

Swiss Re



# How Demographic Change Affects the Capital Markets and the Financial Services Industry

## Financial Service Providers' Challenge in Dealing with Shifting Demands and Supplies

W. Weldon Wilson

Member Swiss Re Executive Board

CEO, Swiss Re Life & Health America Inc.

8<sup>th</sup> International Sustainability Leadership Symposium

27-28 September 2007

Swiss Re Centre for Global Dialogue

Rüschlikon/Zürich, Switzerland



# Agenda

- The demographic transformation
- Need for private solutions to longevity
- Opportunities and challenges for the life insurance industry
- Conclusion

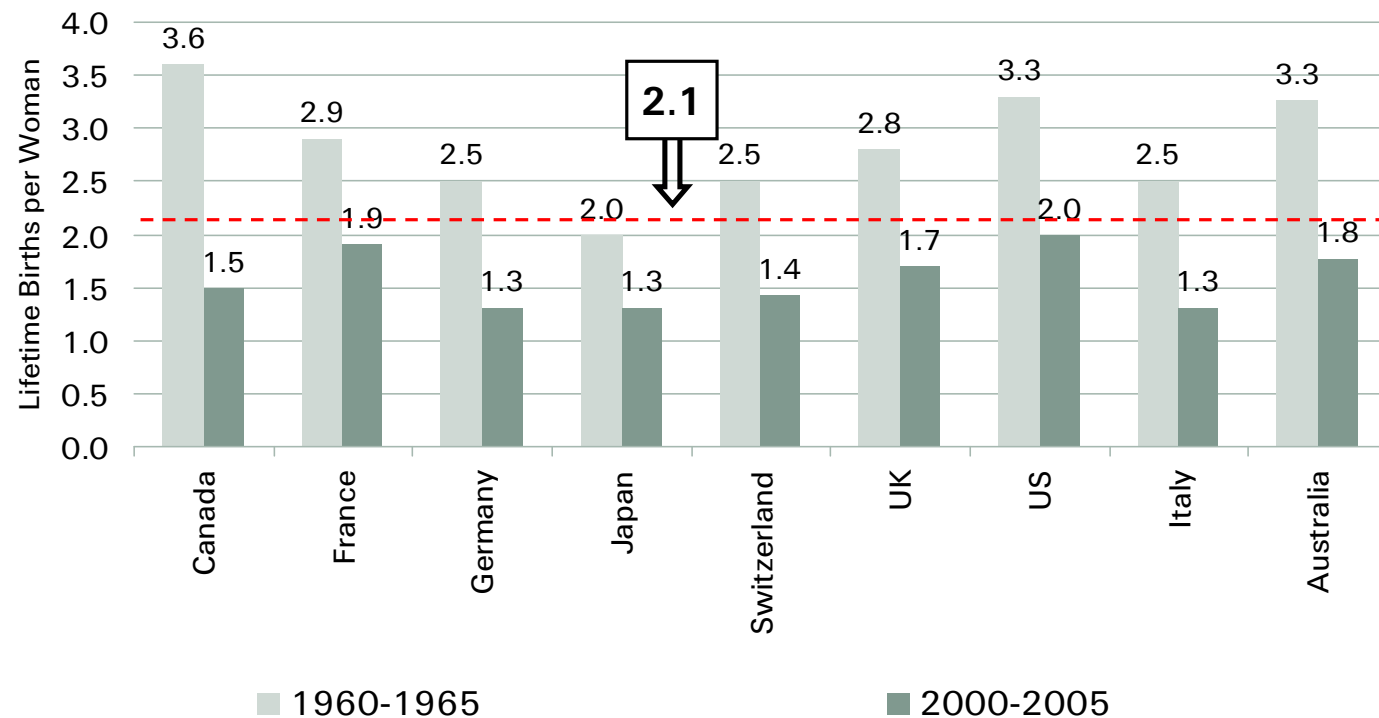


## Demographic transformation is underway globally

- Fertility rates are falling — the share of younger people in the population is shrinking
- Longevity is rising — the share of elderly in the population is growing
- The world will experience unprecedented aging — the developed countries are leading the way, parts of the developing world also are aging quickly

