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RECENT DEVELOPMENTS IN THE UNITED KINGDOM

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SUMMARY

The Report begins by discussing the origins of the actuarial profession in the United Kingdom and the recent growth in its size.

The aim of the Report is to describe the more significant recent developments which affect the actuarial profession in the U.K. These developments are discussed under the following headings:

- Planning,
- Education,
- Life assurance,
- Pensions,
- General insurance,
- Relationships with actuaries overseas,
- Groupe Consultatif,
- Mortality and sickness insurance statistics,
- Investment indices.

Within each heading there is a discussion of current topics and, where appropriate, of possible future developments.

1. INTRODUCTION

ACTUARIAL Science in the United Kingdom may be considered to have its origins in the work of a number of eminent eighteenth century mathematicians and scientists. The most famous of these early pioneers was possibly William Morgan, actuary (from 1775 until 1830) of the first life office to be established on a scientific basis. Until 1845 the profession was very loosely controlled and concerned principally the chief officers of life assurance companies, acting in their capacity as managers, who formed a group which later became the Actuaries Club. In 1848, however, the Institute of Actuaries was formally established, having emerged from a rival grouping of younger actuaries; years later, the members of the Actuaries Club finally joined the Institute. The founder members comprised 94 Fellows and 37 Associates. From this embryo the profession has grown extensively.

In 1856 the Scots in the Institute decided to form the Faculty of Actuaries in Scotland, and to this day the Faculty remains the Scottish counterpart of the Institute. In 1868 the Faculty received the honour of being incorporated by a Royal Charter. The Institute was similarly honoured in 1884. The Institute and

the Faculty are professional bodies, in that they have high and uniform entrance standards, provide Guidance Notes, and lay down for their members codes of conduct which are supported by disciplinary procedures.

Throughout the whole of their existence the two British actuarial bodies have striven to maintain professional standards which they guard jealously, since failure to uphold standards could bring the profession into disrepute—with resulting government action and further legislative control. Within the U.K. a significant feature of the profession is the extent to which it has developed a partnership with the supervisor in relation to life assurance and pensions. We believe that this practice exists to a greater extent in this country than in most others and that it could be spreading into non-life insurance.

In recent years the size of the U.K. actuarial profession has increased significantly. The Institute and the Faculty together currently have nearly 4400 Fellows, of whom approximately 75% are U.K. based. The Institute has some 3600 Fellows worldwide as compared to the Faculty's 770.

During the years 1981 to 1991 the number of Fellows grew by 50%. This is indicated by the figures in the following table which shows the number of members by category of membership, for the Faculty and the Institute combined. The table also shows that over the same period the number of students increased by 70%.

Year	Fellows	Associates	Students
1981	2935	1148	2572
1986	3262	1054	3305
1991	4392	660	4375

In 1991 there were approximately 850 recruits to the profession (i.e. new actuarial students). More than 60% of these came from the U.K., but it should be noted that a significant number of recruits were from overseas (11% from South Africa and 18% from New Zealand and Australia—many Australian students go on to become Fellows of the Australian Institute).

The U.K. profession is conscious of its role in an international context, and an increasing number of actuaries are involved regularly in European activities. Both the Faculty and the Institute belong to the *Groupe Consultatif des Associations d'Actuaires des Pays des Communautés Européennes* (see Section 8).

2. PLANNING

The Institute and the Faculty have formed a series of joint committees to assist them in the interface with government and in discussing professional issues of importance. In 1990 a Planning Joint Committee was established for the first time. Simultaneously work was put in hand to develop a joint Mission Statement together with a corresponding set of strategic objectives. After consultation with all the other committees of both bodies and a detailed analysis of strengths, weaknesses, opportunities, and threats, a strategy document was produced and

submitted to an historic joint meeting of the two Councils held in York in March 1991. This document, entitled *Strategy for the 1990s*, was subsequently approved by the two Councils and distributed to members through the medium of *The Actuary* magazine.

The Mission Statement, summarising the overall objectives of the profession in the U.K., is as follows:

To develop the role and enhance the reputation of the actuarial profession in providing expert and relevant solutions to financial and business problems, especially those involving uncertain future events.

