The French Actuarial Profession

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The French Actuarial Profession

- The French profession organized itself in the last years of the 19th century following the example of the UK profession
- Creation of the IAF in 1891
  - Exam based
  - Few people
  - Very highly qualified
- Development of the French profession went together with the development of the French life insurance industry, and in parallel with the development of social welfare schemes and provident societies

Institut des Actuaires

- The current Institut des Actuaires is the result of the merger of the 4 actuarial associations :
  - IAF founded in 1891 (
  - AADISFA founded in 1932
  - USA founded in 1991
  - A2B founded in 1992

Institut des Actuaires

- Membership : 2430 actuaries having passed one of the ten actuarial diplomas recognized by the Institut

  1885 FQA (Fully Qualified Actuaries)

  545 Associate Actuaries

Institut des Actuaires

- Organization : 11 departments
- Professional departments
- Scientific departments
- Functional departments

Institut des Actuaires

- Professional departments
  - Accreditation department
    - Actuaries Board
  - Professional rules
    - Code of conduct
    - Manual of actuarial standards of practice
  - Actuarial Doctrine
    - Committees, Boards etc…

Institut des Actuaires

- Scientific departments
  - Education department
    - Liaison with the universities and schools
    - Scientific committee
  - Research and development
    - Actuarial library and journal
    - Promotion of colloquia and congreses
  - Continous Professional Development
    - Seminars and workshops

Institut des Actuaires

- Functional departments
  - Public relations
  - Marketing
  - International
  - Internet
  - Membership

Institut des Actuaires

- Professional standards
  - Technical provisions in general insurance
  - Embedded value
  - Solvency reporting
  - …
  - Pension report
  - …

Institut des Actuaires

- Public power delegation
  - Certification of mortality and incapacity-disability tables
  - Actuarial assessment for pensions schemes

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Actuarial Studies in France

The objectives of the French system :

To educate actuaries that will be involved in all the fields of the financial sector :