# Fertility in the developed world has dropped below the 'replacement rate' of 2.1

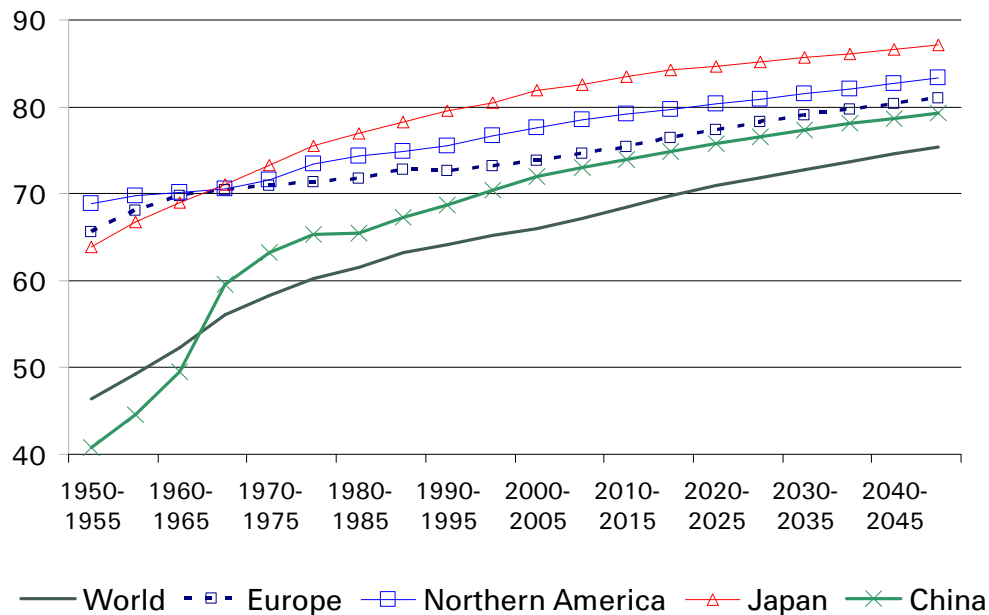
### Total fertility rate by country



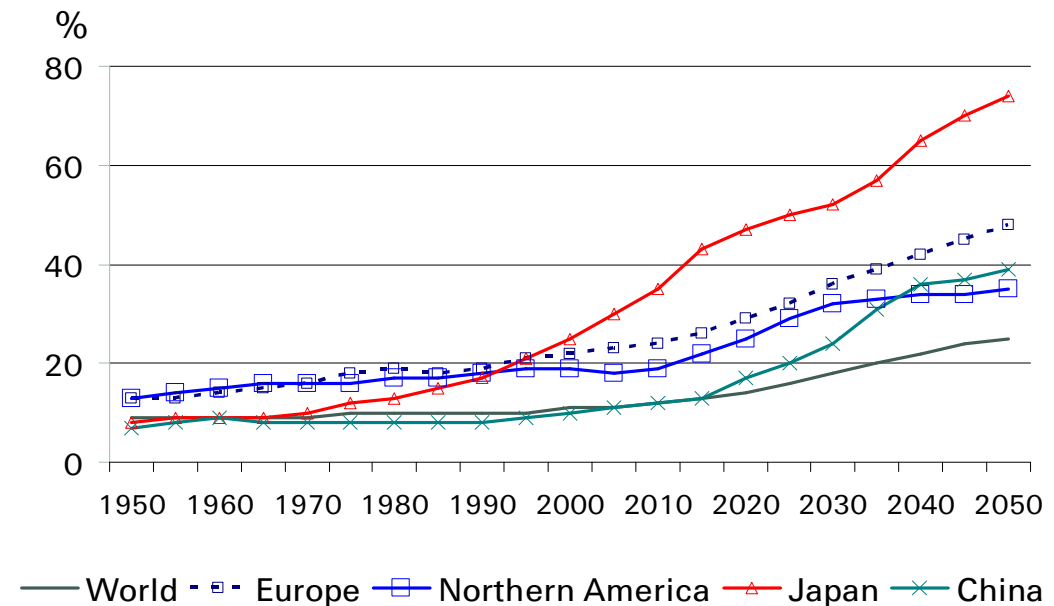


# Increased longevity and aging populations pose enormous challenges to society

**Life expectancy at birth (both sexes)**



**Old-age dependency ratio\***



Notes: \*Ratio of the population aged 65+ to the population aged 15-64. Northern America includes Bermuda, Canada, Greenland, Saint-Pierre-et-Miquelon, and the US.

