



mea

Global Aging and Global Economics

Issues, some answers, and many
more research questions *for you !*

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and NBER**

RAND Summer Institute 2004

1. Fundamentals: **Demography** (and open questions on links to economics)
2. The Wealth of Nations: **Labor Market** Issues (Macro/Micro)
3. **Product Markets**: Sectoral Change, Trade and Infrastructure
4. The Strategic Role of **Capital Markets**: Asset Meltdown, Portfolio Effects, Globalization and Diversification

Open Questions in Economic Demography

- Deterministic and stochastic projections:
How reliable are they?
- Is demography exogenous? Do we understand causality? Economic incentives to fertility and migration

The Wealth of Nations

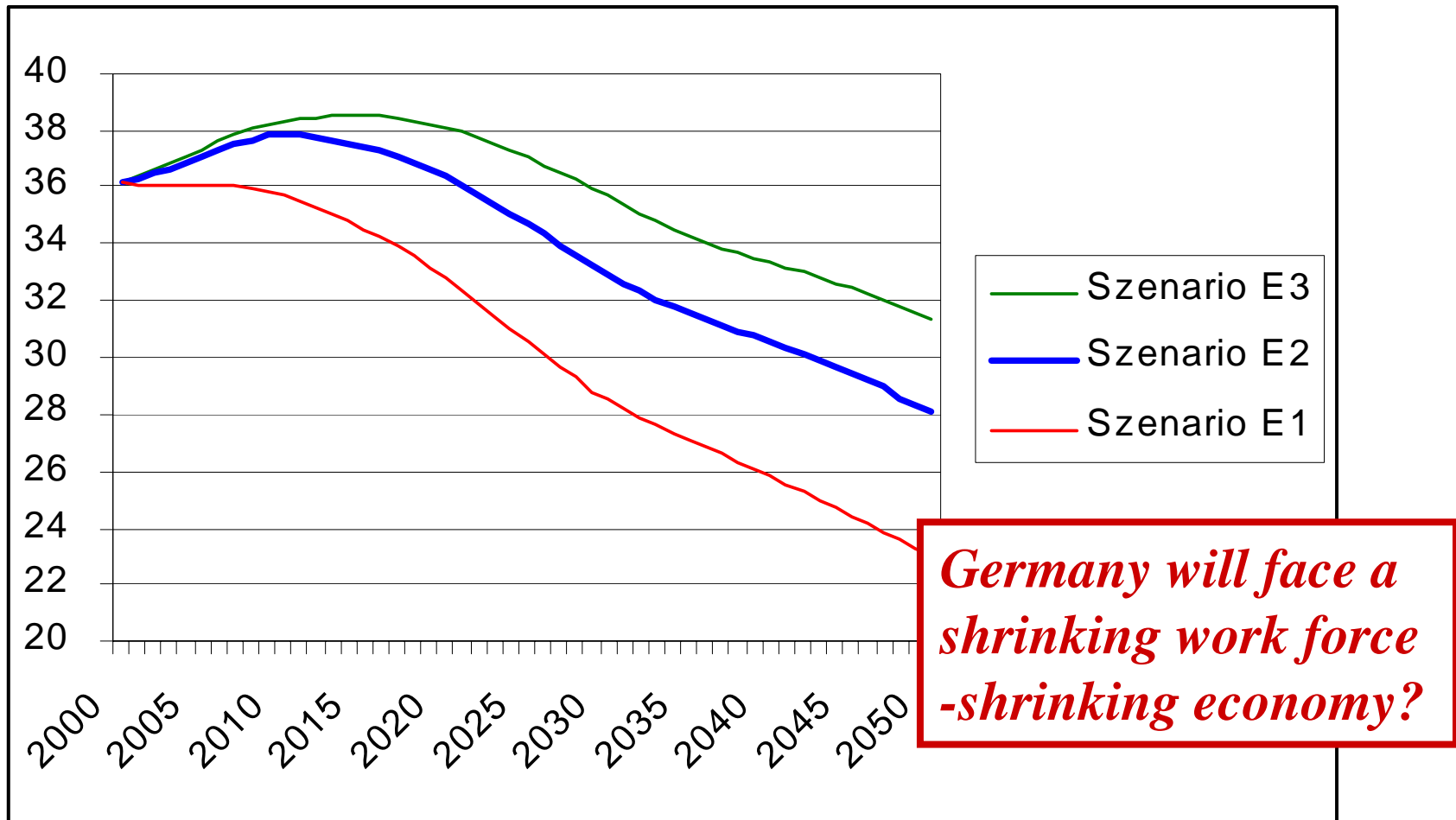
Economy: $Y = A * F(L, K)$

Individual: $Y/N = A * f(L/N, K/L)$

Globalization: GDP vs. GNP

Labor supply in Germany

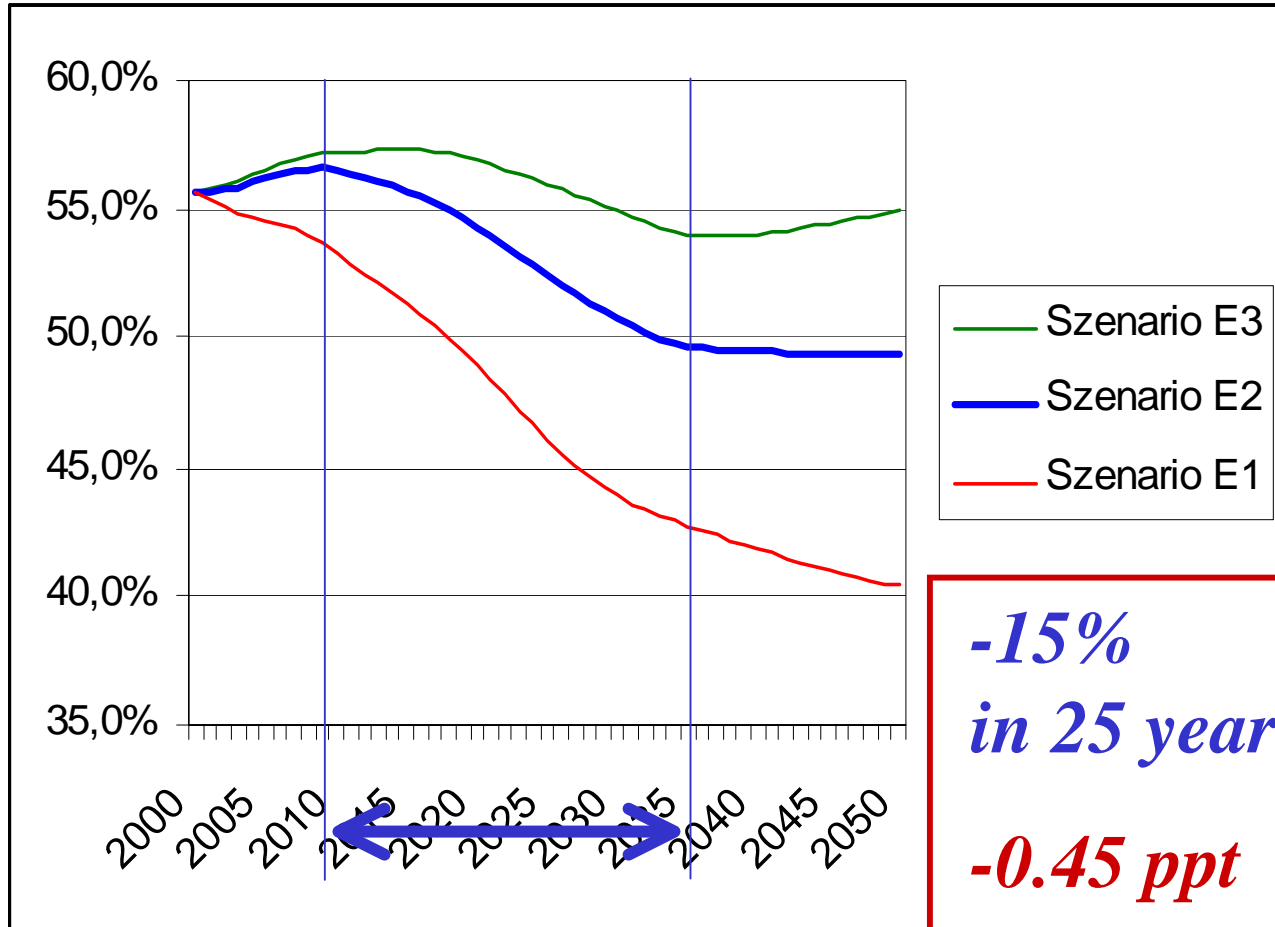
Abbildung 1: Erwerbstätige in Deutschland, 2000-2050 [in Millionen]



