British Actuarial Journal, Vol. 16, part 3, pp. 577–599. © Institute and Faculty of Actuaries 2012
doi:10.1017/S1357321711000274
First published online 10 January 2012

Developments in the Management of Annuity Business

Abstract of the London Discussion

[Institute of Actuaries, 22 March 2010]

Contact
Peter Telford, F.I.A., E-mail: peter.telford@landg.com

This abstract relates to the following paper:
Telford, P.G., Browne, B.A., Collinge, E.J., Fulcher, P., Johnson, B.E., Little, W., Lu, J.L.C., Nurse, J.M., Smith, D.W. & Zhang, F. Developments in the Management of Annuity Business. *British Actuarial Journal*, doi:10.1017/S1357321711000213

The President (Mr N. B. Masters, F.I.A.): The paper this evening is by a large number of people, many of whom, I am very glad to say, are here. There is a tremendous amount of work, as I am sure all of you who have been through the paper have seen. It has clearly been a mammoth enterprise and I thank the authors for that.

Mr J. M. Nurse, F.I.A.: The Working Party was established under the auspices of the UK Profession's Life Practice Executive Committee to undertake a landscape review of how annuity business is now being managed in the UK, which is one of the largest markets in the world for annuities. The UK demographic trend has been towards people living longer into retirement. There has been a large increase in complexity of product alternatives available to individual customers on reaching retirement, and also to corporate customers looking to secure their pension scheme liabilities.

Although, in this paper, we have not attempted to explore the details of the bulk annuity market, many of the techniques used by insurers to manage those risks have direct application to the management of blocks of individual annuity business, and we certainly look to these as exemplars of good practice.

In this paper we seek to draw out the implications for the actuarial management of the business arising from the evolution of longevity risk assessment, investment strategy and operation, financial reporting, and enterprise risk management. We do discuss Solvency II in some technical depth, analysing the proposed rules for technical provisions and Solvency II capital requirement. However, due to the timings, we were not able to incorporate the latest pronouncements from CEIOPS on the use of risk-free rates and illiquidity premia which, of course, has been a major concern for UK annuity writers over the last few months and weeks.

We hope that the discussion this evening will not solely be devoted to the latest technical aspects of Solvency II, but will encourage contributors to consider the broader sweep of the strategic themes and public policy considerations we have tried to signpost in the paper. The Working Party discussed, definitely without reaching consensus, a number of such themes and topics in the course

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

of the work and think that the Profession, and indeed the wider public interest, will be well served by considering some of these themes.

So, we offer the following thoughts and questions as potential areas for discussion tonight.

The first of these is compulsory annuitisation. The UK market is so large and so developed precisely because it has been a necessary condition that accumulated tax-preferred pension funds eventually have to be used to buy an annuity. But the introduction of the alternatively secured pension showed that this may not be necessary, and while financial advisers and their wealthy clients are yearning for this freedom to be extended, the political discussion is now underway in earnest. This might yet mean that the age for compulsory annuitisation just moves up from, say, 75 to 80; but, as a profession, where is our voice in this public policy debate? What is in the best public interest?

While the siren voices calling for change are loud, who is looking out for the interests of the wider public, including the taxpayer? Who will ensure that individuals do not outlive their accumulated wealth or just spend today with little thought of their future needs? Evidence from other international markets strongly suggests that, given a free choice, few, if any, individuals choose to buy an annuity. If this is reproduced in the UK, where might that leave the plight of elderly pensioners, let alone the state of public finances in the years ahead, if the accumulated retirement funds were all used up in a few short years? How should customers be incentivised to make provision for their own retirement without unduly burdening the State if they outlive their accumulated wealth, and should there even be a wider debate on the concept of retirement anyway? This, I am afraid is outside the scope of our paper but is a debate that would inform and impact on the market for, and management of, annuity business in the years ahead.

A second major question: should, or will, all annuities be underwritten when purchased? Accepting that annuities are currently part of the retirement landscape, the available choice for individual customers has substantially increased as enhanced and impaired annuities have increased in popularity. They now account for over one-sixth of all annuity purchases, and this proportion has doubled over just the past four years. As the techniques for assessing the health and lifestyle factors affecting annuitants improve, the writers of non-underwritten annuities may increasingly be selected against, so may be forced to offer worse terms to their standard annuitants, creating even more incentive for the mildly impaired to seek better prices.

We are all used to lengthy application forms to fill out for our motor insurance policies and critical illness cover, so maybe the same will be true, quite soon, when buying our retirement income. It will be interesting to see whether the financial incentive to disclose genetic and other defects that have an adverse effect on the likely lifespan, so making the annuity cheaper, will overcome the natural reticence of the purchasers to disclose such matters. It remains important for actuaries to ensure that uncertainty around longevity risk and exposures are communicated effectively and fully appreciated by their audiences.

Thirdly, will lifetime annuities remain the norm or should there be further regulatory intervention to increase the space for, say, temporary retirement annuities? An alternative thought: should there be a maximum age written into a contract beyond which annuity payments should not be made, so effectively the Government is asked to act as annuity provider of last resort? Have the annuity contracts written so far, and those now available for sale, considered the possibility that some customers, probably the most wealthy, possibly with the largest annuities, might actually use

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

future medical advances or even be cryogenically frozen, to increase their lifespan? Do wordings in policies define clearly, and in a TCF-compliant way, when an annuitant is still alive, and maybe even whether the annuitant claiming the payment is still the same person as the annuitant who started claiming the benefit 50 or 100 years earlier but who has subsequently been "remade" by medical advances?

The fourth major theme: should the UK Government seek to issue longevity bonds in the same way that they issue inflation-linked bonds? Would this lead to a growth in the secondary traded market for longevity-linked instruments, and so potentially remove a barrier to writing those long tail and uncertain liabilities by bringing more participants into the market? Or would this just mean that the UK Government finances become overwhelmingly stretched if lifespans continue to increase and more resources are needed to be diverted to pay for State retirement benefits and healthcare services for the elderly?

It is of interest to note the recent launch of the Life and Longevity Markets Association, which is aiming to give a wider platform on which to air these types of issues, and undoubtedly we actuaries have a part to play in informing that discussion.

Our next point is that the asset strategy for insurers to support annuity business is an issue of material concern. Are closely matched credit-exposed assets still the most appropriate? The complexity of investment strategies and operations has increased greatly from a starting point that was typically passive and low risk. What will the investment strategy in a Solvency II world look like, and how do we get from here to there? A traditionally invested Pillar I portfolio will contain a closely cashflow-matched portfolio of corporate and Government bonds with credit risk manifested as default risk. Regulation and financial reporting for annuity business is undergoing a fundamental change, in particular the move under Solvency II to a one-year Value-at-Risk approach versus a risk-free portfolio with credit risk represented by mark-to-market spread volatility. Irrespective of the outcome of the current debate as to the appropriate risk-free rate, this is likely to represent a significant challenge to existing asset strategies, particularly in terms of transition strategies.

The global financial crisis has also highlighted a number of significant issues for insurers in terms of management of their business, such as the need to consider carefully basis risk on hedging strategies and the potential for unexpected liquidity strains, such as collateral calls, or non-calls, of financial assets.

Annuity providers are increasingly seeking to diversify away from corporate bonds into new asset classes and the global financial crisis has, potentially, presented new opportunities for insurers to explore the illiquid nature of their liabilities. However, these new asset classes will bring a number of new risk management challenges.

