

The demographic change in Germany - effects and alternatives for action

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Deutsche Bank Research





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Status quo: What will happen if we do not act?

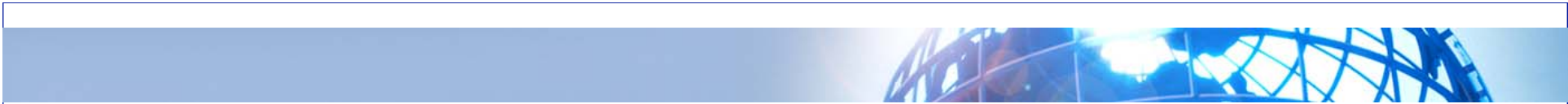
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What can society do?

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Conclusion





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The demographic future of Germany ...



Source: Frankfurter Rundschau

... may look different!

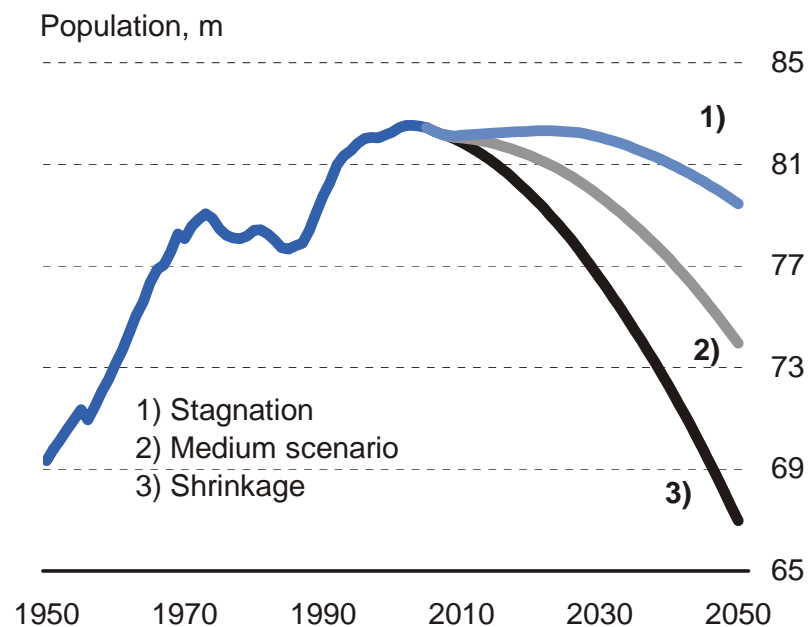


Source: Frankfurter Rundschau, DB Research

Possible scenarios for population development

Population projections

Ranging from stagnation to heavy shrinkage



Source: Federal Statistical Office

- Population development depends on the birth rate, lifespan and net immigration
- Depending on the assumptions, a span from near stagnation to heavy shrinkage (2005-2050: nearly -20%) is possible

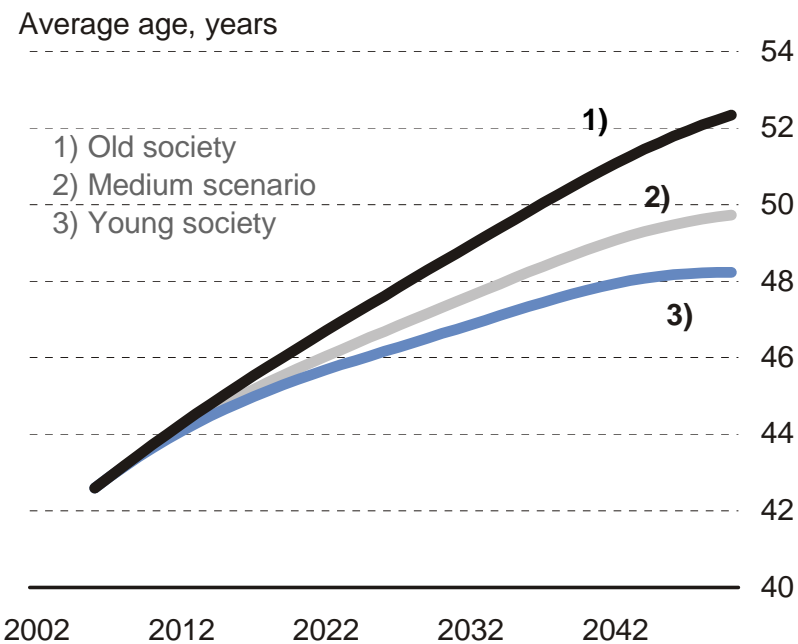
Assumptions up to 2050

	Stagnation	Medium Variant	Shrinkage
Birth rate			
Children per woman	1.6	1.4	1.2
Life span			
Increase (years)	9	7	7
Net immigration			
1 000 p.a.	200	200	100
Population 2050			
m (2005: 82.5)	79.5	73.9	67.0
2005-2050 in %	-3.5	-10.5	-19

