Institution: University of Bristol

Unit of Assessment: 19 – Business and Management Studies

Title of case study: Helping government determine the Minimum Income Requirement for annuity purchases, including for use in the 2011 Finance Bill.

1. Summary of the impact (indicative maximum 100 words)

The Coalition government's manifesto commitments to remove compulsion in the annuity market necessitated a decision about a Minimum Income Requirement (MIR). Cannon's contribution to the government consultation played a significant role in setting the MIR. Previous research by Cannon had shown that the UK compulsory-purchase annuity market was efficient because compulsion expanded market size (more than half of all annuities are sold in the UK) and reduced selection effects. This research enabled the government to justify retaining an element of compulsion. The precise level of the MIR used in the 2011 Finance Bill was based upon the methodology proposed by Cannon.

2. Underpinning research (indicative maximum 500 words)

Research was undertaken by Cannon (at Bristol 1996-present and currently Reader in Economics) in collaboration with Tonks (Professor of Finance at Bristol 1995-2003) and continues up to the present (2013).

The research began in 2000 as part of an ESRC project on retirement behaviour, when very few annuity rate data were available and the only long data series – itself containing gaps – was for the small USA annuity market. In 2000-2004, historical data was collected on the UK voluntary annuity market for the period 1957-2002 showing that it was fairly priced **[b]**. Further work **[a]** demonstrated that variations in annuity rates were partly offset by changes in pension fund values, showing that analysis of annuity rates in isolation was inappropriate for valuing actual pensions. This research has now been extended to a longer historical period for other countries **[f]**.

After the initial publications, Cannon and Tonks were both asked by the Department for Work and Pensions (DWP) to analyse the compulsory-purchase annuity market, resulting in a survey report in 2006 **[c]**, a further analysis for the DWP in 2009 and book published by Oxford University Press **[d]**. The analysis of the compulsory-purchase market showed that pricing was efficient and suggested there was no evidence for removing compulsion.

In the context of annuities, efficient pricing means that the expected present value of annuity payments received by the annuitant is not much less than the price paid for the annuity (where the difference is due to the annuity provider having costs). The name of the metric used for annuities is the money's worth, which should be a little less than one. While conceptually this analysis is straightforward, it is important to quantify correctly the considerable uncertainty in pension values arising from having to forecast mortality improvements of pensioners. This has two important impacts: first, empirical analysis of annuity prices could easily draw false conclusions if inappropriate assumptions were made or if forecasts were not updated; second, annuity providers had to price in the uncertainty if they were not to run the risk of having too few funds to pay out to annuitants. The effect of unexpected mortality improvements on annuity prices was quantified in **[a, c, d]**.

In **[d],** the theoretical analysis of annuities was surveyed which showed that, if anything, compulsion overcame market failures due to adverse selection, poor financial education and behavioural biases. However, quantifying the welfare effect is different from asking whether annuities are fairly priced. **[d]** extended existing theoretical analyses of the utility effects of annuities by using a wider range of utility functions. For example, the book contains the first published analysis of annuities for a consumer with Epstein-Zin preferences. Apart from this significant theoretical result, research also analysed the extent to which pensioners avoid

annuitisation for irrational reasons (failure to understand annuities or psychological biases) or avoid annuitisation to game the tax or benefits system (a form of moral hazard). These provide good reasons for government having a compulsory annuity requirement, as is the case in the United Kingdom.

3. References to the research (indicative maximum of six references)

[a] Cannon, E. and Tonks, I. [2004] "U.K. Annuity Rates, Money's worth and Pension Replacement Ratios, 1957-2002" *The Geneva Papers on Risk and Insurance - Issues and Practice* 29(3), pp.371-393. doi: 10.1111/j.1468-0440.2004.00293.x

[b] Cannon, E. and Tonks, I. [2004] "U.K. Annuity Price Series, 1957-2002" *Financial History Review, 11(2)*, pp.165-196. doi: 10.1017/S0968565004000125.

[c] Cannon, E. and Tonks, I. [2006] "Survey of Annuity Pricing" Department for Work and Pensions, Research Report 318. ISBN 1 84123 958 5 http://webarchive.nationalarchives.gov.uk/20130128102031/http://statistics.dwp.gov.uk/asd/asd5/report_abstracts/rr_abstracts/rra_318.asp

[d] Cannon, E. and Tonks, I. [2008] *Annuity Markets* (Oxford University Press). ISBN 978-0-19-921699-4. Can be supplied upon request.