Furthermore, Solvency II may reduce the ability for insurers to invest in illiquid assets and the interaction of longevity risk with asset risks is also more complex. Are appropriate instruments, processes and techniques in place or being developed to manage these interactions and to enable better regular monitoring and reporting to take place?

More generally, has each organisation even developed its own appropriate ERM framework? The choice of that framework is fundamental, including the dominant metrics, the time horizons over which they are studied, and the architecture of processes.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

It is very unlikely that a single "right" choice exists, as it must be aligned with the insurer's commercial goals while also capturing the impact of regulatory capital and reporting environments and, where applicable, coping with a variety of risk profiles and diversification effects for different business lines. The complexity of the ERM challenge is, in a sense, also the reason why actuaries and insurers need to address it. Annuity business is no longer simple, if it ever was. This has been a recurring theme in the paper and risk management must be appropriate to address this increased complexity.

There has been a proliferation of measurement systems for performance and capital requirements, and the adoption of Solvency II, and of economic capital, will add to this complexity. Can performance, risk and capital be measured and managed consistently?

The seventh point: will Solvency II mean that decent pensions become unaffordable for the majority of the population? Are policymakers, bureaucrats and, dare I say, technicians (including actuaries) too immune from the impacts of their decisions and advice in this regard? Solvency II will change the capital requirements for annuity business, emphasising some risks more while, arguably, under-emphasising others and will likely have implications for business strategy, especially as regards investments.

Are the new requirements and strategy implications understood as far as can be, given the status of the rules, not just by the insurers themselves but also by policymakers? Are they prepared for the implications of transition, including impacts on current and future annuity customers? Some have said there could be a 20% fall in retirement income.

Within this paper we, the Working Party, have not tried to develop or promulgate new techniques for the management of annuity business. Rather, it has been our intention to undertake a review of current best practice as this has developed substantially in several areas over recent years. We did make wide use of the available reference material, which is listed in some detail at the back of the paper.

We have also attempted to identify where developments are likely to occur in the future and what new issues may emerge including, but not only, in the regulatory environment. It is unfortunate that we have not been able to address the operational risk aspect and we should like to see more actuaries becoming involved in this area, and we encourage comments tonight in this area and encourage actuaries to consider gaining more experience in this field. This is one area where we do consider that further research could usefully be undertaken to understand, and to seek to manage more closely, the risks being faced by insurers.

The story is almost certainly allegorical, but the days of the pickled thumb-print being sufficient to claim another year's annuity benefit should, we expect, be but a distant memory.

We hope that the paper has given you the opportunity to reflect on these developments and consider the issues raised, not only the obvious questions, such as, "Why is my organisation not managing its own risks like this?", or "What will Solvency II mean for our capital position?", but also some of the wider strategic and public policy issues. The increased spread of defined contribution and money purchase pension arrangements, and the increasing longevity trend, has meant that the market in the UK for conventional annuities, and other retirement income products, has already grown substantially and, unless compulsory annuitisation is abolished, it is expected to keep on growing substantially for the foreseeable future.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

The tax preferred status of pension savings is not currently, other than that the highest end, under any overt political threat. But compulsory annuitisation has often been criticised and may come under active review. Are the risk, pricing and public policy implications of reducing or removing compulsion well understood by policymakers?

The insurance industry seeks to deliver appropriate products that are, and will continue to be, relevant to customers' changing needs and their desire to seek value-for-money products that satisfy their various needs, particularly income, but also protection for dependants in their retirement.

As future taxation and regulatory changes emerge, actuaries will be called upon to assist companies to understand the changing dynamics of the markets, to design, price and deliver appropriate products to meet customer needs, and to ensure that companies are well managed to deliver the customer promises and manage the risks taken on by the annuity provider.

We look forward to this evening's discussion and hope that the paper, and these opening comments, help to stimulate other actuaries in their thinking in this area.

The President: Thank you. Mr. Nurse set out a long and very impressive agenda of public policy issues as opposed to the more technical content. Perhaps I can echo what Mr. Nurse was saying: I think we will get a more cut and thrust debate if we look at some of those wider issues as well as the technical content.

Mr D. C. E. Wilson, F.I.A. (**opening the discussion**)**:** Section 3.7 considers longevity risk transfer, both longevity reinsurance and longevity swaps, although it is sometimes unclear about the difference between the two. In practice, the difference between an insurance contract and a financial market instrument could prove critical. I think risk managers and regulators alike should be alert to any possibilities for regulatory arbitrage in this area. Essentially, if capital requirements are different for each, there is an incentive to go one way rather than the other, which may lead to lower protection at the end of the day.

In either case, there must be a clear recognition that future mortality rates can never be known, nor even the extent of the uncertainty. They do not just "remain undiscovered", in the words of ¶3.8.4. Hence the importance of understanding how, in the words of ¶3.7.5.2 "a negotiated view of best estimate future mortality" will be arrived at for collateral purposes or future termination of the contract.

Clearly, if a liquid market does ever materialise, this will become less of an issue. This is still a long way off (if it ever does happen). If it does happen, it may not have the capital benefits anticipated in ¶3.7.6.5. In practice, this will depend on how market implied mortality compares to the best estimate mortality previously used for technical provisions and, for those insurers who choose not to hedge, how the estimated 1-in-200 year movement in market implied mortality compares to the current 25% mortality stress.

On the subject of the mortality stress, it must clearly be applied consistently on top of a best estimate basis. It would seem very odd if, as is implied in ¶7.9.1.5, some insurers' best estimate mortality basis for their technical provisions included zero mortality improvements, which, as I read the paper, may be the case for some companies not based in the UK.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

Incidentally, ¶7.2.2.4 refers to Appendix A and claims that average point estimation is a suitable proxy for stochastic mortality projections. I am not sure exactly what is being claimed here, but I find Appendix A highly unconvincing. The non-linear nature of the annuity function with respect to mortality at each age means that the average value of annuities calculated with different mortality would not necessarily be the same as the value of the annuity calculated with average mortality. Clearly, a lot will depend on the assumed shape of the distribution of qx relative to a single point estimate, whether that is a mean, a median or whatever else is used as the best estimate.

Section 5.3.6 refers to the use of FX hedges as opposed to cross-currency swaps when investing in non-sterling bonds. Investors should be aware that these are not effective in removing risk. Arguably they remove pure exchange rate risk, but they leave in place non-sterling interest rate or currency risk.

Similarly, I was struck by a comment in ¶5.4.1.1, in relation to credit default swaps, that sometimes the basis risk has proved greater than the risk being hedged. This highlights the need to understand fully what is going on rather than just listening to the derivative sales person.

I am reminded of a comment once made to me with regard to a particular financial instrument; namely, "It is volatile because it is volatile". In other words, it was used for speculation, and the price depended on sentiment rather than fundamentals, so investors could not rely on relationships with other instruments which they thought ought to apply.

Section 5.4.2.3 discusses matching issues with the current statutory reserving basis. A static hedge is impossible due to factors like the 2.5% deduction from the risk-adjusted yield. While it is possible to make an adjustment at a single point in time, this will not remain valid as interest rates move. Similar difficulties would arise with the suggestion in ¶7.4.5.3 for a discount rate halfway between gilt rates and swaps, i.e., this, too, would be unhedgeable in practice.

