the same comments apply to this as to the FOC figures.

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3) Employers Liability

This class of business was originally tariff-rated and at that time the tariff collected rating statistics. Following the end of the tariff there has been no market body of information and this led to consideration of the possibility of producing market statistics through the BIA. Investigations took place under the control of the BIA Statistics Panel and the position has now been reached that a number of the offices, including most of those with a substantial Employers Liability portfolio, have indicated their interest in co-operating in producing viable market statistics of real practical use to underwriters. The present situation is that a working party is looking at the details of producing a practical scheme.

Assuming a practical scheme is produced it will be operated on a voluntary group basis within the BIA. It follows that the information will only be available to the members of the voluntary group. However, with the large support this project is receiving in the market it is likely that the majority of offices would be involved and this should make it possible for some of the information to be used for analytical work by disinterested parties.

4) Other Liability business

There is virtually no information currently available for Other Liability business. However, the BIA Statistics Panel intend to consider in the near future the feasibility of a market scheme on the lines applicable to EL business. There are grave practical doubts as to the feasibility of this, but if this problem can be met there is likely to be considerable desire on the part of the market to co-operate in an area where at the present time rating is incredibly difficult due to the lack of viable statistics.

5) Household

This former tariff class has also been the subject of a BIA study and a voluntary group has now been set up to collect rating statistics. It will be some time before any useful information is available but it seems possible that a selected group of interested actuaries from the members of the voluntary group could obtain this information in due course for study. Mr. Hey has taken the leading part in setting this up.

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6) Motor

As a separate sub-committee is studying this subject it is not necessary to consider Motor statistics except to note that market co-operation has taken place through MRSB.

7) Marine and Aviation

Notwithstanding comments made at the meeting at the Institute of Actuaries on 28th April it has not proved possible to trace any useful market statistics collected through ILU or the Aviation Insurance Offices Association.

Sources of Experience Statistics in the U.S.

In the United States, various compilations of underwriting and marketing statistics are produced on an industry-wide basis or for a major portion of the industry. These statistics are collected primarily for two purposes: to satisfy the statutory requirements created by the insurance regulatory laws of the various states, and to provide a basis for the underwriting and rating of risks. In addition, financial and overall operating statistics for the industry are compiled from published statements by several financial service organisations.

The American term 'line' of insurance is synonymous with the term 'class' as used in the U.K., and these terms will be used interchangeably throughout this note. Unless indicated otherwise, the note will concern the classes of insurance included in the following D.O.T. policy classes: Liability, Motor, Pecuniary Loss, Property and Transport. Allowance should be made throughout for differences between U.S. and U.K. insurance practices.

A brief description of certain aspects of the insurance industry and regulatory system in the U.S. will provide a framework for an understanding of the statistics which are collected. Insurance regulation in the U.S. is, for the most part, vested in the individual states. Therefore, the degree and manner in which insurance is regulated varies from state to state and by class of business within each state. Consequently it is difficult to give a complete picture of the regulatory environment and the word 'generally' will be used frequently. For example, several states operate monopolistic 'state funds' for Workmens' Compensation (Employer's Liability), while the other states require all insurers to use a uniform manual (tariff) rate for this class. Several states require uniform rates in one or more other classes. For other classes, most states currently operate under 'prior approval' by which all rates must be approved by the state regulator prior to their adoption. An increasing number of states have so called 'open competition' laws under which for most classes the Insurance Department must merely be informed of rate changes. Naturally, the extent to which rates must be statistically justified differs under the two systems.

Notwithstanding the previous paragraph, there is a degree of uniformity between states. The insurance laws of the individual states are broadly similar as a result of the co-operate efforts of the State Insurance Commissioners. Most importantly in the context of this note, the format of the statutory insurance financial statement (the 'Annual Statement' blank) and the statutory method of expense accounting are almost identical for all states, (some states require additional supplements to the Annual Statement). One other important aspect of the consistency between state is that each Commissioner is charged with the responsibility of ensuring that the insurance laws of the state are being observed. To help in the fulfilment of the duty, he is empowered to collect underwriting statistics of each insurer licensed in the state. The Commissioner may promulgate (within certain limits) a statistical plan to be used by all insurers in reporting the statistics and may authorise non-governmental agencies to help in the collection of the statistics. In practice, the bulk of these statistics are collected by rating bureaux whose functions will be examined presently.