The ageing process cannot be stopped

Ageing

in all scenarios



Source: Federal Statistical Office

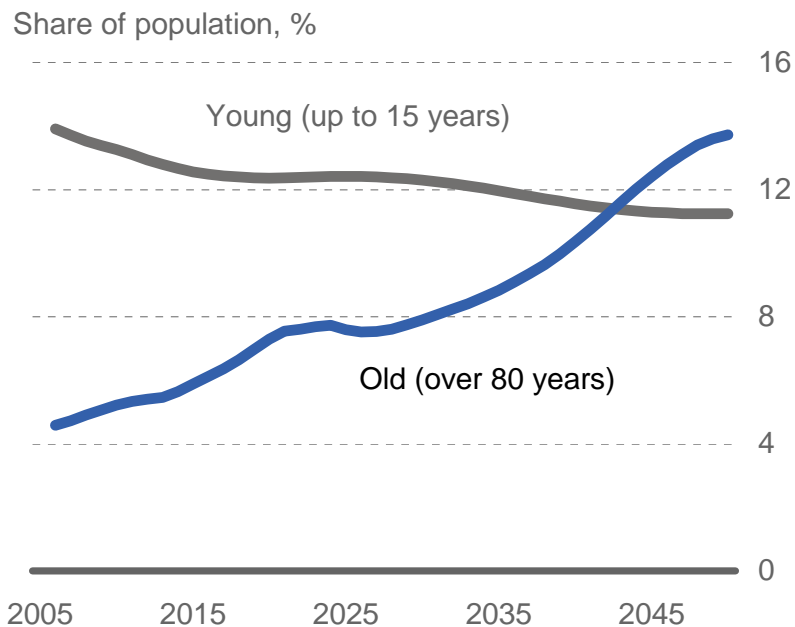
- The average age of the population increases strongly in all three scenarios.
- In 2050 every second person living in Germany will probably be older than 50, compared to a little over 42 today.

Assumptions up to 2050

	Old	Middle-aged persons	Young
Birth rate			
Children per woman	1.2	1.4	1.6
Life span			
Increase (years)	9	7	7
Net immigration			
1 000 p.a.	100	200	200
Average age			
Years (2005: 42.5)	52.3	49.7	48.2

Dramatic increase in the percentage of older persons

Population cohorts

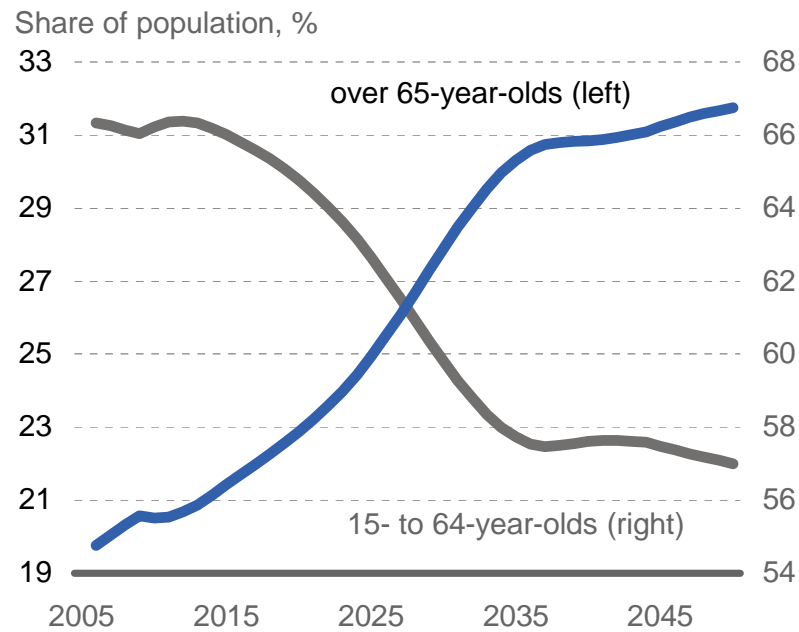


- The percentage of over 80-year-olds will triple to nearly 14% by 2050.
- In 2050 there will be more people over 80 than persons up to 15 years of age.