The arguments for and against an allowance for an illiquidity premium have been rehearsed a number of times, so I will not go over them here. In many ways, I feel the argument is entirely unhelpful. If it is just a question of what assumptions should be made for reported profits and embedded values, then surely the answer is to disclose all the assumptions and let investors use what best fits their own views, as presumably they already do when it comes to banks and their loan books which are not reported on an equivalent mark-to-market basis. The problem arises mainly because capital depends on an estimated 1-in-200 year movement in the possible mark-to-market value of the assets, which is completely unlike what applies in banking. Hence the danger is that we are ending up with a very unlevel playing field.

Section 7 repeatedly refers to "over-demand" for long dated gilts and to "market distortions". I do not believe that actuaries should use these expressions without explaining clearly what is meant. Unless prices are controlled, in which case rationing may be required or a glut may develop, prices will essentially be determined by the interaction of supply and demand. In the case of gilts, supply is essentially price inelastic, being driven by the size of the Government deficit, but it is quite normal to find that demand would be higher if prices were lower, which sometimes seems to be what people mean when they use the phrases I have quoted.

Elsewhere, section 7 highlights some of the potential problems that Solvency II may create with rules as currently understood, with much of which I agree. Indeed, it is arguable that the implied

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

objective, described in ¶7.7.2, of ensuring that an insurer should be capable of hedging all its hedgeable liabilities in the aftermath of a 1-in-200 shock during the first year, is simply unrealistic. Section 7.10.3 seems to be suggesting that the more problems there are with the standard formulae, the more incentivised firms are to use internal models. While this may be true, I do not think it should be used as an excuse for making a hash of the standard formulae.

This leads me to my fundamental question on which I think the success of an initiative like Solvency II must depend. It is clear that Solvency II is likely to make annuities poorer value for policyholders. But do people here think that Solvency II will end up making annuity business more or less risky for both policyholders and shareholders? In other words, will the incentives to improve risk management outweigh the incentives to reduce capital in a way which might actually make long-term risks worse?

This question struck me particularly when considering the arguments around the use of an illiquidity premium. The strongest argument against appeared to be that in ¶5.5.8, that insurers may not be able to adopt the "buy-and-hold" strategy required to capture an illiquidity premium because they may end up as forced sellers of assets in some circumstances following spread widening, not in order to meet their liability cashflows, but in order to meet their risk capital requirements.

The authors have highlighted some potential problems and have asked a number of other questions in their concluding remarks. I am sorry that I have not been able to provide answers to all the questions, but I do applaud them for asking them.

Mr S. Bayliss (guest, Annuity Exchange): I will be addressing some of the general points raised at the beginning of the discussion. That is not to say that I did not have a lot of fun a few years ago helping Rabobank and JP Morgan deal with some of the issues we have just heard raised.

Our position in the UK has resulted from the balance between State and private provision of pensions. This heavy dependence on private provision results in both the size of the annuity market and the increase in demand going forward.

We had a social agreement that meant there was a tax deal to benefit both corporate savings in defined benefit schemes and personal savings, and the personal savings piece was essentially prescribed in 1957.

When I was involved in the Equitable debate many retired actuaries sent me lots of literature. One of the most interesting was a 1960 item from Stone and Cox. I will refer to that later because it told an interesting story about the flexibility and availability of annuity products early in the provision of private pensions.

The changing balance between DB and DC has challenged another social agreement: that of paternalistic provision – as a result making the individual the more responsible decision maker. We now see that with DC and personal pensions, whereas we started off with quite a lot of choice under retirement annuity contracts, but to very few people. In the 1960 Stone and Cox item, a lot of companies' annuities were underwritten – more than today. Indeed there were more with-profits annuities than there are today or have been at any time since. This is not so surprising as the retirement annuity contract passed over someone's desk. But the number benefiting from this was a small privileged group. Now, the vast majority of people are expected to go through the same process.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

We can often view retirees as if they are static, and that once retired they do not change. What you can see happening in talking to clients is that over the last 10 years people's attitude to retiring in one go is now radically different. Unsurprisingly, their needs, attitudes to risk, and understanding change during retirement.

If you are from a company that sells with-profits annuities, and has done so for a period of time, check how many complaints or expressions of dissatisfaction you receive from those who have held their annuities for 10 years or more. These products have not had the best investment conditions; but the problem is not really with the investment return but that the client gets older and their understanding or memory of what they bought changes over time. Maybe that could be cured by us all having new parts as we get older, but at the moment those new parts are not available.

At the start of the retirement process more and more retirees are looking for a way to defer the lifetime annuity purchase because their understanding, at least of the healthier ones, is that it is not a good economic option. And, by and large, they are quite right. If we could take the economic clock back to that time, the average age of the purchaser of the annuity would be 75–76 years.

Are we going to stop people retiring before then? No. But we need to enable them to see ways in which they can safely get to that age without buying a lifetime annuity. And, up until now, we have not provided a viable solution for those that require pension income at levels equal to those payable by an annuity.

I will not go into it now, but we completed a ten-year performance review of drawdown. I asked Mr Betteridge [Prudential] to give his asset allocation advice as well as testing sticking with the same funds (which many do). Even John Lawson [Standard Life] in the end admitted that it had not worked to provide an alternative income to the annuity, at any point during the ten years.

But drawdown does have a different and useful purpose for people who do not need to take the equivalent of the annuity income. And we now see different products coming along that can also take on parts of the developing need. But we are not yet able to say to the client, "If you want to retire now I can provide a way of deferring your lifetime annuity purchase for 10 or 15 years that gives you a level of income that is not that different and a level of security of that income that is not that different from buying your annuity now."

I am economist, not an actuary. To me, if the pricing was roughly the same and you assumed other things being equal, we ought to be able to take a generation of people to a point where the lifetime annuity was purchased later. If you look at yield curves over the last 10 years, the capital savings and de-risking of the pricing of lifetime annuities, there seems to be a number of opportunities for such a market. There even remains within annuity pricing a level of depressing of older rates in favour of 60–65 year-old rates.

If we concentrated on assisting retirees in deferring the lifetime annuity purchase, we would radically alter the structure of the annuity books that we are trying to manage and eliminate many of the complexities that we see in the hundred pages of this paper. I believe you could commercially, socially and politically arrive at ways to achieve this.

We have not had compulsion since 2006. The problem is nobody has really addressed what we have had instead. We have had ASP. ASP is absolutely awful. But it is only awful if you and your partner choose to die at the same time.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

I wrote to Ed Balls, as the relevant Treasury minister at the time asking, “Are you saying that if we had annuity salesmen acting as ambulance chasers, and the moment an ‘ASP pensioner’ was run over with their spouse and were dying, we got them to sign an annuity with a ten-year guarantee period you would be happy?” “Yes”, was the reply, “Quite happy”.

So government policy was clear and limited. The point about compulsion for government and policymakers is not an issue of when you have to buy the annuity. It is whether you will allow the passing of pension capital from one generation to the next. If you take away the requirement or persuasion to buy an annuity altogether, you are left with the question of when you stop accumulation with the tax breaks that go with the accumulation period, which at the moment is 75 years of age. We get as many clients saying, “I have to be aware of the kids in the last year between 74 and 75 years because if my pension fund gets taken then, they get it all” as we do people complaining about the position post-75 years.

