

JFAR Oct paper "A Risk Perspective" TJJ comments

1. I think the paper is an excellent paper of structured horizon scanning designed to assist FRC in planning for the medium term.
2. I think it is essential that risk reviews such as this are conducted by any important organisation and IFoA is no exception. The issue is not whether to conduct such an exercise or not; instead it is what to do about the results (and this should not mean more regulation as a pre-requisite).
3. In consequence, it is good that the paper simply sets out a list of risks without commentary as to what should be done (if anything) in response. This encourages better discussion and debate at this stage.
4. I think the concept of JFAR is a good concept.
5. The paper defines "actuarial work" in just one way. Since the paper was issued, the new draft TAS 100 has emerged. The definition of "actuarial work" in TAS 100 has been expanded to include a second leg around user perception, I trust the updated TAS100 definition will find its way into future papers on risks.
6. The paper asks for ideas to fill in gaps and assist FRC further in its endeavours. The rest of this response seeks to do some of this with ideas as set out in A through F below and Appendix 1 to this paper. Appendix 2 considers one model on managing risk showing how regulation is just one of many responses and often inappropriate.

A. One of the concerns of FRC as stated in 3.4.2 is that actuaries are at risk of "group think". I agree with this – but this is a common risk across the board with every group of people. Indeed, I think that JFAR itself is at risk of "group think" which can be mitigated to an important degree by widening its membership to include people who do not come just from a regulatory background covering actuaries. Despite this, I do not think JFAR should be changed in the short term whilst the group is finding its feet. Even into the medium term, it may not be right to change, but in this case some means should be found for JFAR to mitigate this "group think" risk through formal access to others or having a consultation panel etc.

B. I think JFAR should be willing at some stage to look into wider fields areas (which would necessitate some extra membership) consistent with where TAS 100 is going.

C. I think the table in 3.1 seems to be missing something. I would add a fourth driver of "Status of actuaries in society and changes thereto" and add some risks such as "declining maths ability relative to the competition", "lack of collaboration with other other skills/professions" and "salaries significantly higher than the competition". In making these points, there is an issue of getting some evidence to confirm this driver and associated risks (or otherwise) – a process which would be well-worthwhile for a variety of reasons. At present there is nothing but anecdotes and there is a desperate need for independent research and evidence.

D. I think there are many risks missing. Let me add a few:

- Inadequate maths ability of the generality of actuaries. Note first that the best people involved, these days, in the mathematics of financial institutions are now often academics

who are often not actuaries. Note also that if you buy my expectation, as stated in other letters and articles, that “data analytics” is going to be big in business including insurance, then there is an interesting question as to why actuaries seem to be, at best, on the periphery of all of this (perhaps there is a foothold in insurance telematics). Is it because those who are very good at this type of statistics/modelling can earn high pay¹ without several years of hard exams?

- Inadequate use of evidence and research relative to judgement. My experience in Government has shown me that non-actuaries are better at use of research evidence to inform them on how to analyse matters. You can see this with the way that actuaries can, on a number of occasions, tend to easily make assertions and if challenged on “where’s the evidence” are stumped more than they should be – which does not go down well in Government.
- Poor communication ability. It might be counter-intuitive but I would expect that if actuaries reduced the qualification period by two years and spent the saved two years speaking to clients and the external world, the communication ability would improve. I would argue that this is because communication ability is not about exams but instead is about life-skills learned in those years in one’s 20s which is a critical period for future careers. But this is just a proposition for checking out with research and evidence!
- Appendix 1 covers some further risks to consider based on specific experience
- I am sure there are more risks than the three I mention above, those in E below and those in Appendix 1. Maybe a good way to proceed would be to put together some focus groups of actuaries (who are not normally involved in regulatory matters or attend events) and see what they come up with.

E. I found section 3.6.1 a bit odd. Whilst I agree that the five stated headline elements are worth including, I found the order quite intriguing.

For example, let’s take the first headline element of “Limits to Growth”. The date when this becomes a serious issue for society keeps being pushed back. Fracking and shale gas is one major cause. However, for a more general analysis, I refer you to the February 2015 edition of New Scientist which gives a comprehensive analysis of why the outlook has seriously improved. Even the key author of the latest definitive (ex Club of Rome) book has recently put back his timetable for when issues may arise by a decade or two.

There is no consensus amongst scientists as to what the impact might be (so how actuaries can do this as suggested in the FRC risk review is intriguing). What we have is something which may not have any impact for fifty years or more (albeit earlier is possible). And if it is right to allow for this, then can’t the same be said about wars (ie that we should allow for this risk as well making a sixth item) or nuclear accidents (a seventh) or pandemics (an eighth) or rises and falls of the different religions (a ninth). All, including resources exhaustion, are possible in the next 50 years but none are certain.

On the second headline element of climate change, the impact is mentioned relative to general insurance. On the whole, general insurance has an element of built-in protection against climate change type risks because premium rates are not fixed and annually variable. Indeed it may be that the bigger risks tend to arise with entities making fixed long-term commitments and offering guarantees – something more commonly found in pensions and life assurance. But if DB pensions disappears (or becomes negligible) in private sector within 35 years (say) all that is left is life

¹ The reason this statement is not in conflict with the statement in B about salaries is that B was talking about equivalent salaries for non-actuaries with the same level of maths ability as actuaries whereas C is saying that with better maths the pay could be significantly higher still

assurance and guarantees within this industry. Given the demise of with profits, does this mean just bond-linked annuities in practical terms and how big an issue will that be in decades to come?

