



Swiss Re



Annuities: a private solution to longevity risk

Product & Knowledge Fair 2007 Rüschlikon

30 March 2007

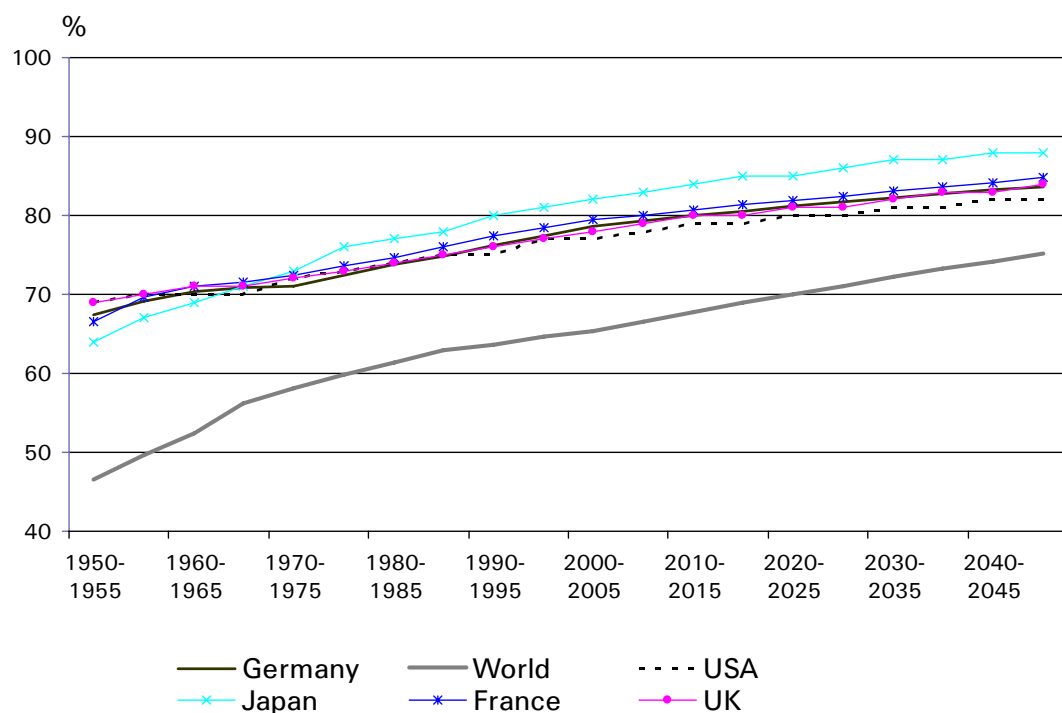
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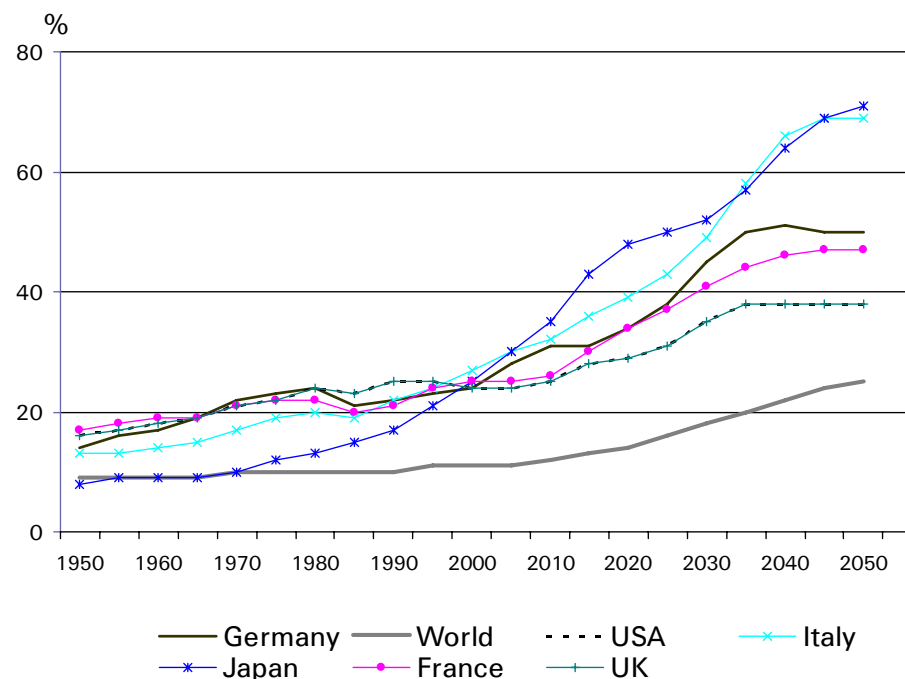