So, when the politicians get round to looking at this, they will be asking, “What do we do about accumulation and tax breaks up to 75?” And when you scratch away those ‘compulsions’ and related rules, the essence of what you are looking at is, “Do we allow capital to move forward from one generation to another?” This government was quite clear that it did not. But actually looking for an alternative is more complex for any government than just the issue of annuities.

We now have the lifetime annuity regime and the USP/ASP regimes, the rules for which do not relate well to each other. For example, we need to find a way that neutralises the differences between lifetime annuities and temporary annuities (USP/ASP). The issues and the detail of this paper do allow us to address some of those points.

In enabling the public to understand these products, we have to find ways in which we address the public in language that they will understand, helping them to buy pension income that is most relevant to them when they are partially retired, relevant to them when they are fully retired, and also allows them to time the buying of an annuity when that is what they want.

Retired actuaries – and we have advised a number – often go into drawdown in the early stages of retirement but most tend to buy annuities in their early seventies. Why do they do that? Because they want their lives to be simpler. We must ensure that whatever changes we facilitate, we allow the consumer to get old in a way that does genuinely enable them to have pension income that meets their needs.

Mr O. J. Lockwood, F.I.A.: I would like to focus my remarks on contrasting the approaches that have traditionally been used in the life industry to manage investment risk on annuities and to manage longevity risk, and on questioning whether there is anything fundamental about the nature of those risks to justify the different treatment.

The management of investment risk has, for a number of years now, been dominated by the principle of market consistency. I consider that this principle has achieved much in terms of objectivity of the valuation, although significant areas still remain where judgement needs to be exercised, such as the choice of risk-free yield curve. However, I would argue that an even more important benefit that market consistency has brought is it automatically creates a dynamic link between experience and assumptions, so that the valuation is not only of an appropriate absolute level but also responds in a coherent way to changes in market conditions.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

If we now consider longevity risk, then it is usual for a company to set its base mortality assumptions and its future longevity improvement assumptions separately. The base mortality assumptions are typically set taking account of several years of recent experience. While there is good reason to consider more than one recent year – in order to control for the random fluctuations in aggregate mortality that occur from year to year – this averaging creates a danger that if mortality has fallen recently, then actuaries will come under commercial pressure to attach only a low level of credibility to the most recent experience and hence not recommend a sufficient strengthening of the basis. This is a problem that calls for a stochastic mortality model, from which an objective conclusion can be reached as to how much credibility to give the latest year's experience compared with previous years. We then obtain a dynamic link between experience and assumptions, in the same way as a market-consistent valuation achieves for investment risk, so that the valuation responds in a coherent way to changes in mortality experience.

Regarding future longevity improvements, the traditional approach has been to revise the assumptions only when the CMI produce a new set of projection factors, so giving rise to a significant delay in incorporating new information into the improvement assumptions. In the last few years some refinements have been made to this approach, for example by imposing a floor on the improvement rates from the Interim Cohort projections. However, there remain questions as to whether the levels of floor currently being applied are adequate, and it could be argued that this is another case where insufficient credibility has been attached to the most recent experience. The latest development in this regard is that the CMI has stated an intention to update the calibration of the initial rates of improvement in the new CMI Projections Model annually going forward, based on actual improvements in ONS data. I regard this as a positive development in terms of achieving more of a dynamic link between experience and assumptions, but I still believe that further work could usefully be done in this. One point is that companies should arguably take account of their own experience in setting their initial improvement assumptions rather than relying solely on ONS data.

Another point is that the CMI smooth the actual improvements using a P-spline model, but because the improvement rates given by the P-spline model at the extremities of the data set tend to be highly volatile, the compromise is adopted of reading the initial improvement rates from two years before the end of the data period and using those as the starting point for the future projection. It is clear that it would be valuable to investigate alternative methods of smoothing the mortality rates in this region of the data, to produce improvement rates at the end of the data period that are suitable for direct use as the starting point for future projections.

Once such a dynamic link between the longevity experience and the assumptions has been established, the approach to managing longevity risk will become much more consistent with the approach to managing investment risk. Exposure to longevity risk will be able to be acted upon immediately as soon as evidence of this exposure emerges, as is the case for investment risk under a market-consistent valuation. In addition, the relative magnitudes of the impacts of investment risk and longevity risk upon financial results at each valuation will provide a fairer reflection of the risk profile of the business.

Mr P. W. Wright, F.I.A.: I came away from reading this paper with the thought that this business is so complicated and risky that nobody in their right mind would think that they could make a reasonable living out of writing it. But, in practice, there have been a large number of new entrants to the annuity market in the UK in recent years, largely writers of bulk annuities and impaired life annuities.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

So my first thought and question is what do they know that the writers of this paper do not?

I should like to say a few words about the illiquidity premium because I remember, something over ten years ago, speaking at a Staple Inn Actuarial Society meeting about pension fund valuations and discount rates. I made the statement there that no life actuaries would contemplate reducing liabilities through backing them with risky assets, which was at the time, of course, common practice for pension funds. Clearly, looking at ¶5.1.3.2 of this paper, I spoke too soon. The practice envisaged there would sit very well, I am sure, within the National Association of Pension Funds.

This question of investing in lower quality assets to enhance the valuation rate of return is not a hypothetical issue. Last year a very large writer of annuity business announced in its results that it had increased its allowance for defaults by credit grade. This is consistent with the findings of this paper. However, it had offset all the resultant additional liability by moving the credit quality of its assets down.

I admired the company for the transparency of its disclosure. I could not fault it there. But I am afraid I did not think very much of the end result. An interesting fact, not mentioned in this paper, is that the listed companies' share prices were all hammered when they disclosed what they had done in this area. So the market out there did not believe that it was appropriate.

It is noteworthy that the new bulk annuity providers are not listed. It would perhaps be interesting to speculate on what would have happened to their share prices if they had been.

Mr W. Burrows (guest, Burrows and Cummins): I have a very simple but, I think, effective analysis of the retirement market, and I describe the market as consisting of "small beer" clients. No disrespect, but they often say, "Mr Burrows, we must be small beer for you". "Small beer" clients are people that have relatively small pension funds and who have limited choice. For them the primary objective will be maximising income.

At the other extreme, there are the so-called fat cats, so named because fat cats take all the cream. But the fat cats are a law unto themselves. My theory is that there is an inverse relationship between the amount of risk people take with their pensions compared to the risks that they have been involved with in their working lives, which means actuaries normally buy annuities and architects will invest in drawdown. The conclusion is that those that understand risk perhaps do not take very much, and those that do not understand risk take more than is good for them.

In the middle there is a very important group of people that I term "middle Britain". For me middle Britain is a very important area of the market. I may disagree with some of the insurance companies about the actual definition, but, for me, middle Britain are clients who have funds where they need to do more than just buy a straightforward guaranteed annuity, and they probably do not want, or cannot take, the complexity of a drawdown.

I think one of the issues that the report does not highlight, maybe it was not in the brief, is what I am now terming the middle Britain annuity crisis.

This is my cue for having a bit of a rant about postcode annuities. Postcode annuities, I think, are a very blunt instrument. Together with Solvency II, they really highlight the fact that this middle

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

Britain cohort are fast seeing the value for money from their annuity disappear. The point that I make is, even if gilt yields and bond yields increase, it is unlikely that the full increase will be passed on to middle Britain as annuity pricing is aimed at people in poor health and people in different parts of the country.

I have a really bizarre example of two people living a mile apart in NW1, where the annuity difference is over 3%. So if there is a problem that middle Britain are losing value in annuities, how can they find a way out?

