Annuity underwriting in the United Kingdom

1. Purpose

This note is for the International Actuarial Association Mortality Working Group (IAAMWG). It aims to provide an overview for an international audience, of the current position with the underwriting of annuities[1] in the UK. It does not discuss how future mortality changes are projected or how the underlying mortality models used by underwriters are developed. I have drawn on materials on the internet and from discussions with Hannover Life Re, Towers Watson, Swiss Re, RGA, Avelo, CMI, the UK Actuarial Profession, the Association of British Insurers (ABI) and others, and am grateful for the information which is not always attributed. For more about the subject, please see the papers mentioned in the Appendix.

2. Background

The large size of the annuity market in the UK is due in part to the tax environment of the individual pensions savings market where an individual's savings are protected from tax while they accumulate. Only part of the proceeds may however be taken as cash, the remainder must be used to purchase a pensions annuity. The ability to "shop around" for a better pensions annuity (the "Open Market Option" or OMO) supports a competitive market in annuities. However, there is also an active immediate annuity market, a market for lifetime care annuities, and annuities are written for structured settlements.

Enhanced annuities[2] were introduced in the UK by Hannover Life Re around 1995 to enable higher annuity payments to be offered to clients with a lower-than-average expectation of life (although in the USA, Chait's "The Medical Underwriting of Substandard Life Annuities" appeared in 1983). The UK market has grown rapidly in recent years, with ABI figures showing sales of 76,000 enhanced annuities in 2011, accounting for 19% of total annuity sales and 27% of premiums.

Annuity business is written by a number of insurers, and the number offering postcode and impaired annuities has increasing significantly in the last few years. Competition is assisted in the UK by Independent Financial Advisers (IFAs) who can select from the offerings of any provider, and by systems that allow this to be done online through portals. A number of organisations that support people with particular disabilities provide access to annuity quotation websites.

The UK government has signalled its intention to amend domestic law to prohibit the use of gender as a risk factor in insurance, and this is likely to lead to a great interest in underwriting annuities based on other risk factors. Other factors that may contribute to major changes in this market include the UK's Retail Distribution Review and Solvency II. These are mentioned briefly at the end of this note.

[1] I have focused only on lifetime annuities, referred to here as "annuities"

[2] The term "Enhanced annuities" is used in this section in the wider sense of all annuities where the annual payment is at a higher level than standard, due to some feature of the client's health, lifestyle, etc.

3. Underwriting types

A considerable amount of annuity business is written without any underwriting. However, basic levels of underwriting are possible with very low impact on the client, by using easily available data such as annuity size and the postcode of the annuitant. Pricing based on this information may be used by the annuity provider to protect its profitability by discouraging applications from the "best" lives. The main interest in the market for enhanced annuities is the provision of a higher income than a standard annuity in cases where the annuitant demonstrates a lifestyle, socio-demographic or medical factor that is expected to shorten his or her life expectancy.

Underwriters may take into account issues such as: serious illness, less serious conditions, behaviours such as smoking, and socio-economic factors such as postcode (zip code). These can be considered in conjunction with underwriting factors such as size of premium (large annuities tend to be associated with higher longevity) and, at present, gender. In addition, when underwriting for lifetime care annuities, the potential care needs of the specific client need to be taken into account.

The categories given below are intended to give an overview of the “types” of annuity, determined by the underwriting. Clearly there is considerable overlap and variation in definitions, and most authors and providers use a smaller number of groups. The first two categories can be seen as selecting between different groups of “normal” lives. The final three deal with different levels of reduced life expectancy. I have based the definitions in part on Gatzert et al – See Appendix.

Postcode underwriting

Postcodes are now used by some insurers as a rating factor for annuity pricing. Postcode can be used as a proxy for social class, and life expectancy varies significantly by both social class and location of housing (although these, too, are only proxies). Also, this does not require the completion of a medical questionnaire. Each UK postcode covers a small number of properties and there is strong evidence from the analysis of pensions and life assurance business that a combination of lifestyle grouping plus postcode data provides insights into the level of mortality expected from a given postcode. Some providers use their own analyses or those of a reassurer, others use the experience available from a few consulting firms. Matthew Edwards – See Appendix- describes a methodology for mortality analysis that combines four different clustering approaches that take into account mortality and health as well as wealth and lifestyle indicators. It results in an ability to attribute mortality ratings to postcodes that are used both in pricing and in reserving.