Need for private solution is growing

Life expectancy at birth in different regions



Old-age dependency ratio* in selected countries



Source: United Nations, World Population Prospects, 2004 Revision
 *Ratio of the population aged 65+ to the population aged 15-64



The role of the insurance sector

In the accumulation phase

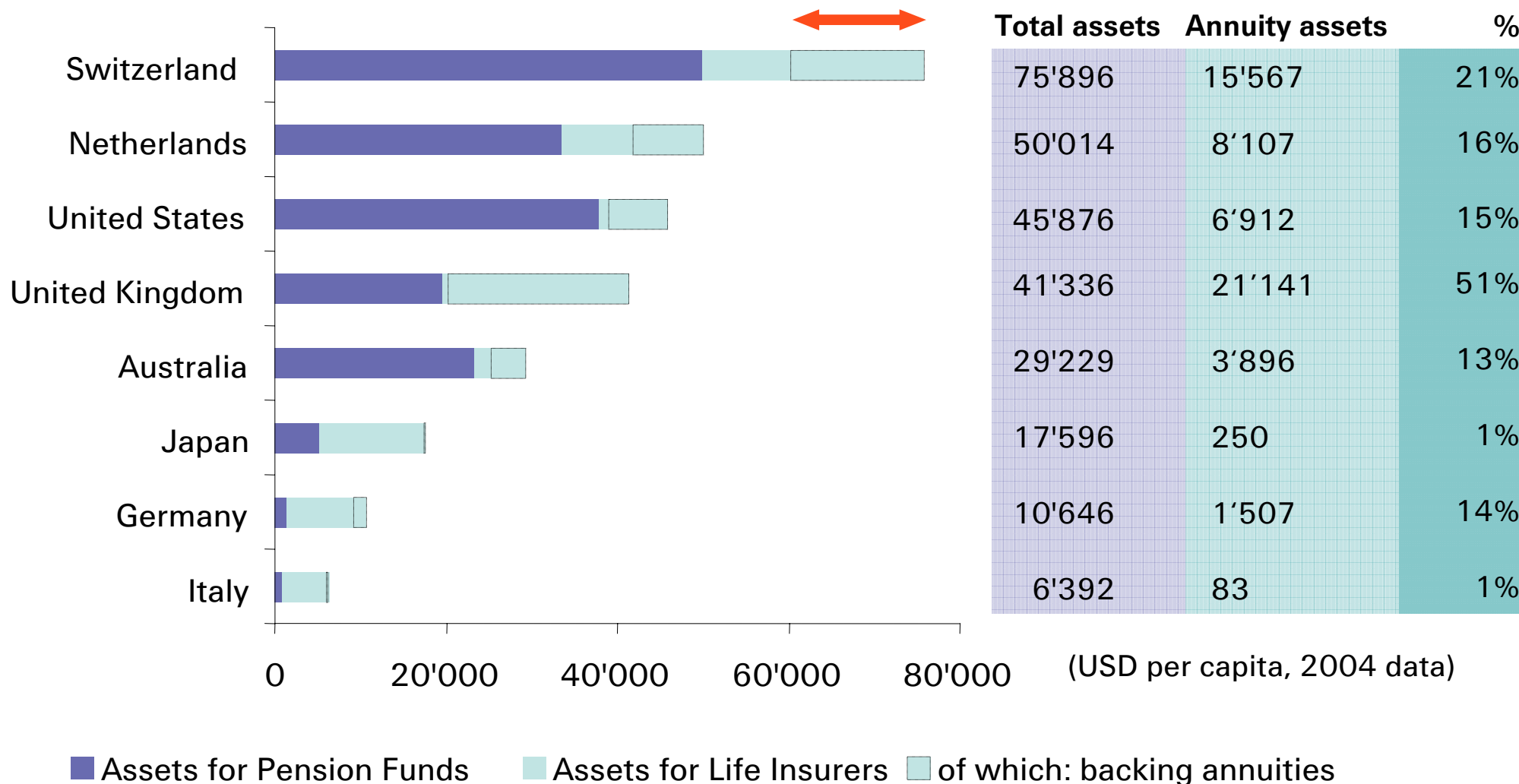
- By helping individuals build up a desirable level of savings throughout their working years:
 - in a flexible way (in the amount and timing of their contributions to the capitalisation plan)
 - in an efficient way (via investment diversification, gradual adjustment of the risk/return profile based on age, tax advantages)