In order to achieve its Mission the profession is currently addressing the following five specific areas of activity: standards, education, professional development, standing and influence. For each of these areas of activity a strategic aim has been developed as follows:

Area of Activity	Strategic Aim
Standards	To achieve the highest professional standards of integrity, expertise and relevance in the giving of actuarial advice.
Education	To maintain the high educational standards necessary for the exercise of the profession and to promote research and extension of relevant knowledge.
Professional Development	To encourage and promote professional and related personal development of members.
Standing	To raise awareness, understanding and esteem of the profession and to promote a positive image.
Influence	To promote the influence of the profession in all areas where actuarial opinions would be of value.

Each of these strategic aims is backed up by a series of specific objectives.

3. EDUCATION

A further area of increased (and continuing) co-operation between the two professional bodies in the U.K. has been education. The Institute had recently carried out a far-reaching education review, an issue which the Faculty was also addressing. Following the joint meeting of both Councils it was decided to aim for closer cooperation on education systems. Consequently, a new Education Joint Committee has been established with the aim of having significant changes in syllabus and courses in place for the examinations of April 1994. Co-operation between the two professional bodies is important to avoid wasteful duplication of effort, and ensures that the profession as a whole in the U.K. maintains equivalent educational standards.

Continuing Professional Development (CPD) has been the subject of much recent extensive discussion. The actuarial profession, unlike some other professions in the U.K., has not previously issued any standards or guidelines in this connection, but has relied on individual members to ensure that they keep abreast of current developments. However, the increasing complexity of

professional work and the rate of change in the environment in which many actuaries now operate make it vital that actuaries can clearly demonstrate that they have a full grasp of current issues and the techniques relevant to their sphere of work. The stage has probably now been reached where any profession without a formal programme of CPD may lack credibility in the eyes of its clients.

The pace of recent change is such that anyone who has not kept in touch with events will quickly have lost the ability to give relevant and accurate advice. The increase in the number of Guidance Notes produced in recent years reflects the fact that it is no longer considered adequate to leave matters entirely to the discretion of individual actuaries. The final push for the development of a formal approach to CPD came from the Department of Trade and Industry in connection with a proposal to introduce 'Practising Certificates' for Appointed Actuaries (see below).

There have been interesting international developments of an educational nature. The U.K. profession has responded positively to requests from several countries in Eastern Europe for assistance in developing a wider understanding of actuarial science. The Institute and the Faculty jointly coordinated the provision of staff for a one-year postgraduate Diploma course in Actuarial Science, held during the academic year 1991-92 at the University of Economic Sciences, Budapest. Developments in other countries are currently under discussion.

In relation to the education of actuarial students, a PC-based life office management game was made available to many Faculty students in 1990. The game, organised through the Student Societies and run in the form of a competition extending over several months leading up to the professional examinations, had team entries and was designed to increase understanding of the problems relating to the actuarial management of a life office. The game is now also available to Institute students.

4. LIFE ASSURANCE

Actuaries in the U.K., as in most countries, fulfil a very broad range of roles in the financial management of life assurance companies. In the U.K., however, the position of Appointed Actuary is set apart by legislation and practice. Under insurance legislation, each life company must appoint an actuary who will prepare an annual report for the company's directors quantifying the company's liabilities and confirming the company's solvency. The supervisory authority, the Department of Trade and Industry (DTI), must receive full details of the Appointed Actuary's report, including the methods and assumptions adopted.

Although the preparation of an annual report is one of the Appointed Actuary's primary statutory duties, the role of the Appointed Actuary is much broader than this in practice. In its widest sense, the role is to monitor the financial well-being of the company; in particular, the Appointed Actuary has a professional duty to be satisfied at all times as to the solvency of the company and

to advise the directors of any potential concern. The Appointed Actuary will also advise on premium rates, policy conditions and declarations of bonuses to with-profits policyholders.

