

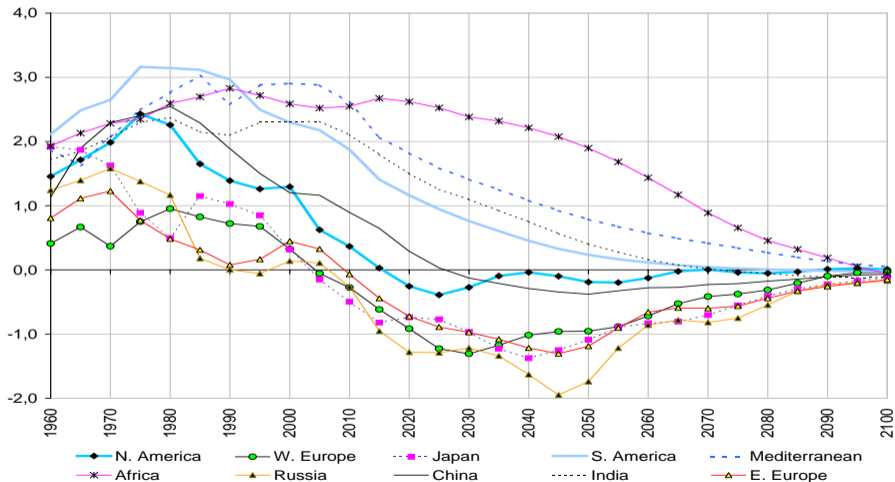
**Comment on “World growth and
international capital flows in the 21st century”
by Michel Aglietta**

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My questions/comments

1. A question about the projected path of future population (particularly, for Japan)
2. What would this exercise imply in terms of economic welfare?

Figure 3: Working-age population annual growth rate (percentage) : 1960 - 2100



Projected path of Japanese population

- Given that current (and near-future) level of the birth rate is well below 2.0, the Japanese population will continue to decline, and approaches zero in the remote future.
- But, according to the paper's projection, the population converges to a steady state level (not zero) in 2100. Probably, the birth rate is projected to start to rise sometime in the future. What is the driving force? Why will it work in the remote future, but not now?
- How the outcome would change if the birth rate stays at a low level (well below 2.0) even in the remote future?

Comments related to welfare implications of this exercise

- Equilibrium obtained in this exercise should be very close to the first-best outcome.
 - Given the evolution of technology and population, households and firms make an intertemporal decision. => No reason for suboptimality
- In a more realistic world, the equilibrium obtained in this paper might not be achievable.
- How and to what extent would the economy deviate from the equilibrium obtained here?

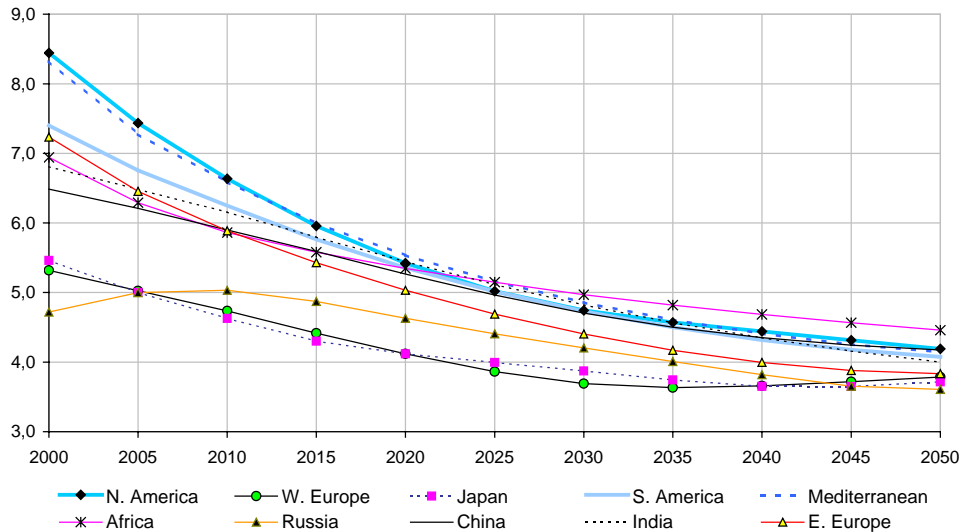
Government

- It might be difficult for the government in shrinking economy to become smaller for some reasons: political process; bureaucracy; large fixed costs to produce public goods and services.

