

BRIEFING NOTE

Annuities

Annuity – regular income payments from an insurance company in return for a single up front payment

Introduction

Annuities have an important role in the provision of retirement income. Many people save into a pension plan throughout their working lives to provide an income when they retire. An annuity enables the pensioner to continue to enjoy an income from their accumulated pension savings without the risk of running out of capital in old age. The concept is simple, but it is often misunderstood. This gives rise to some of the myths concerning annuities and the value they provide.

This briefing note explains how:

- annuities work
- the annuity market works
- insurers price annuities and where they invest the funds.

The paper then explores some of the current issues in the annuity market, including whether annuities provide fair value to customers and how annuity rates have changed over time.

How annuities work

Under many types of pension scheme, a pensioner will need to use part or all of their accumulated pension fund to buy an annuity from an insurance company when they retire.

In its simplest form an annuity promises to pay the pensioner a fixed regular income for the remainder of his or her life.

Each annuity income payment is a combination of two elements – the investment return earned on the money invested by the insurance company on the pensioner's behalf, and a partial repayment of the pensioner's fund. The income from an annuity will therefore be larger than that generated by investing the money in another way which guaranteed the level of future income..

If the insurer knew for how long it would have to pay the annuity, it would be able to price the annuity so that it made the final payment just as the remains of the original pension fund ran out. But, of course, the length of individual human life is unpredictable.

However, insurance companies sell annuities to a great many people. By pooling mortality experience the insurer is able to successfully price the annuity. From, say, 1000 annuities sold one year, the insurer can estimate from past experience how many people on average will die the next year, how many more the year after and so on.

Insurers take account of age and gender when setting the price of an annuity, but do not usually ask further questions about an individual's health. They rely on the pooling of mortality experience to average out individual health variations.

From the customer's viewpoint, those who die early lose the balance of their pension fund that is still held by the insurance company. This money is then used to continue pension payments to those who live longer than average, and whose own funds would otherwise have been used up.

Annuities can take a number of different forms besides a simple income for life. The more common include:

- An income that increases each year, either by a fixed percentage or in line with the retail price index (but often with an upper limit)
- An income which continues, possibly reduced by one third or one half, after the pensioner's death for as long as a surviving spouse or partner lives
- An income which can go up or down in line with the value of a portfolio of investments
- A 'with-profits' annuity (see the Profession's briefing note on with-profits policies) or an annuity which is linked to a particular portfolio of investments
- An income which is paid for a minimum period, (usually five years) whether or not the pensioner lives that long.

The initial income in other forms will usually be lower than in the simplest case.

Case Study

Stewart and Nick are both about to retire, aged 65, and both have capital of £100,000 that they wish to use to provide income throughout their retirement.

Stewart goes to an insurance company, and buys an annuity, which promises to pay him £7000 pa for the rest of his life. The insurance company will invest its funds in long dated fixed-interest stocks giving an interest rate of 5%.

Nick goes to a bank. The bank is currently paying an interest rate of 5%, which is £5000 pa. Nick decides that he is going to take an income of £7000 pa from his account (the same as Stewart is getting from the insurance company), so Nick is using up a little of his capital each year.

Nick consults an actuary, who is able to tell him how much capital he will have left in his bank account to leave to his heirs if he dies at various times in the future.

If Nick dies aged 70, he will have £88,000 left. If he dies aged 80, he will have £53,000 left.

But the actuary also warns that before Nick reaches his 90th birthday, he will have received a letter from his bank manager telling him that his account is now empty!

If Nick is of average health for an annuitant, the chance of him living to 90 is higher than people might think at 43%.

Stewart will have nothing to leave to his heirs, but he will receive his pension of £7000 pa for as long as he lives.

Tax treatment of annuities

The type of annuity described so far, which is bought with an accumulated pension fund, is a Compulsory Purchase Annuity (CPA). The purchaser of a CPA will have to pay income tax on each payment of income. This reflects the fact that the pension fund was originally built up with contributions that received full relief from income tax. The insurance company administering the annuity will usually deduct tax at source, in the same way as an employer deducts tax from income under the PAYE scheme.

Annuities can also be purchased with money not within a pension fund. These are Purchased Life Annuities (PLA). Each annuity payment is considered to be part capital repayment and part investment return. Income tax is payable only on that part of each payment that is regarded as investment return.

How does the market operate to ensure a fair price to consumers and a fair profit to insurers?

The Insurer

Insurers are commercial companies that seek to make a profit from selling annuities in a competitive market.