A booklet, designed to explain the role of the Appointed Actuary to non-actuarial directors and other senior managers in life offices, was produced by the profession and widely distributed. Regular meetings of Appointed Actuaries are held to discuss a number of major issues in life assurance.

Part of the rationale behind the establishment of a system of Continuing Professional Development (CPD) was the proposal, contained in a 1990 Consultation Paper, *Strengthening the Appointed Actuary System*, from the DTI, that 'Practising Certificates' be introduced for Appointed Actuaries of life offices. This proposal has been widely discussed within the insurance industry and welcomed by the profession, which is currently considering the basis on which the certificates will be issued. It is likely that such certificates will be introduced in 1992. Participation in CPD will be one of the criteria, *inter alia*, for issue of certificates to Appointed Actuaries. It is envisaged that initially certificates will be issued to all those who currently act as an Appointed Actuary.

Continual consideration is given to the form and content of Guidance Notes (issued by the Institute and the Faculty) affecting actuaries in the U.K., some of which (GN1, GN7 and GN8) relate specifically to the role of the Appointed Actuary. This is particularly necessary, for example, following the proposal to introduce a regulation requiring the Appointed Actuary to certify (in a statutory return to the DTI) whether or not the Guidance Notes issued by the profession have been observed, and to set out any departures from them.

In recent years there have been a number of takeovers and mergers of insurance companies in the U.K., and actuaries have often played significant roles in such events as advisers to the parties involved. Demutualisation and takeovers have been the subject of much lively discussion at recent Sessional Meetings of both the Faculty and the Institute. The issues raised are now being widely considered in further detail.

Another important development was the issue by the Association of British Insurers (ABI) of a consultative document on *Accounting for shareholders' profits in long-term insurance business*. The proposals contained in the ABI document would introduce new accounting practices for proprietary life companies which seek to re-spread shareholder profits more relevantly over the term of individual policies according to the incidence of the risks borne and the work done. Although there is widespread support within the U.K. for the view that the present method of measuring life company profits is unsatisfactory, the actuarial profession has fundamental difficulties of principle with the ABI's current proposals, which are based on the accruals method. Actuaries continue to be closely involved in the discussion of these proposals, which also need to be considered in the context of European Community directives.

All areas of life assurance have seen much activity in the U.K., particularly because of the impact of the Financial Services Act and the activities of the

Securities and Investments Board (SIB) and the Life Assurance and Unit Trust Regulatory Organisation (LAUTRO). Actuaries continue to play an active part in consultations on the disclosure of information during the sale of life assurance policies. The current requirement is for disclosure of with-profits expenses and unit-linked charges expressed as a reduction in yield, but this is under review. A response has been made to the DTI on the Office of Fair Trading report, *The disclosure of information about life insurance products and commission paid to independent financial advisors—the new requirement of SIB*. The profession has been giving further consideration to this subject, particularly in the wider context of retail investments.

Meetings are held with the DTI to discuss current issues of concern to the profession, and at the present time these are particularly related to European Community legislation associated with the Third Life Insurance (Framework) Directive. Informal discussions take place regularly with the Government Actuary's Department on matters of common interest.

5. PENSIONS

Another area of professional life which has seen hectic activity in recent times has been pensions. A growing proportion of the profession in the U.K. is engaged in consulting practice. Many consultants work exclusively in the pensions field. Furthermore, an increasing number of actuaries employed by insurance companies work on pensions issues.

The statutory framework for pension schemes in the U.K. is such that the actuary's role is largely governed by the operation of Guidance Notes, issued by the Institute and the Faculty, which supplement the relevant legislation and regulation. The profession has recently worked closely with the Department of Social Security in developing such guidance and is keen to preserve this relationship, since it provides flexibility and enables actuaries to apply their professional judgement ultimately for the benefit of the pension scheme member.