Source: United Nations, World Population Prospects, 2006 Revision



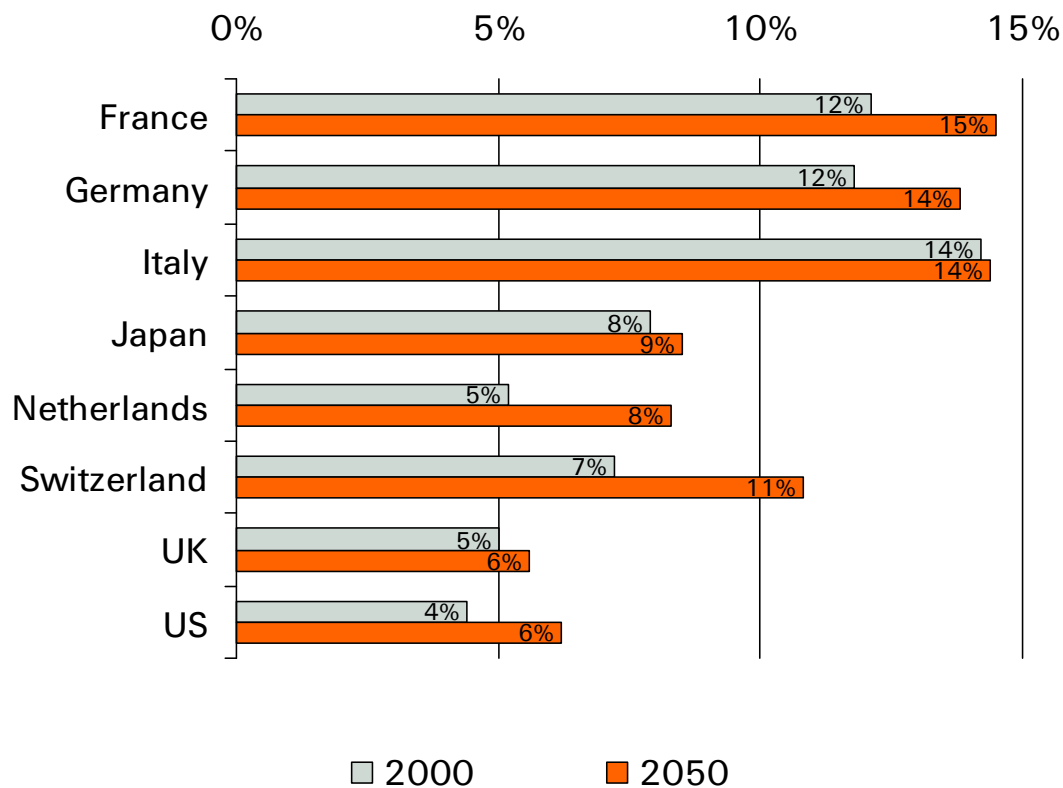
## Need for private solutions to post-retirement funding is growing

- There are fewer wage and salary earners to finance a growing number of retirees
  - pay-as-you-go pension systems are becoming unsustainable
- Corporate pension plans are shifting away from defined-benefit toward defined-contribution schemes
  - employer-based pension benefits are becoming more uncertain
- Workforce mobility and participation of women in the labor force are increasing
  - the elderly receive less support and care-giving from traditional family networks

