

The Needs of Employers - Actuarial Degrees - about right or are there gaps?

Katrina Ellis
Head of Research
Australian Prudential Regulation Authority

Introduction

These views do not necessarily reflect the views of APRA and are my own views.

Congratulations on celebrating 40 years of actuarial education in Australia. As someone who very nearly pursued actuarial studies myself, and having worked as an educator for the last nine years (albeit in a finance department), I think that it is wonderful to have this opportunity to reflect upon your successes and the challenges that may still exist for actuarial education in Australia.

As the prudential regulator, APRA is concerned about the risks and risk management in our regulated entities - covering the banking, insurance and superannuation sectors.

In talking about whether actuarial degrees are meeting the needs of APRA as an employer or not, I think that it is important to define what skills APRA needs to fulfil its role as a prudential regulator. So I'll start with a brief overview of APRA's approach to regulation and then how this relates to the skills of APRA employees.

APRA's approach to regulation

APRA's approach to regulation is principles-based rather than relying on prescriptive rules.

A principles-based approach is one that emphasises outcomes in setting regulatory requirements and expectations, but does not seek to specify or prescribe the exact manner in which those outcomes must be achieved.

The move to a more principles-based approach in the prudential supervision framework is complemented by APRA's risk-based approach to the supervision of individual financial institutions.

Put simply, risk-based supervision is the process by which supervision activity (e.g. on-site reviews, data analysis, meetings with boards and management) is directed at risk issues of highest priority.

It contrasts with mechanical supervisory cycles that apply the same level and intensity of supervision to all institutions, regardless of their risk profiles. APRA has taken a risk-based approach to supervision for some years.

The effectiveness of the approach is based on:

- robust supervisory tools for identifying and assessing emerging risks in a regulated institution;
- a supervisory team with appropriate skills, experience and judgment; and
- strong statistical and research capabilities.

A risk-based supervisory approach built on supervisory judgement places particular demands on the skills and experiences of supervisory staff. Supervisors need to be able to judge whether a specific solution proposed by an institution is adequate to meet the relevant prudential principle; they also need to be astute and confident in identifying emerging risks and pursuing appropriate remedial action. Growing and maintaining a team of supervisory staff with these qualities has been a major priority for APRA.

APRA has 580 staff, and of these we have 25 actuaries, including an actuary at the highest level in APRA: John Trowbridge, one of the members of the APRA Executive group.

Roles of actuaries at APRA

The majority of APRA staff members are frontline supervisors: those people with direct contact with the regulated entities across banking, insurance and superannuation.

In addition to the supervisors, APRA has several technical areas that support the supervisory work: our supervisory support division has technical specialists in a range of teams; and our policy, research and statistics division is providing the data, research and policy development work for APRA.

There are two technical teams that specifically provide actuarial support for the rest of APRA: our actuarial services team and the insurance risk team.

Our actuarial services team provides advice on the interpretation and application of the prudential standards and legislation that APRA administers to the extent that it requires:

- consideration of actuarial issues; or
- involvement of, or advice from, an actuary.

Actuarial Services provides advice and support across Life Insurance (including Friendly Societies), General Insurance and Superannuation industries. These services include:

- coordination of the review and consideration of actuarial reports;
- providing actuarial input to PRS on policy proposals;
- providing advice to frontline staff on those aspects of the operations of regulated entities that typically entail actuarial involvement;
- undertaking information gathering and analysis by industry sector on actuarial and related prudential matters;

The insurance risk team aims to provide expertise on key areas of insurance risk:

- Underwriting;
- Claims Management;
- Product Design and Pricing;

- and Reinsurance.

The advice and expertise from these actuarial teams enhances our supervisors' abilities to make sound judgements.

In addition, it is a great benefit to the frontline supervisory teams when members of their teams have technical expertise, as well as relying on the skills of our supervisory support division.

In fact, two thirds of the actuaries at APRA do not work in a technical role, but are in frontline supervision. For example, our supervisory teams for life insurance and general insurance include several people with actuarial training. The actuarial training is a solid base for these supervisors, even though are working in non-actuarial roles.