Old-age dependency ratio will double

Population cohorts

Dramatic shifts regarding old-age pensioners and those fit for employment

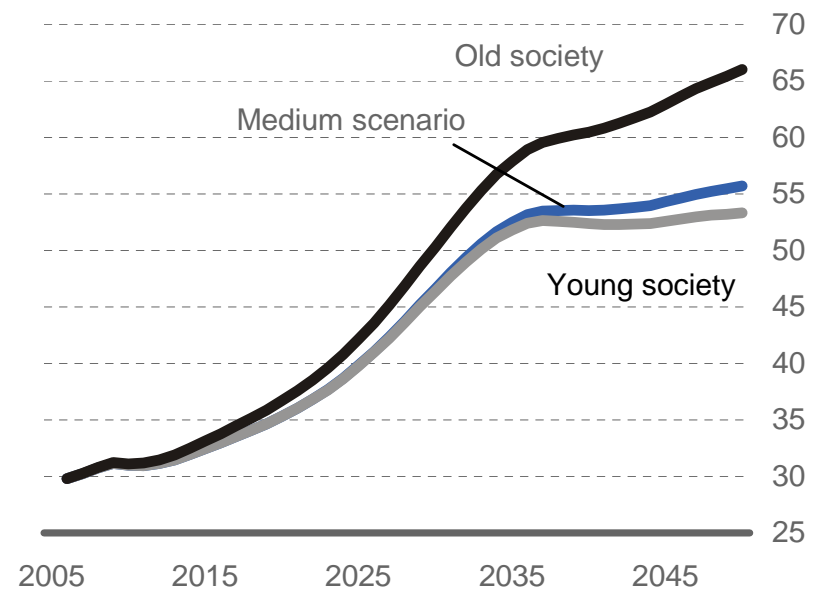


Source: Federal Statistical Office, Medium variant

Old-age dependency ratio

will rise in all population variants

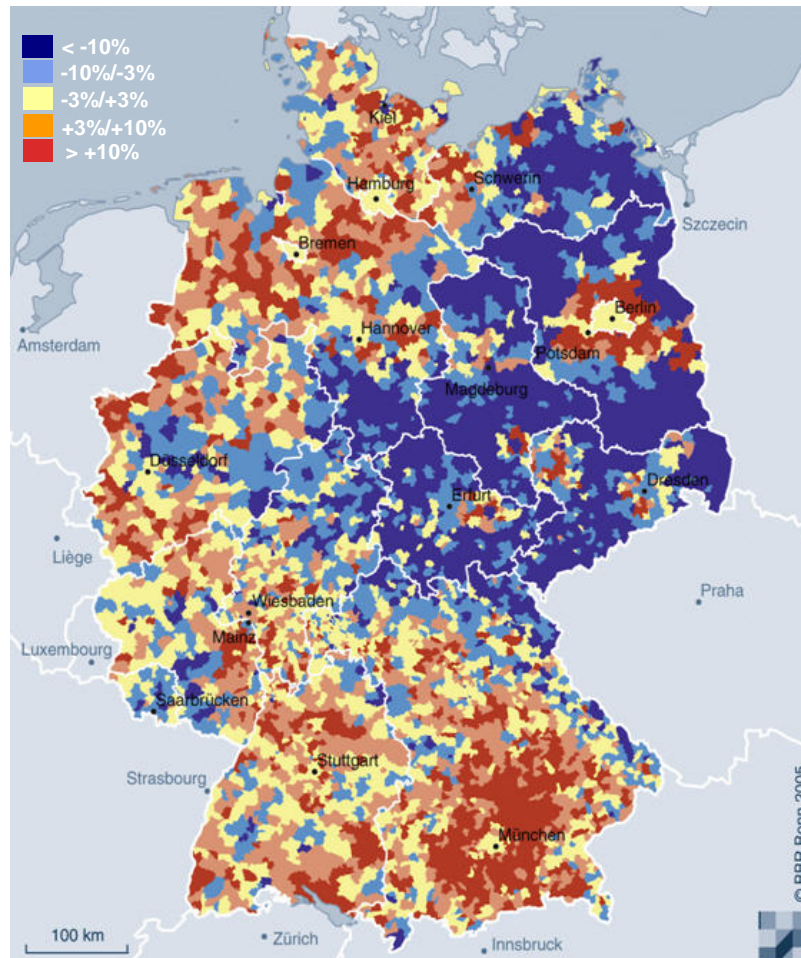
Ratio of the Population aged 65 years or over to the population aged 15-64



Source: Federal Statistical Office

Demographic development depends on region

Population, 2002-2020 in %



- Heavy increase in several urban agglomerations (Berlin, Munich, Rhine-Main, Hamburg). But even there, the natural population balance (number of births minus number of deaths) is often negative.
- Increase is almost always due to migration.
- On the other hand, large parts of Germany, especially east Germany, will be “depopulated”.
- Already by 2020, the population will decrease by more than 10% in some regions.
- Due to the exit of young people, ageing will be more pronounced in east Germany.



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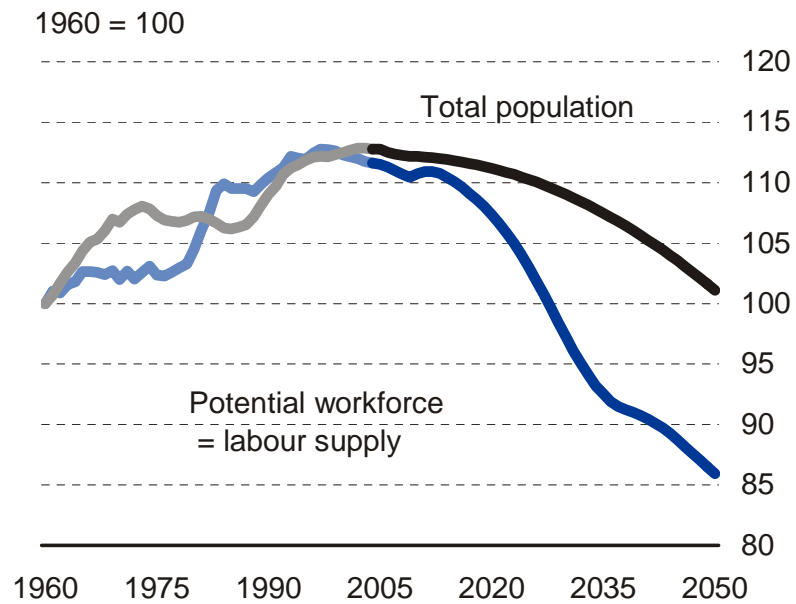
Conclusion