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The Role of Rating Bureaux

The closest counterpart in the U.K. to the American rating bureaux is the FOC. Rating bureaux in the U.S. are, in general, managed and financed by member companies. Other fee paying insurers, known as subscribers, use the services provided by the bureau. Membership and subscribership is open to all insurance companies and may be required in certain states for certain lines. Rating bureaux collect statistics (for rate-making as well as for the statistical reporting purposes described above); determine 'manual' (tariff) rates; formulate and supervise the use of rating plans by which manual rates are systematically modified for application to individual risks; and secure approval for manual rates and rating plans (where required by law) by making 'rate filings' with the states on behalf of companies using the bureau rates and plans. The adoption of bureau rates and rating plans are (in general) optional for members and subscribers of the bureau. Rate filings are usually accompanies by extensive statistical and actuarial supporting evidence. A company may use a bureau as its statistical reporting agent (i.e. to satisfy the statutory requirement in the previous paragraph) without being either a member or subscriber of the bureau. Those companies must, however, agree to supply their statistics in the format used by that bureau and which has been approved by the individual commissioners as being acceptable for their purposes.

The principal rating bureau for most classes of business is the Insurance Services Office (ISO). The statistics collected by ISO are available to its members and subscribers in the form of compilations. These form the most broadly based underwriting statistics available. Most of the subsequent discussion will concern ISO statistics. The National Council on Compensation Insurances ('National Council') is the statistical agent and rate-making bureau for Workmens' Compensation insurance in about half the states. Other states are serviced by smaller bureaux or by ISO. Bureau membership is generally compulsory for this class. The National Association of Independent Insurers (NAII) is another statistical reporting agent. Since it does not also function as a rate-making organisation, the NAII statistical plans are less detailed than those of ISO, and compilation of data submitted through it is not generally available.

In the case of ISO, the statistical plans are developed by the Statistical Committee after due consultation with the Actuarial Committee and the appropriate 'line' committee(s) responsible for the class(es) of insurance included in the individual statistical plan. Membership on each committee is composed of officials of member companies on a rotating basis. The staff of the committee (employed by the bureau) co-ordinates the work of the committees and undertakes studies authorised by the committees as well as performing the day-to-day work of the bureau. Changes to the statistical plans and 'Special Calls' (described later) are usually initiated by the

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Actuarial Committee when some changes in the rate-making method are contemplated, or at the behest of the states when changes in statutory requirements are made, or as a result of new types of coverage being introduced.

The statistics which are submitted to the states by the bureaux in their role as statistical agent are not published. However, broadly similar compilations are published by the bureaux for the use of their members and subscribers. Bureaux also submit some of these statistics as part of rate filings and as such they become a matter of public record.

The statistical plans used by ISO differ for the various lines of insurance in the detail in which the information is reported. Risk information (premium and exposure) and losses are reported on either a unit basis (a separate record being submitted for each policy and each loss) or an 'aggregate' basis (all risks with similar classification and coverage details being grouped together, and three separate records - for premium and exposure, paid losses, and outstanding losses - are produced for all risks within each classification). The classification details which are coded parallel those used in rate-making and the rating of individual risks, and of course set a limit on the amount of detail contained in the published compilations. In general, each 'line' of business is divided into various 'forms' (policy types or coverage types) which are further sub-divided into classification (type of construction, industry group, age of driver, etc.). Other principal rating factors include deductible and limit of indemnity. Each state is divided into territories which are usually compact geographic districts. Experience is compiled in groupings of various of these sub-divisions or combinations thereof. The experience compilations usually report Premiums (Written and Earned), Units of Exposure (where appropriate), Losses (Incurred and often, in addition, Paid), Incurred Loss Ratio, and (where appropriate) Loss Frequency and Loss Cost per Exposure unit. The number of years of experience and the ways in which risks are grouped into years ('type of year' described below) in each compilation conforms to the rate-making method currently in use for each particular class. Three 'types of years' are currently used in one or more classes. They are calendar year (accounts basis premium and losses) accident year (losses, assigned to year of origin as in Department of Trade return Schedule 3 - Part III, premium to year in which earned) and policy year (losses and entire premiums assigned to the year in which the policy went into force). The losses which are shown on the compilations may have first been adjusted for loss development and loss adjustment expenses (claims expense transfers) not included in the reported loss. The adjustments are based on factors computed by the bureau in accordance with prevailing rate-making practices.