Three exposure drafts of Guidance Notes have recently been discussed by the profession and two of the notes are now in force. The first (GN17) deals with the Statement of Standard Accounting Practice No. 24 which is concerned with accounting for pension costs. In relation to defined benefit pension schemes, the Statement requires that actuarial calculations of pension cost and of other figures to be disclosed should be made in accordance with the stated accounting principles. The second Guidance Note (GN16) arises from a recommendation in the Occupational Pensions Board (OPB) report entitled *Protecting pensions – safeguarding benefits in a changing environment*. The OPB (which is a statutory body) had proposed that bulk transfer payments, for which the consent of the member had not been obtained, should be permitted only if an actuarial certificate was given to the effect that members would not be adversely affected by the transfer. One of the main concerns of the profession was the treatment of benefits granted on a discretionary basis which were reasonable expectations

rather than definite rights. After much discussion, provision for the inclusion of discretionary benefits granted by custom and practice, now defined as 'additional benefits', was included in the regulations which were made in February 1991.

The Social Security Act 1990 requires, *inter alia*, that defined benefit occupational pension schemes provide guaranteed increases in pensions in payment of 5% p.a. or the percentage increase in the Retail Price Index, if less ('limited price indexation'), on all pensions accruing from an Appointed Day (A-day). It is also now a requirement that after A-day any actuarial surpluses must be used to provide limited price indexation on pensions currently in payment and on pension rights which accrued prior to A-day for members who have not yet retired. Again the profession has been working with the Department of Social Security to produce the appropriate regulations and professional guidance note in parallel. A-day was to have been no later than 1 January 1992, but has now been postponed until the uncertainties arising from the 'Barber' case (see below) have been removed.

A major development in the field of pensions was the judgment, on 17 May 1990, by the European Court of Justice in the 'Barber' case, which concerned the equal treatment of men and women in occupational pension schemes. The Barber case has caused much uncertainty and confusion and it seems unlikely that any definitive answers to the questions it has raised will be available in the near future. It is, however, clear that, in relation to service after 17 May 1990, the rate of future accrual of benefits must be identical for both sexes, as must retirement ages. This has raised the question of the use of unisex factors (i.e. commutation factors, transfer factors, early and late retirement pension factors) in pension schemes and the problems which these will create. The total liability which all this will impose on pension schemes is as yet unknown. It is expected that a test case currently in progress will clarify many of the issues raised by the Barber case.

The U.K. Government has announced that it is to press ahead with the equalisation of treatment of men and women in the state pension scheme and will tackle the problem of unequal pension ages. A discussion paper has been issued by the Government on this and the profession will play an active role in submitting written comments, by discussions with the Department of Social Security, and by public debate. The profession believes that these issues should be addressed sooner rather than later.

The Government is to review the terms by which final salary pension schemes and personal pensions can contract members out of the State Earnings Related Pension Scheme over the quinquennium 1993 to 1998. The Government Actuary's Department is charged with the responsibility for these regular reviews. The profession was actively involved in the discussions and worked closely with the various Departments which make recommendations to Government.

The impact of Europe has also been felt following the issue by the European Commission of a working paper on *Completing the Internal Market for Private*

Retirement Provisions. The profession has made submissions to the Commission with its views on the proposals and has had meetings with the Commission to explain and emphasise its concerns. A draft directive dealing with freedom of cross-border investment and freedom of cross-border management of pension funds has been issued, and another directive dealing with freedom of cross-border membership of pension funds is to be drafted.

6. GENERAL INSURANCE

Over the last few years there have been a number of significant developments affecting actuaries who work in non-life insurance.

In 1989 Lloyd's of London issued a bye-law which requires that an actuarial opinion be given on the reasonableness of any proposal by a managing agent not to close an underwriting year of account at the normal time owing to material uncertainties regarding future liabilities. The General Insurance Joint Committee of the Institute and the Faculty met this challenge by drafting a new Guidance Note, which was subsequently issued as GN14.

Also in 1989 a number of U.K. actuaries were asked to provide opinions for the Non-Admitted Insurers Information Office (NAIIO) in the U.S.A. These opinions related to the reasonableness of the overall company reserves for those companies authorised to write excess and surplus lines non-life insurance in the U.S.A. In order to assist U.K. actuaries who are required to provide such NAIIO opinions, a further Guidance Note (GN18) has been issued.