The insurer will price its annuities so that if policyholders live on average as long as the insurer anticipates, it will make a profit. There is of course the risk that policyholders will live longer than expected, in which case the insurance company will have to make up the shortfall. This has been the case in recent years as insurance companies have had to revise upwards their expectations of how long pensioners will live. .

Where a shareholder-owned company issues annuities in a non-profit fund, profits can be distributed as dividends to shareholders, and losses made either from other sources of profit or, possibly, from raising fresh capital from shareholders. In the case of a mutual company, or where a proprietary company issues annuities in a with-profits fund, profits or losses on annuities will lead, respectively, to higher or lower bonuses on with-profits policies.

The Consumer

There is an active market for annuities. At the time of writing, the magazine *Investment Life & Pensions Moneyfacts* shows nine insurance companies actively competing for annuity business. The Financial Services Authority requires insurers to advise consumers (sometimes called annuitants) approaching retirement of the potential benefits of shopping around to get the best price for their annuity from competing insurers.

The annuity is a very simple and highly transparent product. The consumer makes one single payment to the insurer and in return is promised a fixed income. This means that it is easy for the consumer to compare the annuities offered by rival insurers and to select the one that offers the highest pension for the fund they have available.

Consumers can also use an intermediary with specialist knowledge to find the best deal for them. In exchange for a commission, the intermediary will use market knowledge to secure the best annuity rate for their client. These intermediaries have

access to real time information that enables them to undertake a market search more quickly and efficiently than a consumer could on their own. The intermediary will also help the consumer to choose annuity features, such as an increasing income or a spouse's pension, that meet their personal needs. Additionally, the intermediary will assist with the form filling and any technical details.

How do insurance companies estimate how long we will live for?

The insurance companies that underwrite annuity business contribute data on the lifespans of pensioners to The Actuarial Profession's Continuous Mortality Investigation (CMI). This group collates the data from multiple sources into a single published table of recently experienced survival rates.

Insurance companies use these rates as a basis for their annuity pricing. However, because where pensioners live, their wealth or what occupations they followed can influence how long someone will live on average, insurers will adjust the rates to reflect their own 'mix' of pensioners.

Improvements in the health of the population over time mean that historical data by itself is not adequate for the calculation of annuity rates, as further improvements in longevity are expected. To calculate the average expected lifespan of people retiring today, insurers must include an allowance for future mortality improvement. The pattern of mortality improvement in the UK population as a whole is illustrated below (the average annuity purchaser is currently expected to live significantly longer by most UK insurance companies, largely because of the different social and geographic mix between pensions policyholders and the population at large);

Life expectancy for a UK male aged 65	
Year of reaching age 65	Years remaining after 65
1901	10.6
1928	11.5
1960	12.1
1987	15.0
2007	18.9
2027 (projected)	21.5
2047 (projected)	23.3

Source: Government Actuary's Department and Office of National Statistics
(1987 -2047 GAD historical rates and 2004-based cohort projections)

Insurance companies, advised by their actuaries, will adopt a particular view on the rates of improvement which may be experienced in future for their own policyholders and take this into account in their pricing. The CMI has provided actuaries with statistical models which can be used to inform these decisions, based on past rates of mortality improvement.

Investment considerations

Traditionally, insurers invested the premiums they received for annuity business in long-dated British Government Stock (gilts). These assets were felt to provide the most appropriate match to the liabilities, as the interest and capital payments were guaranteed and the timing of them was known.

Actuarial techniques enable insurers to construct a portfolio of gilts in which the incidence of interest or redemption proceeds closely matches the expected incidence of payments to pensioners. This reduces or eliminates altogether the risk of having either to sell investments at a loss or to re-invest excess investment proceeds on worse terms in the future.

This matching is important, as the insurance company that sold the annuity has guaranteed to make future pension payments, which cannot be reduced if investments under-perform. The use of long-dated fixed interest assets makes sure that the insurance company will have funds available at the right time to pay the promised pensions.

However, gilts are also much sought after by other investors such as pension funds, so their availability is limited and their price is high.

As a result of the limited availability of gilts, and to achieve higher payments for annuitants, most insurers now back their annuity liabilities with a portfolio largely, or completely, of other types of fixed interest investments, including bonds backed by other governments or supra-national institutions (eg the World Bank), commercial mortgages, corporate bonds and interest rate swaps with major investment banks.