In the decumulation phase

- By allowing individuals to run their asset pool down smoothly while offering protection against longevity and inflation:
 - through various types of annuities
 - through health care and long-term care insurance
 - through wealth monetisation (eg reverse mortgage)
 - through wealth transfer in the case of early death



Size of annuity markets





Total pension expenditure in % of GDP

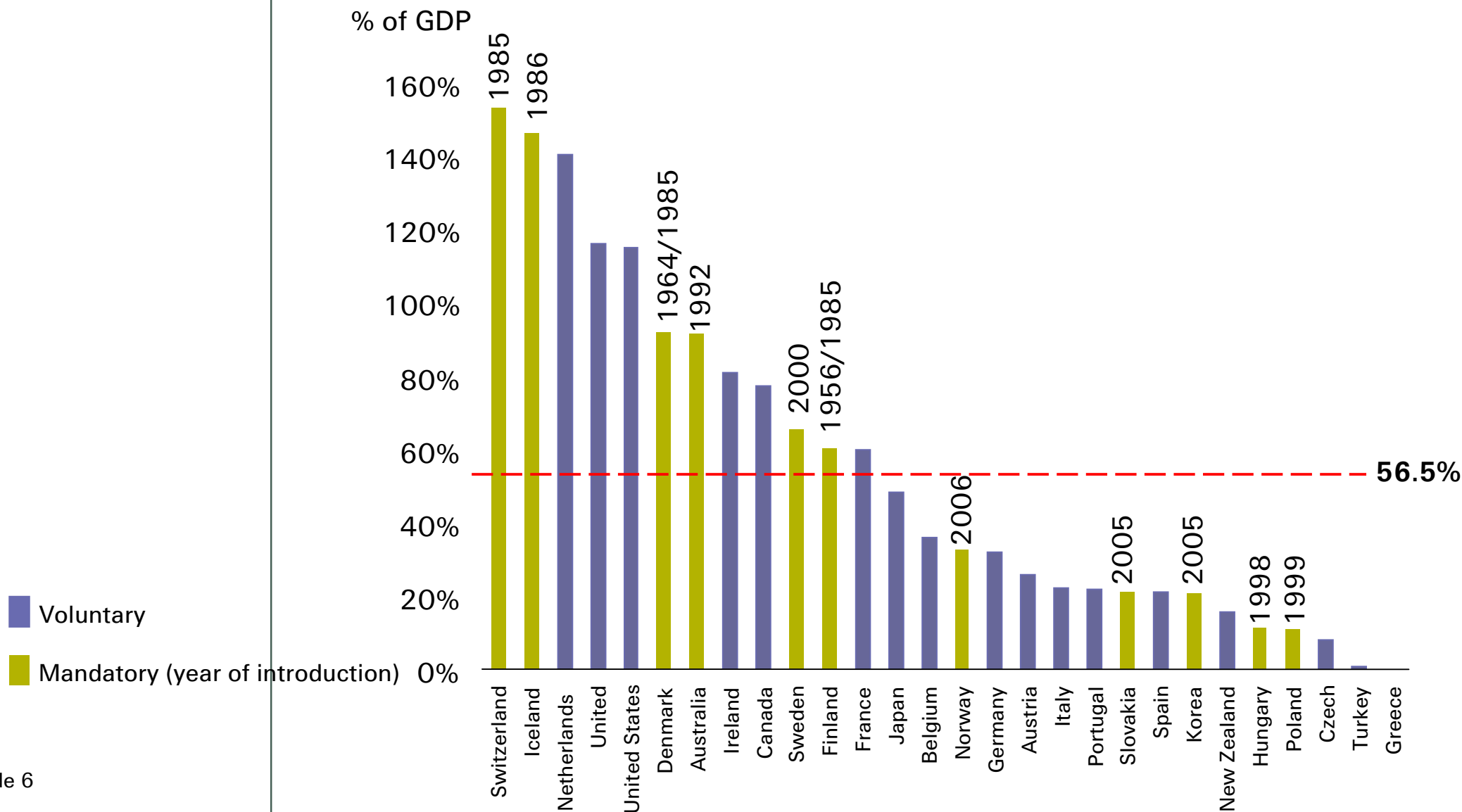


Source: Report of the Pensions (Turner Commission), 2005; OECD, 2004, Social Expenditure Database (1980-2001)