Quelle: Berechnungen des Autors auf Basis der Bevölkerungsprognose B2

⇒ Support ratio (Employment/Consumer)

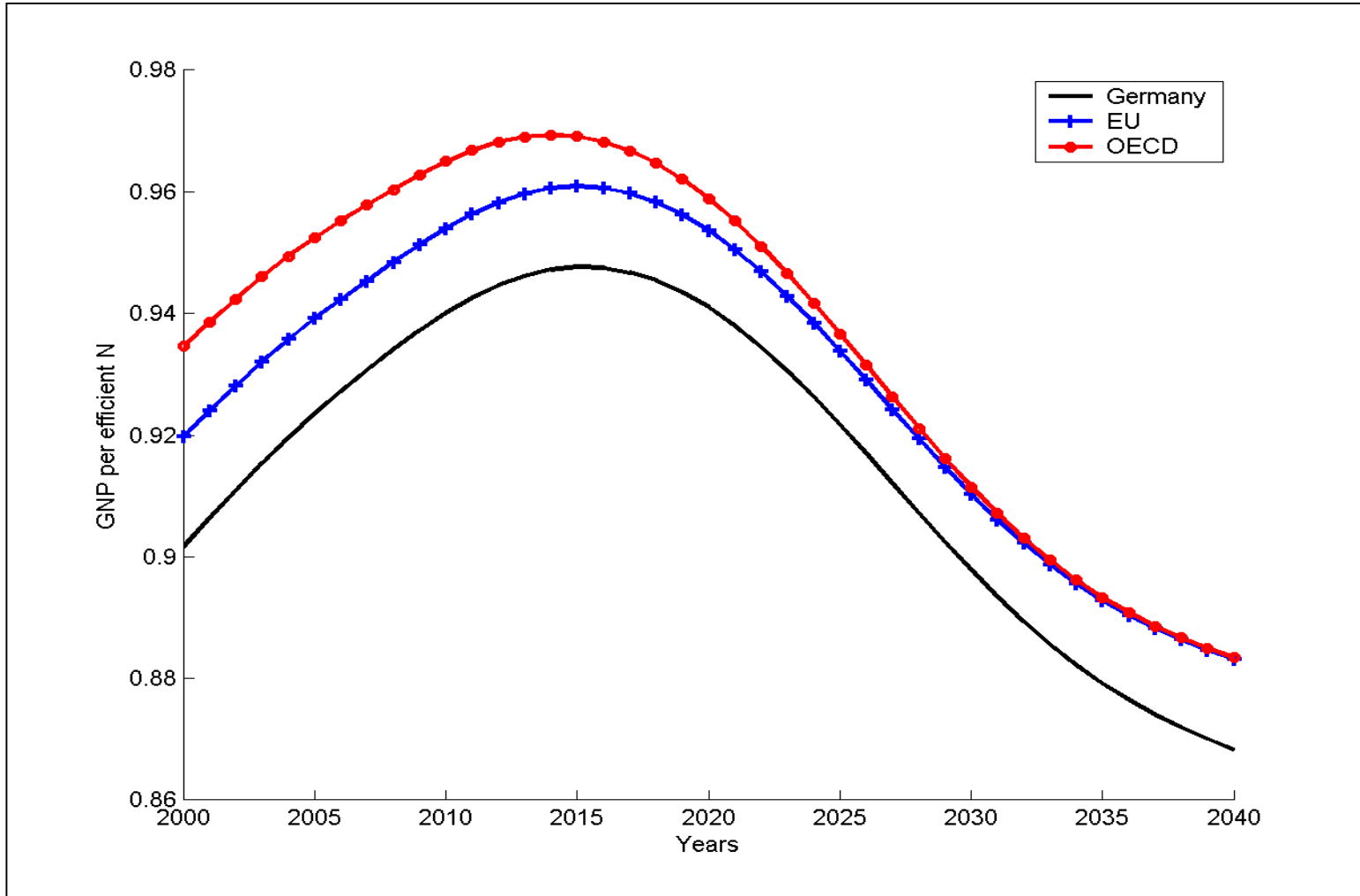
Abbildung 2: Stützquote (Erwerbstätige pro Erwachsene), 2000-2050 [in %]



-15%
in 25 years
-0.45 ppt
per annum

Quelle: Berechnungen des Autors auf Basis der Bevölkerungsprognose B2.

⇒ German GDP per capita (net of exogenous GDP growth)



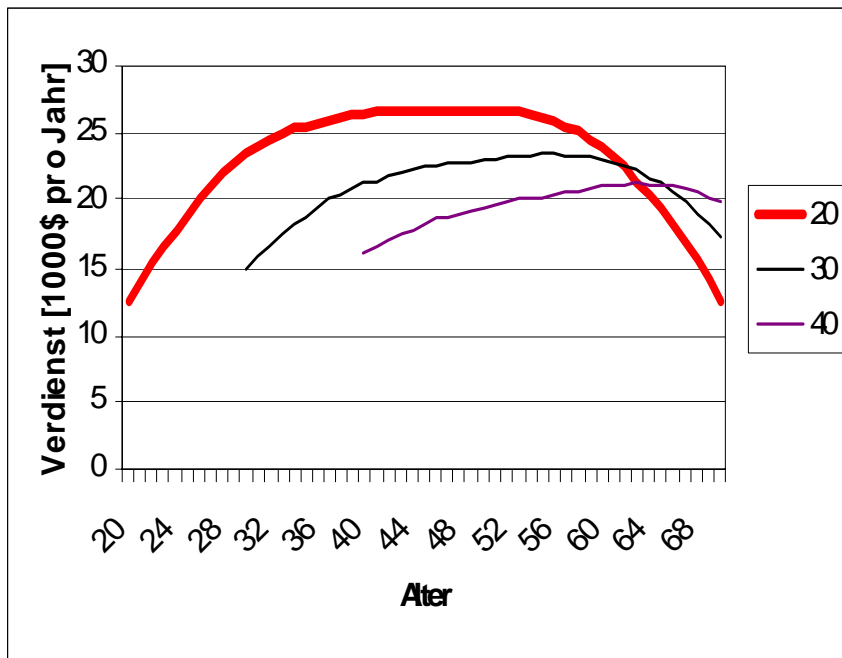
Research issues:

$$Y = A * F(L, K)$$

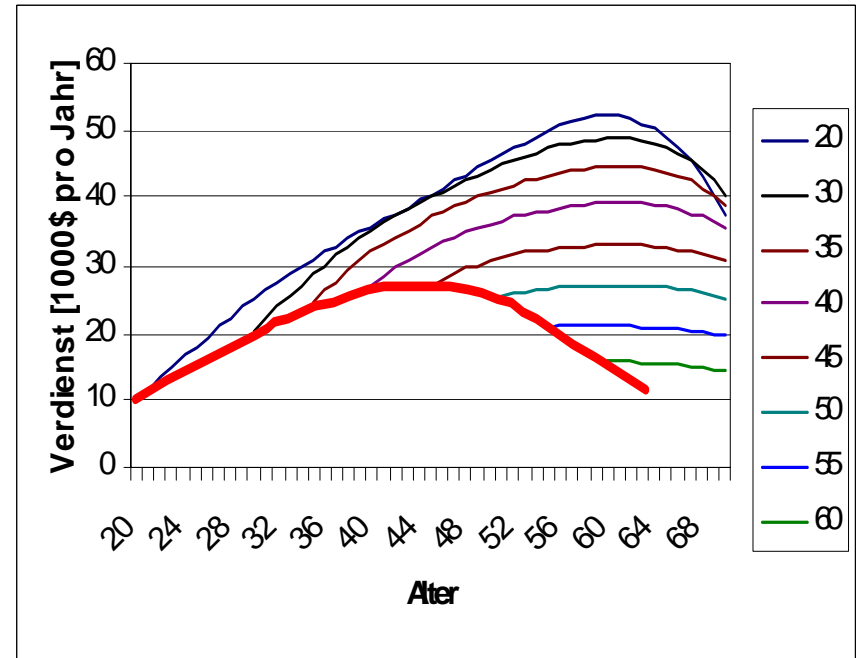
Response of L to aging (retirement age, entrance age, female LFP, unemployment)