Lifestyle underwriting

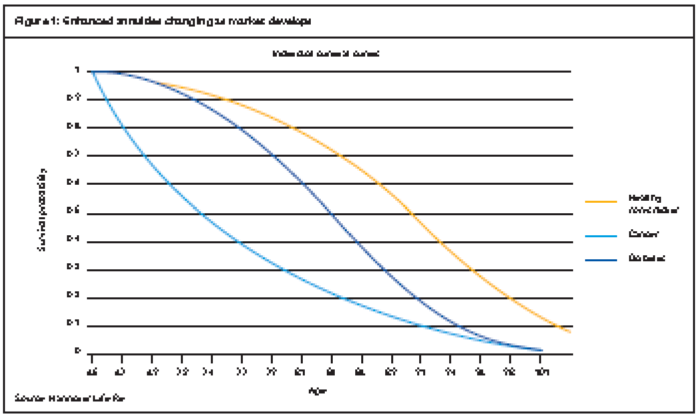
This can take into account smoking and drinking habits, marital status, occupation, height and weight, blood pressure and cholesterol levels.

Postcode and lifestyle underwriting provide an interesting contrast with the US market, where (I am informed that) these factors are generally not used because they are deemed to be under the control of the client. Concerns about "over disclosure" (overstating smoking or drinking habits) do exist, but methods of post-underwriting such as the use of cotinine tests are used. It is also recognised that older people move house relatively rarely, and will usually move to a postcode with similar mortality characteristics.

Enhanced annuities

An “enhanced annuity” will pay out an increased income to a person with a slightly reduced life expectancy. Underwriting can take into account, in addition to the above, a history of medical conditions which might include a past episode of cancer, heart attack, or controlled type II diabetes. Pricing in this market requires an understanding both of the expected level and incidence of excess mortality.

The figure below, from Hannover life Re, looks at survival curves for those aged over 65 if suffering from cancer *(bottom curve)* or diabetes *(middle curve)* , in comparison with the survival curve for a healthy non-smoker *(top)*.



Impaired annuities

An "impaired annuity" will pay out a higher income than an enhanced annuity, as a result of medical conditions which significantly shorten the life expectancy of the annuitant. Underwriting considerations may include, for example, a history of heart attacks, heart surgery or angina, life-threatening cancers, organ diseases, strokes and diabetes, Parkinson’s disease and Alzheimer’s.

Care annuities

Care annuities (or “immediate needs annuities”) are aimed at seriously impaired individuals normally between age 75 and 90 or persons who have already started to incur long-term care costs. Risk assessment for care annuities will include geriatric symptoms such as frailty or restricted mobility, which are measured, for example, in terms of activities of daily living (ADLs). Cognitive skills may also be taken into account.

These annuities may be based on assumptions of a very short expectation of life, and in some cases the insurer may limit long-term risk by offering a limited term annuity.

More details of underwriting processes are given in Gatzert et al.

4. Sources of client information for underwriting

The primary source of client information for underwriting this type of business is the “annuity Common Quotation Request Form” (http://www.commonquotation.co.uk/). The form was agreed by the major providers of annuities, and permits the client’s details to be circulated to one, a selection, or even all of the providers. “The CQRF captures personal, pension and medical details. The medical section is relatively short, comprising 10 basic health questions plus a number of lifestyle-related questions. This is supported by supplementary questionnaires covering common severe diseases such as heart disease, cancer, diabetes and stroke.

Typically the applicant completes the relevant forms with the assistance of their IFA, who can then request quotes from all annuity providers. Today up to 95% of all enhanced and impaired life annuity applications are assessed on the basis of these questionnaires" (Dahlke).

Given the strong level of competition and the potential lost cost of seeking further information, there could be reluctance by the insurer to approach the applicant for a medical examination. Further information, when called for, can include cotinine tests and General Practitioner Reports. Outsourced medical data collection and underwriting are available to providers from specialist medical companies and reassurers.

There is considerable interest in the market in the potential use of tele-interviewing. The facility is used in other areas of the life assurance industry, such as follow up for income protection claims. Tele-interviewing, conducted by paramedical staff in direct contact with the client, has a number of advantages. It saves IFAs the problem of asking sensitive personal questions, improves the quality of information by using specialist interviewers, reduces concerns about "over-disclosure" and finally, and importantly, facilitates accurate direct input to online systems with interactive features to allow "follow-up questions" about particular factors.

5. Portals

"There are a number of portals now that allow IFAs to access information on products and providers, request comparative quotes, and transact new business online. Some are free to use, while others charge providers. IFAs enter annuitants' information, compare quotes and can then decide whether to apply directly for an annuity or go through the normal CQRF process. Portals complement the advantages of the CQRF by allowing a quicker process, improved access to information and – assuming all questions are answered properly – greater accuracy. (Dahlke).

To widen accessibility to outside users, on-line intermediaries provide branded websites for employers, special interest groups and pension fund trustees for use with their clients. These are substantially tailored to meet the needs of the different special interest groups.

One portal provider captures all the non--text information requested by the CQRF (including questionnaires) and produces online quotations based on this information. It can deliver a large percentage of firm acceptances including enhanced and impaired annuities. The quotation data can then be fed electronically to a provider's new business system to reduce paperwork and support a commitment at point of sale.

