ISSUES IN THE REGULATION OF ANNUITIES MARKETS

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Abstract

- Annuities are a vital aspect of a growing number of reformed pension systems around the world, and will be of increasing relevance in Europe as reform of generous social security schemes gathers pace. This paper addresses the regulation of annuities, essential to ensure integrity of the system, from three sides; prudential regulation of insurance companies, conduct of business regulation of insurance companies and the regulation of annuities within the overall pension system.

- We also consider some broader systemic issues that may arise. It is highlighted that the main risks are traditionally held to relate to errors in mortality and interest rate assumptions, but increasingly credit risk is also coming to the fore. Further issues are raised by the Equitable Life debacle. Thematically, we suggest that research into the appropriate response of regulation to the dynamics of competition among annuity providers and the to implications of ageing warrant particular study.

Structure

- Introduction
- Background – annuities in a free market
- Insurance companies, annuities and financial regulation
- Prudential regulation
- Conduct of business regulation
- Annuities regulation within the pension system
- Longer term risks
- Conclusion

Introduction

- Three ways to dispose of a pension fund in a defined contribution (DC) scheme
  - Lump sum
  - Programmed withdrawals
  - Annuity
- Annuity important as only contract guaranteeing income
- Regulatory focus enhanced by reform of social security and decline of defined benefit (DB) schemes

Annuities in a free market

- Characteristics of annuities
  - Traditional level annuities offer guaranteed income till death
  - Remove investment and mortality risk from individual, and allow maximisation of smooth income…
  - …financial and mortality risk assumed by life insurer, but their insolvency would impact on individual
- Types of annuity
  - Level, real, with profits, variable, CREF
  - Differ in risk distribution between individual and firm, with trade-off being investment freedom

- Annuities and pension systems
  - DB and PAYG schemes offer “guarantees” although often subject to discretion on real payouts
  - Backup is forms of risk sharing of income payment
  - DC schemes have no automatic mechanism for guarantees or risk sharing, but feasible via annuities
  - Implies financial regulation is justified for retirement income security as well as other reasons

- Financing of annuities
  - Level annuities can be matched or immunised with government bonds
  - Estelle James - Strategy inconsistent with high money's worth ratios, and narrow margins relative to government bond yields
  - Cover costs, risk premia and profits by investing initial lump sum in corporate bonds, mortgages, equities, private placement and foreign bonds (with swap) – and duration mismatch (see life sector portfolios)
  - Net cash inflows used to cover initial payments
  - Points to essential role of internal risk management (risk reduction and risk shifting)… and financial regulation

Life insurers' portfolio composition 1998

percent	Liquidity	Loans	Domestic Bonds	Domestic Equities	Property	Foreign assets
UK	5	1	25	48	6	13
US	6	8	52	26	0	1
Germany	1	57	14	17	4	0
Japan	5	30	36	10	0	9
Canada	7	28	55	26	7	3
France	1	2	74	15	7	0
Italy	0	1	75	12	2	0
Netherlands	1	29	24	24	5	10
Sweden	4	2	35	27	5	27
Finland	1	61	0	21	12	0
Average	**3**	**22**	**39**	**23**	**5**	**6**
Prudent person	**4**	**13**	**33**	**33**	**4**	**8**
Restrictions	**3**	**26**	**41**	**18**	**5**	**6**

Insurance companies, annuities and financial regulation

- Why is financial regulation needed?
  - Free market insufficient when market failures
  - Key aspects in finance are information asymmetry, externality and monopoly, as well as adverse selection and moral hazard
  - Information asymmetry important for annuities both for investment (if variable) and solvency, particularly due to size relative to wealth and irrevocability of contract
  - Externalities less than for banking but not absent – common ownership, conglomerates, reinsurance failure, weakening of sector by loss of inflows

- Market power – consumers obliged to buy annuity get worse terms, and general competition issues
- Adverse selection key to annuitisation, also moral hazard