As well as issuing the above two Guidance Notes the Institute and the Faculty have reviewed GN12, a general Guidance Note for members of the profession working in non-life insurance, which was issued to highlight the profession's approach to working in non-life areas. There have been some preliminary discussions concerning the possibility of a statutory role for actuaries in non-life insurance in the U.K. in certifying technical reserves.

Increasingly actuaries from the U.K. are involved in merger and acquisition activity in non-life insurance as they have been in life assurance for some time. This not only covers the due diligence review of the non-life technical reserves, but also includes in many cases the assessment of the appraised value. The paper by Ryan & Larner presented to the Institute in 1991 was a useful contribution to the development of actuarial appraisal values in non-life insurance.

As the non-life insurance market is becoming much more global in nature, the General Insurance Joint Committee of the Institute and the Faculty is actively encouraging greater liaison between actuaries in a number of countries so as to co-ordinate the professional guidance provided to the respective memberships. It is essential that there be an equivalence in standards to avoid misunderstanding when reports arising in one country are used in another. This is especially important between the U.K. and the U.S.A., because a high proportion of long-term liability business, which has given rise to environmental pollution and asbestos claims, is underwritten in the U.K.

The General Insurance Study Group (of the Institute and the Faculty) continues its activities and holds an annual convention, at which a wide range of non-life insurance issues are discussed.

7. RELATIONSHIPS WITH ACTUARIES OVERSEAS

In 1990, the European Joint Committee was established by the Faculty and the Institute to act as a focal point for issues affecting the profession in the European Community (EC) and to ensure that all such issues were kept under review. The International Relations Joint Committee has a similar responsibility, which extends to countries other than those of the EC.

One of the areas in which the European Joint Committee has made a contribution was in its submission to the DTI on the working document setting out the Commission's views on what should be included in the Third Life Insurance (Framework) Directive. The profession's views were also made known through the Groupe Consultatif which made a submission to the Commission. The proposed Directive, as agreed by the EC Commissioners, was published by the Commission in April 1991 and is currently being considered in detail. The draft Directive aims to enable EC life companies to operate throughout the Community on the basis of a single licence from their home member state, either directly by cross-border services or through a local branch establishment, supervised by the regulatory authority of the home member state. The draft Directive defines principles for the calculation of technical provisions and sets out the types of asset which must cover these technical provisions.

The European Joint Committee also monitored the progress of the proposed Directive on the Annual Accounts and Consolidated Accounts of Insurance Undertakings which the EC Council of Ministers adopted in December 1991.

8. GROUPE CONSULTATIF DES ASSOCIATIONS D'ACTUARIES DES PAYS DES COMMUNAUTÉS EUROPÉENNES

The Groupe Consultatif is an umbrella organisation, established by the national associations of actuaries in the European Community. Not only has it been able to put forward the views of actuaries from all EC countries to the institutions of the EC, but it is also the focal point for the discussion of matters of common interest to the profession in Europe. The Groupe held its 14th meeting in Athens in October 1991. Actuaries from the U.K. participate actively in the work of all of the Groupe's committees (Insurance, Pensions, Financial, and Freedoms and General Purposes).

Following the adoption by the European Council of a Directive on *The general system for the recognition of higher education diplomas awarded on completion of professional education and training of at least three years duration*, an agreement has been reached between the national actuarial associations in the EC. The purpose of the Directive is to allow greater mobility of labour within Europe at professional level and the agreement goes further than the Directive in providing

for mutual recognition by each association of the members of other EC associations who wish to pursue their profession outwith their home country.

The Groupe has been active in organising colloquia and conferences. For example, in 1991 a Summer School for European Actuaries on *The Actuarial Management of a Life Office* was organised on behalf of the Groupe by the Faculty and held in Edinburgh in July, and in October the Groupe ran a colloquium in Lisbon on *Pensions and Social Security*.

9. MORTALITY AND SICKNESS INSURANCE STATISTICS

For more than 65 years the profession has organised the annual collection and analysis of data relating to the mortality of insured lives. This work is done by the Continuous Mortality Investigation Bureau, the Executive Committee of which is a joint committee of the Faculty and the Institute. Since 1972 the Bureau has also been collecting data relating to permanent health insurance (PHI).

