

# Demographic development

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## Opportunities for German Actuaries in Risk Management

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*Prof. Dr. Kurt Wolfsdorf  
Actuarial Presidents' Forum, June 13th 2005, Rome*

## *Demographic Development in Germany*

- **The prolongation of life expectancy in Germany (West) is comparable to other industrial nations**
- **Since re-unification the formerly higher mortality rates in East-Germany have declined considerably; thus, for the future the life expectancy is expected to increase even faster than today**
- **As a consequence, state and corporate pension schemes as well as the health insurance systems face the challenge of ensuring constant fulfilment of insurance cover**



# Comparison of International Mortality Trends

Mean Values age 60 -89	1960-1979	1965-1984	1970-1989	1975-1994	1980-1999
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## Males

Germany-West	0,39%	1,30%	1,57%	1,67%	1,80%
Japan	2,28%	2,61%	2,54%	1,92%	1,53%
Great Britain (1979-1998)	0,57%	0,87%	1,26%	1,67%	1,89%
France (1978-1997)	0,89%	1,27%	1,56%	1,97%	1,98%
Italy	0,35%	0,64%	1,13%	1,79%	2,03%
Sweden	0,30%	0,48%	0,80%	1,34%	1,63%
Switzerland	1,18%	1,38%	1,46%	1,54%	1,82%
USA	0,75%	1,31%	1,36%	1,28%	1,32%

## Females

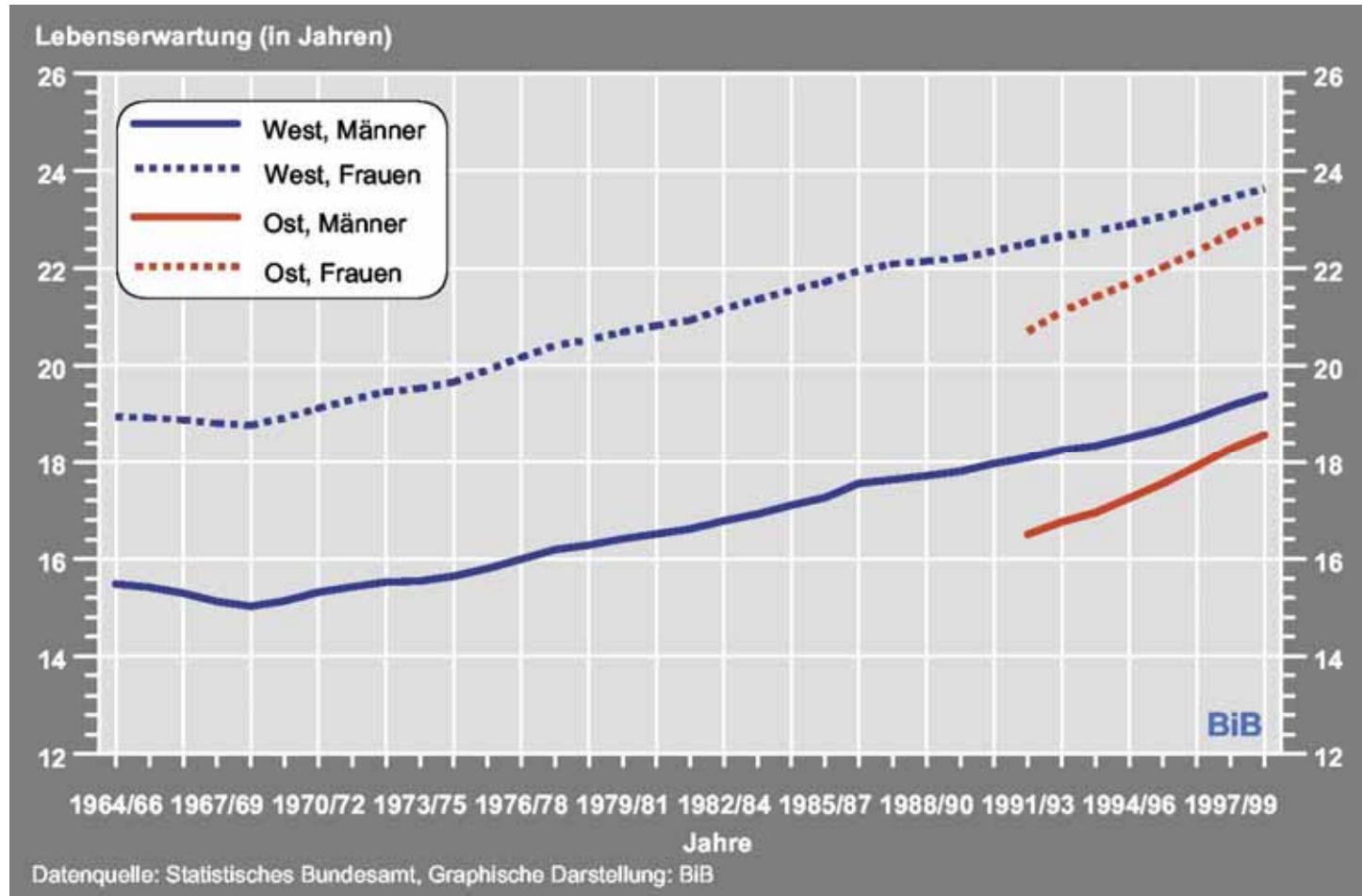
Germany-West	1,32%	2,09%	2,22%	2,05%	1,98%
Japan	2,75%	3,20%	3,49%	3,26%	2,98%
Great Britain (1979-1998)	0,94%	0,98%	1,17%	1,37%	1,41%
France (1978-1997)	1,76%	2,05%	2,31%	2,48%	2,39%
Italy	1,48%	1,71%	2,02%	2,40%	2,50%
Sweden	1,86%	1,79%	1,58%	1,53%	1,46%
Switzerland	2,31%	2,54%	2,46%	2,10%	1,96%
USA	1,54%	1,75%	1,38%	0,89%	0,61%