- Market discipline and risk taking incentives
  - How much can market discipline be relied on?
  - Disclosure essential – problems of diverse accounting standards
  - Role of rating agencies
  - Insurers monitor mutually (reputation, compensation fund)
  - Debt enhances monitoring but little outstanding
  - Ambiguity with equity (option characteristic)
  - Franchise value and risk taking incentives when liberalisation occurs

Prudential regulation

- Reserving and solvency regulation
  - Finsinger/Pauly case, insurers lacking regulation may not put up capital
  - Parts of insurers portfolio – reserves and capital
  - Multiple reasons to reserve, with possible conflicts
    - Internal risk control
    - Accounting
    - Tax
    - Prudential supervision

- Standalone versus risk sharing – can e.g. life policies or with-profits funds provide hedges?
- Reserve on prospective liabilities from existing contracts
  - Mortality – long term rise, and adverse selection?
  - Discount rate – more complex if credit risk or duration mismatching – case for government to issue long term bonds
  - Future expenses – on closed fund basis for prudence
- Capital and stress testing
- EU harmonised capital potentially misleading – new proposals to improve (Solvency I and II)

- The Equitable Life case
  - Option of deferred guaranteed annuities, when option not "in the money"
  - When option gained intrinsic value as lower bond yield and higher longevity, sought to "manage by discretion" rather than reserving, reinsuring, buying out etc.
  - Attempt to pay lower bonus to guarantee holders quashed – attempt to place burden on whole with profits fund (as mutual)
  - Lessons inter alia for reserving (option values) and fund separation

- Portfolio regulation
  - Dependence of appropriate assets (bonds v equities) on business mix (nominal or real contracts, guaranteed or not)
  - Surplus interaction with appropriate assets
  - Choices in regulation, prudent person versus quantitative portfolio restrictions. Former based on diversification and risk management, latter focus on limiting “risky” assets not portfolio
  - Regulation may override optimality, albeit most in case of QAR and real liabilities
  - General need for flexibility in competitive market for innovation
  - Calculations suggest costs to QAR

Portfolio regulations

	Prudent person rule/diversification rules	Quantitative restrictions on domestic assets	Self investment and ownership concentration	Foreign asset restrictions
Canada (maxima applied to all assets)	No PPR	5-25% in real estate and stocks combined; 10% in non mortgage loans	Self investment banned, localisation rules apply	No currency matching rules
Finland (maxima applied to investments against technical provisions only)	No PPR, EU diversification rules (10% maximum of technical reserves in one piece of real estate, 5% shares and 5% loans of one borrower), maturity matching rules apply	Maximum 50% in domestic shares, 10% unquoted shares, 40% real estate, 40% mortgage loans, 50% in secured non mortgage loans or corporate bonds, 3% cash	Self investment banned, EU localisation rules apply	80% currency matching limit, non-OECD shares limited to 25%, technical reserves must be covered by real estate in Finland, securities issued by residents or assets guaranteed by residents
Germany (maxima applied to investments against technical provisions only)	No PPR, EU diversification rules (10% maximum of technical reserves in one piece of real estate, 5% shares and 5% loans of one borrower)	Maximum 30% quoted shares, 10% unquoted shares, 25% real estate, 50% in loans, 30% mutual funds and 50% bonds	Self investment banned, localisation rules apply	80% currency matching limit overall; 5% of premium reserve and 20% of other restricted assets
Italy (maxima applied to investments against technical provisions only)	No PPR, EU diversification rules (10% maximum of technical reserves in one piece of real estate, 5% shares of one borrower and 5% loans of one borrower)	Maximum 20% quoted shares, 20% unquoted shares, 50% real estate, 50% mortgage loans. Non mortgage loans prohibited	Self investment banned, localisation rules apply	80% currency matching limit overall; 20% may be held in foreign shares and 50% in other foreign securities
Japan (maxima apply to all assets)	No PPR, 10% limit on debt or equity exposures to one borrower	Maximum 30% shares, 20% real estate, 10% non-mortgage loans, 10% corporate bonds, 30% mutual funds (mortgage loans prohibited for life companies)	Self investment banned, localisation rules apply for foreign companies	No matching rules, 30% limit on foreign currency assets