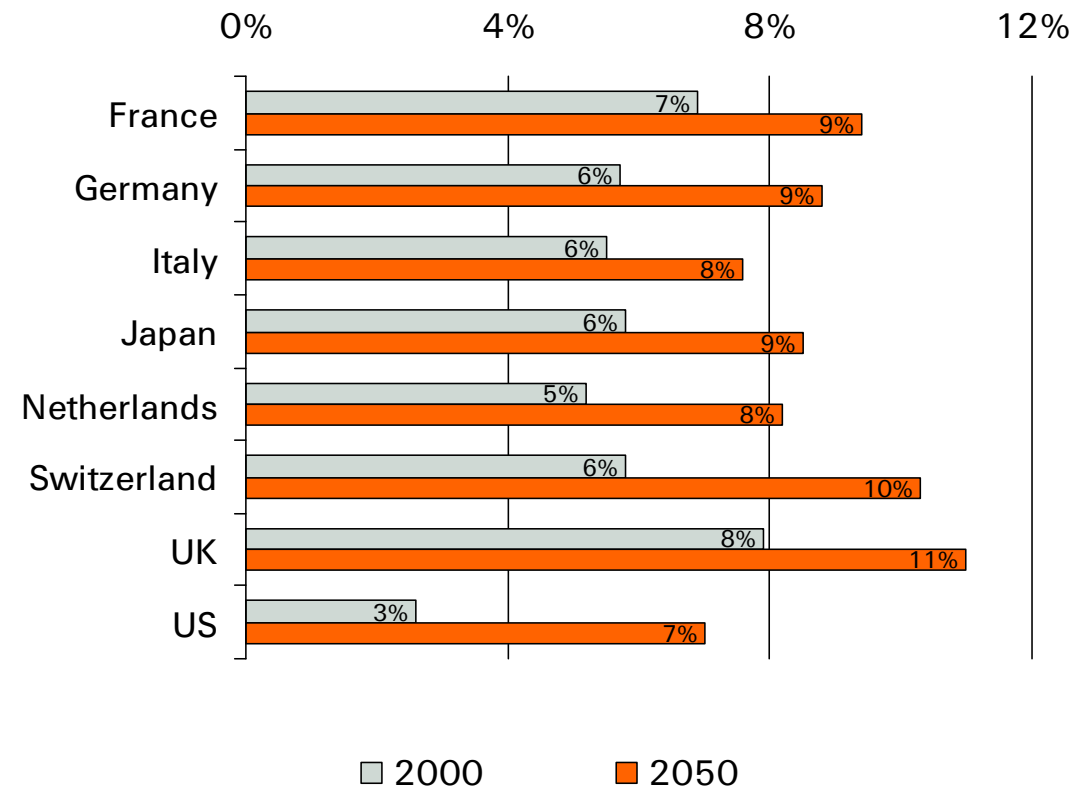


# Public budgets are under mounting pressures

**Public old-age pension outlays in % of GDP**



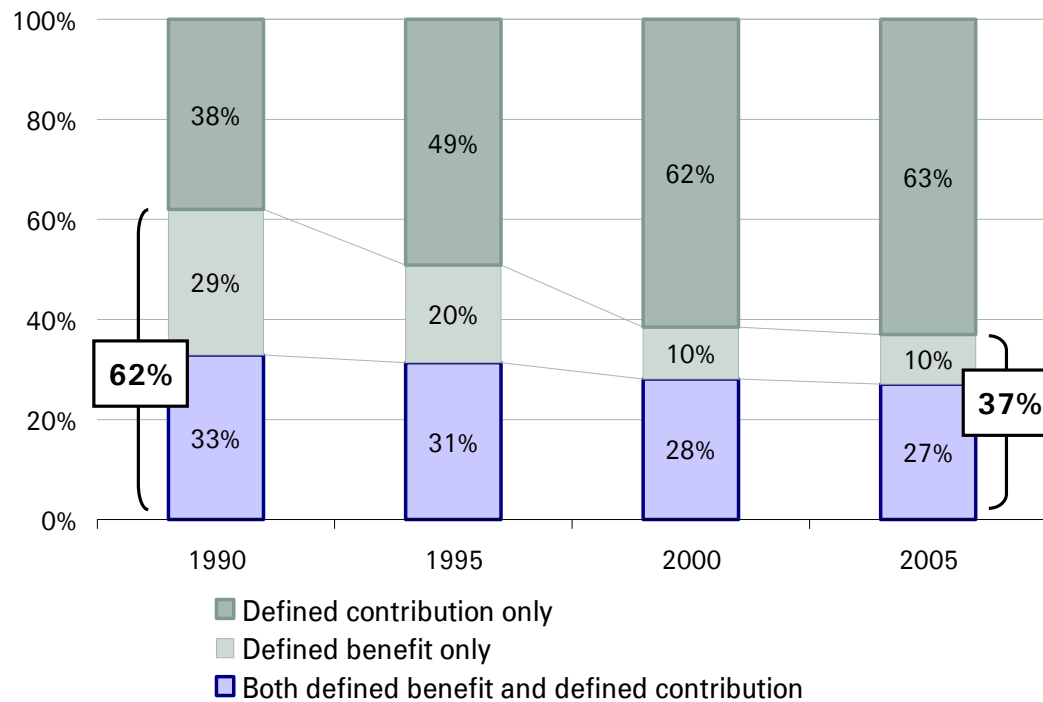
**Public health and long-term care spending in % of GDP**