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# Life Expectancy in Germany (East and West) at age 60, 1964/66 - 1998/2000



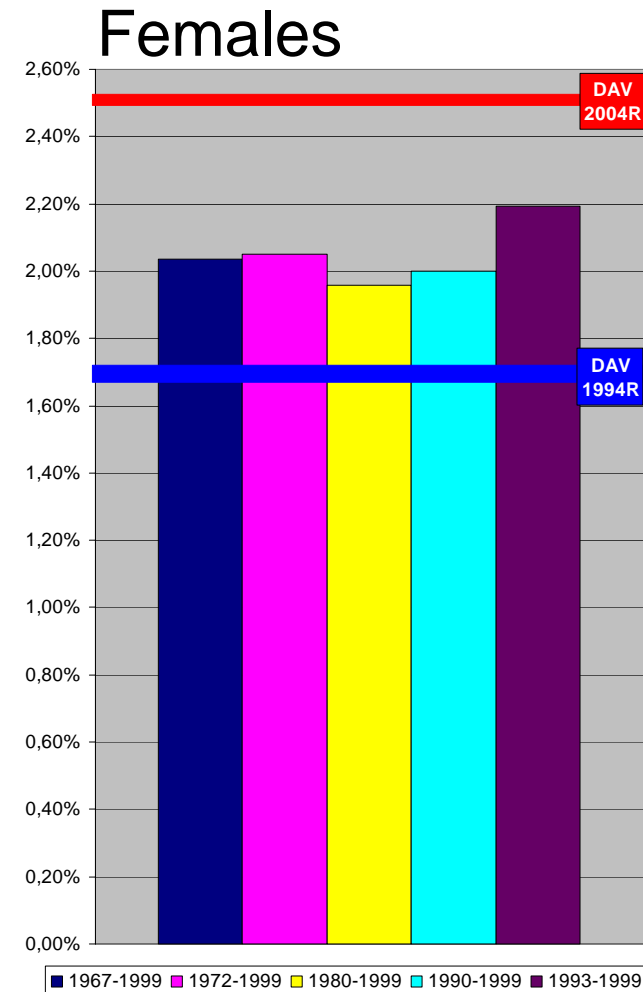
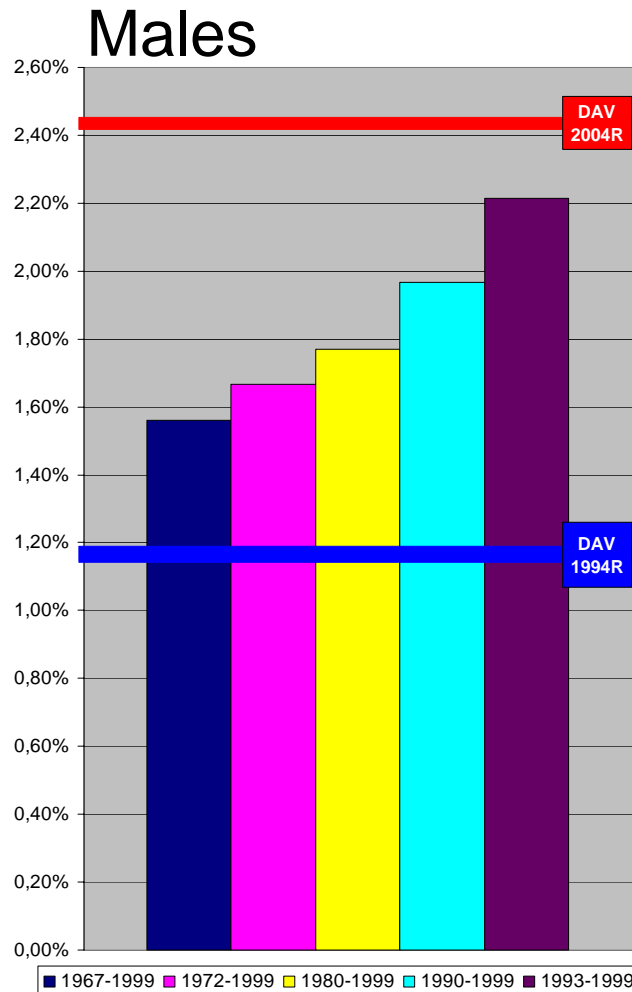
# ***New Tables for Annuity Products - DAV 2004 R***

- **To clarify the consequences of the demographic development - not least for political decision-makers - the German Association of Actuaries regularly quantifies the decline in mortality rates**
- **The DAV has introduced new mortality tables in 2004**
  - **for annuity products in private insurance including**
    - **government sponsored annuity products**
    - **corporate pensions**
  - **to strengthen the reserves for the existing portfolios**



# Mean-Value of Decline in Mortality Rates (in %)

(Germany-West age 60-89 for different observation periods)