Response of A to aging (age profile of productivity, health, capital intensity)

Sales force (on piece rate)



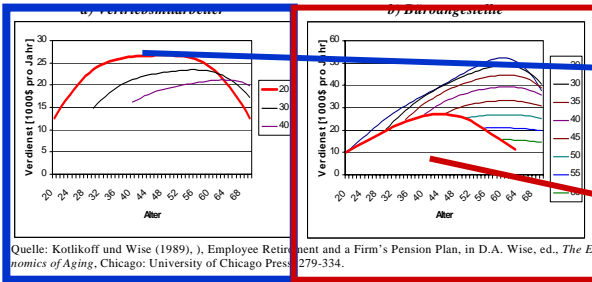
Clerical workers (on salary)



Quelle: Kotlikoff und Wise (1989), Employee Retirement and a Firm's Pension Plan, in D.A. Wise, ed., *The Economics of Aging*, Chicago: University of Chicago Press, 279-334.

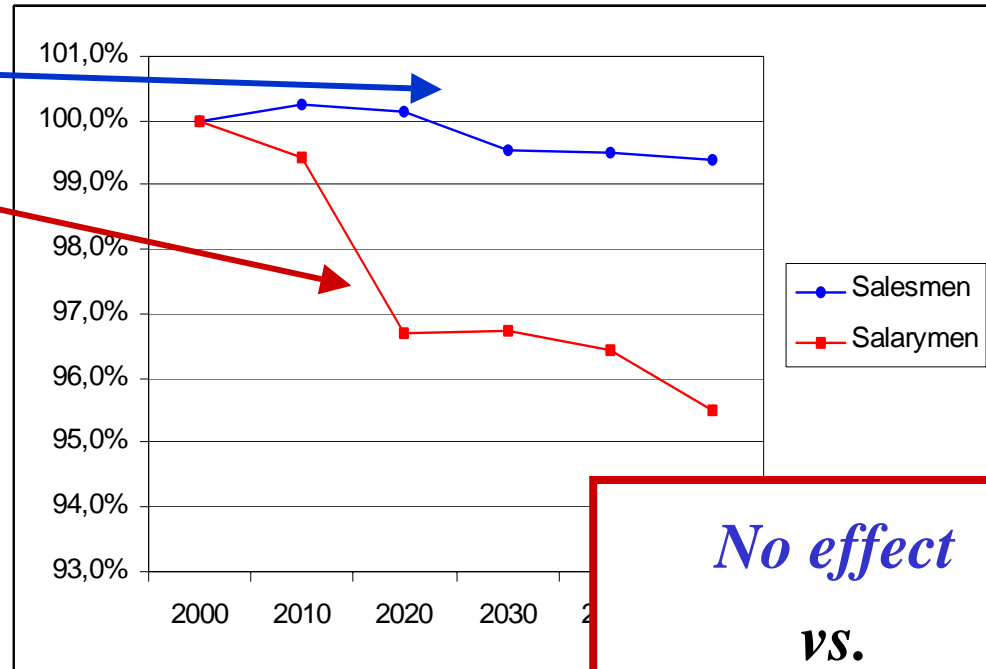
⇒ Effect on aggregate labor productivity

Abbildung 4: Alters- und senioritätsspezifische Verdienste



Quelle: Kotlikoff and Wise (1989), Employee Retirement and a Firm's Pension Plan, in D.A. Wise, ed., *The Economics of Aging*, Chicago: University of Chicago Press, 279-334.

Abbildung 9: Relative Arbeitsproduktivität von Vertriebspersonal und Büroangestellten



Quelle: Berechnungen des Autors

No effect
vs.
0.15 ppt p.a.
(10% of growth)

A European (?) issue:

Large structural changes in the product market require more sectoral mobility in the labor market

Abbildung 5: Altersspezifische Konsumausgaben [Gütergruppen in Prozent]

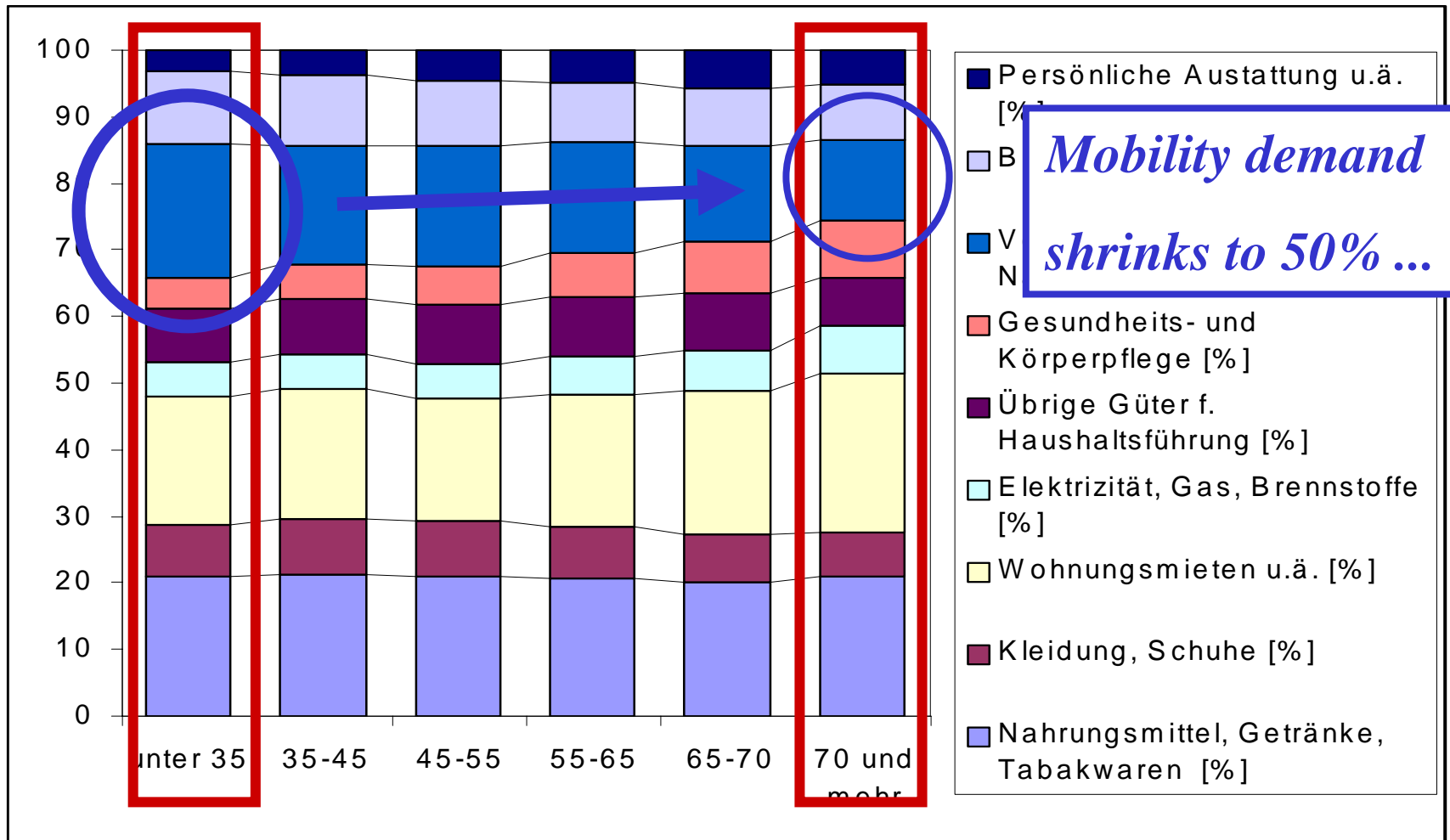


Abbildung 5: Altersspezifische Konsumausgaben [Gütergruppen in Prozent]