Corporate bonds pay a higher interest than a government-backed stock of the same duration. This is because:

- The company that has issued the corporate bond is more likely to default on interest or capital repayments than a major government
- Dealing costs for corporate bonds are higher than for gilts
- The illiquid nature of many of these bonds means that forced sales can result in lower prices.

Whereas the second and third factors above will apply to an active investor, an insurance company using corporate bonds to back its annuity portfolio is generally buying them to hold until maturity, and so the higher yield does prove particularly attractive to annuity providers. The benefits of this are passed on to consumers through improved annuity rates. Allowance for a long-term average of defaults by corporate bond issuers is allowed for in the pricing of annuities and insurers minimise default risk by investing in a diverse range of such bonds.

Use of a much wider range of assets, particularly interest rate swaps, means that insurers are able to match annuity payments more closely than could be just done with UK gilts.

Annuities which increase in line with the Retail Prices Index (RPI) will generally be matched by index-linked gilts or commercial assets providing a similarly denominated return.

How safe is my annuity?

An annuity is a promise that the insurance company will deliver a series of pension payments to the consumer. The consumer has passed to the insurer the risks of investment performance and longevity, and the insurer must fulfil the promise no matter how adverse the experience.

As part of the prudential regulation of UK financial services, the Financial Services Authority requires insurers to hold capital in excess of a prudent estimate of the future cost of paying its annuities, to avoid the likelihood of insurers being unable to meet their promises to pensioners. For a portfolio of new annuities, this excess capital will be at least 4% of the prudent estimate of the annuity liabilities.

Further capital is likely to be assessed as being required by the company, depending upon the level of risk it takes with its investment strategy, its views on the more extreme longevity improvements possible and on the other types of risk to which it is exposed. The minimum amount to be held is agreed periodically with the Financial Services Authority.

This capital must be set aside by the insurance company at the time of selling an annuity. If the experience of future years is adverse for the insurer, for example if pensioners live even longer than expected or if the issuer of a large corporate bond defaults, then this capital will be used to continue pension payments to the consumer. However, if the experience of future years is as predicted, then this capital can be released back to the insurer and re-used to support further insurance business.

If the worst came to the worst and a UK insurer went into liquidation, the Financial Services Compensation Scheme should ensure that at least 90% of an annuity payment would continue to be paid.

Impaired life annuities

There is a niche market for impaired life annuities. Here, consumers can gain a higher level of pension if they declare that they are suffering from certain health impediments. The extra annual income reflects the fact they will probably receive it for a shorter period compared with a healthy pensioner.

The impairment can be generic, eg admission of being a regular smoker. Or it can be quite specific, and include detailed professional medical analysis of a patient's condition and prognosis after, for example, a serious heart attack.

While this is good news for those in poor health, their removal from the population of standard annuity buyers results in the average state of health of that population being better. In turn, this requires insurance companies to increase the price of their standard annuities; so those in good health will end up paying more..

Are annuity rates good value for consumers?

One of the popular misapprehensions about annuities is that insurers pay out only the return earned on the investment, and pocket all the capital on the death of the annuitant. But, as explained earlier, this capital is used to pay the pensions of those people who live longer than average.

This misapprehension is particularly evident at times when short term interest rates available on a bank account are higher than the long term interest rates on the gilts and corporate bonds that determine annuity rates. In these circumstances, it might be possible for a pensioner to generate a higher immediate income by investing in a bank account than in an annuity. But it is always possible that the short term rates will fall in future so that the pensioner will receive less overall than under the annuity. To an extent, the lower initial income is the 'price' for the income to be guaranteed – whatever happens to the bank rate.

Case Study

Returning to the example of Stewart and Nick who both used sums of £100,000 to provide retirement income of £7,000 pa. Stewart chose to buy an annuity, and Nick chose to invest in a bank account currently paying 5% interest.

If interest rates fell straight away to 3% and stayed there, Nick's fund would not last until he is almost 90 (as he was expecting), but would run out when he is only 83, which he has a 67% (2 in 3) chance of reaching.

Changes in interest rates will, however, not affect Stewart's income at all as it is guaranteed by the insurance company. Moreover, assuming the insurance company has actuarially matched its promises by investing in the right mix of long-dated stocks, etc, it should not make a loss either when interest rates fall.

The annuity market is a very active one. Insurers change rates regularly according to external factors such as investment conditions, the latest assessment of mortality trends and internal factors such as competing demands for capital..