Note: Data was not available for Ireland, New Zealand and Spain



Role of pension system: Pension funds and life insurance assets penetration





Main risks and costs affecting annuity profitability

Insurance risks

- Longevity risk
- Persistency risk

Underwriting activity

Financial-market risks

- Interest-rate risk/
- Investment risk
- Unhedged inflation risk

Investment activity

Costs

- Administration costs
- Distribution costs
- Capital costs

Operating activity

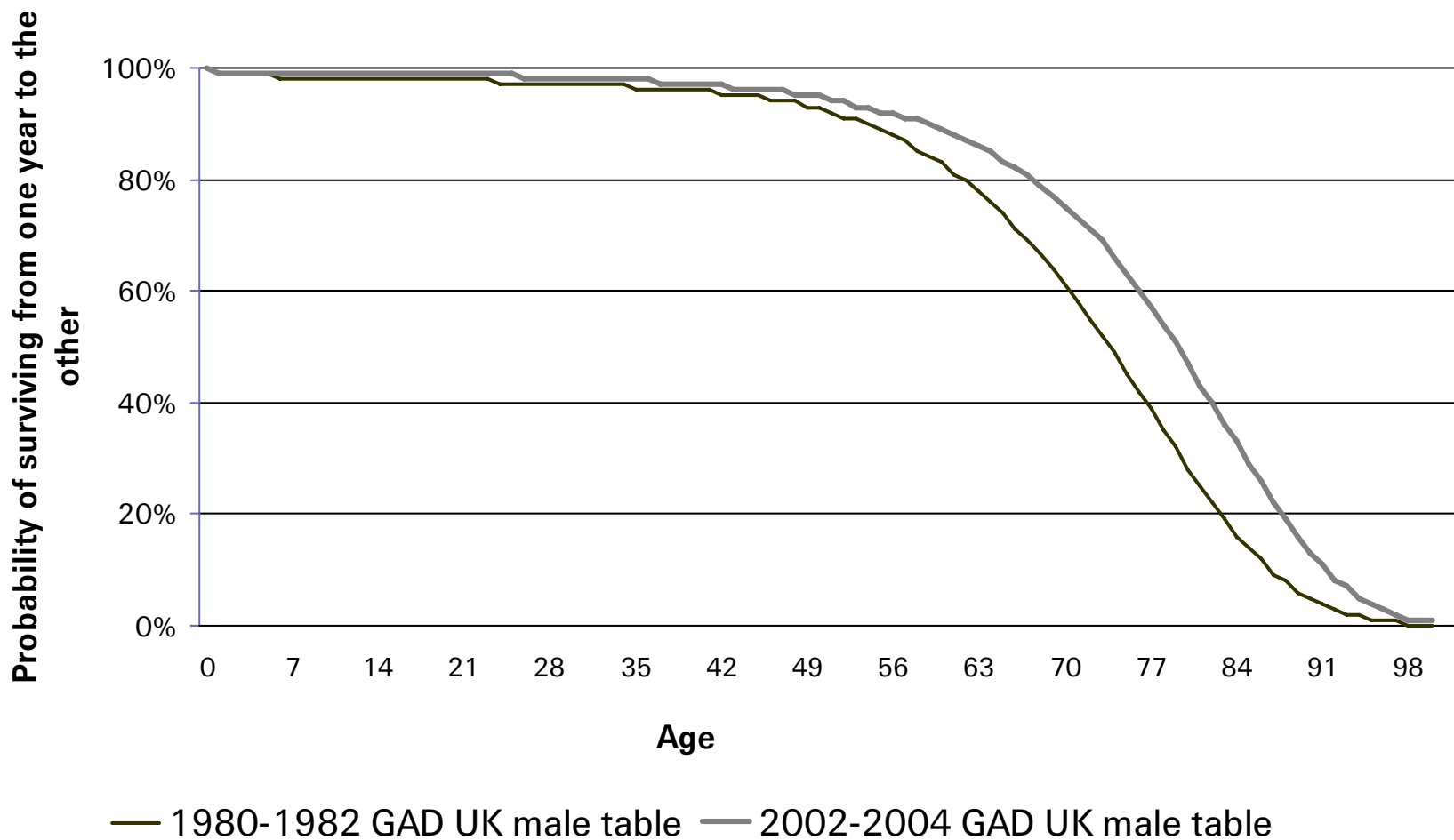
insured's buying behavior risk management prowess