I will now talk about some of the products, and link that in. I have an interesting graphic that I use to describe the options. There is a box that shows non-profit annuities; there is a box that shows investment-linked annuities and a box that shows drawdown. But coming out of the investment-linked annuities are with-profits annuities, flexible annuities (examples of that being Prudential's Income Choice annuity and the new Flexible Income Annuity from MGM). Then there is a fixed term annuity. Of course, a fixed term annuity is not an annuity. It is actually a form of drawdown. I do not intend to go into too much detail about the products because you will be aware of them, but I think an intelligent question is, "What is the rationale for an investment-linked annuity?"

That ties in very neatly with the so-called middle Britain crisis because, if we take a customer-centric approach and ask ourselves what are the objectives of this mythical middle Britain customer, we may say it is a sustainable income in real terms for as long as they and their partner are alive without taking undue risk and with as much flexibility as possible.

If we unpack that then it does not bode well for the guaranteed annuity which the majority of people are buying at retirement because guaranteed annuities clearly offer insurance against outliving assets. But, of course, there is no inflation linking.

I make a very simple point, and maybe I am naive here, but if an annuity is a long-term contract, then surely it is appropriate to consider having longer term investments, real investments, that will, hopefully, provide an effective hedge against inflation.

So the rationale for investment-linked annuities is that they provide the benefit of annuitisation (income for life, longevity insurance) at the same time as they provide real investments, real assets, with guarantees and with flexibility. Surely that is exactly what this middle Britain cohort needs.

I am very optimistic about the future. I think the debate needs to be wider and move away from this polarisation between guaranteed annuities and drawdown towards saying that there are a lot of customers who fall in the middle. I see no reason why this middle Britain cohort, and equally the small beer and the fat cats, should not consider purchasing more than one type of annuity inside what I increasingly call an annuity portfolio.

The President: Thank you very much, and thank you for responding to my earlier challenge as well. For those who perhaps did not hear it, Mr. Burrows was speaking on Money Box at the weekend, and I for one was struck by the sheer complexity of the answers that were needed to what were some very straightforward questions from ordinary savers. I think Mr. Burrows has given us at least some idea of the issues, and maybe there is something here that the Profession can start to look at, not perhaps from the life insurer's point of view but rather from the point of view of the individual, and how the individual weaves his or her way through the intricacies.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

Mr J. P. Ryan, F.I.A.: The first thing I want to discuss concerns ERM. The paper talks about Value-at-Risk (VaR). One of my points is that this is a flawed concept when being used for managing and measuring risk. You need to have a coherent measurement of risk. There is quite a lot of literature on the subject. VaR only values risk correctly for elliptical risks – not quite the same as things that are equally likely to go up and down at the same time. It works for banks in day-to-day market risk where there are huge computation issues involved. It does not work for anything other than day-to-day market risk.

I think at least one of the major contributors to the recent financial crisis is the fact that actuaries have not shouted out loud enough about fallacies of VaR in the banking system, and the fact that Basel II was flawed in that it did not push that down far enough. We have seen the impact with all the bank failures. So, please do not let life and annuity companies make the same mistake.

This is particularly true of credit risk, which is certainly not an elliptical risk, but is very skewed to the downside. You need to have quite a lot of capital in that respect.

There has been a certain amount of comment about regulatory arbitrage and the fact that Solvency II might lead to lower annuity rates, presumably because that would require higher capital requirements. This, I think, is probably flawed unless we admit as a profession that we have screwed up and underestimated the risks in annuity business for a long time. Have we been operating with far too little capital than any prudent financial institution would, and therefore do we need to make that good? I do not think that is true. Even if the regulatory requirements become stiffer, that should not of itself lead to an increase in annuity rates. The more capital you actually put up, the less risk is involved, and financial market theory says therefore investors require a lower return. I know you have skewed curves and everything does not quite work out symmetrically, but that goes a long way to offset the increase in the returns required. It is not a flat rate return; it is not because you increase the capital you need a high equity return. You do not. The risks should be less and therefore you need a lower return and the two should offset each other.

To the extent that there are flaws in Solvency II, and I am certainly not going to go over that tonight, it requires too much capital. But that should not be an issue – you can hedge or you can borrow. There are trade-offs in the marketplace which can be used.

Similarly the effect of regulatory arbitrage can be unwound to some extent, using the marketplace to work some of that out.

The section on operational risks in the paper calls for some comments. There are three that immediately spring to mind.

First of all is computer failure, and there can be massive breakdowns in that area. It is a well-known issue for financial institutions.

Secondly there are policy wordings, elements of which have been mentioned earlier this evening. The wording on policies is a real operational risk, including impacts from longevity, cryogenics, and so on. But there are other issues as well that need to be considered.

Finally, perhaps the biggest one, and it is not specifically mentioned but it is a very real risk. Certainly, when I first started looking into annuity companies as an investment analyst, it was one

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

of which I was very conscious. It is inflation risk on expense allowances. By and large, because there is a single premium up-front, if we go into a highly inflationary era with money flushing around from the banks, and so on, that has to be a real risk, and it could be the major risk. I know you can buy index-inked investments to hedge some of that risk, but it remains one of the biggest risks that annuity companies face.

I welcome the comments on portfolio annuities. An individual has several needs. Once he has purchased an annuity there is a real inflation risk. In the last few years we have gone from fears that, maybe, we are going to go through a chronic period of deflation, to wondering whether we are going to come out in a period of rapid inflation. We could spend the rest of the month discussing that topic.

The only way you can actually hedge that as an individual is by buying a mixture of inflation-linked and conventional type annuities, presumably with some investment risk as well. So, a portfolio, I think, is an extremely good idea and I think is something, as a profession, we should be pushing very hard for, because that has to be very much in the interest of the individual policyholder.

I conclude with a thought on the interesting idea of transfer of wealth between generations. It suddenly struck me who is a natural buyer of longevity bonds. Why not invest the excess of the annuity you are forced to buy in a longevity bond and pass that on to your children?

Mr D. I. W. Reynolds, F.I.A.: I was very recently at a General Insurance Practice Executive Committee and we actually debated the date when they may present a paper, and how it would be discussed. One of the things debated was whether the President should actually try to manage the discussion by saying, "Let us talk about this topic". People might be much more prepared to stand up if there is just one topic. So, if the topic is compulsory annuitisation, then people would have different views and we could actually have a debate.

The best comment that I have heard in respect of compulsory annuitisation is it should be limited: it should be there but it should be limited. It should be limited so that you must take out, if you are able to, sufficient income that keeps you above the means test limit for state benefits. I would buy that. Yes, go for compulsory annuitisation but actually allow it to be limited, and not use the total funds available.

Disclosure of genetic data sounds great. I am sure that it is happening. But I suspect there are a number of companies who would not want to accept genetic data in pricing annuities because they are banned from using it for protection products. Logically you should be able to use it for both. For instance, if I do not have a genetic problem, why should other people receive better annuities than I do? There will be people saying unless you allow it for all products, that is, unless I can benefit from better term assurance rates, why should I suffer on annuity rates?

Should there be a maximum age for annuities with the government paying thereafter? Possibly. I suspect if you set the maximum at something like 100 it might not be a very big cost for the government, but it will be taking on more longevity risk. The real benefit for companies is that it would probably reduce the amount of capital they have to put up against annuities.