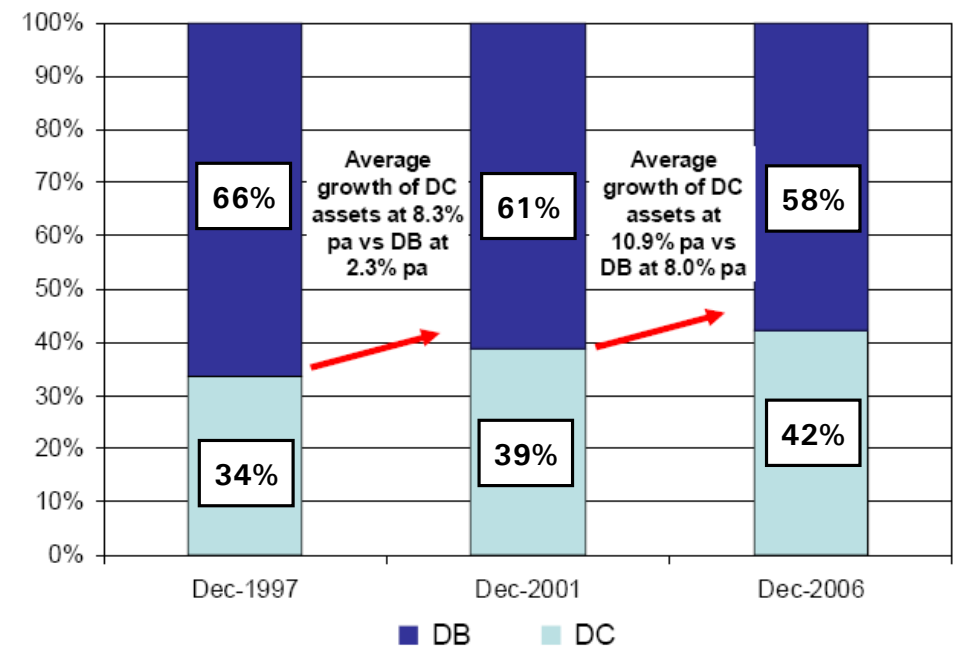


# Risk and responsibility are shifting to individuals

**US private sector workers with pension coverage by type**



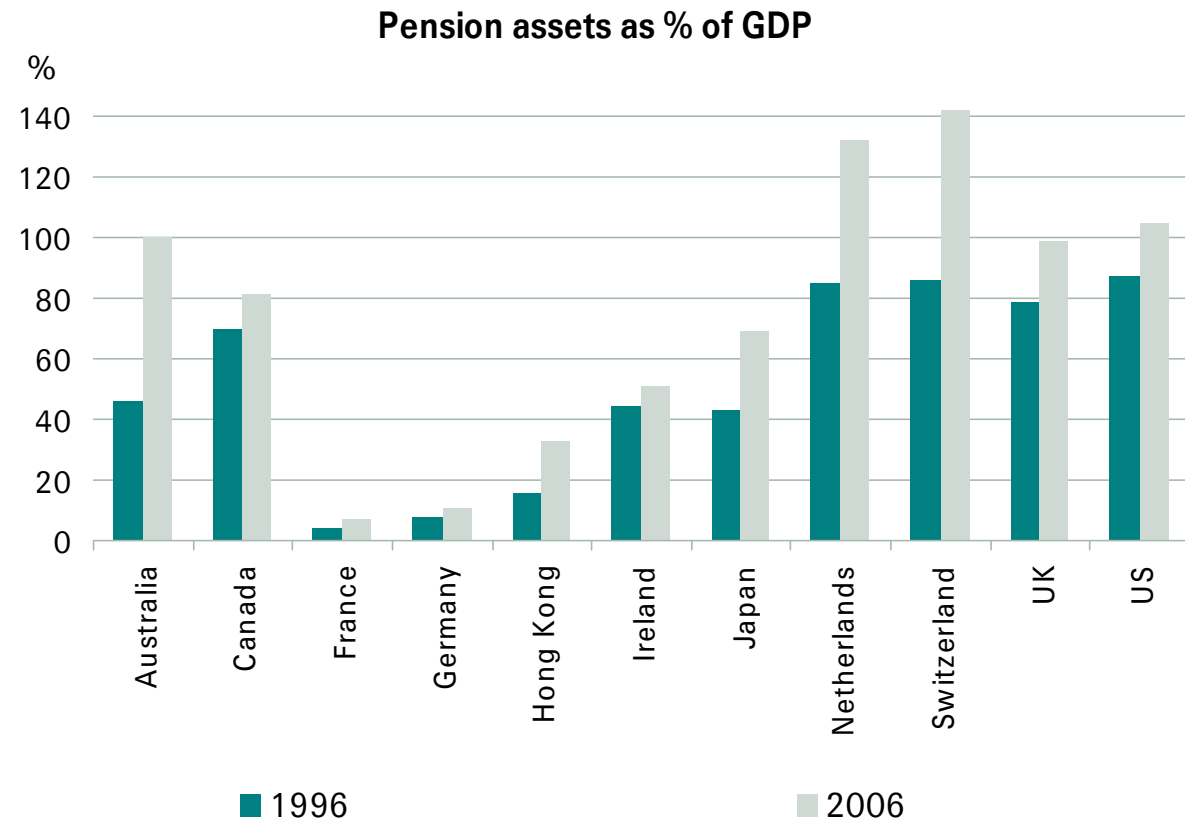
**Global pension assets: DB/DC split**



# Global private pension fund assets doubled from 1996 to 2006 and today exceed \$23 trillion



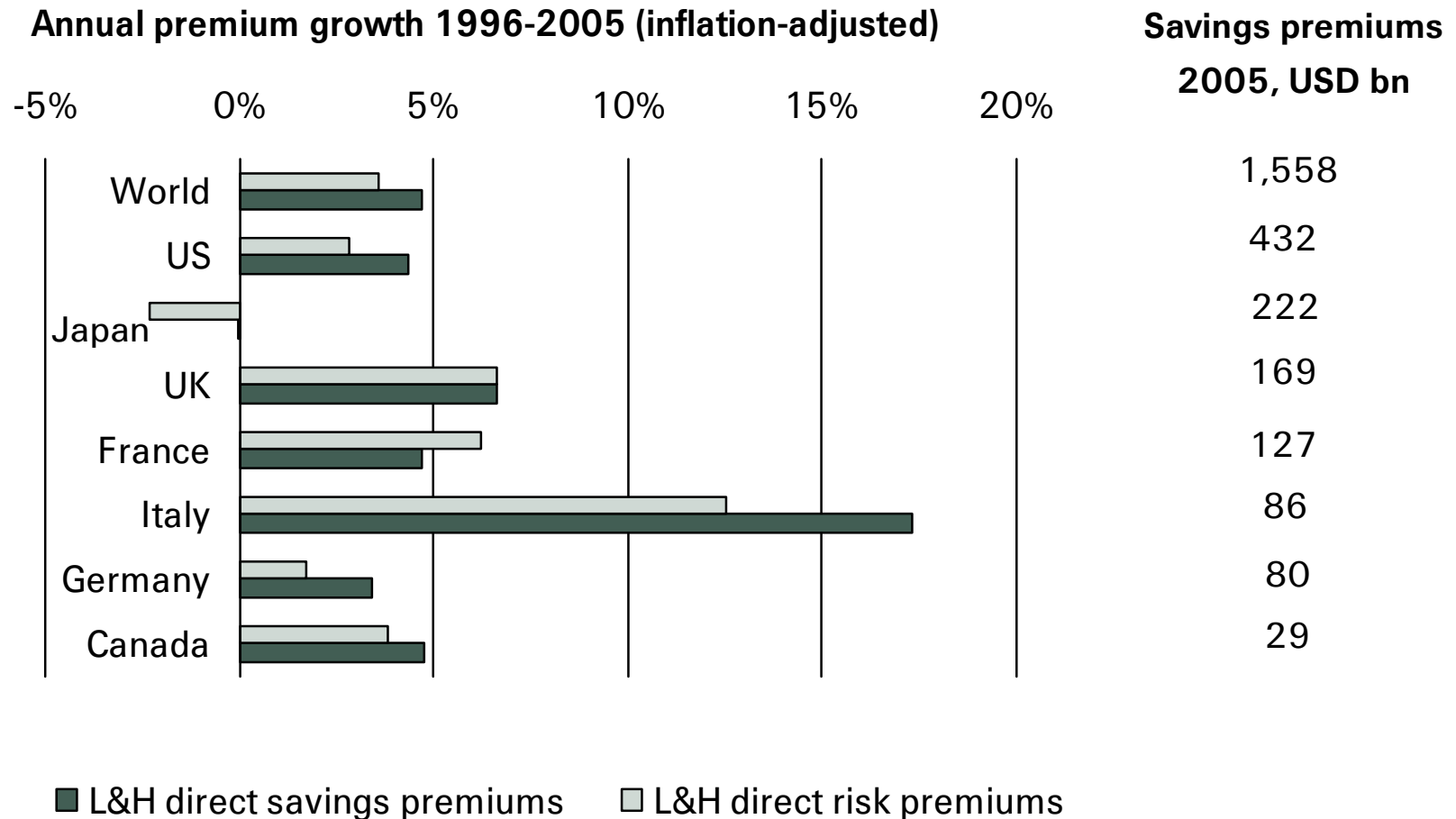
	Total pension fund assets 1996 (USD billion)	Total pension fund assets 2006 (USD billion)	CAGR 1996-2006
Australia	192.0	743.4	14.6%
Canada	429.0	1,026.8	7.4%
France	68.0	157.9	8.2%
Germany	204.0	311.7	3.8%
Hong Kong	25.0	62.0	9.6%
Ireland	33.0	111.9	13.0%
Japan	2,007.0	3,083.7	4.7%
Netherlands	349.0	873.3	9.1%
Switzerland	261.0	565.3	7.0%
UK	950.0	2,338.4	7.9%
US	6,774.2	13,963.1	7.5%
<b>Total (USD)</b>	<b>11,292.2</b>	<b>23,237.4</b>	<b>7.5%</b>