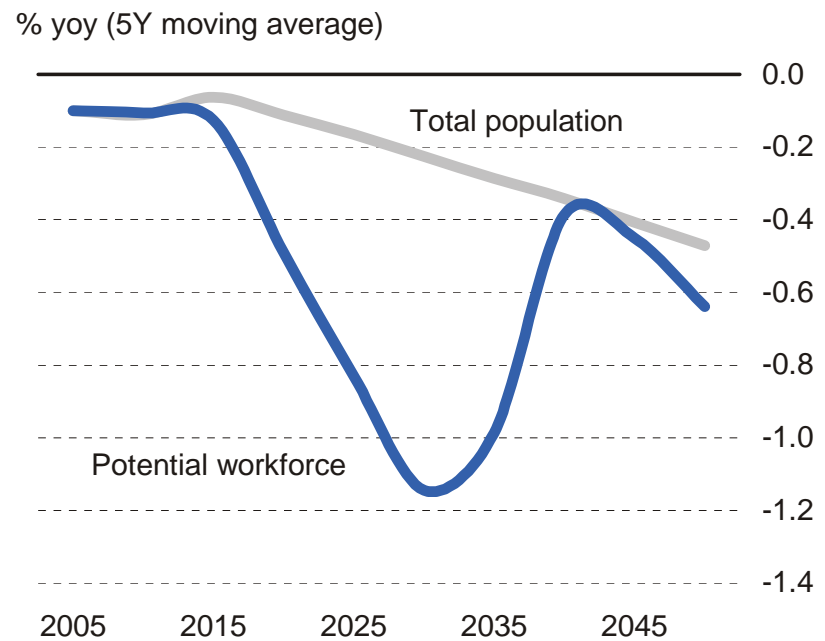
Status quo: Labour is getting scarce (I)

The potential workforce

will decrease by 2050 by 20%, which is twice the decline of the total population



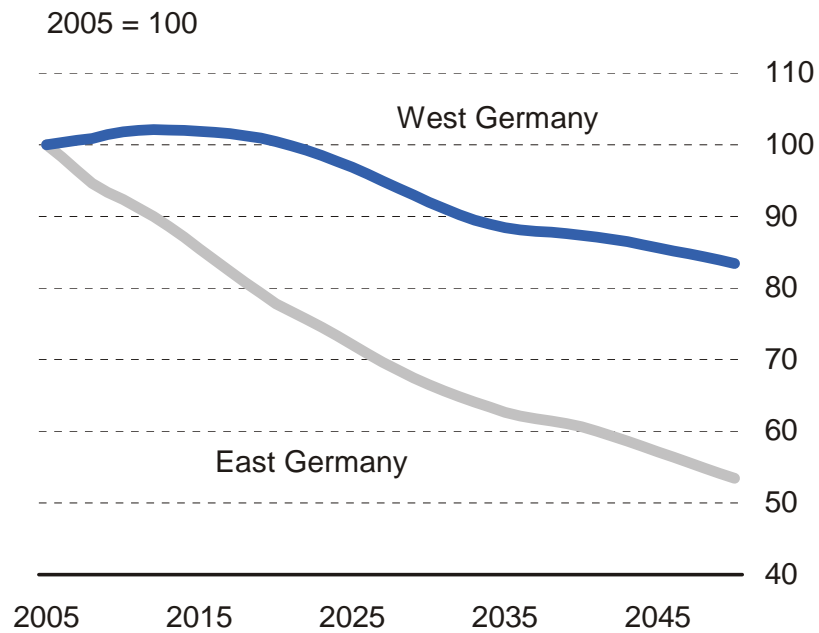
Source: Federal Statistical Office, Medium variant



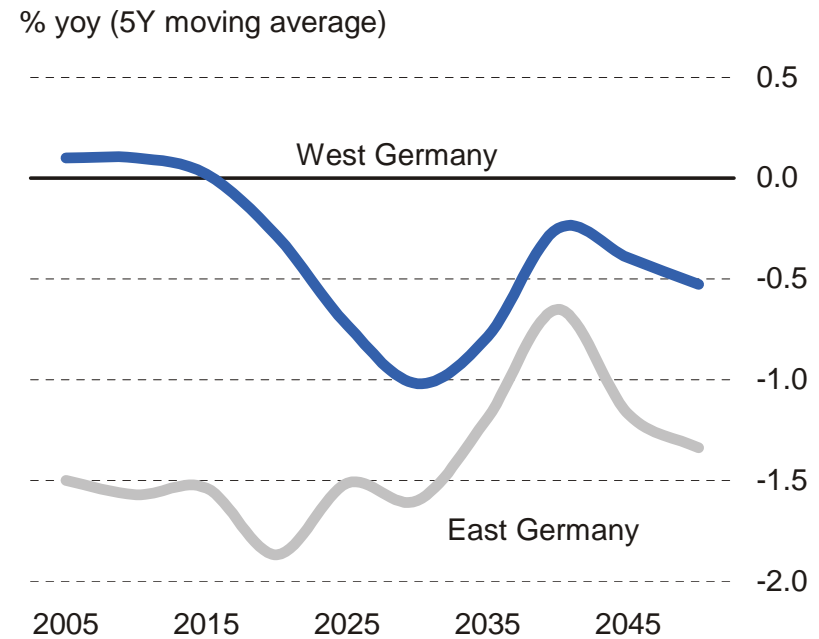
Source: Federal Statistical Office, Medium variant