For Liability classes (including Motor), manual rates are quoted for 'basic limits' (a fixed limit) of liability. Rates for higher limits are determined by applying multipliers to the basic limits manual rates. Consequently, in the experience compilations for the Liability lines, losses are divided into basic limits (including all 'allocated' loss adjustment expenses - legal fees, etc.) and excess loss components.

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Property class losses (including Auto-Physical Damage) which are associated with a catastrophe as identified by ISO are so indicated in the loss reports. Total losses for each catastrophe by class are published by ISO. A separate catastrohpe element enters into the rate-making procedure for Property lines.

As an example of the range of compilations published by ISO, the following compilations are available for Homeowners (Householders) for each state :-

(1) By amount of insurance (in bands), for two groups of policy forms, for latest one and five year periods.

(2) By cause of loss, for two groups of policy forms, for latest one and five year periods.

(3) By type of construction and quality of fire protection :

  (a) by territory groupings, for two groups of forms, for latest one and five year periods.

  (b) for entire state, for each policy form separately, for latest one and five year periods

All Workmens' Compensation experience in a state is reported to the rating bureau licensed in that state for that line, which forwards the required data to the Commissioner and uses the experience in its rate reviews. The data which is distributed to members of the National Council is divided into industry class or groups of similar industries and shows for each of the latest five policy years: the payroll in the class and the loss and loss adjustment expense incurred divided into 'Serious', "non-serious', and 'Medical only' cases. The National Council statistical plans require unit reporting of the premium and payrolls exposure for each risk, and individual reporting of losses in excess of $750. Losses below $750 are summarised by industry class and type of loss. As estimates of outstanding losses change and claims are settled, these changes are reported on an annual basis. Further detailed reports of 'Serious' cases are also required. The statistical plans in non-National Council states are similar, if not identical, to that described above.

The individual state Compensation Boards annually publish overall underwriting and expenses statistics for all Workmens' Compensation business written in the state. The New York Insurance Department also publishes similar statistics for the competitively rated Statutory Non-Occupational Disability Insurances written in that state.

The Surety Association of America, which is the rating bureau for Contract Guarantee and Fidelity Guarantee Insurances, collects experience from all companies writing those lines. It publishes Earned Premium, Losses Incurred, and Loss Ratios separately for:companies which use Association rates, all other companies, and total for all companies. The data is shown by form and classification on a country-wide basis.

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The Non-Voluntary Sector

Separate statistics are collected for the 'non-voluntary' sector of the insurance market. This refers to the special facilities established by each state for risks which are not able to obtain coverage in the ordinary (voluntary) insurance market. Such facilities, which take a variety of forms, may exist for one or more lines of business in a state. They are most common for Motor and Property classes. The authorities which administer these facilities annually publish compilations of their experience. The collection of the statistics varies with the organisation of each individual plan. Where the servicing of risks lies with individual insurers, reports are submitted to the administrators of the plan or to the insurer's normal statistical agent. In other cases, all work is done directly by the administrative body which is able to compile statistics directly from its records.

Expense Statistics

Expense statistics for rate-making purposes are taken from the Insurance Expense Exhibit (IEE) which is a supplement to the Annual Statement. No additional expense statistics are ordinarily reported to the states. Since the late 1940's expenses have been compiled on a uniform basis by all companies. The IEE divides expenses into five functional groups (e.g. loss adjustment, investment) and twenty-one expense classification types (e.g. salaries, commissions, rent). The expenses in each expense group are also distributed into the individual lines of insurance. Since the IEE is part of the Annual Statement, these statistics are freely available. Expense compilations for individual companies and for all principal companies combined are published by private statistical services, and New York State publishes aggregate expense statistics for all companies licensed there.

Special Calls and Special Reports

From time to time a rating bureau may request its members to submit data not ordinarily collected. This is termed a 'Special call' and may be used to refine the rate-making method, to collect specialised expense data, or as a result of a special request made by one or more states (perhaps to be used in consideration of a rate filing). For example, Special Calls of expense data by size of risk are used to determine schedules of premium credits which are allowed for large risks. Special reportings are currently being made to ISO of all Fire losses in excess of $50,000. This will be used in future studies of the 'tail' of the size of loss distribution for this class and may eventually be incorporated into the rate-making procedures. In response to requests from the Insurance Commissioners the so called 'Fast Track' system for Private Passenger Motor Insurance was instituted. This system, which was developed as a result of the energy crisis, makes information available on a more timely basis than ordinarily. The leading Motor insurers submit monthly premium, exposure, and paid loss data by type of coverage shortly after the end of the month. ISO is considering continuing to collect this information after the states no longer require it.

