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**THE ACTUARIAL FUNCTION UNDER SOLVENCY II:
SURVEY ON THE ROLE OF THE ACTUARY IN INSURANCE**

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Foreword

The Framework/Omnibus Directive has established the Actuarial Function as part of the governance structure for insurance undertakings within the Solvency II system. The responsibilities outlined for the Actuarial Function cover a number of actuarial activities already carried out in many member states. The Groupe Consultatif carried out a survey under the auspices of its Insurance Committee to assess the readiness of the actuarial profession in Europe to meet the demands of the new system. This report outlines the results from the survey and summarises the situation using the results.

The survey results cover four main topics:

- The number of professional qualified actuaries in insurance
- The current roles of actuaries in insurance
- The qualifications of actuaries to meet the current roles
- The current expectations as to the management of the Actuarial Function in Solvency II

The survey results cover 26 actuarial associations from among the members of Groupe Consultatif, which include almost 90% by number of the total individual actuaries represented by the Groupe Consultatif. The 26 member included in the survey are shown in Table 3 below.

The following comments reflect a summary of the results as they relate to the four main topics.

The survey can be seen in the context of the efforts of the Groupe Consultatif to assure the success of the Actuarial Function, which also includes the need to establish professional standards, the approach to reporting requirements and the important contribution by the Groupe to the preparation of the Solvency II framework from the very beginning of the project.

Numbers of actuaries

There are large numbers of qualified actuaries and students

There are over 19,000 qualified actuaries involved in insurance business among the 26 actuarial associations. Of these, about 50% are 'life' actuaries (including those working in health and reinsurance) and about 25% are 'non-life' actuaries. Most of the remaining 25% work in pensions.

Table 1 : number of members of the actuarial associations

Full member	
Life	8,368
Non-Life	4,920
Health insurance	742
Pensions	5,017
Reinsurance	644
Total	19,691

At present there are about 6000 student actuaries working in insurance, with 70% in life and 30% non-life. New students commence actuarial studies each year. A separate exercise carried out by the Groupe showed an expected growth rate of 7% per annum in the number of qualified life actuaries and 10% per annum in the number of qualified non-life actuaries over the next 5 years. The higher proportion of students involved on the non-life side supports the higher expected growth rate for non-life actuaries.

Required numbers of actuaries

There are a sufficient number of actuaries to cover the needs of insurance undertakings

To measure the need for actuaries, we relate it to the number of actuaries and number of undertakings in the survey.

Table 2 : number of insurance undertakings

Life companies	2605
Non-life companies	3187
Total	5791

From this we can establish the average number of actuaries working per undertaking. It is important to recognise that these statistics are very much a 'single figure average' and there is no doubt a fair spread around these 'means'. Some figures are also affected by the type of companies in certain countries (for example captives or very small niche risk companies, which would have minimal internal actuarial resource) which then reduces the average figures when spread over all companies.

Table 3 : number of actuaries per company

	Life	Non-Life
Austria	1	1
Belgium	10	2
Channel Is	1	1
Croatia	2	3
Czech Republic	5	1
Denmark	3	1
Estonia	1	1
Finland	8	4
France	1	3
Germany	7	6
Greece	1	1
Hungary	2	1
Iceland	1	1
Ireland	4	1
Italy	3	1
Lithuania	1	1
Luxembourg	2	1
Netherland	1	1
Norway	6	1
Poland	1	1
Portugal	1	1
Spain (Col.legi)	1	1
Sweden	1	1
Turkey	1	1
Ukraine	1	1

United Kingdom	16	3
Average	3	1

The data suggests that there are a sufficient number of professional actuaries available to meet the need for actuarial skills in the context of the Actuarial Function, although an increase in the numbers practicing in non-life and in certain countries would be helpful. All national actuarial associations in Europe are members of the Groupe Consultatif and as such, all associations apply a minimum education basis for qualification as an actuary. The Groupe Consultatif is constantly updating the common syllabus and is addressing this in the context of the skills required to implement Solvency II successfully.

The new solvency system will generate a natural market-led demand for such skills and where there may be a perceived skill shortage at present (for example in non-life business) the Groupe is confident this will be capable of being covered. Market demands for actuarial skills will be met by the supply of suitably qualified professionals.