So when Mr Nurse asks whether the government should issue longevity bonds, I think they should be buying longevity protection. They have so much liability from State employee pensions the last thing they want to do is issue longevity bonds and take on more longevity risk.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

Perhaps I can pick up some things that we have debated already. Mr Wilson was cautious, maybe critical, about reference to bias in gilts yields. I recently attended a lecture by Charlie Bean, Deputy Governor of the Bank of England, on monetary matters. He was very clear that the purpose of quantitative easing was to reduce interest rates. So the market is biased at the moment: the Government may want lower rates. This way they were actually introducing a mechanism by which they could distort the market. Another example is to ask, "Can we get rid of mark-to-market?" The market is not always a fair value.

Let me make some comments on drawdown schemes and non-annuitisation. When I was at the FSA they introduced the hurdle rate for drawdown schemes. Barrie & Hibbert did a very good piece of work, which I have tried to get hold of since. What they were saying was you cannot just take the movement return from when you start a drawdown scheme to age 75, and say you must be able to buy the same annuity at age 75 as at commencement of the drawdown scheme. This misses out one significant benefit of a drawdown scheme which is, if you die in that period you still have your capital. When you take that into account, the hurdle rate is rather lower. The FSA approach is unchanged and is still wrong. Whether we will ever get it changed, I do not know. Barrie & Hibbert must reissue their paper.

This brings me to a comment that I have probably made in this hall before on pensions, the amount in a drawdown scheme and passing it on to the next generation. I have certainly made it elsewhere. There should be a process by which the annuity pool when you die – whether you reach 50 or 55 years of age, whether you are in drawdown or not – should then be required to go into somebody else's pension pot. If I die before I have taken money from my SIPP the money can go into my son's pension pot. No tax relief on it. Actually it is a benefit to the Government because it reduces the amount he can put into his pension pot but it keeps the amount of money in pensions for the next generation. I would just express that point again.

For a final point, we all have built into our expectations that mortality will continue to improve. Medical skills will develop, albeit at a cost. But I would just say I would expect mortality will go in the opposite direction at some stage, and quite significantly. I think I already held that view when a couple of years ago I saw an article in the FT by an epidemiologist. She did not quite put in these words, but broadly it was: be afraid, be very afraid. The argument was we had SARS, and that is easily transmitted between humans. Fortunately, it is not very dangerous. It seems to be the same with swine 'flu. Or, you can have something like ebola fever, which is very difficult to transmit but absolutely deadly. She finished by saying, "We will get an easily transmittable virus that is deadly." Be afraid. Mortality will get worse.

Dr. L. M. Pryor, F.I.A.: This paper is a very good survey of what management of annuity business involves. The overall impression is that it is very, very complex. There are lots of things going on and it is most unlikely to get any simpler.

Nobody will be surprised, gien where I come from, when I make the observation that in order to manage complex businesses you need good information. Much of the information for managing annuity business comes from actuaries. Therefore, it is really important that actuaries provide good information.

In particular, given that there is so much uncertainty involved about what might happen in the future, and that this is very long-term business, information about the risks and uncertainties is

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

absolutely vital. There is a very interesting discussion in a number of places in the paper about that. Also, Mr Ryan's comments earlier, on some of the risks, were very interesting, especially on the operational risk side of things.

I should also like to add some personal remarks, picking up on something that the paper says about how annuity business differs from protection business in that in the protection business essentially the policyholder and the insured have a shared interest in the insured event not happening. With annuity business that is not the case.

With protection business if the policyholder dies, that is bad for the policyholder. The money then gets paid out to their dependants, and that is good. So the two things offset. With annuity business, if the annuitant lives, that is good for the annuitant plus they get the money, which is also good.

This creates a big problem in that we all know that we tend not to be very rational when we make decisions. You very rarely hear someone complain at the end of a term assurance, "Oh look, I have lived for 25 years, what a waste all those life insurance premiums were." However, people buying annuities often say, "Well, what happens if I die in two years' time? What a waste that will be. I will have lost all my money." So it is very much "heads I win; tails you lose" or the other way round. There does not seem to be the symmetry that one would expect of rational decision-makers.

This means that if any change is made to the regulatory landscape, for example a change in the requirements for compulsory purchase, the shape of the business will, I suspect, change enormously. You might well get less take up; you might well have to offer many more guarantees, capital guarantees, and that sort of thing. We have to think very carefully about that; and also possibly, as an industry, we should be thinking about better ways to communicate to potential annuitants exactly what is going on and how good a deal or otherwise fixed guarantees are. There is a definite concern that sometimes people buy expensive guarantees that are probably not in their best interests.

Mr M. Iqbal, F.I.A.: One general point on guarantees: a couple of centuries ago, when the Equitable was formed, it charged a higher premium for non-profits endowments than for with-profits because of the guarantee it was giving. On annuities the guarantee lasts for 30 or 40 years. The question really is whether the new players are adequately capitalised for the lack of diversification.

In the paper the authors say the biggest risk is longevity risk. I wonder if that is true. That was true 20 years ago when the matching assets were gilts. It is probably no longer true now with corporate bonds and other assets that carry significant default risk. That leads me to think the risk-free discount rate is perhaps too high or alternatively that the assets should be written down.

Mr D. S. Brand, F.I.A.: For some time I have been working in the industry for a reinsurer considering the annuity market from the provider's point of view. The paper goes through much important detail very well.

As I am now in my mid-50s, I am beginning to think from another point of view. I have a defined contribution pension scheme and I will soon get to the point where I am going to have to decide what to do with it. Suddenly the risks of annuities look totally different to me. In looking at the newspapers over the last few years, wherever I saw a financial page and saw a letter which said,

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

"Why I should I buy an annuity? If I die within the next year I will lose all my money", I was keen to make the point, "No, you will not lose your money; this is this concept of pooling of risk." That is all very well when you are considering the situation from an insurance company point of view. When you are the individual, and as the President said, this is the time when we should be looking at the individual's point of view, your view is very different. It is natural to think (as I am beginning to) "If I die I (or my family) will lose all the money I have been saving for many years." Pooling of risk seems to be a long way from your thoughts at this point. This is very different, from a retiring individual's point of view to that of a policyholder with a life insurance policy. As has been said, nobody complains when they have got to the end of the 25 years of a term policy without making a death claim. I certainly didn't!

So, as Mr. Wright said, from the insurer and reinsurer's point of view, why should we write these products? The risk of losing money does seem very high. On the other hand, the individual coming up to retirement looking at the position believes the product is really bad value. There are not many industries where you find both the product provider and the customer think that the product is bad value. So, how do we get to a position where our industry can be seen as providing valuable retirement products when considered from the consumer's point of view?

Mr D. A. Shaffer, F.I.A.: Just a couple of comments echoing something that Mr. Wilson said at the beginning about the level playing field, or otherwise, between participants in the transfer of longevity risk.

There are two distinctions here, and I do not know if they are clear to everybody. One is between swaps and insurance contracts. There is another distinction which is between insurance companies and non-insurers, in particular the banks, which see longevity as an attractive market to get into. There are a number of banks trying to get into this market. If you put that together with the Solvency II regulations, which are rapidly coming towards us, you get what seems to me to be quite an unlevel playing field. Under Solvency II, as has been said, the insurers need to hold sufficient capital to cover a 1-in-200 event and then to buy out the risk in the market. We could have a debate about whether a 6% cost of capital on the risk margin is appropriate.