In contrast to the day-to-day work of the actuarial services and insurance risk team, the supervisors may not be doing modelling or focusing only on actuarial aspects of the regulated entities, instead these people are our generalists within APRA - the supervisors need to analyse all aspects of the regulated entities in conducting their review of the institution.

Thus given the need to have highly-skilled frontline supervisors, APRA often looks to actuarial graduates for recruitment.

In recruiting new actuarial graduates into APRA one difficulty that we face is that many students simply want to be an actuary, but we only have a handful of people in APRA working as actuaries.

What we like about actuaries is the quantitative analysis skill set that they bring: a theoretical base, good spreadsheet skills, understanding of insurance business, general commerce training. Actuarial training can be good training for all aspects of APRA. However, convincing actuarial graduates to consider roles beyond their pre-conceived notion of their future as an actuary is difficult.

I'd like to note also that APRA is supportive of employees completing their qualifications for the Institute of Actuaries of Australia, regardless of whether they are a frontline supervisor or in the actuarial services team as we view this as valuable professional development for employees with these skills.

Co-op Program

One engagement that APRA has been involved with for the last 6-7 years is the UNSW Co-op Program. Although this program covers a wide range of degrees at UNSW, the actuarial services team at APRA has had a close connection with the UNSW actuarial studies students in particular.

This program has allowed the actuarial services unit at APRA to host a continual stream of actuarial studies students over the years. As the co-op students first spend 10 weeks of the summer after their first year, and then one year after the first half of their third year of studies with APRA, we get to see them at the raw stage and then once they have acquired a good amount of skills.

The value of the co-op program is that it helps to fill the gaps that potentially exist between the academic training in a university degree and the real world of life

post-university. These are skills that it would be almost impossible for a university to provide, and thus APRA's continual engagement in the program highlights the belief that it enhances a student's learning and facilitates recruitment post-university.

The technical skills that students get from actuarial studies programs are high quality, and fulfil APRA's needs. The ability to do modelling, have a grounding in theory, be able to work on spreadsheets and in general have good quant skills are what we expect from newly minted graduates.

The gaps that students have are in areas such as understanding of the markets, dealing with people, and understanding the details of products in the market. These softer skills are difficult to teach in a classroom.

Coming to work at APRA via the co-op program gives students an opportunity to work in a business environment and learn the ropes of basic business protocol. Programs such as these are a valuable link between university degrees and future careers.

Beyond APRA - the impact of principles-based regulation

I have spoken about APRA's internal needs to have highly skilled supervisors who can make sound judgements about the risks of regulated entities, and the adequacy of solutions posed by the entities to manage the risks.

However, it is important to note that APRA's principles-based approach to regulation and the various changes to the Prudential Supervision Framework that have occurred over the last few years have put more onus on the regulated entities to have sound risk management practices themselves.

Rather than APRA prescribing a set of rules to follow, the regulatory approach aims to enhance internal risk management by regulated entities so that each entity has the ability to measure and manage its own exposures and come up with solutions that satisfy the regulatory expectations but also meet the needs of the entity's own business.

For example, the fit and proper standards for responsible persons, and high-level principles on board governance and performance assessment are two examples of principles that APRA outlines. APRA does not tell entities how to satisfy these principles, but provides guidelines about APRA expectations and suggested practices. An entity can employ one of the suggested practices or an alternative so long as it delivers the prudential outcome APRA is seeking.

Principles-based regulation provides flexibility at the cost of certainty. Under a prescriptive set of rules, regulated institutions have clarity as to what they must do to meet prudential requirements, but little room for compromise or alternative approaches. A principles-based approach provides greater scope for institutions to design their business arrangements and risk management systems according to their particular circumstances, rather than ticking a checklist; at the same time, institutions need to explain their approach and accept APRA's judgment as to the adequacy of their systems and controls.

As regulated entities can design their own risk management systems, these institutions need highly skilled employees to do so. Actuaries have an important

place in this aspect of financial institutions, and populating our regulated entities with people with specialised training in risk-management and modelling is a vital part of a healthy financial system.

Conclusion

Although APRA only employs a modest number of actuaries, the skills acquired in an actuarial degree are very attractive for APRA.

If today's actuarial graduates view themselves as people with technical training and a skill set that can open up a wide range of job opportunities, rather than simply defining themselves as "an actuary" then the future is very bright indeed.