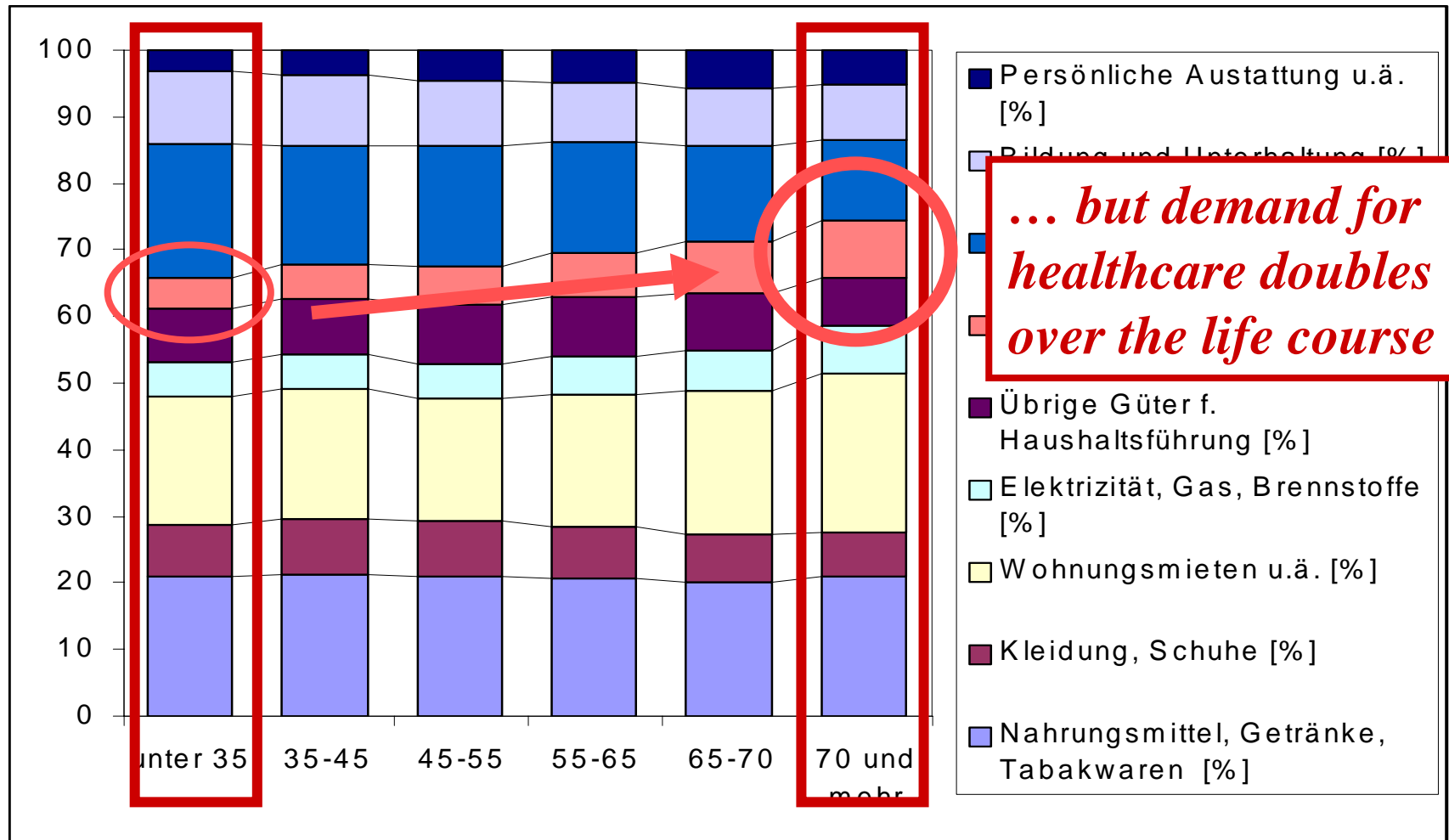
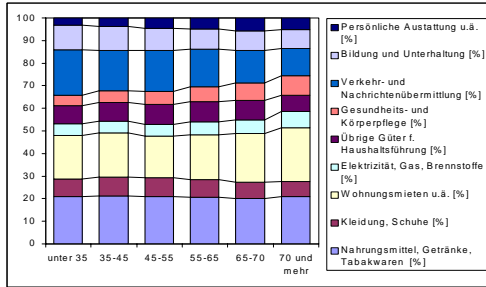
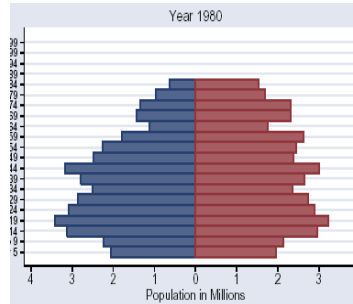


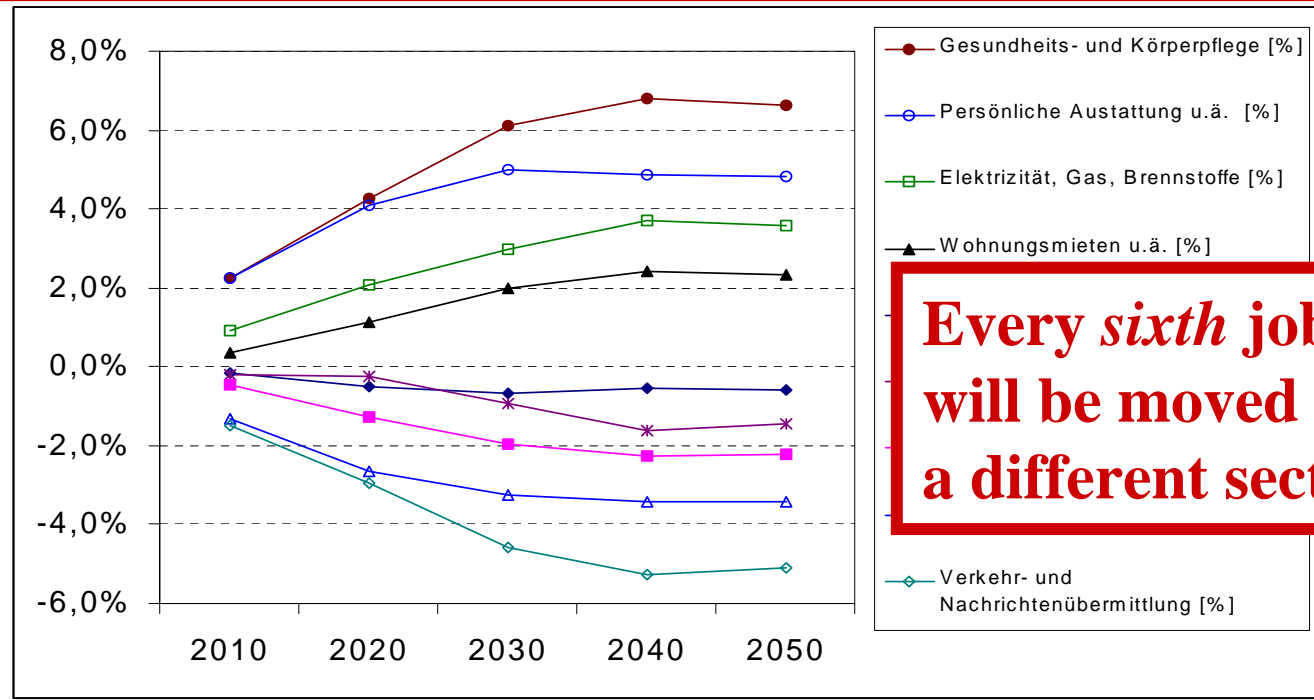
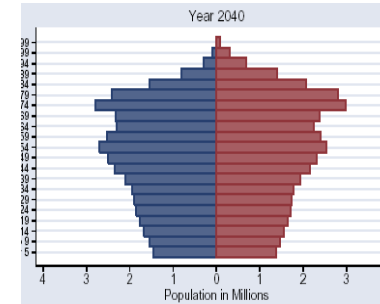
Abbildung 5: Altersspezifische Konsumausgaben [Gütergruppen in Prozent]



Quelle: Statistisches Bundesamt, Fachserie 15, Heft 5, EVS 1993.



bzw.