Status quo: Labour is getting scarce (II) – especially in east Germany

The potential workforce
in east Germany will halve by 2050



Source: Federal Statistical Office, Medium variant



Source: Federal Statistical Office, Medium variant

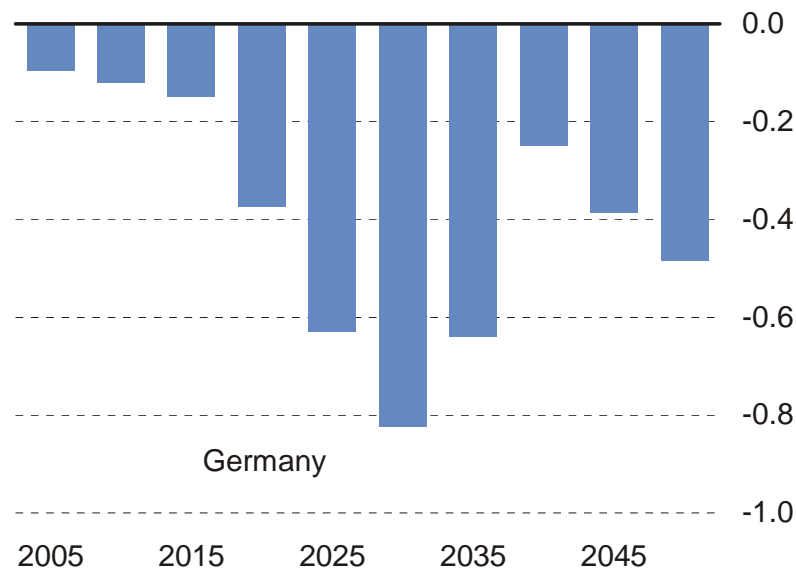
Status quo: Growth dynamic decreasing notably

$Y = \text{technical progress} * f(\text{labour, capital})$

Growth potential

will go down to half in "status quo" scenario

Demographic effect on potential GDP
%-points (5Y moving average)

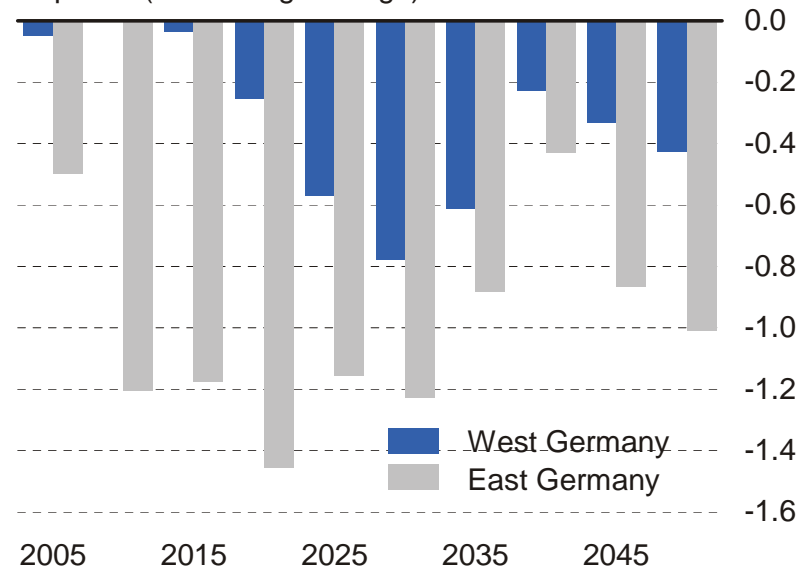


Source: DB Research, Federal Statistical Office: Medium variant

East Germany

is unlikely to catch up with west Germany

Demographic effect on potential GDP
%-points (5Y moving average)



