

## CINQUANTENAIRE OF THE INSTITUT DES ACTUAIRES FRANÇAIS

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A BRIEF account was given in *J.I.A.* LXXV, 149–150, of the proceedings of the Cinquantenaire, together with a photograph of the Address presented by the Institute of Actuaries to the Institut des Actuaire Français. The publication of the *Comptes Rendus*\* enables a fuller account to be given both of the inaugural address delivered by the President of the French Institute, Monsieur H. Auterbe, and of the papers submitted to the business meetings.

In his address M. Auterbe extended a warm welcome to the delegates who had come to celebrate the jubilee of the French Institute, which, he remarked, should properly have been celebrated in 1940 if other events had not prevented it. He recalled that many of those present had visited London the previous year for the Centenary of the Institute of Actuaries, on which the French Institute was modelled, and he then proceeded to an interesting account of the *origins and progress of actuarial science in France* and of the Institut des Actuaire Français. The following is a translation of this part of his address.

Long before actuaries had won the consideration which today attaches to their name (for alongside them the modest compiler of records of the Roman era cuts a truly sorry figure), a Frenchman, the brilliant Blaise Pascal, had discovered the bases of the calculus of probability, on which, later on, the whole of actuarial science was to be built. Coming down from the realms of theory into the realms of practice, Pascal constructed the first calculating machine, thereby providing the means of giving practical expression to his most daring and complicated conceptions. He was, as Quiquet has said, the father of the actuary's two travelling companions—the calculus of probability and the calculating machine. Ought not Pascal, then (who was, moreover, a wide-ranging mystic), to be regarded as the patron of our body?

Pierre de Fermat, the famous mathematician, a contemporary and fellow-countryman of Pascal, also played his part in the elaboration of the calculus of probability. To each of these two forerunners is due the gratitude not only of actuaries, but of all men of science, to whom they not only opened up such magnificent prospects, but also taught a virtue which is essential to the truly scientific mind—I mean that modesty which is wary of views that are too absolute, of affirmations that are too categorical, and which harmonizes so well with the ever-mounting conquests of probability.

Do we not, indeed, see certainty giving way more and more to probability? Whether in the field of scientific discovery, or of philosophical speculations, the mind no longer dares to assert that it is the custodian of definitive truth. Every consideration which has hitherto seemed firmly based on experience and reasoning now appears as a temporary position from which it may be necessary to leap tomorrow towards some fresh stage. Thus, from the infinitely small to the infinitely great, the way is always open to research, and science has never said its last word.

Moreover, Pascal's labours were not to be without a future, and, in 1740, another mathematician, Deparcieux—also a Frenchman—through his very interesting *Essay on the Probabilities of Human Life*, provided them with a sequel that was in direct relationship with actuarial preoccupations. It is to him that is due the first mortality table in France, based on the data of tontine operations. Half a century later, life assurance,

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which was already prospering in England, took root in our country. As far back as 1787 the Compagnie Royale d'Assurances was established and, claiming that by its activities it was doing scientific work, declared that 'in its management it had a brilliant mathematician who was both skilled and certain in his calculations'. That mathematician was Duvillard, the author of the mortality table which bears his name, and which was used here until 1892.

The work of actuaries, which had been interrupted by the revolutionary storm that put an end to the activity of the first French insurance companies, was resumed with the establishment of new societies—La Générale in 1819 and L'Union in 1829—with technicians such as the Comte de Gourcuff and Myrtil Maas, the latter being the author of a very good *Mathematical Theory of Life Assurance*. Then came men such as Kertanguy, Achard and Charlon, names memorable in the history of actuarial science in France. In 1871, Hippolyte Charlon founded the Cercle des Actuaire Français, an institution which, though short-lived, could boast of presidents like Edmond Maas and Léon Say, in addition to Charlon himself.

As I mentioned earlier, it was in 1890, on 30 May, that our present Institut des Actuaire Français was founded. Among the thirty persons who, by the method of co-optation, were invited to take part (not one of them is with us now), special mention must be made of the members of its first committee—Guieysse, the President; Béziat d'Audibert, the Vice-President; Léon Marie, the Secretary; Fontaine, the Treasurer; Cohen, the Librarian and Keeper of the Records; and, of course, the Honorary Presidents, Hippolyte Maas and Léon Say.