scope for diversification hedging instruments use

product structure



Longevity risk: Rectangularisation of the mortality curve

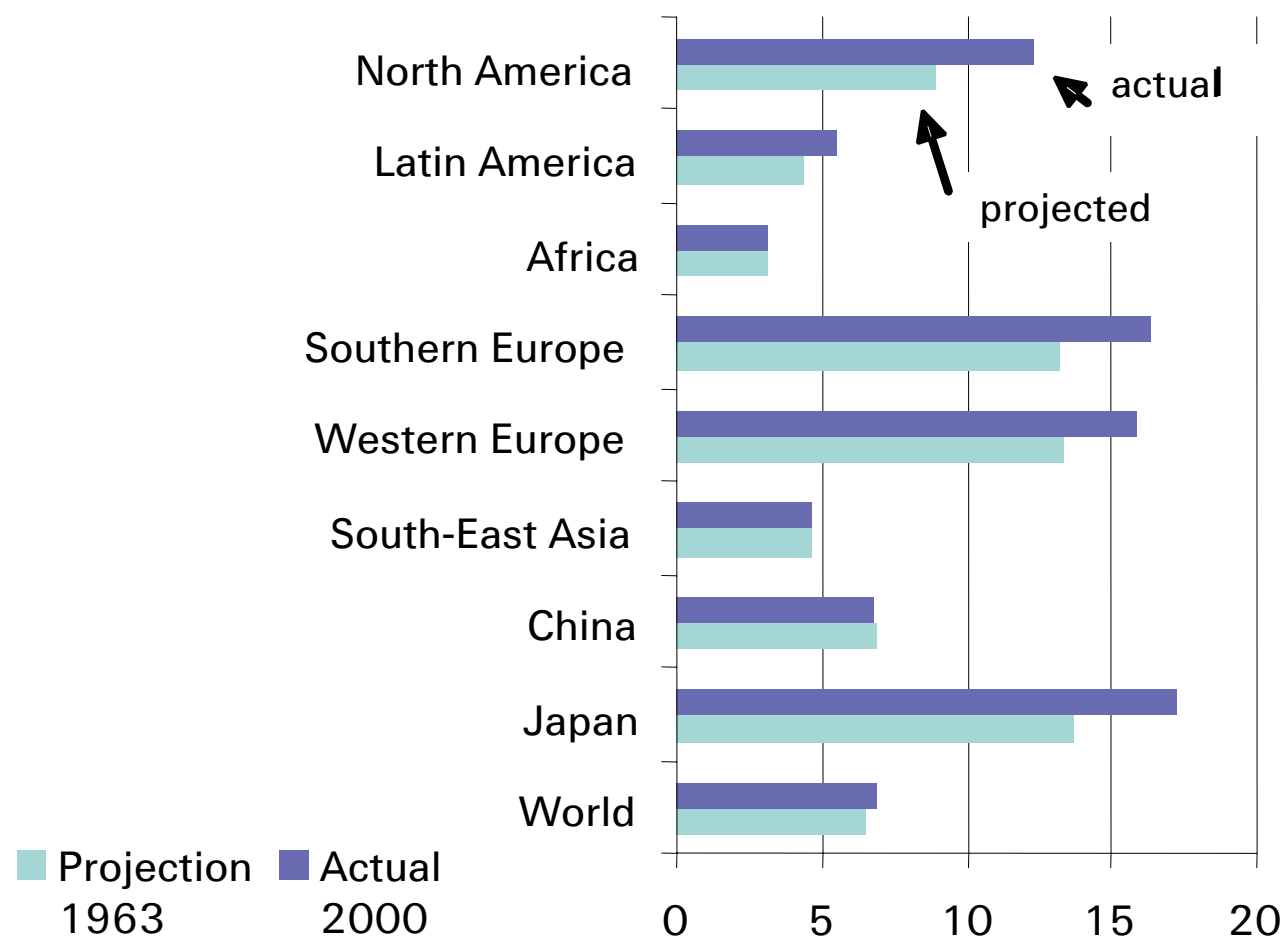