Notes: Pension assets include assets in defined-benefit and defined-contribution occupational pension plans. For the US, parts of individual savings for retirement (IRAs) are also included.

Source: Watson Wyatt Worldwide 2007 Global Pension Asset Study

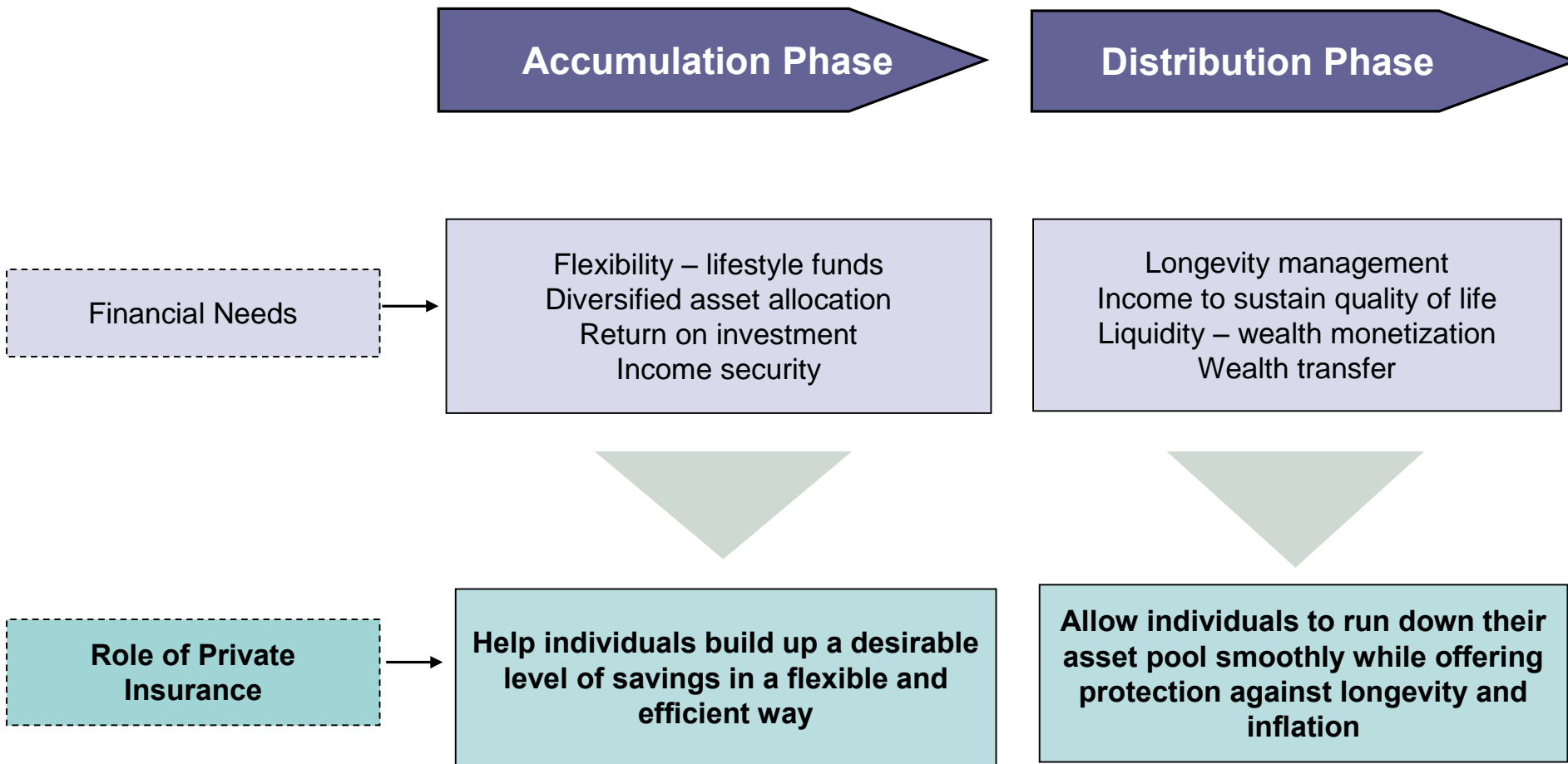
# Premiums for life industry savings products have outpaced risk premiums in many countries