On 30 October 1896 the Society's service to the public was officially recognized. With this sanction, it henceforth became numbered among the most prominent scientific bodies in our country, although remaining a private institution.

Without doubt the similarities between the various societies of actuaries now in existence all over the world are very close. It may interest you, nevertheless, to be informed with some exactness upon the conditions of recruitment, working methods, and activities of our Institute.

Recruitment is no longer by co-optation, but rather by way of examination. The titles conferred, when these examinations are passed, are those of Membre Diplômé (Certificated Member) and Membre Agrégé (Fellow) of the Institut des Actuaire Français.

For the Membre Diplômé, the candidate must pass an oral and written examination in various subjects: in the first place, mathematics (differential and integral calculus and calculation of probabilities); then the mathematical theory of life assurance; next, long- and short-term financial transactions; and, finally, social economy. This is a difficult examination; it demands considerable technical and professional knowledge which has to be gained by laborious preparation as well as, in the ordinary way, a period with a life assurance company.

The first person to pass, in 1891, the examinations for the Membre Diplômé—at that time the title was Membre Stagiaire (Probationary Member)—was M. Boudet Maurice, who ever since has been a practising actuary in various insurance companies, notably the Urbaine-Vie, and is now our doyen. His advanced age prevents his being with us today, but he sends his apologies in a charming letter. Will you allow me to send to this veteran of the French actuarial world the homage that we owe to those who preceded us, to whom also we owe something of what we are?

In order to become a Membre Agrégé, the candidate must fulfil two conditions: he must be a Membre Diplômé and must submit a thesis on a subject which is more or less closely allied to actuarial science.

Besides the Membres Diplômés and the Membres Agrégés, the Institut des Actuaire Français admits Honorary Members and Foreign Corresponding Members; these are selected from the most prominent scientific people who, though not necessarily specialists in our work, cannot fail to add lustre and fame to our body. On 31 December last our strength was as follows:

20 Honorary Members	25 Membres Agrégés
24 Foreign Corresponding Members	138 Membres Diplômés.

After giving further details of the work carried out by the Institut des Actuaires Français during the first fifty years of its existence, M. Auterbe proceeded to pay tribute to some of the leading actuaries whose work contributed so largely to its progress, mentioning particularly the four Presidents who were successively at its head during the period—MM. Guieysse, Fourret, Poterin du Motel and Weber.

The following day at the two business meetings the papers prepared for the occasion were delivered by their authors, after an introductory survey by H. VIALA (France). The general subject for discussion was 'The rôle of the actuary in the financing of building construction'. A brief résumé of the papers is given below in the order of their presentation in the volume of *Comptes Rendus*.

- T. R. CHANDLER (England). *Building societies in Britain*, pp. 71-76. A history of the development and expansion of building societies with an account of their legal and financial structure and lending policy.
- B. ROBERTS (England). *Financing of building construction by life assurance offices in the United Kingdom*, pp. 83-90. A survey of the activities of life assurance offices in the financing of private dwelling-houses, flats and commercial buildings by lending on mortgage and by purchase.
- F. DE CREEFT (Belgium). *Les compagnies d'assurances devant le problème du rééquipement immobilier*, pp. 91-98. Discusses the possible development of Belgian insurance companies' investments in mortgages and stresses the danger of encouraging over-building.
- R. ROYER (Belgium). *La coopérative de propriétaires (Expérience 'Baticop')*, pp. 99-111. Describes an interesting experiment at present taking place in Belgium. A co-operative building society called 'Baticop' was established to make available to anyone intending to purchase or build a home such technical or financial service as he might require.
- A. THEATE (Belgium). *La Caisse Générale d'Épargne et de Retraite de Belgique et l'œuvre des habitations à bon marché*, pp. 113-119. An account of the work of the Caisse Générale d'Épargne et de Retraite in financing the construction of cheap houses for the working-class population of Belgium.
- G. LYRA DA SILVA (Brazil). *Le rôle de l'actuaire dans le financement de la construction*, pp. 121-123. An account of the development of mortgage loans in Brazil by the life assurance companies, the Instituts et Caisses de Retraites et Pensions, by the social insurance funds and more recently by the Fondation de la Maison Populaire which derives its funds from part of the reserves held for social insurance.
- B. DRACHMANN and P. JOHANSEN (Denmark). *Les placements de fonds des compagnies danoises d'assurances sur la vie*, pp. 125-128. In Denmark the life assurance companies' main contribution to reconstruction has been by investment in the bonds of the land credit societies which represent two-thirds of the total assets of the companies. So far the companies have not been permitted to invest in real estate.