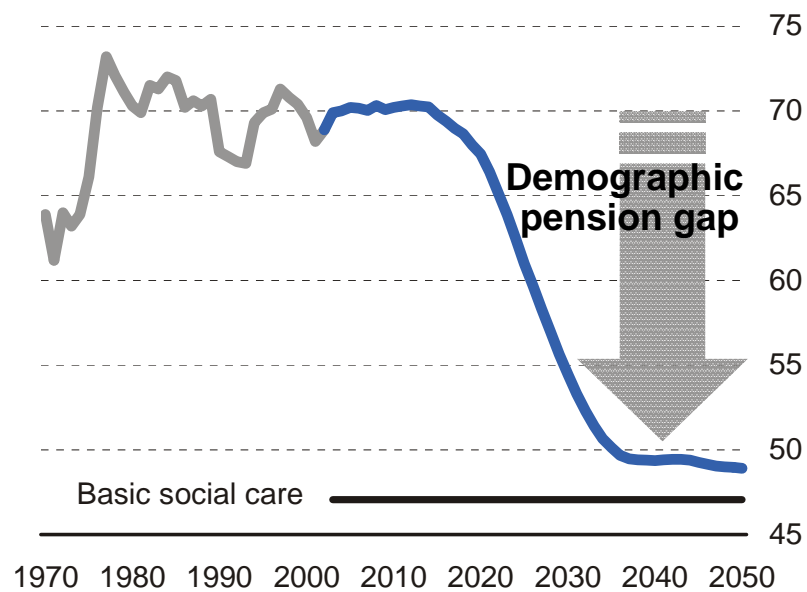
Source: DB Research, Federal Statistical Office: Medium variant

Status quo: Pay-as-you-go social systems in a squeeze

State pensions

will only cover basic social care

Level of net pensions, %



Source: DB Research, Medium variant

- Due to budget restrictions of the state pension insurance

$$\text{level of pensions} = \frac{\text{Number of contributors}}{\text{number of pensioners}} * \text{contribution rate}$$

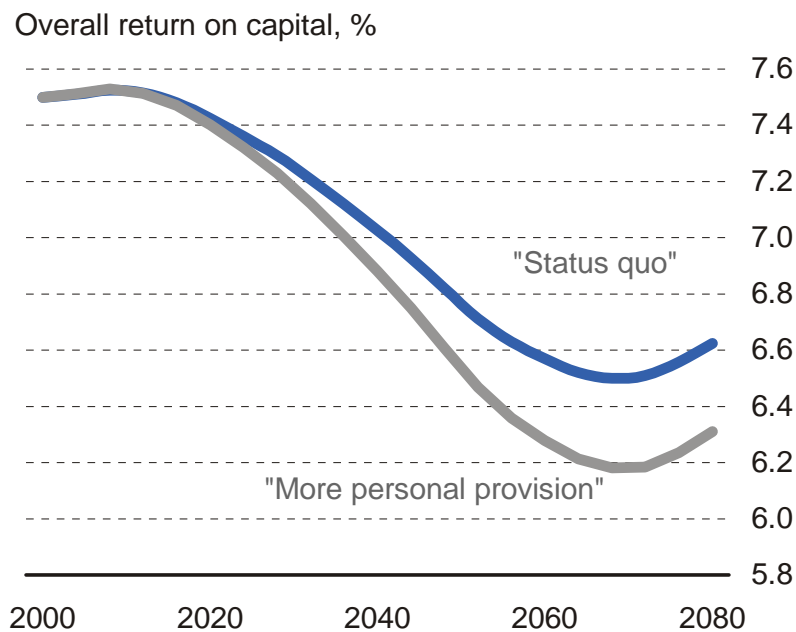
pensioner ratio

- State pensions will decrease to cover basic social care.
- Private capital-funded old-age provision will gain in importance.

Status quo: Macroeconomic rate of return goes down

Rate of return

Decrease for demographic reasons



Source: DB Research

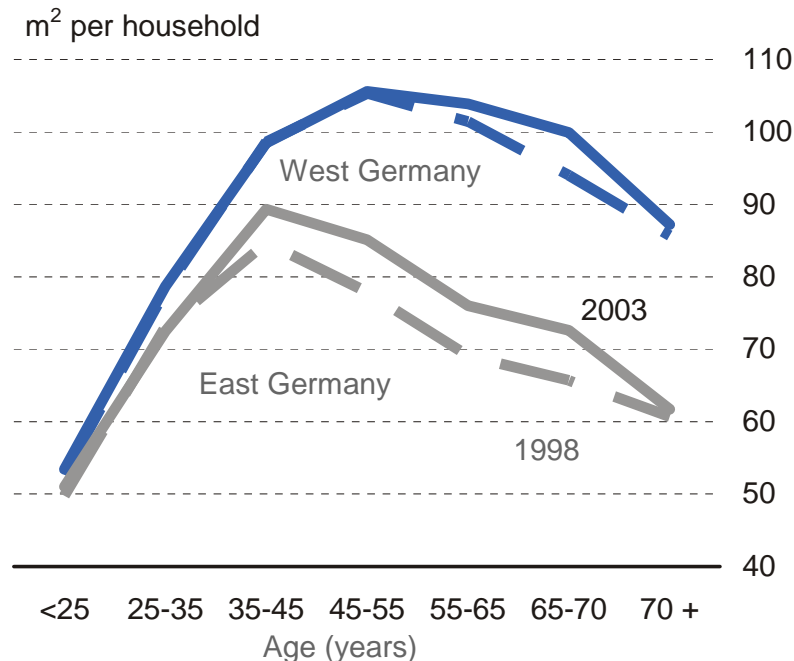
- Simulations with an OLG model (Overlapping Generations Model) suggest a decrease in the rate of return by about 1 percentage point.
- Internationalisation may soften the decline but cannot totally prevent it.
- Funded, private pension provisions will face problems as well ...
- ... which is also basically true for Bausparen! (savings plans with German building & loan associations)
- It follows either to start saving earlier or to increase the annual saving rates or ...
- ... to work longer!