[e] Blake, D., Cannon, E. and Tonks, I. [2010] "Ending Compulsory Annuitisation: Quantifying the Consequences" Pensions Institute Report, No. 8, Cass Business School (with David Blake and Ian Tonks) (submission to government consultation). http://www.pensions-institute.org/reports/EndingCompulsoryAnnuitisationConsequences2.pdf

[f] Cannon, E. and Tonks, I. [2013] "The Value and Risk of Defined Contribution Pension Schemes: International Evidence" *Journal of Risk and Insurance, 80(1),* pp.95-119. doi: 10.1111/j.1539-6975.2011.01456.x

4. Details of the impact (indicative maximum 750 words)

The initial DWP report **[c]** was described by the 2006 HM Treasury's report "The Annuities Market" **[g]** as "the most comprehensive ever UK annuities pricing survey" (paragraph 2.6), resulting in HM Treasury reiterating that compulsory annuitisation was appropriate (paragraphs 6.1-6.2) given that annuities were fairly priced (explicitly referring to the report in paragraphs 5.1-5.2).

Despite this, there was continued pressure from the press and some MPs to scrap compulsory annuitisation, stoked by Fitzgerald's Brunel Business School Discussion Paper of October 2006 "Can 'Compulsory' Annuities Provide a Fair Pension?" which suggested a large drop in the value of annuities in 2006. Cannon and Tonks's analysis for the DWP in 2009 showed that Fitzgerald had over-estimated the fall in the value of annuities. The period 2005-2008 was particularly problematic for annuity measurement due to large revisions in mortality rates from the Institute of Actuaries and consequent uncertainty in quantifying the risk that this entailed for annuity providers (at a time when banks were accused of being careless of risk management).

The DWP confirmed to us **[i]** that the research had been used:

- As part of briefing prepared for DWP Ministers in preparation for their appearance in front of the 2009 Work and Pensions Select Committee Inquiry into Pensioner Poverty;
- To help inform the policy debate on the abolition of the requirement to secure a pension income by age 75;
- As part of internal briefing for DWP Ministers and senior managers on the annuity market;
- As part of the evidence base drawn on in the DWP's strategy on DC pensions, where the research has helped to improve the Department's understanding of and thinking about annuity markets.

Both the Conservative and Liberal Democrat 2010 election manifestos promised abolition of compulsory annuitisation, albeit with a caveat that this should not result in higher state spending. The June 2010 emergency budget announced a consultation on removing compulsory annuitisation and led to a HM Treasury consultative document in July 2010. This explicitly cited Cannon and Tonks noting that:

"The primary reasons for these falls [in annuity rates] are declining interest rates (which fell from 8% to 5% ...) and increasing longevity. A study by Cannon & Tonks concluded that the money's worth of annuities ... remained at around 90%. This represents good value in comparison with other insurance products … annuities remain an effective form of insurance against the risk of outliving life expectancy." (paragraphs 4.4-4.5).

In anticipation of this consultation, Cannon and Tonks wrote a letter to the *Times* newspaper with David Blake (Professor of Pension Economics, Cass Business School) and were then invited by the Prudential (one of the major providers of annuities) to investigate the issue of removing the annuitisation requirement, resulting in two reports published by the Pensions Institute **[e]** written by Blake, Cannon and Tonks. These reports discussed reasons for retaining the compulsory purchase requirement drawing on our previous research. More importantly they also discussed the appropriate level for the Minimum Income Requirement. The second report **[e]** suggested that for an index-linked annuity the minimum income should be £14,100 for an individual and £20,000 for a couple.

The government's response to the consultation process was published in "Removing the requirement to annuitise by age 75: A summary of the consultation responses and the Government's response" (December 2010) which cited the MIR calculations by Blake, Cannon and Tonks **[h paragraph 3.45]**. Their methodology was based on working out the appropriate annuity to ensure that a pensioner (or couple) received no means-tested state benefits before the age of 100. This was based on the observation that the probability of a male aged 65 surviving this long was 8% and that to be sure that a pensioner never received state benefits regardless of how long they lived, would set the MIR too high. This methodology was accepted by HM Treasury and they used the same algorithm to calculate the MIR in the Appendix to the response document. The final calculations were reached after an e-mail correspondence between Cannon and Jonathan Deakin of HM Treasury **[j]**.

Following the consultation, Trevor Gosney of the Prudential wrote to Blake, Cannon and Tonks **[k]** saying that "In the Prudential's subsequent conversations with Treasury officials they described this paper [i.e. reference 8] as the best and most thorough assessment received during the consultation process. As such it has played a significant role in guiding policy decisions on this issue".

In addition to the impact on government policy, the data Cannon and Tonks collected for **[a]** have been used by several sources in policy making and the private sector (e.g. National Association of Pension Funds **[l]**, Aviva Investors **[m]**).

5. Sources to corroborate the impact (indicative maximum of 10 references)

[g] HM Treasury (2006) *The Annuities Market* (London: HMSO).

[h] HM Treasury (2010) *Removing the requirement to annuitise by age 75: A summary of the consultation responses and the government's response* (London: HMSO).

[i] E-mail correspondence with Imran Razvi of DWP.

[j] E-mail correspondence with Jonathan Deakin of HM Treasury.

[k] Letter from Trevor Gosney, Prudential.

[l] Letter from Mirko Cardinale, Aviva.

[m] Letter from Verenna Menne, NAPF.