For a non-insurer holding a derivative in a regulated entity, they typically have to hold a mark-to-market or mark-to-model value of that derivative. Others may know better but, as I understand it, those things are not terribly well-defined in the banking industry. Therefore the amount of capital they have to hold against longevity risk is materially lower.

So you have an unlevel playing field at the moment, and on top of that you have increased regulation which is going to require insurers to hold even more capital. I think the consequence of that is you have an even more unlevel playing field after 2012, and therefore you are going to see longevity risk move away from regulated insurers and more towards unregulated entities, either offshore, outside of Europe or outside the insurance industry and the banking industry.

I just ask people to consider: you have what is probably the fastest growing line of insurance business potentially moving completely away from the insurance industry. Is this where the industry wants to be?

Mr S. C. True, F.I.A.: This paper has stimulated an interesting debate this evening, namely: how can you have a product that both insurers and the customer appear to hate?

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

Firstly, I am not sure that the insurers do hate annuities. It is the reporting season now. When you get to the end of this month have a flick through the new business added value that companies are claiming on annuities. That contribution is propping up an awful lot of companies' new business profits.

Vesting annuities is a captive market: there are billions of pounds converting from accumulation products each year into annuities. The life insurance industry is the only home for that money. There is a huge competitive advantage for the incumbent players in the industry not least because they have all the data on longevity. The industry cannot credibly claim to know with certainty how long individuals are going to live, but it does know how uncertain its estimates are. It knows how risky the business is in terms of future demographic experience. That is a huge barrier to entry from anywhere else.

The vast majority of people in this room should embrace annuities as a concept because it is going to be the lifeblood of this industry for a long time. There is political pressure which will challenge the existing compulsory purchase of pension annuities, but the absorption of longevity risk by insurance companies is a valuable social function.

The second point I should like to make is on this absorption of risk issue. It is not entirely obvious in certain structures who bears the risk when things go wrong (either increased longevity or deficient investment performance). I have been involved in situations where with-profits funds have historically written a lot of pensions business, which have vested into annuities. These funds then reach a tipping point whereby the annuity outflow is going to be vast and uncertain in comparison to the in-force with-profits book. The strain on with-profits payouts when things go wrong with the annuity book, for instance as a result of reserving changes or the impact of Solvency II, is a risk that with-profits policyholders have no concept of because the balance of risk in their fund has changed enormously since they purchased the original policy.

So there is a huge issue about who is best placed to own these risks, and I think we might well see some change here as with-profits funds recognise that their policyholders do not really want this risk, albeit that shareholders do not particularly like uncertainty either.

In summary, this is an industry we really have to get our arms round and be more definitive about where we see it going, because it is going to be the lifeblood for a lot of the people in this room.

Mr Nurse: I will respond to some of the questions about the value to the customer and the risks taken on by insurance companies. There is one other market where I looked at the annuity business which is completely different from the UK market. There they do not have the same regulatory constraints. But one thing they do have, and this is the market in Israel, is 20 year guarantees on their retirement income in payment. The customer says, "I am going to get at least 20 years' worth of payments out of the insurance company." The insurance company says, "I know I have to pay for 20 years at least. So I have some tail risk." This is a product design and concept that is a bit different from what we see in the UK. I wonder whether there are some public policy initiatives that we as an industry could think about with regard to that.

The President: May I make some comments of my own?

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

First, I was very struck, having been out of the UK market for only two or three years, to read the introduction and to see just how rapidly the landscape has changed. That is obviously one of the great values of the great sweep of the paper.

The issues around the immediate needs annuities is an area which is still to be understood, and is an area from which I will be encouraging future papers and research.

The other thing that struck me, which has struck me also on the life insurance side, is the much more detailed attitude towards underwriting. It feels to me that we are now looking much more at predictive underwriting for term assurance, and for annuity business, very much in the way that the car insurance business did 10 or 15 years ago. What are the factors? What else can we tease out? How can we gain competitive advantage? That will be an area of considerable interest, and considerable growth, for maybe five or ten years to come.

That does then, of course, lead to the questions which Mr. Burrows was picking up, and which I think others have also mentioned, which is how do we help the individual tease out all those decisions that they need to make, and which are now being passed to them? I really worry sometimes if we are asking individuals to make assumptions about longevity, indeed about their own longevity. I am concerned about that and so, therefore, I am concerned about the abolition of compulsory annuities at a certain age. This is a very personal remark. I think the abolition of compulsory annuities is probably the right thing. It is probably going the right way, provided there is enough protection for individuals. But that is a big proviso. Inevitably, for some individuals, their date of compulsory annuitisation will fall when interest rates are unnaturally low for external reasons, such as the current aftermath of the "credit crunch". This means those individuals are forced to lock in these low interest rates for the rest of their lives. This cannot be good economic sense.

Mr R. J. Houlston, F.I.A.: I have a very quick comment. You seem to be suggesting that abolition will allow people to protect themselves against inflation. We heard earlier comments about small beer. I am not sure that we have covered the issues of how we protect the people who do not have much money, and who probably need protection against inflation.

As somebody who has actually seen annuities sold, there seems to be a tendency for people not to take the inflation link. Most people wanted the maximum immediate income. I do not know, but I wonder whether there is actually a need for compulsion and compulsory indexation. I do not know how you do it and I do not think it will work. But there are going to be people who, to some extent, are not going to have valuable annuities in 20 or 30 years' time. It is going to be just the same as there being no compulsory annuities and they are going to fall back on the State.

There is one other little point in the paper which slightly irritated me. Somebody sneaked the word "guaranteed" in when referring to income from sale and leaseback. I think it is rather dangerous to refer to anything as guaranteed. There is nothing certain in this world except death and taxes.

Dr C. S. S. Lyon, F.I.A.: As a pensioner of more than 20 years' standing, it has been good to be brought up-to-date on what has been going on, to the extent, of course, that I can understand it.

Also, as a pensioner of more than 20 years' standing, I am in that fortunate group, the "never-had-it-so-good group" of pensioners with a defined benefit pension and a contingent widow's pension as well.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

When I look around and see what has been happening and how the younger generation are having to cope, one thing that worries me particularly is the extent to which people coming up to retirement in the next 20 years, say, are going to have inadequate pensions. They will have small groups of pensions, in quite a lot of cases, which will not, in aggregate, meet the target that was mentioned earlier on of overcoming the level of State benefits and State support.

I just wonder about this. You cannot cope with a lot of complexity when you are dealing with very small benefits like that.

As for transferability of wealth from one generation to another, again looking at the mass of the population, I wonder whether one possible way of helping people would be to be able to build in a very small death benefit at the end of a pension so that people are able to cope with the immediate expenses post-death, in other words, funeral expenses, and so on.

For example, suppose a pension up to a certain level could continue for three months, or something like that, just to provide some help. As it is, the pension just stops on death. I am not sure whether that is a very helpful suggestion, but I throw it out for what it is worth.

Mr Burrows: Just very quickly on the point before last – about people with smaller funds and inflation–proofing – perhaps one of the things we can do is to change the debate; rather than just talking about providing guaranteed benefits, talk about the concept of shared risk. For me, the heart of this is the proposition for the customers that if they are able to share some of the risk with the insurance company in return for a potential for income growth then customers might be able to have incomes that go some way to providing inflation-proofing.

Mr Wilson: I agree about sharing risk. Guarantees are too expensive. It is an obvious thing to do for the middle Britain group about which Mr Burrows has been talking.