Every sixth job will be moved to a different sector

Quelle: Berechnungen des Autors auf Basis der Bevölkerungsprognose B2 (vgl. Abbildung 1), der Ausgabenanteile aus Abbildung 5, sowie des Statistischen Jahrbuchs „Umsätze pro Beschäftigte“ nach Sektoren.

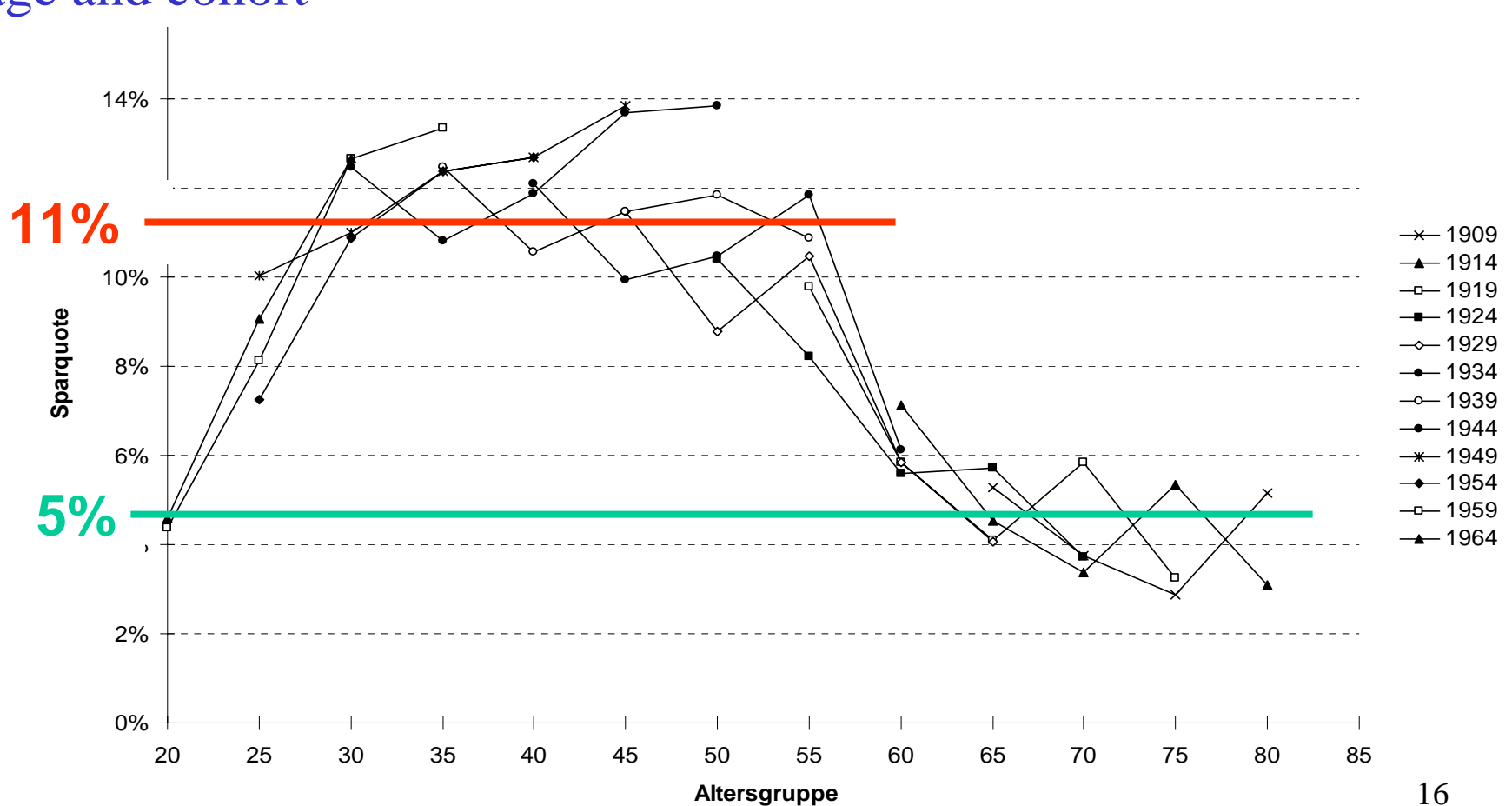
Strategic role of capital markets in the course of global aging:

- Substitution of scarce and costly labor
- Intertemporal resource shifting
- International diversification

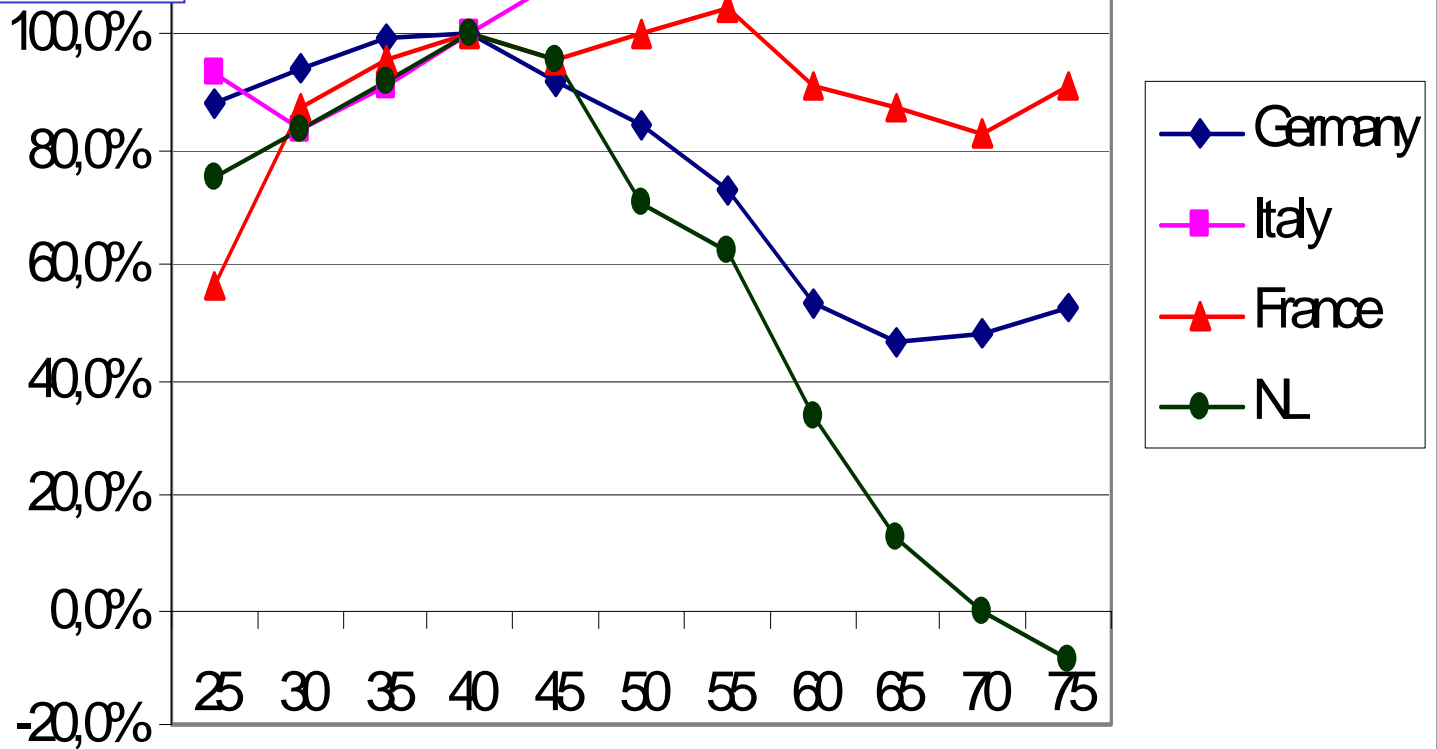
But:

Asset meltdown? Scarcity of capital supply?