» Insurance

» Banking

» Finance

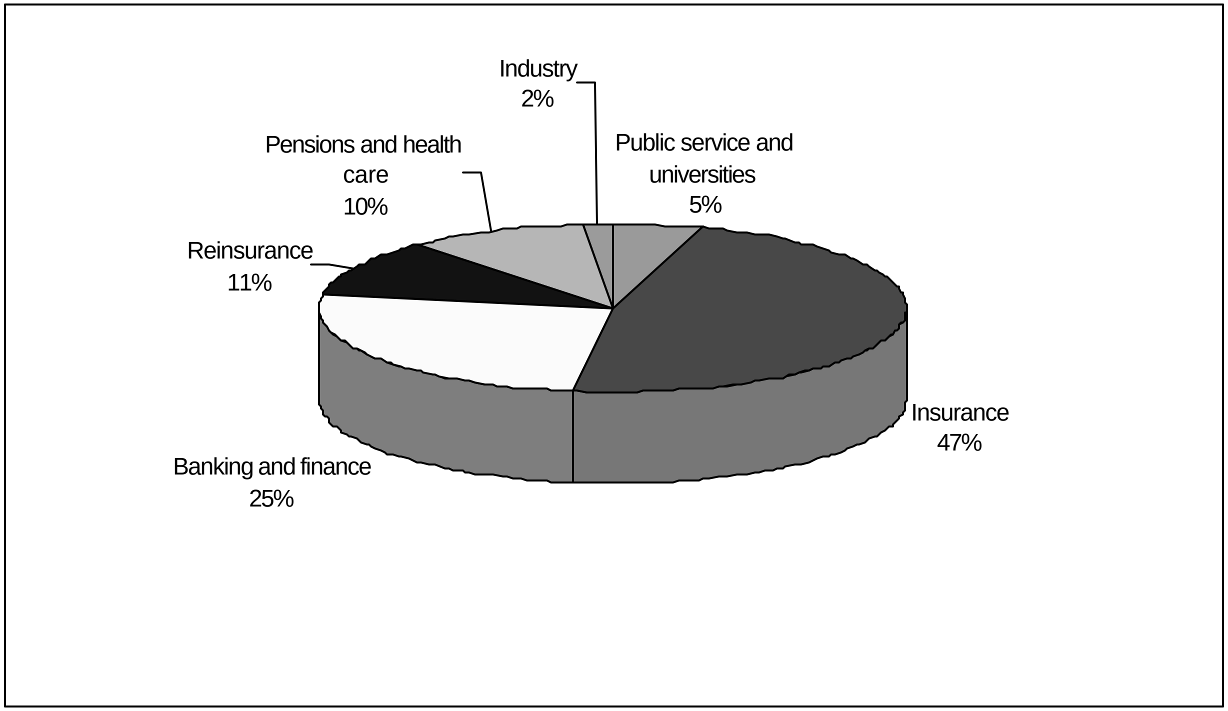
» Pensions

» Risk management

» Supervision

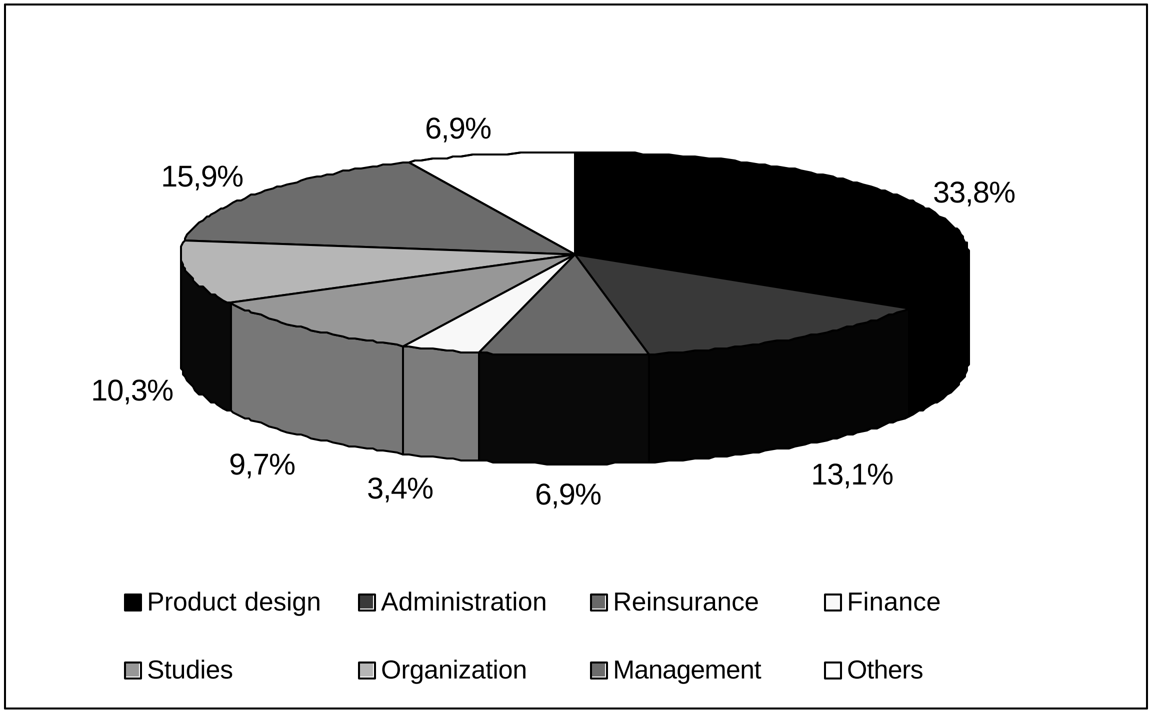
Actuarial Studies in France

- Breakdown of French actuaries by industry



Actuarial Studies in France

- Role of the actuary inside the insurance industry



Actuarial Studies in France

Breakdown of French actuaries by profession in the finance industry

Trading	16%
Portfolio management	31%
Marketing	10%
Risk control	6%
Research	12%
Credit	8%
Data processing, organisation	9%
Others	8%

Actuarial Studies in France

- New fields
  - risk management and supervision
  - solvency - Basel 2
  - research & development
    - market and credit risk analysis
    - derivatives, exotic options
  - data processing/organization and methods

Actuarial Studies in France

Specificity of the French system

University based : In France, it is no more the responsibility of the actuarial profession to educate future actuaries and it is considered that this will be much better done by the national education system

Nevertheless it is the responsibility of the French actuarial profession to accredite the diplomas awarded to the future actuary that will permit the access to the actuarial body (Institut des Actuaires through its Scientific Board))

Actuarial Studies in France

Specificity of the French system

University based :

Coexistence of three channels of higher education in France

- State Universities
- Schools (Grandes Ecoles) of university level with competitive entrance examination after two or three years of preparation
- Centers of continuing education

Actuarial Studies in France
Specificity of the French system

Selective admission :

- In the universities : after the two first years of education by competitive entrance examination and/or based on school records
- At the entry in the Grandes Ecoles
- In the centers of continuing education : based on school records and qualifications

Actuarial Studies in France
Specificity of the French system

Emphasis on theory :