I think that there may have been some group think going on here which, because the IFOA has a Board on these two subjects and people can get very emotional, has resulted in strong advocacy for an ordering (and has resulted in an oddly short list of risks in 3.6.1) which might differ to what you might get under a proper scientific “hazard x exposure as impacts actuarial work” schedule. Appendix 1 lists some further risks for 3.6.1 which could also be of bigger significance under this scientific definition of risk. Putting all of this together, I would urge use of the scientific definition as a mechanism for future analysis and prioritisations.

All of this goes to the point of something in section F below – that solutions to problems may not necessarily be around an actuarial consideration (other than recognition that uncertainty exists which everyone knows) and convert to a legal/structural/policy condition solution through the risk management ideas described.

F. The paper rightly does not get into responses to the risks. I said at the open discussion I attended that there are many types of responses and extra regulation (often called “controls” in risk literature) is only one out of many. So here are a couple of approaches to help consideration of a wide range of response:

- In a lot of literature about risk management, you will find the five Ts – treat, transfer, terminate, tolerate and take the opportunity
- In my talk on strategic risk that I gave on the 19th January to a large audience of senior individuals, I offered a model which uses a matrix of flexibility, assessments, mitigations, actions and controls set against preparation and crisis management

For regulators, I think that whilst both approaches are worthy of thinking about and using, there is a good case for thinking seriously about flexibility, assessments and actions (e.g. stress tests) rather than extra controls given that historically the focus has been on controls. However, that is for discussion and I would be happy to assist and go into more detail as required or requested. Appendix 2 gives a short description of an holistic overview of all of this.

Trevor Llanwarne
15th February 2015

Appendix 1 – Extra thoughts on risks arising specifically out of work I did as Government Actuary

When I started my job as Government Actuary in 2008. I spoke to many “great and good”. I asked them for impressions about actuaries and the messages were very consistent on the negatives so I’ll pass these elements on (to be honest as is often the way I’ve forgotten what the positives were but they were many and various albeit with less consistency).

There were five consistent negatives creating a bad impression of actuaries amongst establishment figures:

- Equitable – the “Establishment” believed that this was fundamentally caused by actuaries regardless of the facts or the outcomes of various reviews; this was still jarring in 2008 but I suspect it would not get raised now except in parts of Treasury
- Longevity – why did actuaries keep under-estimating longevity improvements when the evidence was there in every decade from the 1970s onwards of a continuing trend of improvement. The interviewees answered this with the “vested interest” point below.
- Communication skills – as well as innate skills there is also a language issue. Actuaries use phrases like “best estimate” or “I recommend” whereas economists use phrases like “the risk is to the upside”, “central scenario” etc. The problem for actuaries is that they are in the minority and so actuaries have to understand that if an economist hears the actuarial language compared to their own, their initial thought is “hey, actuaries know better than us” and then when it all goes wrong, credibility is lost and the next bullet below comes onto the scene
- Arrogance – actuaries historically had seemed to present themselves as “we’re the experts, we know best”; once again I suspect this is not as prominent as it was but it still exists
- Vested interest – perhaps the major concern; a feeling that actuaries would not be willing to give neutral advice if the consequence would be to start a move towards terminating the vehicles (with profits or DB pensions in particular) from which actuaries earn high fees and salaries. This is quite a subtle point because it’s not about acting for trustees or employers per se. That said, the position has moved on since it’s now too late to stop the terminations; but I think the residual suspicion still exists
- There was a sixth item that cropped up but stated less directly. A resentment, as others (economists in particular but also operational research) might articulate it, that actuaries earn so much compared to their skill set and yet they are no better. This issue is just as prominent now and may be behind statements such as “actuaries are set in their ways”.

These messages are offered since it may flag some ideas for additions/adjustments to your risk paper. Raising these ideas might also get you thinking about how you assess priority ranking.

Separately, whilst I was in Government, I was on a steering group for a horizon-scanning Foresight project on demography (“Future of Demographic Change” which I don’t think has yet been published by the way). Recalling that work, I believe that top of any list of external risks for 3.6.1 must be the ageing society as opposed to limits to growth and climate change for example. There is a certain amount of evidence (nowhere near enough research in my view) that investment returns start reducing in countries (eg Japan) where the population starts getting above a certain average age and that too big a dependency ratio creates pressures for cost-cutting in Governments which eventually could lead to a range of responses including less tax incentives etc. The demographic challenge is major for actuaries on even a 20 year view let alone 50 years so to me it’s the elephant in the room and needs adding in.

Finally and importantly, I believe that professions have a lot in common with public sector. In public sector, the biggest risk is invariably the reputational risk and I'm sure this is true for the actuarial profession. A lot of your paper covers items that could cause reputational problems but I wonder if you mentioned the phrase "reputational risk" in the paper as an overarching point?

Appendix 2 - A holistic approach to risk

In my work within public sector, I have been developing a holistic approach which I present using the labels of “past”, “present” and “future”.

1. Past. These are the lists of risks that have been understood and commonly listed for many years past, are controllable by the organisation and are susceptible to managing through a risk register approach with internal controls put in place.

2. Present. These are the ever-present, potentially high-impact, risks that are fully or partially outside the control of the organisation. Traditionally, they have not been considered properly since internal controls cannot remove the risk. They include black swans.

3. Future. These are the outcome-based risks of non-delivery to any long-term business plan or corporate strategy.

Regulation does not really work for the second and third categories because regulation is akin to internal controls. So what you need to consider is to have a resilience framework with a big focus on flexibility and regular reporting of trending assessments.

Note – this approach has a lot in common with the FRC risk regime for quoted companies – going concern, viability statement and strategic report.

Happy to provide more on this if you would find it useful.