Saving rate by age and cohort



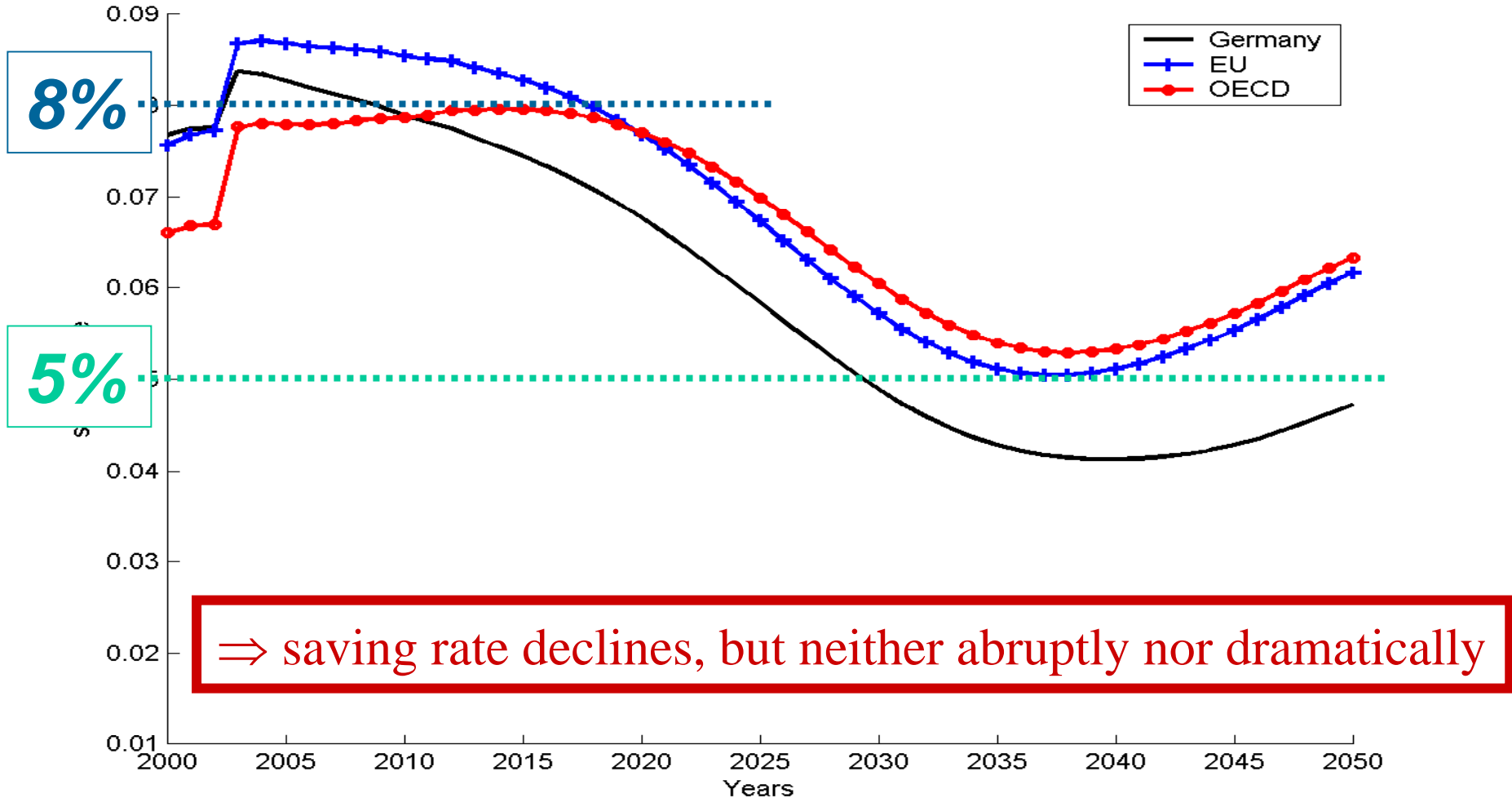
Saving rates by age and cohort (relative to age 40)



Research issues:

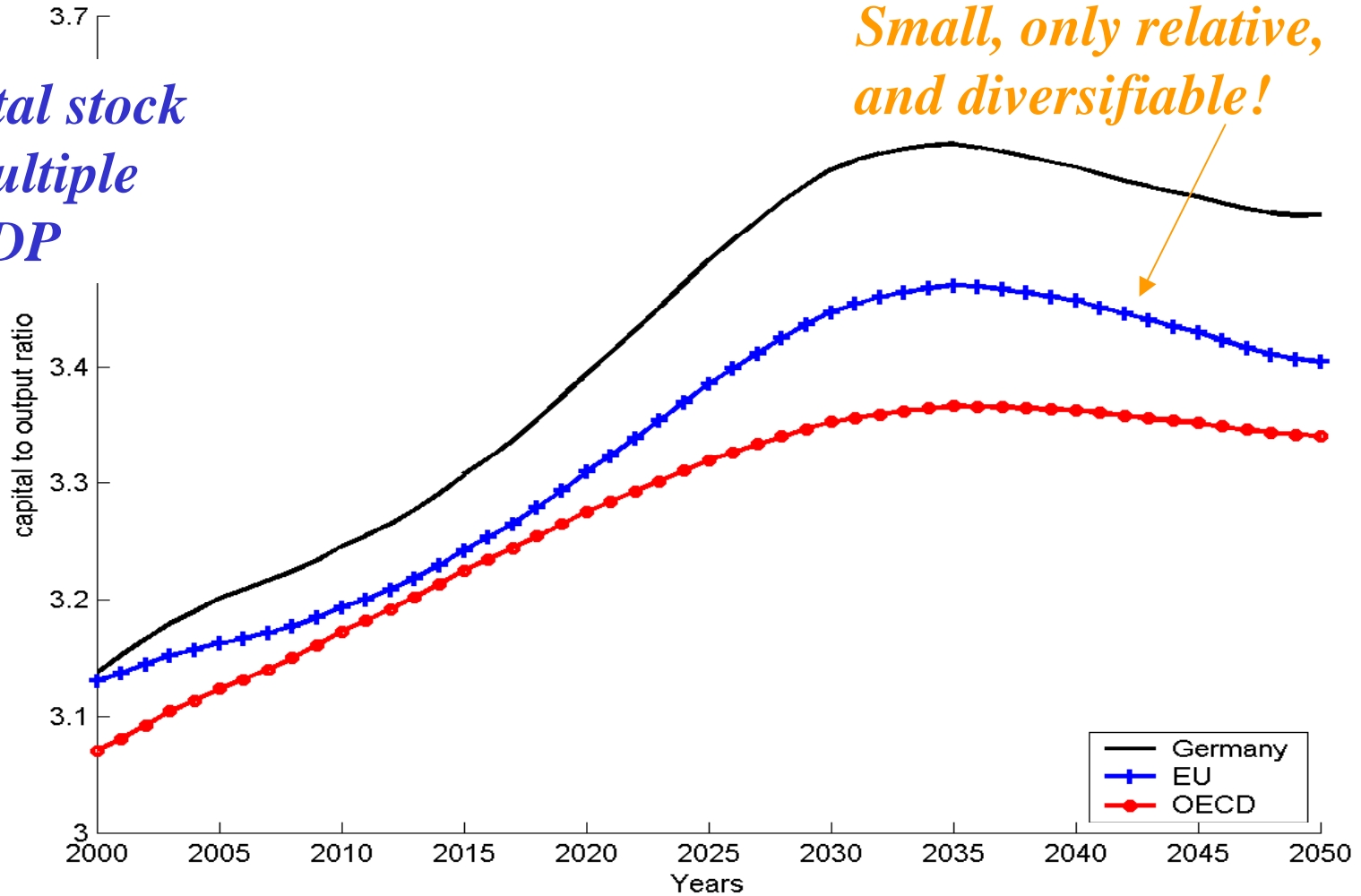
- How responsive are age-saving profiles to public policy (tax privileges, pensions)?
- Realistic general equilibrium models of capital accumulation
 - Quite sophisticated, but:
 - Risk (life span, earnings, returns)
 - Portfolio effects
 - Capital market frictions (home bias, FDI)
 - Behavioral reaction to pension reform