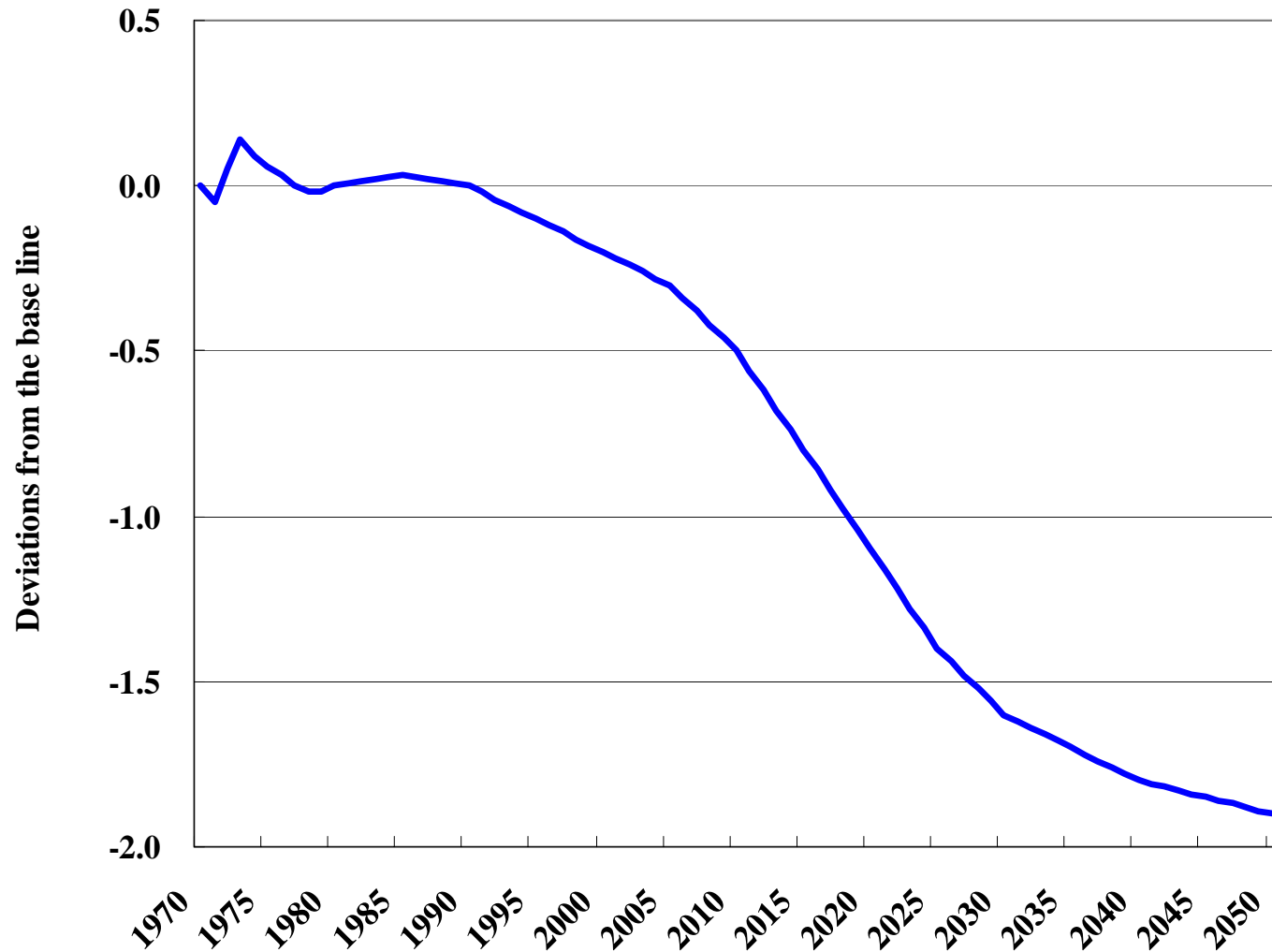
Substantial decline in real interest rate

Figure 8:

Regional annual real interest rate



Responses of the real interest rate to a decline in the birth rate



Source : McKibbin and Nguyen (2004)

Why is substantial decline in the real interest rate problematic?

- Decline in labor supply \Rightarrow Labor is scarce, but capital is not \Rightarrow Higher K/L \Rightarrow Decline in the real interest rate
- Real interest rate in each period might be below zero even if the baseline values (or the steady state values) are above zero.