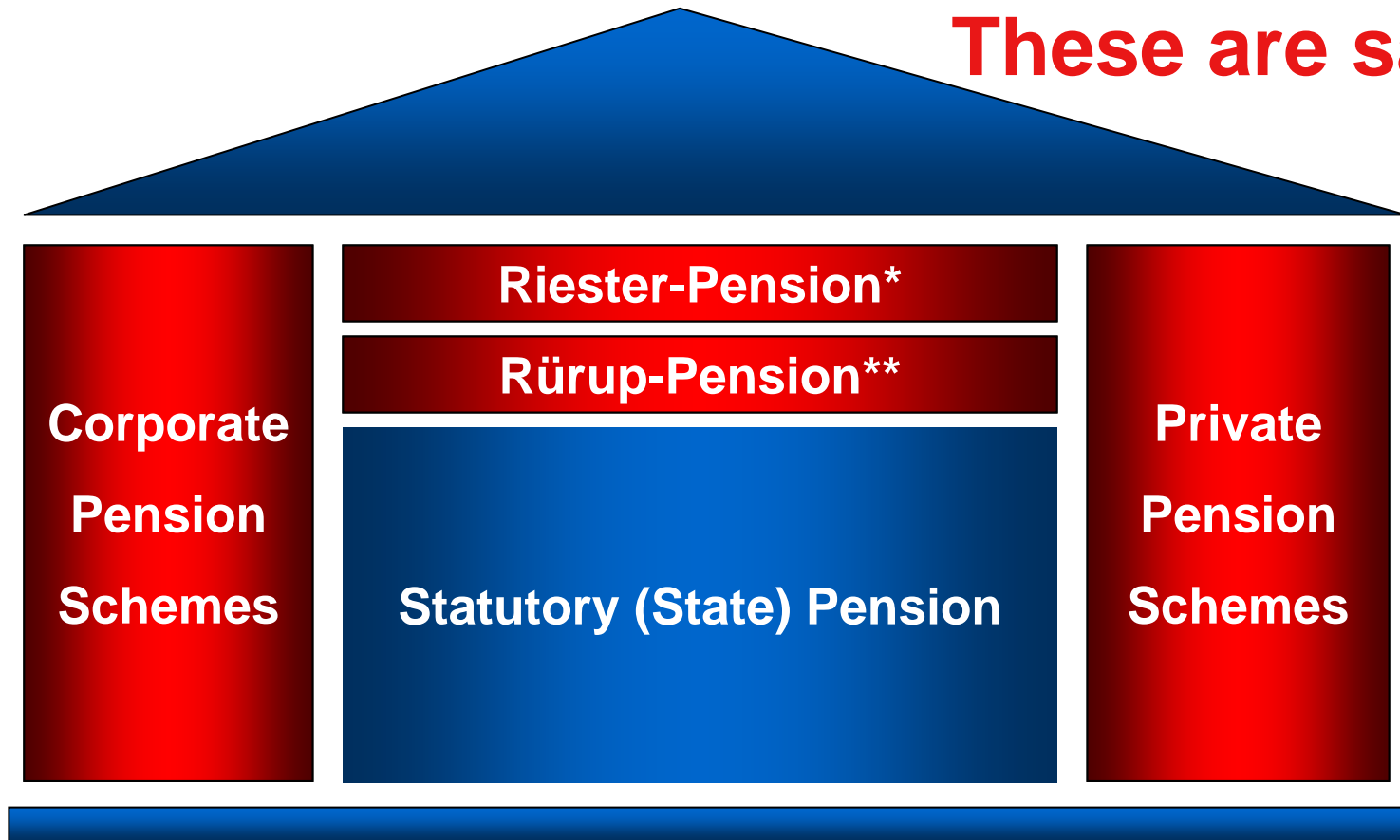
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# System of Retirement Pensions in Germany

## Three Column Model

**These are safe!**



\* private pension scheme with governmental financial bonus

\*\* private pension with tax incentives



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# ***Government Reaction on Aging Population***

- **Tax exemption and transfer payments for asset backed and private financed old-age provision (Riester-Förderung 2001)**
- **Transition from taxed contributions and partially taxed pensions to tax-exempt contributions and fully taxed pensions (Income Tax Reform Act 2004)**

