

Guest Editorial

Whither actuarial research?

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A quick look at the most downloaded and cited articles in *Annals of Actuarial Science* shows that over recent years the “hot” topics in actuarial research have been longevity risk, dependence risk modelling, Solvency II, ERM along with claims modelling, optimal dividend and ruin problems. It is interesting to reflect on the new areas of research that actuarial research should address, but also to reflect on the impact of actuarial research in other disciplines and in the profession more broadly. Will data analytics become an area of research, given the emphasis the profession appears to be placing on this as an opportunity for the profession? Or will broader research issues in ageing and LTC receive an increased focus?

Before considering these possibilities, it is worth reflecting on some of the challenges that actuarial research faces. These include a lack of recognition by most mainstream disciplines and a lack of recognition by practitioners of its potential application to their businesses. There are exceptions to this, but few finance or economics researchers would be aware of the published research in actuarial journals and this would apply to many practising actuaries. The actuarial profession’s intellectual contributions over many years have become less and less recognised as other disciplines lay further claim to the intellectual foundations of actuarial science. For actuarial research to thrive it is important that the actuarial discipline remains relevant to the broader business and scientific world. Increasingly, universities and researchers need to seek funding for research from industry partners.

Actuarial research has been driven by practical problems. In the early days of the profession, actuaries, faced with the business problems of managing life insurance, developed the application of survival models to this business. Actuaries also developed the stochastic processes required to assess solvency of non-life insurance, a significant component of risk theory research. Many other examples could be given. Despite this, other disciplines would lay claim to these fundamental actuarial techniques and little recognition is given to these actuarial contributions. Fortunately, actuarial research has also benefited from these other disciplines. We have been able to borrow concepts from many other disciplines and apply and develop them in the actuarial field.

So why should actuarial researchers care how other disciplines view our research or what practitioners understand about this research? After all, publishing in mainstream economics, finance and related discipline journals when you are not part of these disciplines can be more time consuming, and perhaps less easy, than for actuarial journals. Furthermore, the process of applying research to practical business problems is regarded as consulting by universities, albeit research related.

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An important factor to consider is that the actuarial research community is relatively small compared with many other disciplines and that young researchers in particular are often assessed against these other disciplines when it comes to tenure or performance reviews. We also compete for academic talent with these disciplines. Ensuring actuarial research is valued beyond the discipline gives it a broader profile in the academic community.

As for new and interesting research areas, this is likely to be driven by practical issues where we have a comparative advantage. Modelling of longevity risk was an area that developed from the profession's long history of mortality modelling and an increased awareness of financial risk modelling approaches. It is also an area where other disciplines have recognised the need for research, including demographers and economists. New areas are likely to involve multiple related disciplines. Similar comments apply to Solvency regulations and related research. These are areas where we have the fundamental skills and an understanding of the business application.

With this in mind, young researchers should be encouraged to participate in multi-disciplinary research projects where actuarial skills are recognised in new and developing areas. Researchers should be willing to develop industry partnerships linked with research funding to support research and potential industry applications in new and developing areas. Publishing in a broader range of related discipline journals is likely to be a benefit of increased multi-disciplinary research. Commercialisation of the research may be a beneficial outcome of such industry links. There are many examples of actuarial involvement in these activities, but they are not so common in actuarial research and both have significant potential.

It is also important that established researchers identify and attract early career researchers, so they develop their skills and interests in new areas of research. Accessing research grant funding to support these young researchers as well as providing strong mentoring in these new research areas is essential to ensure that the actuarial research agenda remains vital.

It is all too easy as an actuarial researcher to focus on your area of specialisation, publish in the discipline journals and not also go beyond this. If this is the case then we must ask the question: whither actuarial science?