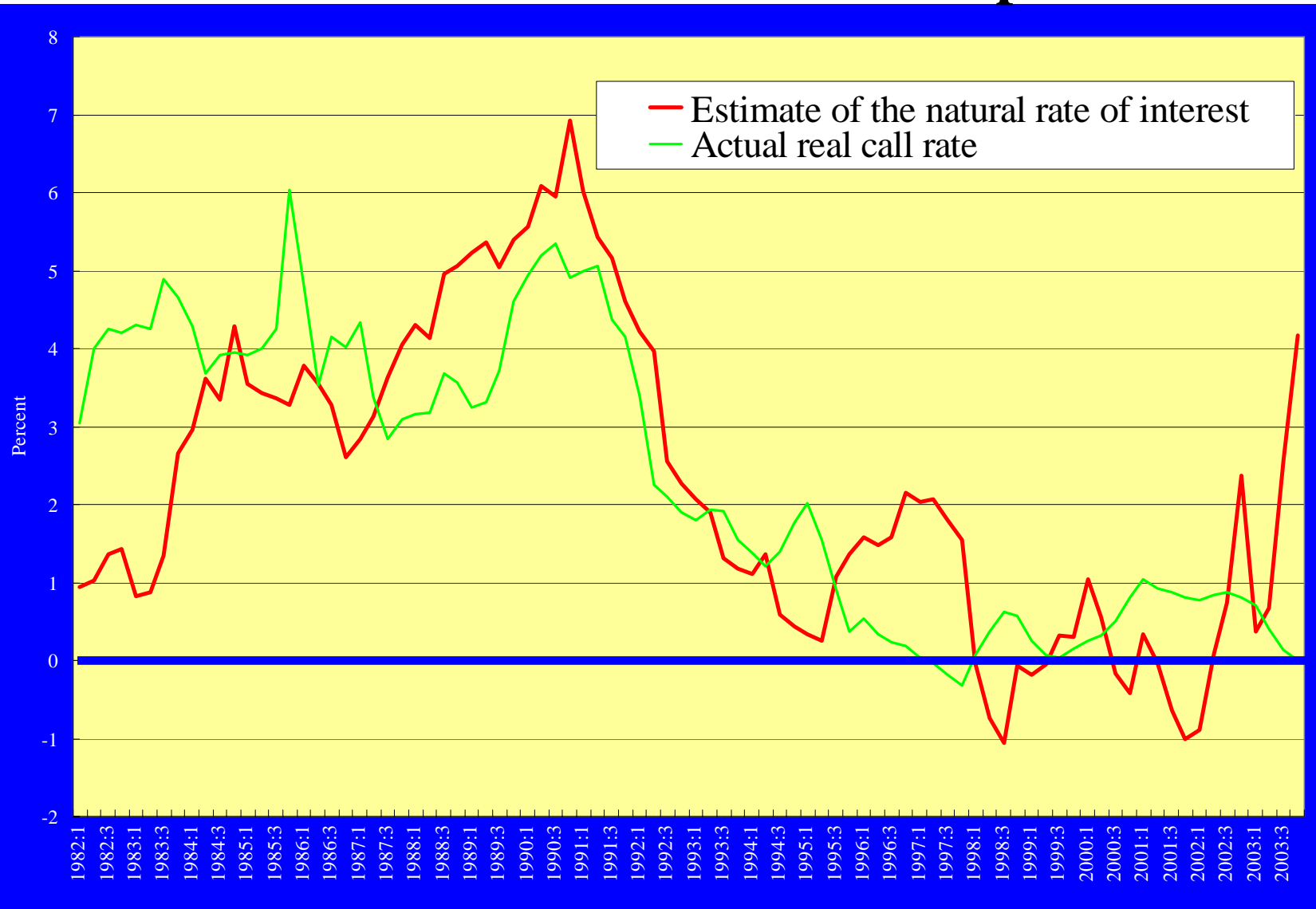
$$r_t^n = r_{BL}^n + \sigma E_t [(\hat{Y}_{t+1}^n - \hat{Y}_t^n) - (\hat{G}_{t+1} - \hat{G}_t)]$$



(Wicksellian) natural rate of interest is defined as what the equilibrium real rate of return would be if prices were perfectly flexible