Status quo: Housing demand

- at first glance everything seems quite clear

The living space of households

goes down with old age



Source: Federal Statistical Office (EVS 1998, 2003)

- Old people have less living space than people in the prime of life.
- The simple conclusion:
The demographic trends will lead to a dramatic slump in demand as there are fewer people with a larger ratio of older persons.



Status quo: Housing demand

- three effects must be differentiated

■ The cohort effect

Every age cohort has its own history (socialisation) and therefore different starting conditions, experience, etc. The 80-year-olds of today are affected by the war and post-war period. This may have an influence on their behaviour as consumers or with regard to housing. However, things may look very different for the Woodstock generation, who will be the 80-year-olds of 2030.

■ The life cycle effect

During their life cycles, people adapt their demand to their income and family situation. 20-year-old students have a comparatively small income and rarely have children. The 30-year-old assistant lecturer will probably have a higher income and share a nice apartment with his girl friend. In the course of his scientific career, the 40-year-old professor might choose to live in his own house with his wife and two children.

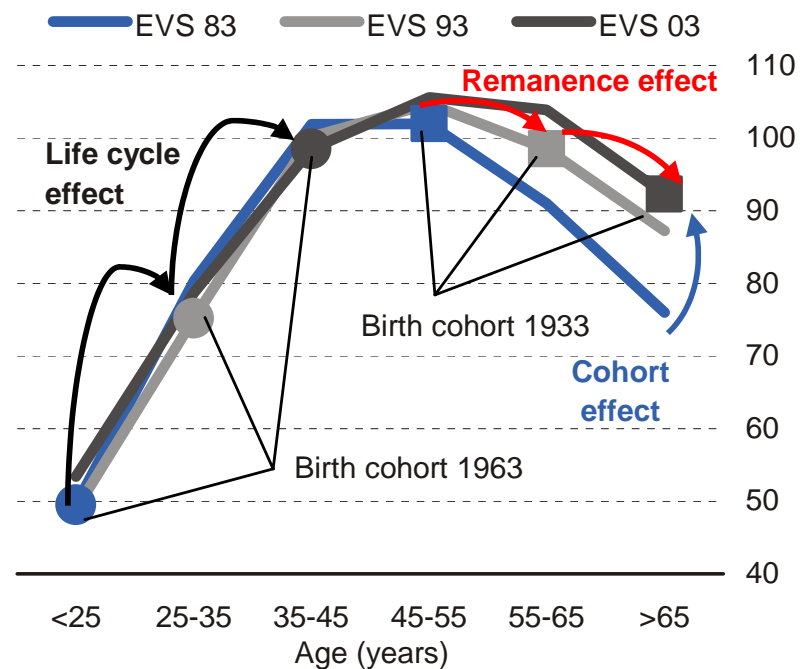
■ The “remanence” effect

Old age brings about a strong tendency of remanence. When the children leave the professor’s household, the parents do not consequently move to a smaller apartment. This has something to do with habit (but this is not the only point, as for instance relocation is not always worthwhile when you have a long-standing rental agreement, relocation costs also increase with age).

Status quo: Housing demand

- the effects of age, cohorts and remanence

The living space of households goes down with age



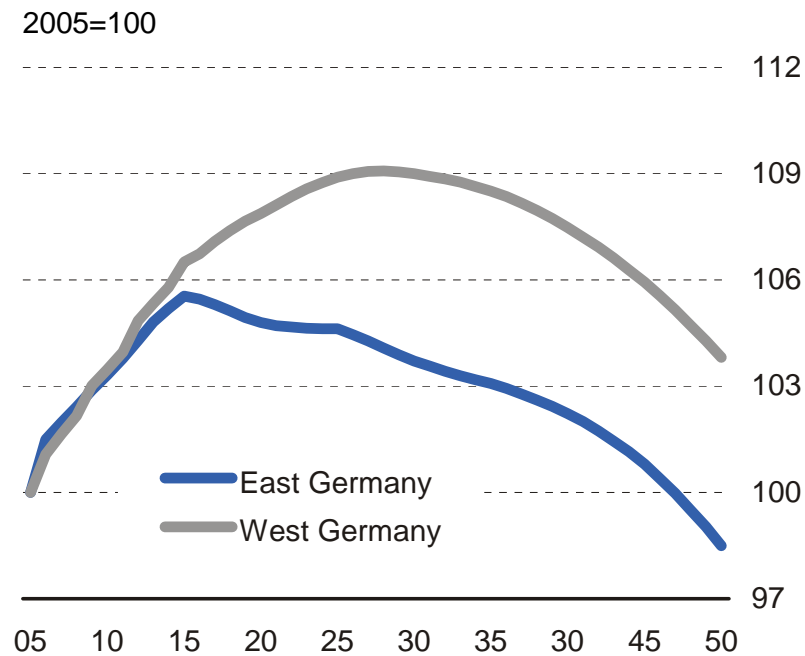
Source: Federal Statistical Office

- The persons born in 1963 increased their living space considerably within the 20 years between EVS 83 und EVS 03 (age or life cycle effect).
- In the same period, however, the persons born in 1933 reduced their living space per household only slightly (remanence effect).
- Senior citizens had considerably more living space in EVS 03 than in EVS 83 (cohort effect).