Investment Life & Pensions Moneyfacts shows there is a significant variation in annual pensions that can be bought with a lump sum of £10,000, for a male aged 65 on standard terms (the table excludes insurers that offer enhanced rates to impaired lives such as smokers, construction workers and those in ill health):

<u>Annuity Provider</u>	<u>Annual pension (£)</u>
Company A	684
Company B	683
Company C	680
Company D	680
Company E	674
Company F	669
Company G	661
Company H	654
Company I	616

There is a large differential from top to bottom of the league table. A pensioner who thought of buying an annuity from the bottom-ranked insurer could secure an 11% improvement by buying from the top-ranked insurer.

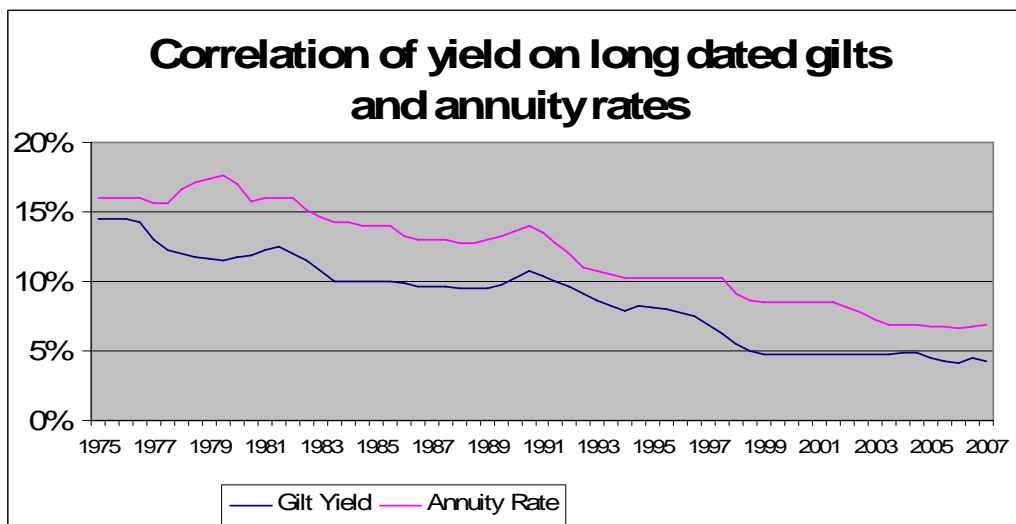
Many insurance companies which have issued pension policies in the past no longer want to sell an annuity to policyholders when they want to retire. The company may, therefore, not set its annuity rates particularly competitively. Most, if not all policyholders, are entitled to ask for their cash fund to be paid to another insurer, and so should be able to improve the pension they will receive by doing so. Insurance companies are required to remind their customers of this as they approach retirement age.

A historical perspective on annuities

The two principal drivers of annuity prices are investment returns and mortality. This paper has already demonstrated how the cost of an annuity is being increased by the fact that people are living longer. But, until 1998, the major factor in the change of annuity prices was the reduction in the yield on gilts.

A man aged 65 retiring now with a pension fund of £10,000 could buy an annuity giving an annual income of around £680. In 1979, the same pension fund could have bought an annual income of £1,700.

The close correlation between gilt yields and annuity rates can be demonstrated by expressing the annuity as a yield. Thus, an annual income of £700 for a 65-year-old male from an annuity purchase price of £10,000 can be expressed as 7%. The correlation since 1975 is as follows:



(Source: University of Bristol Leverhulme Centre, and updated with recent data)

It should, however, be borne in mind that the 1970s and 1980s saw periods of high inflation, which rapidly eroded the purchasing power of the high annuities then available. This period of inflation had an even more dramatic effect on the real value of lower annuities bought in the 1950s and 1960s when interest rates were previously low. If economic circumstances led again to a sustained period of high inflation, there could be a repeat of this devaluation. Annuities which increase in line with the Retail Price Index (RPI) provide protection against this, although at the price of an initially lower pension.

Some pensions policies guarantee a minimum annuity rate which will be used by the insurance company. In many cases, these guaranteed rates were set when annuity rates were much higher than today and so are of considerable value to policyholders. In some cases, they may only apply at certain dates or if the annuity is taken in a certain form.

Summary

Annuities provide value for money to protect pensioners against the risk of running out of capital in old age. The key factors driving the price of a pension are longevity and yields on fixed interest securities. In the last two decades, trends in these factors have combined dramatically to increase that price. This paper has sought to put that rise in context.

Shopping around can usually help policyholders get better annuity rates, although guaranteed annuity rates in the policy or impaired life rates may be even better.