Saving rate



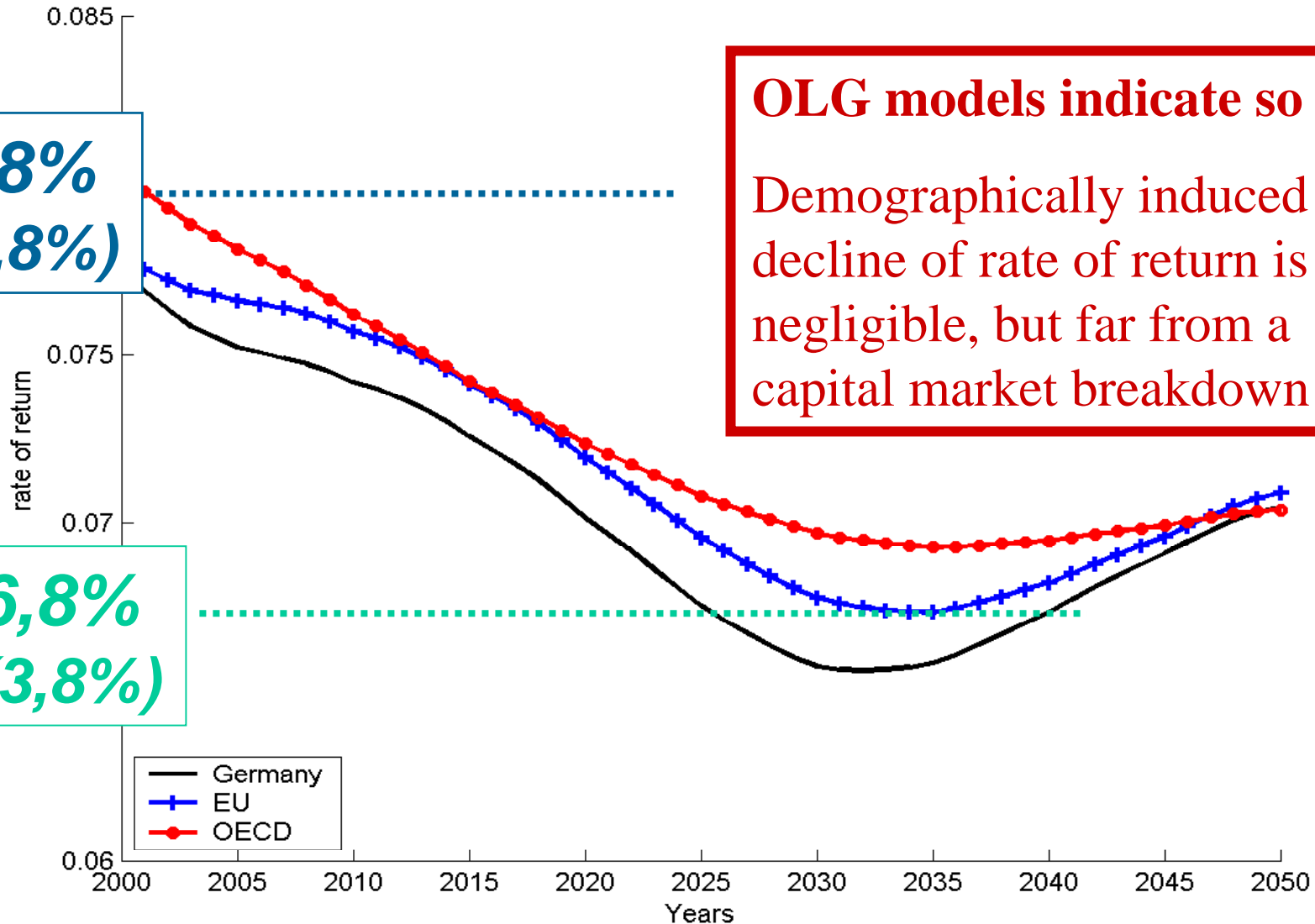
Capital stock: Asset Meltdown?

*Capital stock
as multiple
of GDP*



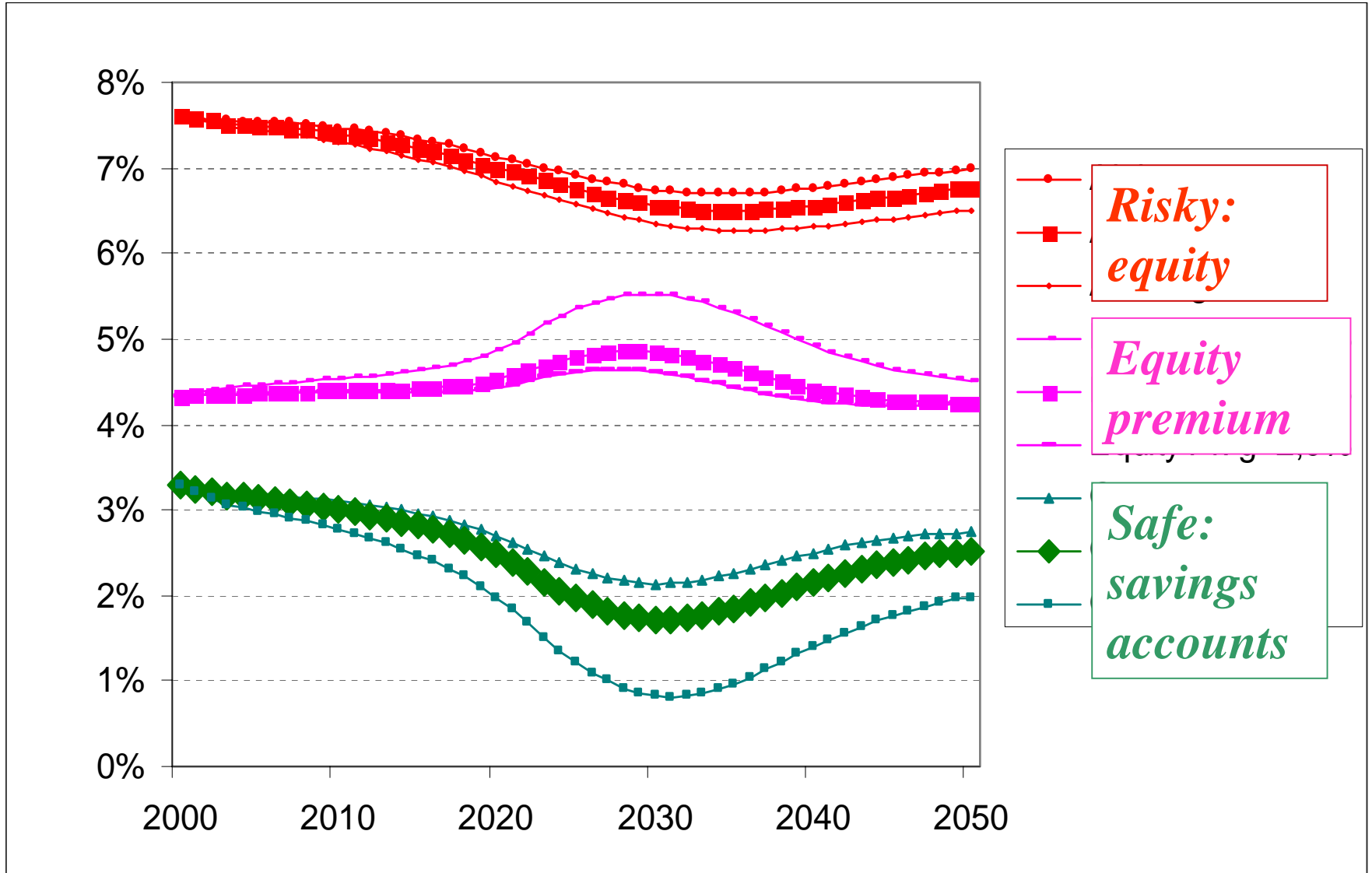
7,8%
(4,8%)

6,8%
(3,8%)