The bulk of U.K. life assurance business is covered by those offices which contribute data to the Bureau. Confidentiality is most strictly preserved. Each office receives an annual analysis of its own data, together with a comparative analysis of the 'all offices' data, detailed studies of which are published quadrennially (in a series of *Continuous Mortality Investigation Reports*).

In 1990 the Executive Committee published twelve new *Standard Tables of Mortality*, relating to the experience of offices over the period 1979-82. This was the first occasion on which the Committee had published simultaneously such a complete range of standard tables. The new tables are wide-ranging and relate to male and female assured lives, pensioners, immediate annuitants, temporary assurances, and widows of pensioners. For pensioners there are tables on the basis of both 'amounts' and 'lives'. For pensioners, widows, and annuitants a new model was adopted to incorporate into the tables projected improvements in mortality with the passage of time.

A major innovation was the publication by the Bureau of the PC-based *Standard Tables Program*. The purpose of the program is to allow the user to generate mortality and monetary functions from the newly published tables (and also from certain previously published tables). In addition, the user has the option to adjust the published rates of mortality ($q(x)(adj) = Aq(x+k) + B$) and to calculate functions on the basis of the adjusted rates. The program also acts as a replacement for the previous method of distributing new tables.

In 1991 the Executive Committee published a comprehensive new methodology for the analysis of sickness data and the calculation of PHI premiums. A key feature of the new model is its separate treatment of the inception of sickness, recovery from sickness, and death. (The distinction between recovery and death as reasons for the termination of sickness contrasts with models used in other countries.) The new methodology provides an easier and more consistent approach to the analysis of sickness data.

10. INVESTMENT INDICES

For many years the profession in the U.K. has maintained a Committee which, in association with the *Financial Times* newspaper, has been involved with the development and maintenance of accurate and representative stock market indices. The fruits of this work first appeared in 1962, when the FT-Actuaries share indices were created to cover the U.K. equity market. The so-called All-Share Index now covers about 660 stocks and is designed to reflect the total market. In addition, there are sub-indices for all the industry sub-groups. In each case the index values are calculated daily along with the earnings yield, dividend yield, and P/E ratio where appropriate.

The calculations are all done by the *Financial Times*. The responsibility of the Index Committee is with the design and construction of the indices, including the preparation and periodic revision of the rules and formulae. The Committee also decides the groupings and the choice of the constituents of the indices.

On 1 January 1984 the '*Financial Times*—Stock Exchange' (FT-SE) Index was created based on the leading 100 stocks. This Index has the advantage of being calculated continuously and forms the base for the FT-SE traded option and the London Financial Future indices. Although the profession has no direct responsibility for the FT-SE Index, several actuaries were closely involved informally in its setting up.

In 1976 a revised series of fixed-interest indices was introduced. These cover primarily the British Government market (both conventional bonds and index-linked stocks), but also extend to the corporate debenture and loan markets. For the Government market, in addition to the price indices, there are yield indices for different coupon levels and different terms.

The problem of indices not accurately reflecting the markets they are meant to cover has existed in many markets round the world. This difficulty led to the creation in January 1987 of the FT-Actuaries World Indices. These cover 24 different countries and are calculated daily in terms of the dollar, sterling, the yen, and the deutschmark, as well as in local currency terms. These indices are aggregated into regional indices and finally into a World index.

In all the above cases the indices are calculated on a weighted arithmetic basis, with the weights being reviewed regularly.

The indices have proved to be extremely useful for all purposes of measuring market movements and portfolio performance. In the U.K. they have been widely adopted and have replaced the much less representative indices which existed previously.

The Index Committee continues its work of new development and refinement.

11. CONCLUSION

This Report provides a summary of the more significant recent events affecting the actuarial profession in the U.K. The profession has many regular continuing

activities which, although not mentioned here, are nonetheless essential to the well-being of financial institutions within the U.K. and overseas. Although small in numbers, the profession enjoys a high reputation and faces with confidence the future challenges it will encounter.

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