Source: UK GAD



Longevity risk: Uncertainty in demographic projections

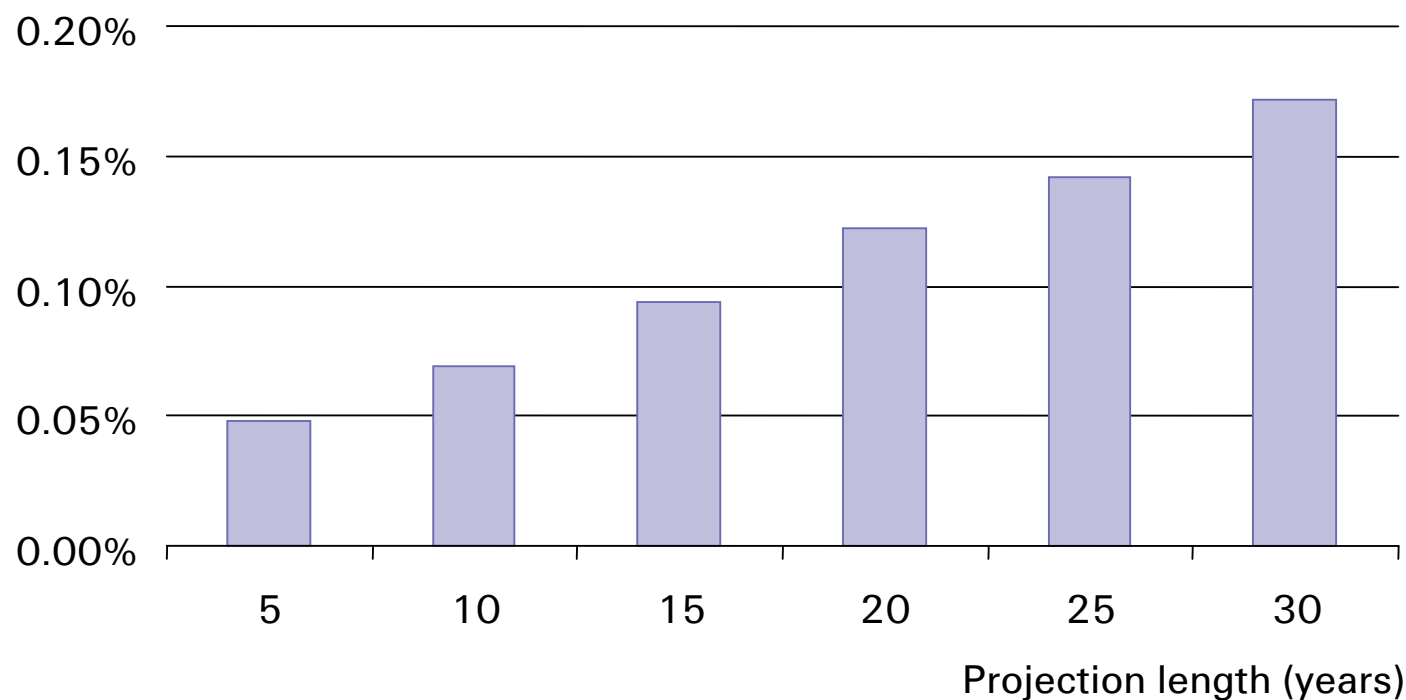
Share of population > 65 years (%)