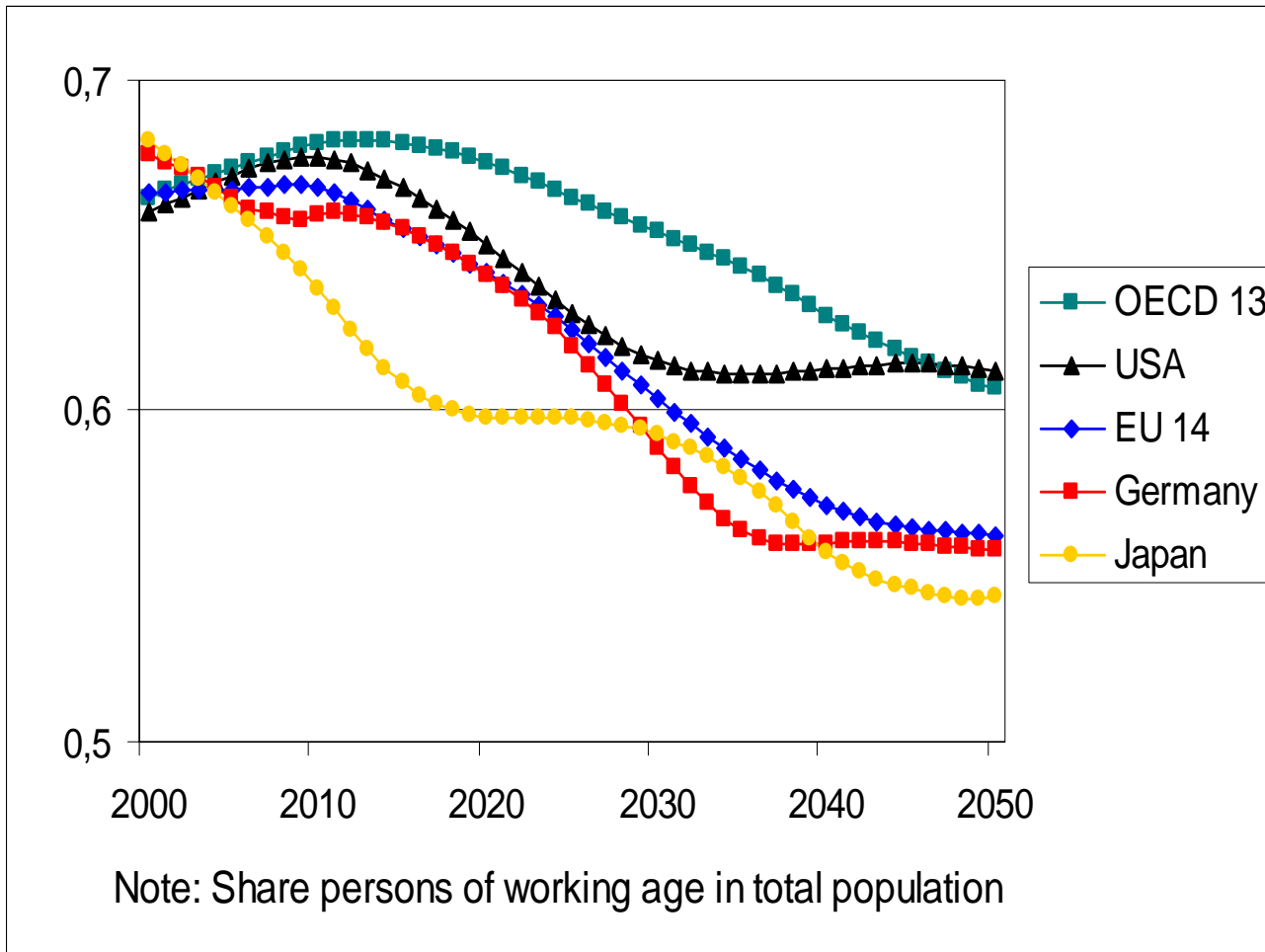


OLG models indicate so far:
Demographically induced decline of rate of return is non-negligible, but far from a capital market breakdown

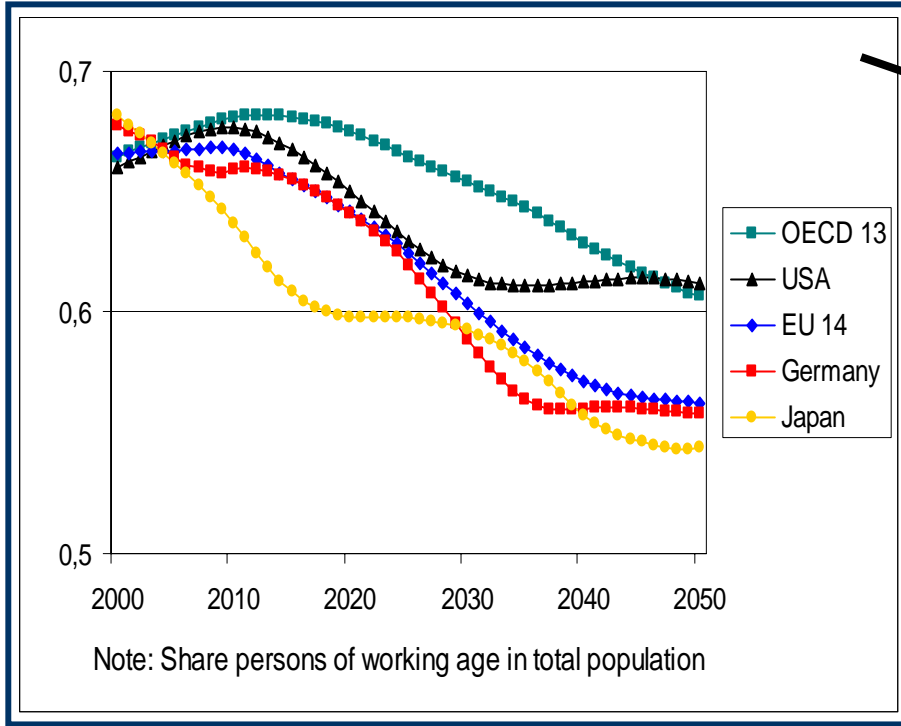
Safe versus risky assets?



Support Ratio



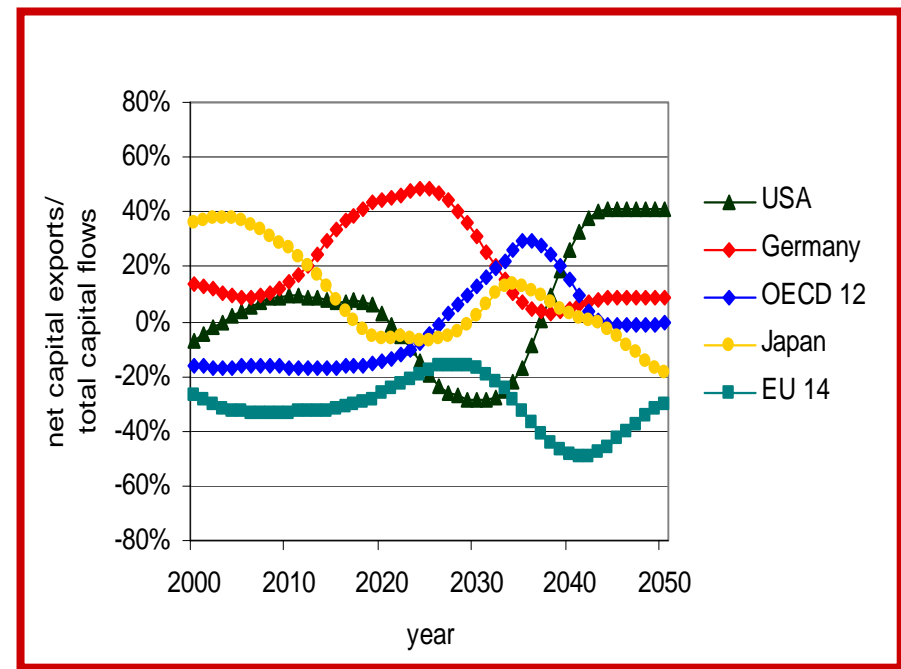
Induced international capital flows



Support ratio

Multi-country OLG model

⇒ Net capital flows



Final issue: Corporate governance

- Capital productivity important part of TFP
- Strategic role of capital markets makes corporate governance more important
- Feedback effects of pension reform

Where to set priorities?

- Aging and productivity (need firm data!)
- Behavioral responses to pension reform: retirement age, saving (need international data! Time-honored questions with limited answers)
- Macroeconomic effects of risk management
- Global capital flows (home bias, frictions)