- In the French educational system a strong emphasis has always be put on theory. In order to apply correctly a theorem, it is considered as essential not only to know under which assumptions the theorem is valid but also to understand the proof of this theorem and to be able to prove it again.
- We don’t want the actuary to become only an ordinary program user

Actuarial Studies in France

Specificity of the French system

Diversity of education :

- Although the French actuarial education is general, a slight specialization may be achieved through the diversity of schools (some universities are more specialized in Insurance and Statistics, other in Finance or Management, other in Econometrics)

Actuarial Studies in France
Specificity of the French system

Strong implication of the employers and the supervisors :

- In order to ascertain that the curriculum covers the needs of the profession, a large part of the teaching is left to professionals under the control of the academics
- Supervisors play also a important role in the teaching of actuarial techniques and the application of the regulations (the French system is characterized by a strong implication of the supervisors and a very close cooperation between actuaries and supervisors – the two actuaries system- which aim is to improve the security and solvency of the financial system

Actuarial Studies in France

Specificity of the French system

Strong implication of the employers and the supervisors :

- Also the French system is based on an important part of the study period devoted to training in the companies and the writing of an actuarial thesis of a hundred or so of pages on a subject proposed by the company and approved by the university or school. This thesis will have to be submitted before a jury comprised of representatives of the universities or schools and of members of the Institut des Actuaires

Actuarial Studies in France

Specificity of the French system

Strong implication of the employers and the supervisors :

- Finally the young actuary (associate member or AA) will have to wait for three years before being authorized to apply for qualification. During these three years he will be tutored by a senior actuary inside the company who will have to certify that the AA meet the criteria (actuarial skills, behavior) to become Qualified Member of the French Institut

Actuarial Studies in France

List of universities delivering an actuarial diploma giving access to the French Institut des Actuaires (Associate level) :

- Paris 6 (ISUP), larger French university specialized in statistics
- Paris Dauphine, university specialized in management
- Lyon : ISFA, university school specialized in actuarial education
- Strasbourg : Louis-Pasteur, university specialized in international management
- Brest : EURIA : university school specialized in actuarial education

Actuarial Studies in France

List of Grandes Ecoles (Prestigious schools of university level with competitive entrance examination) delivering an actuarial diploma giving access to the French Institut des Actuaires (Associate level) :

– ENSAE (grande ecole for statistics and economic administration, which train the future high ranking civil servant of INSEE)

– ESSEC (grande ecole for management and business students)

Actuarial Studies in France

- List of continuing education centers delivering an actuarial diploma giving access to the French Institut des Actuaires (Associate level) :
  - CEA
  - CNAM
  - Collège des Ingénieurs

Actuarial Studies in France

Characteristics of the French curriculum :

– Actuarial studies : 3 years of specialized studies at the university (or equivalent) following two years of preliminary education after secondary school examination(A level)
– Emphasis put on theory (very important role of mathematics and statistics)
– At the end of the studies, writing of an actuarial thesis (applying theory to a practical case found in the real business life), during a training period of 3 to 6 months

Actuarial Studies in France

Education syllabus :

specific to France and imposed by the professional organization (Institut des Actuaires) but in line with the European Actuarial Consultative Group and the IAA syllabi.

Actuarial Studies in France

Main topics covered by the syllabus :

• Mathematics and Probability theory	370 hours
• Statistics	305 hours
• Computing	50 hours
• Economy	90 hours
• Accounting	90 hours
• Financial mathematics, MPT, portfolio management	170 hours
• Life insurance, Pensions, Non life and reinsurance	170 hours
Training period and thesis :	800 hours

Actuarial Studies in France

To summarize :

- Actuarial Diplomas are awarded by the schools and universities
- Actuarial Diplomas are recognized by the Institut des Actuaires
- Actuarial Diplomas give access to the statute of Associate Actuary
- To become Qualified Actuary (FQA in the IAA terminology) the AA must complete a period of three years employment under the tutorship of a senior actuary

Chief Actuary missions

- Europe changed from « file & use » scheme to « in situ » controls
- More controls from the Commissionner on :
  - Management skill
  - Organization
  - Actuarial doctrine
  - Reserves calculation methodology
- High individual responsability

Chief Actuary missions

- From Pascal to Descartes: the mathematician spirit
- French Actuaries focused on:
  - Commitment to the Policyholder : only safe promises
  - Clear and understandable Policy wording (especially for Unit Linked products)
  - Nice balance between risks for shareholders and protection for policyholders
  - Limiting systemic risks
- In a specific regulation
  - Very safe: interest rate, longevity tables, reserves
  - And open: no loading ceiling, no compulsory price

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