	Prudent person rule/diversification rules	Quantitative restrictions on domestic assets	Self investment and ownership concentration	Foreign asset restrictions
Netherlands (maxima applied to investments against technical provisions only)	PPR, , EU diversification rules (10% maximum of technical reserves in one piece of real estate, 5% shares of one borrower and 5% loans of one borrower); maturity matching rules apply	Maximum 8% in unsecured loans, 10% in real estate and 3% in cash	Self investment banned, EU localisation rules apply	80% currency matching
Sweden (maxima applied to investments against technical provisions only)	No PPR, Maximum 5% in a single item of real estate and for exposures to a single borrower	Maximum 25% in shares, 25% in real estate and mortgage loans together, 50% in corporate bonds and 3% in cash	Self investment banned, EU localisation rules apply	80% currency matching, maximum 20% of technical reserves in foreign currency and foreign securities; overall 25% limit on foreign shares
UK	PPR, maturity matching required	Maximum 3% in cash		80% currency matching
US (maxima apply to all assets)	PPR, per-issuer limitation of 3-5% of issues other than US government	Imposed at state level, e.g. Delaware 250% of capital and surplus in shares, 25% in real estate, 50% in mortgage loans New Jersey 15% in shares, 10% real estate, 60% mortgages		No currency matching rule; aggregate limits on foreign assets of 0-10% imposed at state level. Canadian investment more liberalised

Returns on life company portfolios (7 OECD countries, 1980-95)

	Nominal return	Standard deviation	Real return	Standard deviation
Average	**11.2**	**7.3**	**7.0**	**7.8**
Prudent person	**11.9**	**6.9**	**7.5**	**7.8**
Restrictions	**10.7**	**6.1**	**6.6**	**7.9**

- Insurance compensation schemes
  - Is reinsurance and prudential regulation insufficient backup?
  - Example of UK
  - Risks of moral hazard
    - Need for firm supervision
    - Monitoring
    - Risk sharing/sanctions on management and equity holders

Conduct of business regulation

- Information provision to consumers (UK case)
  - Plethora of choices at retirement
    - Term of annuity
    - Type of annuity (and inherent risks)
    - Timing of payment
    - Choice of company
  - Consumer understanding questionable
    - Open market option in UK rarely exercised
    - Money illusion
    - Delayed purchase, cost of “mortality drag”
  - Hence consumer advice literature and stringent regulation of salesmen, disclosure

  - Severity of regulatory regime and low fees dissuades salesmen, so consumers left without advice, take execution only
  - Issue of group annuities (Switzerland, UK)
- Product regulation
  - Choice of strict control versus permitting innovation
  - Issue also for tax authorities
  - Possible barrier to entry
  - Pricing regulations (consumer protection and prudential basis)
    - EU “technical rate basis”
    - US assumed rates capped
  - Case for voluntary versus compulsory annuities

- Innovation and price dispersion
- Swiss case
- Use of mortality tables
  - Unisex or not
  - Use of tables from other countries
  - Government or trade association mandated
  - Simple government provision of annuities (Sweden)

Annuities regulation within the pension system

- Compulsion in annuities purchase
  - Disadvantages of lump sums – dissipation, adverse selection, myopia
  - Disadvantages of annuities – timing risk – but purchase can be staggered
  - When free choice, people often choose lump sums (investment choice over retirement income security)
  - Possible reasons, annuitisation from social security, underestimates of longevity, bequests, families, tax, liquidity constraints

- Inflation indexation
  - Benefit of protecting real income (if total DPV identical)
  - Indexed annuities not available in many countries
  - UK mandates partial indexation
- Timing of annuitisation
  - Possible remedies for timing risk, delay or staggering
  - Timing risk only arises if portfolio shift occurs
- Taxation of annuities
  - Aspect of general pension taxation – income tax versus expenditure tax
  - Under expenditure tax, favour saving, and may treat pensions more favourably due to contractual annuities – paternalistic
  - Fiscal treatment of annuities crucial to take-up

Regulation of retirement income (DC schemes)