Longevity risk: Projections errors grow with time span

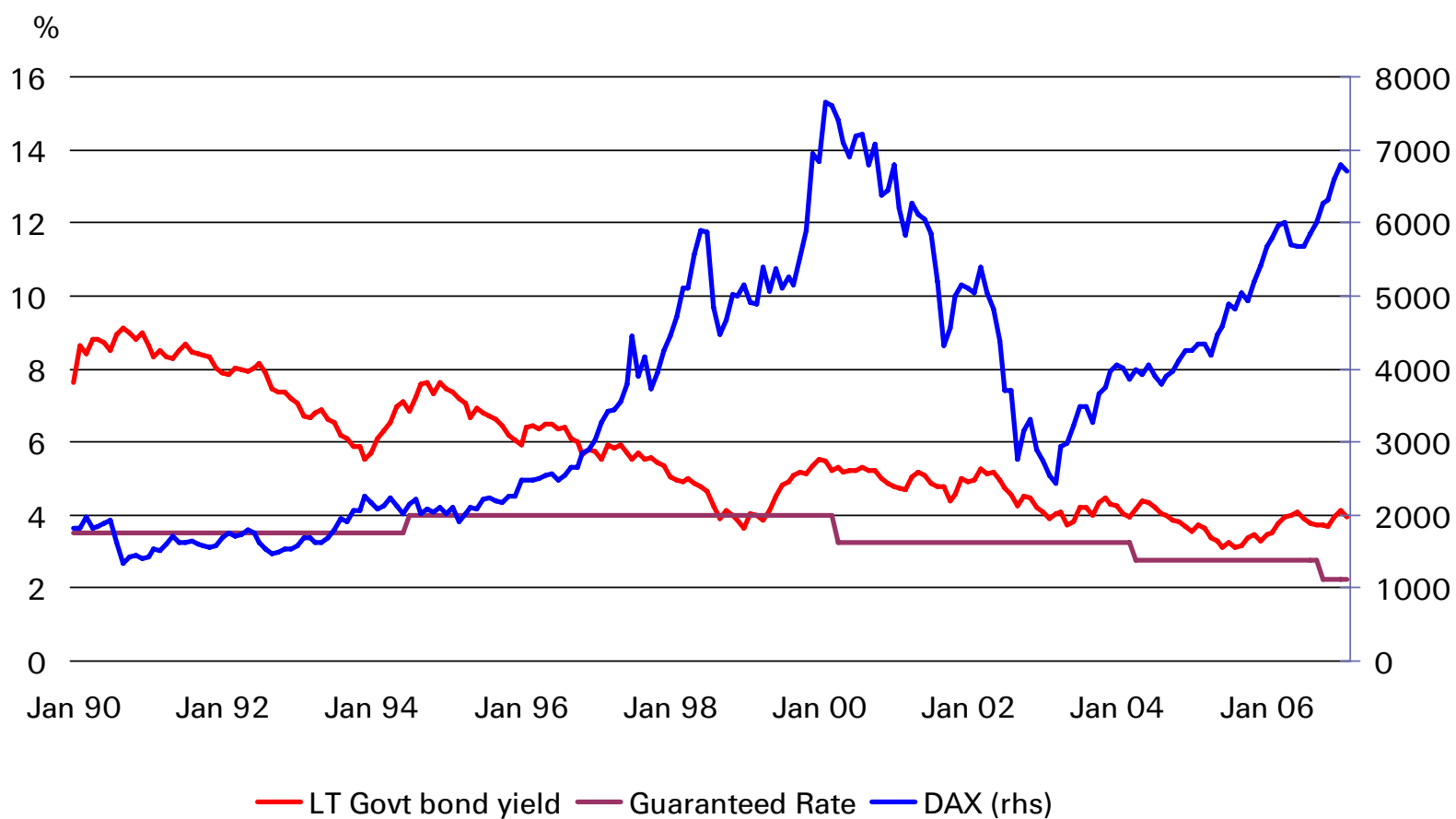
Absolute projection error (mean values)



Source: IMF, World Economic Outlook (2004)



Interest rate risk: Guaranteed rates vs. market yields





Managing longevity risk: The role of different players