Some problems are encountered in having one statistical plan fill the dual purposes of providing data for both rate-making and for state regulators.

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A principal problem is in the reporting of premium. Manual rates are often modified for individual risks by application of rating plans mentioned previously. Also, members and subscribers often use rates other than those published by the bureau. Therefore, the actual 'collected premium' reported in the statistical plans will often not be that which would have been collected had unmodified manual rates been used, and hence it does not always provide an accurate basis from which to test current bureau rates. Where exposure units are also reported, this difficulty may be overcome since the premium that would have been collected had manual rates been used may be determined. An alternative method is currently being used in some Property classes. In response to an annual Special Call, each bureau company reports its percentage deviation from bureau rates for each classification in each state. Such deviations are often on a uniform percentage basis over all classifications in a state.

In the past, various studies have been commissioned by the Federal Government and insurance trade organisations. Those studies provide information of value for rate-making or underwriting purposes. Prior to the initial adoption of 'no-fault' (first-party) Motor insurance legislation, separate studies were undertaken by the American Insurance Association (AIA) and the U.S. Department of Transportation (DOT) to determine the impact of such legislation on insurance pricing and to develop a data base from which costings could be made. Details of closed Auto Liability claims during fixed time periods were submitted to the two organisations by selected insurers. Various tables were eventually published. These tables showed :-

(1) accident frequency by type of accident (to indicate what portion of claims would still be subject to third-party liability actions under the various limited 'threshold' no-fault plans which were being proposed), and,

(2) the amount of monetary loss incurred by victims of auto accidents divided by type of loss (e.g. wage loss, medical costs).

The results of these studies were valuable in the development of no-fault legislation and the initial rates for the coverage.

One additional source of data is what I will call 'Special Reports' required by one or more states. The 'Fast-Track' system for Auto experience described earlier may be considered an example of this type of report. The number of such reports has been increasing over the past few years. These are often in response to special problems or new developments such as the energy crisis, no-fault insurance, and the more recent crisis in medical malpractice insurance. There is no general rule as to the form in which the statistics collected are eventually published, if they are published at all.

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The no-fault laws in several states require the Commissioners to collect appropriate data. The data that is collected ranges from a breakdown of premium, losses and expenses by policy coverage, (no-fault, liability, etc.) to a detailed reporting of losses by type of no-fault benefit (medical, wage loss, etc.).

Several states currently require a report of each medical malpractice claim filed in the state. A central national reporting system is being planned.

The Annual Statement

To complete the picture of the insurance statistics which are available in the U.S., a brief description of the statutory Annual Statement follows. Although the Annual Statement contains primarily financial statistics, and what data of an underwriting nature it does contain is not sufficiently refined for rate-making purposes, the Annual Statement does give the most comprehensive picture of the state of the American insurance industry at any time.

The Annual Statement consists of a Balance Sheet, Statement of Income and various supporting schedules and supplements. The most important supplement is the Insurance Expenses Exhibit described previously. Statements are produced for each company, and since 1973 also on a consolidated group basis. All data is on a country-wide basis except for premiums, loss reserves and dividends which are also shown divided by state for each line of business. The principal Annual Statement schedules are now also submitted in computer legible form. This will enable the creation of a data base for use by Insurance Commissioners and other interested parties.

Following is a list of the principal supporting schedules contained within the Statement :-

Premiums	=	written, earned, and unearned - by class
Losses	=	paid, outstanding, incurred, IBNR - by class
Assets	=	detailed listing
Reinsurance Contracts	=	detailed listing
Expenses	=	by class and group
Loss Reserves	=	five-year run-off for Liability classes - by class two-year run-off for all other classes - by class

It should be noted that special statutory insurance accounting methods are used throughout the Statement.

The Annual Statement is a matter of public record and as such it is freely available. Several private statistical publishing houses annually publish extracts and compilations of the Statements of principal insurers.