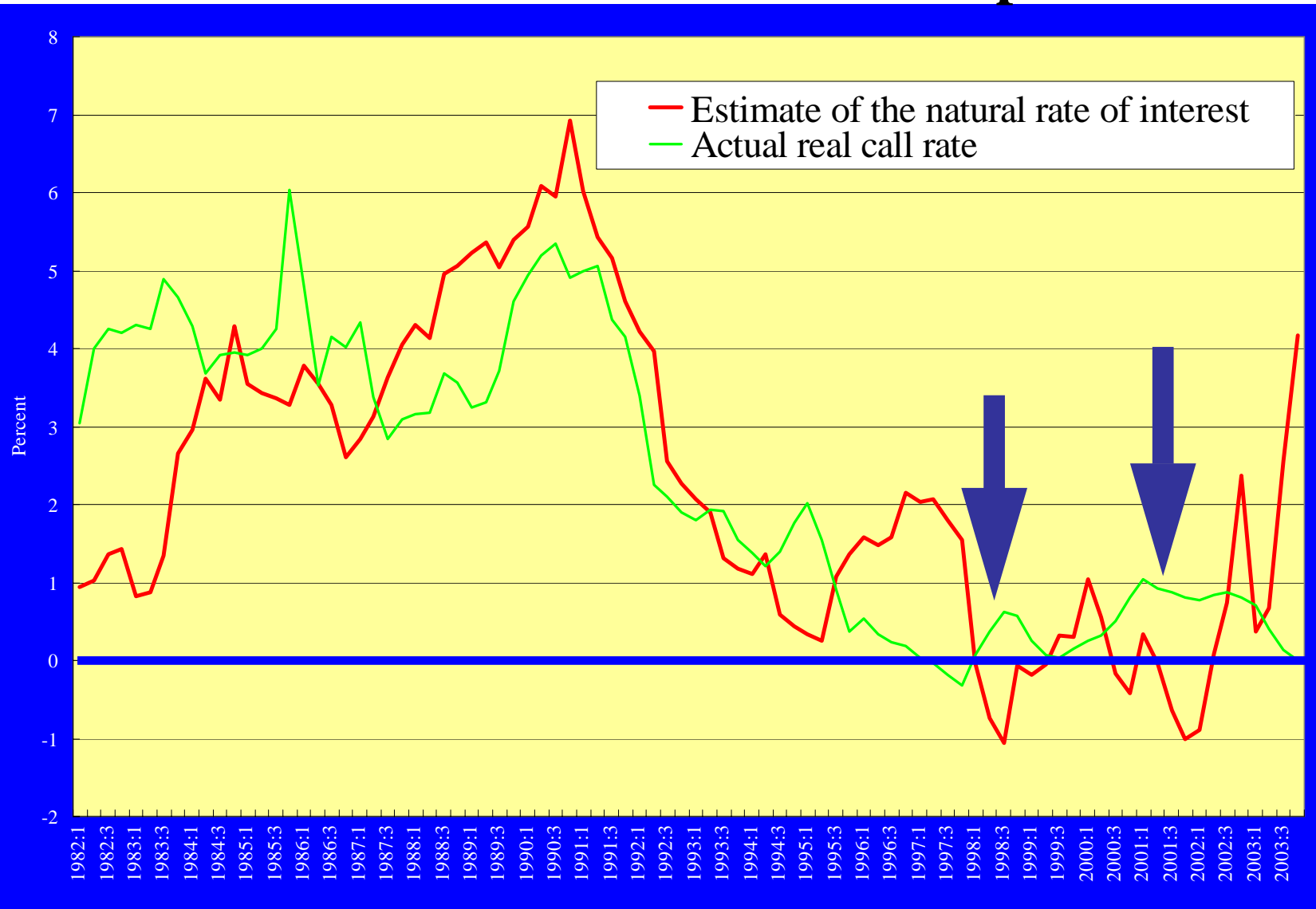
- However, nominal interest rate cannot go below zero under the current monetary regime \Rightarrow Liquidity trap!
 - Paul Krugman (1999), David Miles (2002), Charles Bean (2003), Takamura and Watanabe (2005)

Natural rate of interest in Japan



Source: M. Iwamura, T. Kudo, and T. Watanabe, "Monetary and fiscal policy in a liquidity trap: The Japanese experience in 1999-2004," NBER WP 11151, February 2005

Natural rate of interest in Japan



Source: M. Iwamura, T. Kudo, and T. Watanabe, "Monetary and fiscal policy in a liquidity trap: The Japanese experience in 1999-2004," NBER WP 11151, February 2005