EVS = income and consumption sample

Status quo: Housing demand is different between east and west Germany

Living space

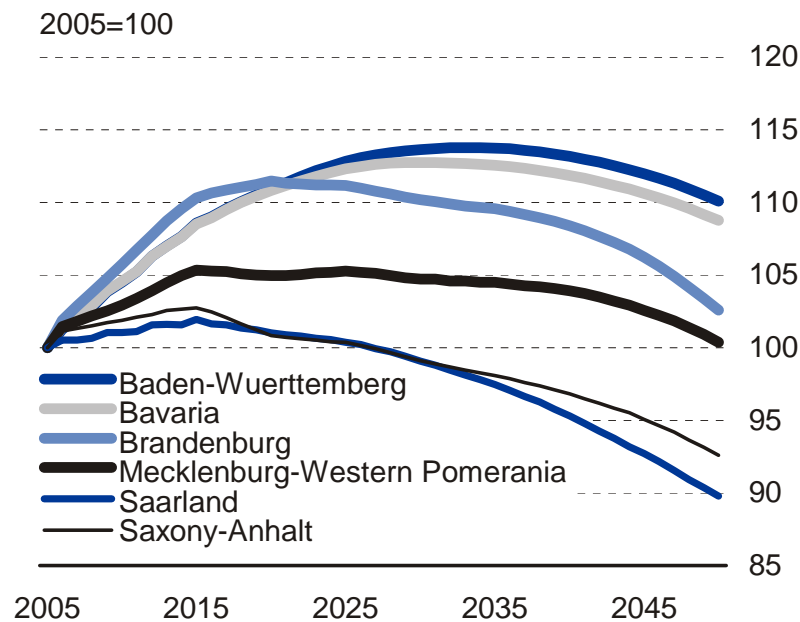


Source: DB Research

- The demand for living space will experience a marked increase in west Germany until about 2020.
- The decrease will start only after 2030.
- Marked regional differences – only small growth potential in depletion areas.
- In east Germany, however, housing demand will start to decrease from about 2015 on.

Status quo: Housing demand in various Federal States

Living space



Source: DB Research

- The state of Brandenburg benefits from its proximity to the capital – there are, however, tremendous disparities within the state.
- Mecklenburg-Western Pomerania, with its coastline and lake districts, provides attractive old-age residence areas which have a positive effect in spite of the weak industry of the region.
- Bavaria und Baden- Wuerttemberg are by far still the most attractive with regard to housing demand, ...
- ... but there is a considerable decline even among the west Germany Federal States, e.g. in the Saarland.



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The demographic change in Germany calls for action - what can society do?

- More children
 - More people in jobs
 - Longer working life
 - More globalisation
 - More immigration
 - More education
-
- But: Only a combination of these options will lead to success.
 - And: All those involved (government, people and companies) must make an active contribution
- to make sure that the “Status quo” scenario will not become reality.



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Conclusion

- The demographic challenge is a fact.
- The power of its impact depends on our decisions.
- We are on the right path
(e. g. regarding employment of older people, raising the entry age for old-age pension, reducing the time required for education and job training, providing more day-care facilities for children, pursuing an immigration policy which is in line with the job market and also with regard to the business sector).
- However, a lot of things remain to be done ...
- ... and we have to be determined to make changes.
- Therefore, our slogan should be

"Let's get going!"

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Talking point

Despite subprime crisis: EU mortgage market integration must continue!



The US subprime crisis is still challenging the international financial sector. Market players who have invested in US securitised mortgage loans or could be affected otherwise are under particular scrutiny world-wide. The large central banks have pumped massive amounts of liquidity into the markets. Market participants, politicians and the general public everywhere raise the question how the capital markets got into such serious trouble. This is the financial markets-related part of the discussion on the causes and impact of the turmoil... [\[more\]](#)

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In focus

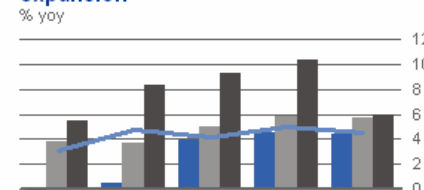
Germany cresting the wave - A reform agenda for the Grand Coalition



With Germany's Grand Coalition two years into its first term, it is time for a midway review of what the government has achieved so far and a look at what the second half of the legislative period might bring. The Grand Coalition still lacks assertiveness in its economic and social policy. Reforms of corporate and investment income tax have been addressed only half-heartedly; the tax landscape is a work in progress. Structural energy and environmental policy reforms will be launched. The higher cost of environmental awareness should be another reason to lighten the tax and contributions load. [\[more\]](#)

Chart in focus

South Korea: Broad-based expansion



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