In the case of a substandard annuity application, the client may not have sufficient medical detail to complete the process in the intermediary's office, or may have confidentiality concerns. A couple of providers are working on an approach where the intermediary gives the client a hyperlink, and then the client can go home, collect the necessary data, and then click on the hyperlink to complete the medical questionnaire. This is seen as a means of maintaining client confidentiality and improving the ability to close the sale.

6. Expert systems

Expert systems are now available to underwriters that take into account a wide variety of medical details and other risk factors and come up with a recommended rate. These are developed and calibrated using the organisation's existing book of business. However, any expert system will be limited by the quality of its data input, and more effective systems of capturing data are needed. Based on data input by the client, an IFA or the staff of the provider, one reassurer's system can now come up with an annuity rate in 80% of all cases without referral to a human underwriter.

Clearly the competitiveness of the rate offered and the ultimate profitability will be dependent not only on the quality of the data input but on the quality of the projections of future mortality built into the model. This is not a subject for this note, but more information can be found in Telford and Gatzert – see Appendix.

7. Measuring the impact on mortality experience

The level of detailed and computer-encoded underwriting evidence available to the major annuity providers and the small number of specialist "substandard" providers provides a valuable competitive advantage. When used to compare with the mortality experience from their book of business, it gives these organisations a continuing capability of measuring and tuning their underwriting models. Other organisations can compete with the help of reassurers.

As a greater proportion of substandard lives are encouraged to opt for enhanced annuities, it is clear that providers of "standard" annuity rates must take into account the selection process, and cater for the remaining lives that are selected by not being substandard.

8. Developments in the UK and elsewhere

The size of the potential market for annuities is clearly influenced by the number of the UK population reaching retirement age, and 2012 sees a peak in the number of men and women reaching age 65, corresponding to the post-war baby boom. The number of men reaching 65 (a common retirement age for males) is projected to decline over the next five years, and then increase steadily year-on-year over the following 12 or so years. The number of women reaching age 60 (a common retirement age for females at present) is projected to increase steadily, starting now.

The proportion of people who have a pension lump sum and who select to take an annuity depends to a great extent on the fact that for pension annuities there is a degree of compulsion. The attractiveness of annuities has fallen over recent years due to falling yields and increasing longevity, and the government is drafting legislation to allow wealthier clients to avoid the OMO. It is proposed that individuals with a secure pension income of £20,000 may use flexible drawdown to draw all their pension savings as income without any restriction. This could lead to some reduction in the market for annuities. On the other hand, if and when yields on government securities rise, annuity rates may seem more attractive again.

In the past many retirees have failed to take advantage of their right to search the market for a competitive annuity (the OMO), relying instead on the offering from their pensions savings provider. The impact on the market for underwritten annuities is significant, with an ABI Survey in 2010 finding: "Of those potentially entitled to an enhanced or impaired annuity with a fund of over

£5,000, 51% were aware of these types of annuity, 19% considered them and 10% bought one". Faced with the possibility of sanctions, providers have agreed to a voluntary code of conduct, brokered by the ABI, to draw the attention of retirees to their rights. This will include a requirement to explain the benefits of enhanced annuities and should substantially improve the share of enhanced annuities in the overall market.

The size and profitability of the market over the coming few years will be influenced by a number of factors including uncertainty about the new Solvency II regime and the UK Retail Distribution Review.

As mentioned above, the European Court has ruled that insurers can no longer consider gender when pricing insurance policies from 21 December 2012. The details of how this will be applied under UK law are not yet clear. For example, there is uncertainty regarding the treatment of annuities purchased by trustees of occupational pension schemes. However, overall, it is likely that price competition will lead to a greater use of underwritten annuities. Indeed, the market could move towards a position where annuities are priced individually for each client.

The past few years have seen a growing market in the UK for care annuities. A client who is expecting to require care (eg nursing care at home or in a retirement home) in the long-term may find it necessary to sell or mortgage their own property to buy a care annuity. A 2011 report of the Commission on Funding of Care and Support recommended inter alia that an individual's lifetime contributions towards their social care costs – which are currently potentially unlimited – should be capped, perhaps at £35.000. If the client faces a maximum expense of £35,000, this could well limit the attractiveness of these annuities. However, in the light of the UK government's spending review, implementation seems unlikely at present.

This paper has focused on the UK market, but it is perhaps worth noting that a 2007 paper by Brown and Scahill, "Issues in the Issuance of Enhanced Annuities" concludes that the U.S. and Canadian annuity marketplace could be doing more to provide "fair value" annuities to substandard risks. Without an appropriate private-sector reaction, it suggests consumers may respond by inviting government intervention. Similarly a 2006 paper by Drinkwater et al. suggested that if US insurers could overcome consumer and producer objections to SPIAs and thereby expand the market, substandard annuity sales would most likely grow, and that significant growth could be driven by Social Security Reform, particularly if individual accounts with mandatory annuitisation were adopted.

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Appendix

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