Notes: Risk premiums include premiums for mortality, disability, long-term care and critical illness insurance. Savings premiums include premiums for annuity products and the cash accumulation portion of premiums for combined savings-protection products such as universal life in the US and unit-linked products in Europe.

Source: Swiss Re Economic Research and Consulting

# There are significant opportunities to address the financial needs of an aging population



# Products for the distribution phase focus on longevity management and income preservation



## Accumulation Phase

## Distribution Phase

Product  
development/innovation

- Traditional life insurance
- Return-of-premium products
- Accumulation annuities with embedded options and guarantees
- Combined life/annuity/long-term care products
- Unit-linked life insurance

- Payout annuities
- Accumulation annuities with embedded options and guarantees
- Combined life/annuity/long-term care products
- Long-term care insurance
- Critical illness insurance
- Reverse mortgages
- Wealth transfer products



## The new, more complex products present many challenges

- Complex (and often correlated) insurance, financial market and macroeconomic risks:
  - mortality/longevity/morbidity risks
  - persistency risk
  - interest rate risk
  - equity-market risk
  - inflation risk
- Longevity risk — asset-liability management at long duration (30+ years)
- Capital strain from increased regulatory requirements

# Financial innovation will continue to play a key role in managing risk and capital

Swiss Re



- Use of financial instruments to hedge and transfer risks to capital markets is growing rapidly
  - Hedging instruments are used to transfer financial market and economic risks embedded in life insurance products
  - Insurance-linked securities are used to transfer risk to capital markets and provide financing
    - extreme mortality
    - reserve funding (eg XXX, AXXX, disability)
    - monetization of embedded-value
- Financial tools increase industry capacity, improve insurers' return on equity, and reduce the volatility of earnings



## How to manage longevity risk?

- Longevity risk is systemic in nature – *i.e.*, it affects the population as a whole – and portfolio diversification is not a useful risk mitigation tool
- Longevity risk exposure can be managed by
  - hedging the risk while retaining it
  - transferring the risk to counterparties – *e.g.*, reinsurers, investors
- Developments focusing on redistribution of longevity risk through the capital markets are underway; however, successful solutions still need to be found



## Conclusion

- The industry is developing innovative products to meet the demands of an aging population
- These products carry growing longevity and financial market risks and present insurers with new challenges in risk and capital management
- Given the size of the issue, the industry will rely increasingly on innovative financial tools to hedge risks and manage capital in an efficient and flexible way