But my question is: how does the customer choose? At the moment a lot of these products already exist but hardly anybody uses them. Despite your best efforts, Bill, you cannot do it by yourself. I genuinely wonder whether the IFA community has the appetite to understand the issues and to explain them to their customers.

Ms K. M. Brown, F.I.A. (closing the discussion): One of the interesting areas was to consider the customer and the options that the customer has. First, how do we understand the needs of the customer? One thing that has always struck me is that the customer's level of understanding is very basic. Market researchers tell us that people plan for the next five years. That is not much use when people come to retirement and they are trying to plan for the rest of their life.

I had one point of particular interest on the paper about underwriting and customers typically under-disclosing how ill they are. Customers are used to being penalised when they say that they are ill, and also many are of the generation which says "mustn't grumble." That is true in general, but I have a slight concern about smokers. It may interest you to know that Government statistics show that about 20% of people of retirement age spend any money at all on tobacco. A typical definition for smoking for annuitants would be to smoke 10 cigarettes a day for at least ten years, which is a considerable uplift on smoking just occasionally. When I did some analysis of the quote requests coming through the Exchange it therefore surprised me somewhat to find out that 47% of the requests were for people who wanted smoker rates. I am still struggling as to why that is.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

But let us go back to the customer and how we meet the customer's needs. There are two reasons why compulsory annuitisation has a very real customer benefit. The first one is to do with the customer's understanding of how long they are going to live. I talked about customers planning for five years. How does the customer deal with the uncertainty of life expectation?

For example, taking a male age 65: if you looked at the 25th and 75th percentile, they would have an equal chance of living either 16 or 28 years. For the individual, the question is, "So if I am going to take my fund and run it down gradually, do I plan on 16 years or 28 years – or more or less?" It is an impossible conundrum for any customer.

One of my colleagues has a mother and mother-in-law. One of them pays little attention to the future but wants to spend money. The other one never spends: "It might always be needed for a rainy day". Both people are living sub-optimal lifestyles. They cannot judge how much to spend. Something like an annuity will help customers.

The concept that, at some level, people, when they have bought an annuity, should have freedom to do what they like with their pension fund sounds good. However, that level must be sufficient to live on, and at a level we would not be ashamed of, as a society, to see people living on.

I thought the comments about people feeling that they were cheated by an annuity are important. The suggestion of introducing a 20 year guarantee period was helpful. It would also be helpful if it could be payable as a lump sum. The other possibility is a money back guarantee. This says to the customer "You can have your money if you die early." It is simple. At the moment there are tax and legislative complexities.

Overall, the annuity market is thriving. It has a great future because more and more people are going to need to provide annuities for themselves. The next two years are uncharted territory for us due to Solvency II. It is important for us as a profession to work through these issues to create something which is value-adding. We should turn the comment that neither the insurer nor the customer wants an annuity on its head, into something both value.

Mr P. G. Telford, F.I.A.: I am delighted that so many of you have taken up the invitation to talk about public policy issues. This has been an opportunity not just for us to exercise our brains, but for the Profession to have some influence for the public good. I will come back to that theme at the end of this short commentary.

One speaker correctly identified that we had left out operational risk. I am afraid that even in a paper of 96 pages something had to be out of scope, but a further presentation on this topic is being prepared for the Life Convention in November.

The question was raised, "Will Solvency II really increase the risk of annuity business or the capital required?" – in other words, Solvency II should not present a new problem if the industry is properly capitalised already. But, as somebody has already said, Solvency II is essentially a wind-up valuation and, in my view, therein lies the new problem. The insurer must be capitalised to endure a 1-in-200 year shock, then to dispose of all its business to another profit-making entity, and then to transfer across sufficient assets to make the acquisition of that business commercially attractive.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

This is not normally the way we run our businesses, and if a wind-up valuation is superimposed on going-concern management which probably has the lifetime economic solvency and profitability of the business in mind, then some of the consequences will be unwanted.

That is not to criticise the Solvency II regime, but simply to say that, like any other regulatory capital regime, it is a constraint that insurers have to meet. It is not necessarily perfectly aligned with the economic interests of our proprietors or with those of our customers.

Returning to the theme of public policy and what customers really need, I am delighted that Mr Bayliss and Mr Burrows, our two guests who are engaged in selling the product, gave such thoughtful comments. We have identified a number of things that annuity customers need: an income in retirement; protection of that income in case they live longer than their assets; and, at least for some people, a generational transfer of income-producing capital. And thus we reach a conflict because one cannot provide, from the same stock of capital, both longevity insurance and generational transfer. Something has got to give: customers who want everything will not get everything.

I am delighted, too, that we managed to have a diversity of views, even around the table here on whether compulsion is a good thing or not. I do not myself have a firm view, but perhaps the idea of compulsion up to some level of income, and choice above that level, would be a sensible way forward. The Profession clearly should contribute to forming this important piece of public policy. Moreover when a change is decided, if it is decided, we need to help manage the consequences for future retirees as well as for the insurers that we advise.

We used a quotation that the objective of an enterprise risk management process is to provide "reasonable assurance" over the achievement of an entity's objectives. We said that for an annuity insurer "reasonable assurance" is a very ambitious aim. I think that tonight's discussion has demonstrated that afresh. Insurers and their customers expect actuaries to facilitate the outcome of reasonable assurance. I believe we have also well covered a wider question: how do we provide reasonable assurance to the annuity-buying public that they will get what they need and, as far as possible, what they want?

Speakers have mentioned the misalignment of interests between the annuitant and the insurer. That is a fundamental and unavoidable issue. We are trying to ensure that people do not outlive their assets. The classical approach has been to manage the longevity of the assets, by reference to our assessment of the longevity of the person. All the recent criticisms of non-profit annuities aside, it does seem a pity that the value of that solution does not always commend itself to the people who may need it most, and so we find people, quite understandably, taking emotive positions such as "everybody hates annuities" or "people are being cheated when they die".

I think that, in simple economic terms, a key explanation is the difference between utility perceived by customers, and accounting values perceived by insurers. The holder of a life insurance policy (or their dependants) will either gain a great deal financially or lose a small amount. Most customers will see that as a reasonable trade – indeed the difference between utility and accounting is what makes insurance economically rational. But an annuitant, each year, either gains a relatively small amount – in terms of preserving income for another year – or "loses" a large amount on death. From a utility standpoint, that is unattractive.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press

But perceptions are what they are. People think that way, and we need to help our clients and firms reach customers with products that they will understand and value.

We need to do that in a landscape where public policy may change. The regulatory requirements will certainly change, and all of that may drive new solutions and make old products relatively less attractive to provide.

As we said in the paper, we did not try to provide all the answers. What we have tried to do is to survey and discuss what good practice is today. I am in no doubt that if some of the changes that have been mooted come about, then good practice in another ten years' time will look very different from what it does today; but hopefully the paper that we have produced, and you have been kind enough to read, will provide us with a starting point to move the industry and the Profession forward.

The President: Mr. Telford, thank you very much indeed for bringing this excellent discussion to an end.

It remains my great, great pleasure to thank the authors, the opener and the closer. It has been a tremendous achievement to have produced 96 pages of such readable material It certainly held my interest all the way through and I think it will be a great reference paper for some years to come.

https://doi.org/10.1017/S1357321711000274 Published online by Cambridge University Press