The framework Directive makes clear that, subject to appropriate conditions, functions including the actuarial function can be outsourced by the insurance undertaking. The ability to outsource will help reduce any problem relating to limited availability of directly employed actuaries in some countries

It is important to recognise that the actuarial services for many smaller companies will be provided by consulting firms, rather than in-house actuaries.

The Groupe firmly believes that the Actuarial Function will have to be organised around suitably qualified professionals. These persons will be well capable of helping to implement appropriate processes for the operation of the Function, utilising all available resources in companies. From this perspective it is accepted that the role will vary as necessary. This will be a function of the size and nature of each company. The objectives of transparency and comparability inherent to the Solvency II system imply a need for a broadly common framework for the Actuarial Function for all companies. The requirements for and quality of the persons running the Function will need to be consistent and comparable.

Roles of Actuaries

The role of the actuary today as presently defined is close to the scope of the Actuarial Function

Technical roles

The technical roles as described in the survey have been considered in conjunction with the tasks laid down in article 48.

Reference is made to :

- The technical provisions and more specifically the valuation, the accuracy of data, the methods used and the assumptions used
- The underwriting policy with reference to premium rating and new products
- The adequacy of reinsurance arrangements
- The risk management system with focus on the projection of the future financial position, the development of internal models, the asset liability management and/or modelling, the assessment of the solvency position and the distribution of profits

The following table shows the involvement of actuaries in many of the aspects of managing the finances and risks of companies at present. These show that there exists a solid base of actuarial experience and expertise which should be built upon to ensure the success of the Actuarial Function and the broader Solvency II system. Results are shown in relation to:

- Number of countries with actuaries engaged in this area of activity compared to the total number of countries (Country)x
- Number of companies with actuaries engaged in this area of activity compared to the total number of companies (Company)
- Number of actuaries with actuaries engaged in this area of activity compared to the total number of actuaries (Actuary)

Table 4: technical roles of the actuary today

Life				Non-Life			
	Country	Company	Actuary		Country	Company	Actuary
Statutory Role							
Technical Provision	92%	65%	93%	69%	91%	31%	
Solvency Margin	65%	42%	81%	31%	25%	4%	
Premium Ratng	65%	38%	80%	50%	41%	9%	
Reinsurance	42%	25%	53%	31%	23%	5%	
Distribution	50%	37%	80%	23%	21%	3%	
Projection financials	42%	55%	80%	19%	55%	80%	
ALM	35%	31%	54%	27%	49%	6%	
New Products	38%	18%	12%	23%	21%	6%	
Risk Management	19%	18%	45%	12%	16%	1%	

Internal Model	15%	16%	48%	12%	16%	3%
Technical Provision						
Valuation	92%	65%	93%	69%	91%	31%
Data	73%	59%	91%	54%	83%	29%
Methods	85%	63%	91%	62%	88%	30%
Assumptions	81%	62%	90%	62%	88%	29%
ALM						
Modelling	35%	31%	54%	27%	49%	6%
Investment Strategy	35%	26%	12%	23%	28%	5%
Solvency						
Individual Capital Req	27%	26%	45%	19%	25%	4%
Investment Strategy	65%	42%	81%	31%	20%	4%

The survey results show wide involvement by actuaries currently in the activities required by the Actuarial Function. Much of this involvement takes the form of 'statutory' roles at present, that is, roles required by the supervisory authorities in many member states that can only be fulfilled by qualified professional actuaries. Almost all life insurance companies and about two-thirds of non-life companies currently rely on actuarial professionals to set, validate and certify technical provisions, one of the cornerstones of the Actuarial Function.

The other aspects of the Actuarial Function including reinsurance, underwriting, risk modelling and assessment will lead to more change for companies as well as for the actuaries. It is vital to create the appropriate framework for this as well as enhance education as already mentioned.

Formal roles

The next table shows the actuaries current involvement across a number of headings, including involvement in formally certifying various elements, reporting responsibilities, offering opinions on underwriting and reinsurance policies and other relevant aspects to be captured within the Actuarial Function.