	Occupational pension funds	Personal pension funds	Memo: tax treatment of funded pensions
Canada	No specific regulations – lump sums as well as annuities possible	Option of programmed withdrawals or annuities	EET
Finland	Annuities most common – lump sums subject to tax penalties	Annuities most common – lump sums subject to tax penalties	EET
Germany	No specific regulations	Not available	TET
Italy	Annuitisation required of at least 50% of the balance	Annuitisation required of at least 50% of the balance	EET
Japan	No regulations, DC funds just being introduced	No regulations, DC funds just being introduced	ETT
Netherlands	Full annuitisation at retirement mandatory	Full annuitisation at retirement mandatory	EET
Sweden	Full annuitisation at retirement mandatory	Full annuitisation at retirement mandatory of new compulsory individual accounts	ETT
UK	Pension fund must be annuitised by age 75, subject to 25% tax free lump sum and scheduled withdrawals from retirement till 75	Pension fund must be annuitised by age 75, subject to 25% tax free lump sum, and scheduled withdrawals from retirement till 75	EET
US	Lump sums as well as annuities possible	Lump sums as well as annuities possible	EET

Longer term risks

- Underlying risks of annuities could manifest themselves in industry wide problems, especially if competition intense, not always captured by regulation focusing on firm-by-firm. Also need focus on incentives
- Current issues
  - Underestimation of longevity, leading to possible insolvency
  - Credit risk concerns for insurers
    - Default risk on bonds
    - Risk transfer from banks (securitised debt, credit derivatives) due to regulatory arbitrage

- Financial instability and competition
  - Approaches to banking competition pointing to risks for insurance sector beyond “cycle”
  - Uncertainty
    - Unlike risk, not subject to objective probabilities e.g. future mortality
    - Opportunities for profit in competitive market
    - Feature of financial innovations not yet tested in adversity such as credit transfers, new annuity types
    - Issue of herding – common where uncertainty prevails
  - Disaster myopia (Kahnemann/Tversky basis)
    - Managers of financial institutions may disregard high impact, low frequency risks

- Example in banking, financial crises as opposed to cycle
- Undercutting by “imprudent”, or forget past problems (US in 1930s)
- Leads to declining solvency margins, narrower profit margins, reliance on new business, etc.
- Insurance examples, shocks to mortality or market crashes
- Regulators may also be vulnerable to accept “prevailing judgements”

- Industrial approach
  - Highlights that excessive competition may follow reduction in entry barriers (sunk costs)
  - Consequence of deteriorating information uncertainty, herding, market share competition

- Risks in the ageing of the population
  - In accumulation phase, with low government bond issue – insurers pursue high returns, leading to credit risk, especially via commercial property linkage (credit expansion generating bubbles)
  - Similar aspects when “baby boomers” start to focus on debt claims
  - Possible asset price declines in decumulation phase

- Lessons from Japan
  - Although crisis was due to life insurance, affects annuities and could have arisen from them
  - Like Equitable Life, guarantees, poor risk management, also low competition in asset management and poor returns
  - Effective forward rate agreements on policies at 5.5% up to 1992, no duration matching as bonds 10 year
  - Interest rates fell to 1-2% and credit losses on loans
  - Accounts misleading (assets could be included with no liquidation value, future profits in net assets) and crisis worsened by forbearance
  - Double gearing with banks, raising systemic risks
  - Possible parallels in Continental Europe

Conclusion

- Covered annuities regulation from four sides
  - Prudential regulation
  - Conduct of business
  - Within pension system
  - Broader systemic issues
- Vital to integrity of reformed pension systems, under researched area
- Aspects neglected – structure of regulation and DB issues
- Need for "macroprudential indicators" such as MWRs, market structure, equity prices

- EU issues include
  - Advent of EMU facilitating cross border sales
  - Possible fiscal and regulatory barriers to integration
  - Need for harmonised accounting standards
  - Transnational regulation – forbidden in Maastricht Treaty
  - Ongoing improvement of solvency regulation
  - Deregulation of asset restrictions (consistency with Pensions Directive)?
  - … all seen in context of urgency of pension reform