- J. DAVIE (Scotland). *Note on mortgage loans*, pp. 129-133. Deals with the development of building societies in Great Britain, stressing the need for life assurance cover, and with the investment policy of the life assurance companies.
- A. LASHERAS-SANZ (Spain). *Le rôle de l'actuaire dans le financement de la reconstruction*, pp. 135-143. Studies the question from the point of view of building societies and insurance companies in Spain.
- D. H. HARRIS (U.S.A.). *Life insurance and real estate—some recent developments in the United States*, pp. 145-151. Discusses the investment by insurance companies in the United States in income-producing real estate, with an interesting account of urban and rural housing schemes undertaken by insurance companies and of the ownership of commercial and industrial properties.
- J. FOURASTIE (France). *Aspect économique du problème du logement en France*, pp. 153-157. Stresses the very serious situation which has arisen in France on account of the housing problem and draws attention to some of the defects in the present arrangements for financing building operations.
- J. FRAISSE (France). *Les possibilités de placements immobiliers des compagnies françaises d'assurance sur la vie*, pp. 159-166. Deals with the problems arising in France through the holding of real estate by life assurance companies in a period of monetary depreciation and suggests that, owing to the limitation of income on property, a policy of granting mortgage loans may be preferable.
- J. LAMSON (France). *Observations sur les building societies*, pp. 167-193. A technical study of the operation of building societies in France with some notes on their legal and practical problems.
- J. LOISEL (France). *L'épargne collective immobilière, formule de financement de la reconstruction*, pp. 195-226. Part I of the paper is devoted to a general survey of the problems of financing reconstruction by mutual credit societies operating in various European countries and in America. Part II deals with the problem specifically from the French point of view and suggests improvements required in the present arrangements for real estate savings.
- C. CAMPAGNE (Holland). *Sociétés de crédit mutuel à la construction en Hollande et le rendement des constructions nouvelles*, pp. 227-239. Describes the methods adopted for long-term financing of reconstruction in Holland by the mutual credit building societies.
- I. J. N. SMIT (Holland). *Les problèmes économiques de la Hollande du point de vue de l'actuaire*, pp. 241-247. Describes the present economic problems of Holland resulting from the war and stresses the need for industrial development.
- A. LEÃO (Portugal). *Le problème des habitations à bon marché au Portugal*, pp. 249-258. Discusses the problem of financing middle and working-class dwellings in Portugal.

- H. G. HAGSTROEM (Sweden). *L'actuaire et le financement de la production*, pp. 259-265. Discusses the advantages of maintaining life assurance reserve funds in real estate to avoid depreciation during a period of inflation.
- F. WALTHER (Switzerland). A: *Les caisses Suisses de crédit à terme différé*; B: *La propriété immobilière et les placements en valeurs réelles des sociétés suisses d'assurances sur la vie*, pp. 267-271. Part A deals with the origin and progress of deferred credit societies in Switzerland and their development into mortgage banks. Part B discusses the operations of the Swiss life assurance companies in real estate investments.
- H. WYSS (Switzerland). *Estimation des valeurs mobilières des sociétés suisses d'assurances sur la vie*, pp. 273-279. Describes the methods adopted for the valuation of holdings of bonds and stocks included in the balance sheets of Swiss life assurance companies, and discusses the possibility of applying them to other types of investment such as real estate.
- It was unfortunate that time did not permit of adequate discussion of the many interesting subjects in these papers.
- R. J. W. CRABBE (England) submitted a note on *Methods of house purchase in England*, pp. 77-81, which contains remarks that he had intended to make in discussion.