**Actuaries are asked to develop attractive and efficient concepts and products for individual and company provisions**



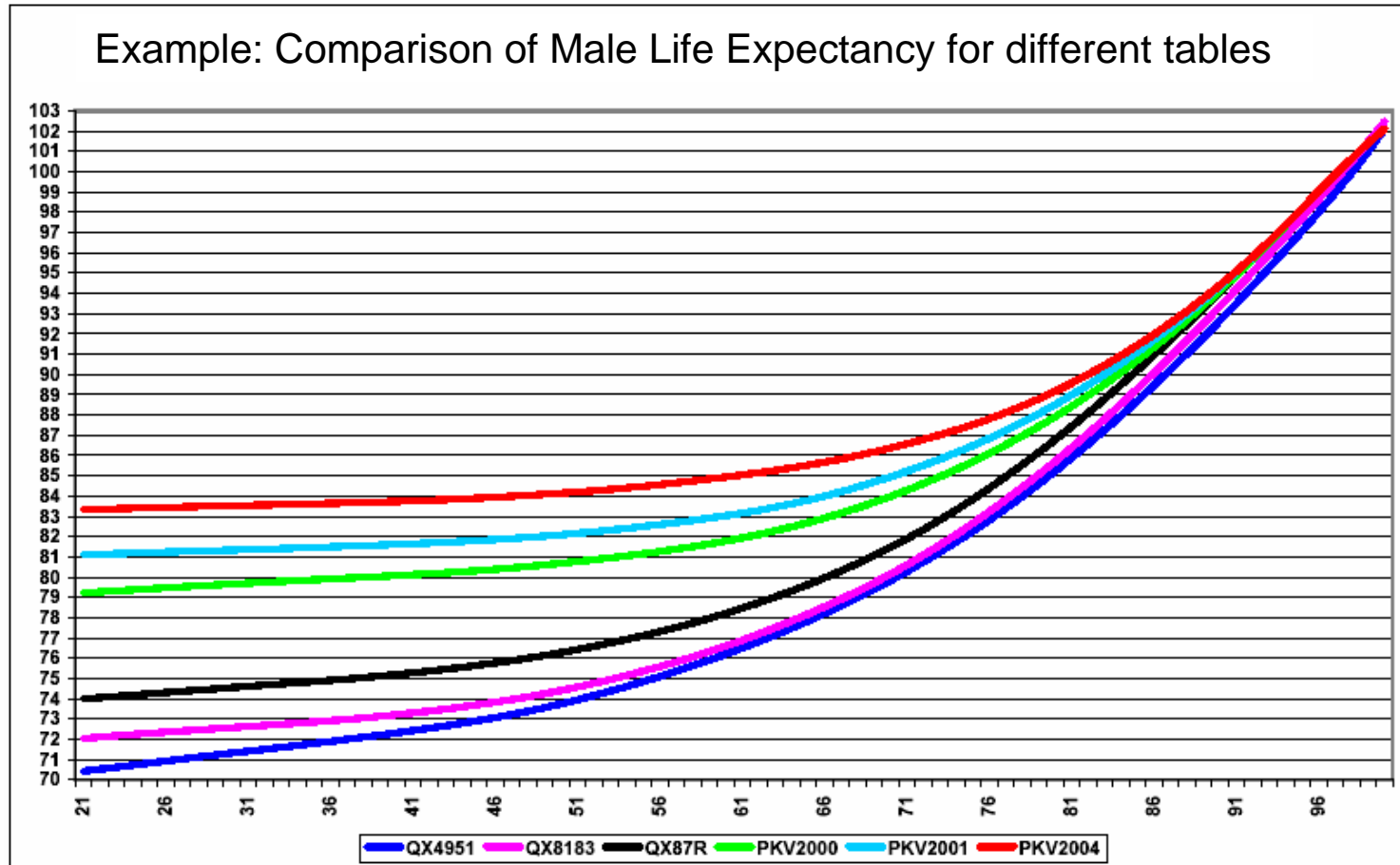


# ***Mortality Tables in Private Health Insurance***

- **In private health insurance the significance of mortality tables for premium calculation has increased considerably over the last 50 years**
- **Reasons: the decline in mortality rates and the dependency of costs for medical treatment on the age of the insured person**
- **the Association of Private Health Insurers published a new mortality table in 2004**
- **aging reserves and the transfer of individual and collective aging reserves gain importance**



# Mortality Tables in Private Health Insurance



# *Challenges for Actuaries*

- **to clarify the implications of an aging population**
- **to help employers to maintain the level of corporate pension schemes**
- **to help the government to prepare for the future development of the social pension system**
- **to support political decision-making in current topics like transfer of aging reserves (private health insurance) or guaranteed surrender values (life insurance)**

*Actuaries can give more support than they have been asked for so far!*



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