Table 5 : Formal roles of actuaries today

Life Non Statutory Role			Non Life Non Statutory Role			
	Country	Company	Actuary	Country	Company	Actuary
Certifying Role						
Adequacy Assets	58%	45%	63%	35%	61%	9%
Individual Capital Requirement	35%	30%	50%	27%	48%	5%
Solvency Position	62%	38%	63%	42%	53%	9%
Distribution Surplus	46%	21%	18%	27%	21%	5%
Equity PS	42%	25%	51%	15%	16%	2%
Adequacy Premium Rates	65%	37%	62%	35%	20%	6%
Reporting Role						
Financial Conditions	38%	34%	53%	23%	47%	4%
To Board	81%	54%	90%	50%	56%	11%
To Supervisor	69%	41%	60%	46%	56%	8%
Opinion						
Underwriting Policy	35%	22%	15%	35%	33%	7%
Reinsurance	58%	46%	62%	31%	14%	11%
Other						
Validation IM	23%	22%	53%	19%	43%	6%
Access Board	65%	49%	88%	42%	55%	10%
Whistle Blowing	50%	43%	82%	31%	14%	11%

Qualifications required of actuaries

The person in charge of the Actuarial Function will have to demonstrate appropriate education, skills and experience

The following table sets out the 'qualification' required to operate a 'required' actuarial role in insurance business at present. The figures are based on the number of member associations and total more than 26 due to some countries requiring more than one of the stated qualifications. The inference here is that similar requirements should be a feature of the new system to ensure appropriate skills and competences are applied in the operation of the Actuarial Function, given that the Function incorporates many of the existing 'requirements' along with some new ones. These requirements should form part of what is demanded under the 'fit and proper' requirements in the governance framework of Solvency II. The Groupe believes that it would be a retrograde step to reduce the requirements demanded of those appointed to manage the Actuarial Function.

Table 6 : Required qualifications for actuaries today

Requirement for Qualification in Europe (per country)	
Approval Supervisory / Ministry	23
Member Actuarial Association	14
Minimum years of Experience	8
General Education	18
None	2

Expectations as to the management of the Actuarial Function

The Actuarial Function will be carried out by the same person involved in the role at present

The survey captured views on current expectations among actuaries already working in insurance as to how the Actuarial Function may be organised within their companies. It is not surprising to report that the general expectation is that the Actuarial Function will be carried out by the same person currently operating the actuarial role, especially where the current role is a required statutory role. There is no expectation that the role will be carried out by non-actuaries, which while it may be considered an obvious conclusion among those surveyed, certainly suggests there is little movement within companies at present to 'de-professionalise' the role.

Table 7: expected management of the Actuarial Function

Only Qualified Actuaries	Life 10	Non-life 5
Mostly Qualified Actuaries	Life 14	Non-life 19
Mostly Non-Actuaries	Life 0	Non-life 0

Conclusion

The Actuarial Function combines a number of different activities which can be summarised in the following terms:

- co-ordinating the calculation of technical provisions
- expressing opinions on underwriting policy and reinsurance arrangements
- contributing to the implementation of the risk management system
- making judgements based on professional experience

The Groupe Consultatif recognises this may mean different activity for some insurance actuaries but nothing that is outside their actuarial education and skill sets. The Groupe will ensure that education is enhanced to capture the changed environment, especially in relation to risk management. Member associations are introducing extensions to their continuing professional development programs to reflect the scope of the Actuarial Function. The Groupe has established a project team to consider the development of professional and technical standards to assist actuaries working in the Actuarial Function, especially where such standards are deemed appropriate but may not be included in the standards and guidelines developed within Level 3. The Groupe is also working on a framework for reporting from the Actuarial Function, to assist supervisors, companies and other stakeholders in providing consistent reporting across member states, and on professional standards of practice for actuaries in the different roles that they will fulfil under Solvency II.

The results of the survey show a profession ready and able to play its full part in the implementation of the new solvency system. There are challenges ahead, not least in the concerns that the use of actuaries may be diminished in some way by the apparent change in role from the current position. The survey shows the extensive use at present of professional actuarial skills in the operation of insurance undertakings and there is no reason to suspect undertakings will need less of these skills in the new system. Indeed the opposite is the case and the Groupe is confident that actuaries as individuals, associations representing actuaries at national level, and the Groupe representing the associations and individual professionals at the European level, will show by their expertise and professionalism the actuarial value added to insurance undertakings, and by extension to the security of their policyholders.