

# Global “Imbalances”

Ricardo Caballero

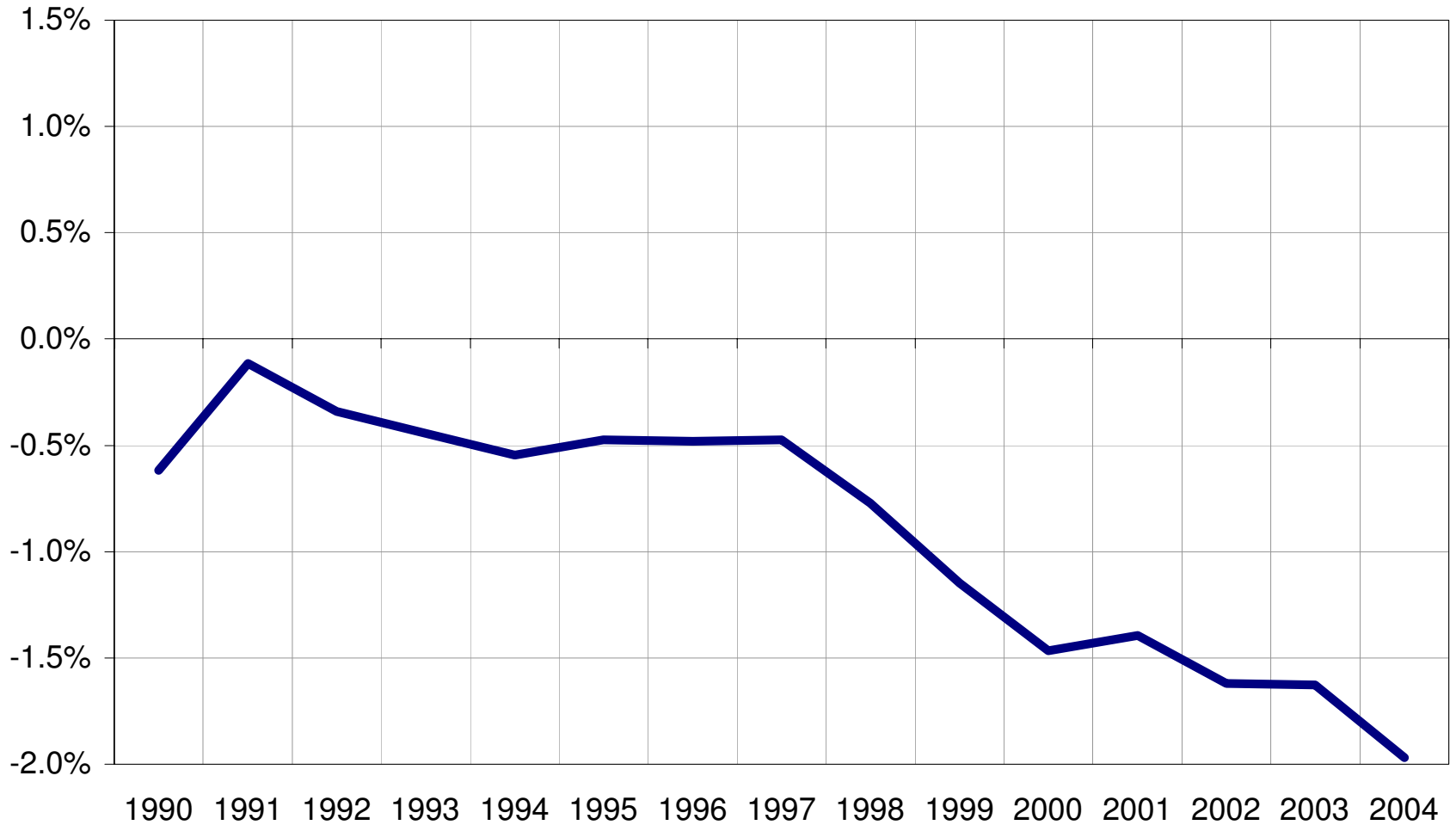
MIT

Background paper: “An Equilibrium Model of ‘Global Imbalances’ and Low Interest Rates”

R. J. Caballero, E. Farhi, P. O. Gourinchas

# Current Account by Region

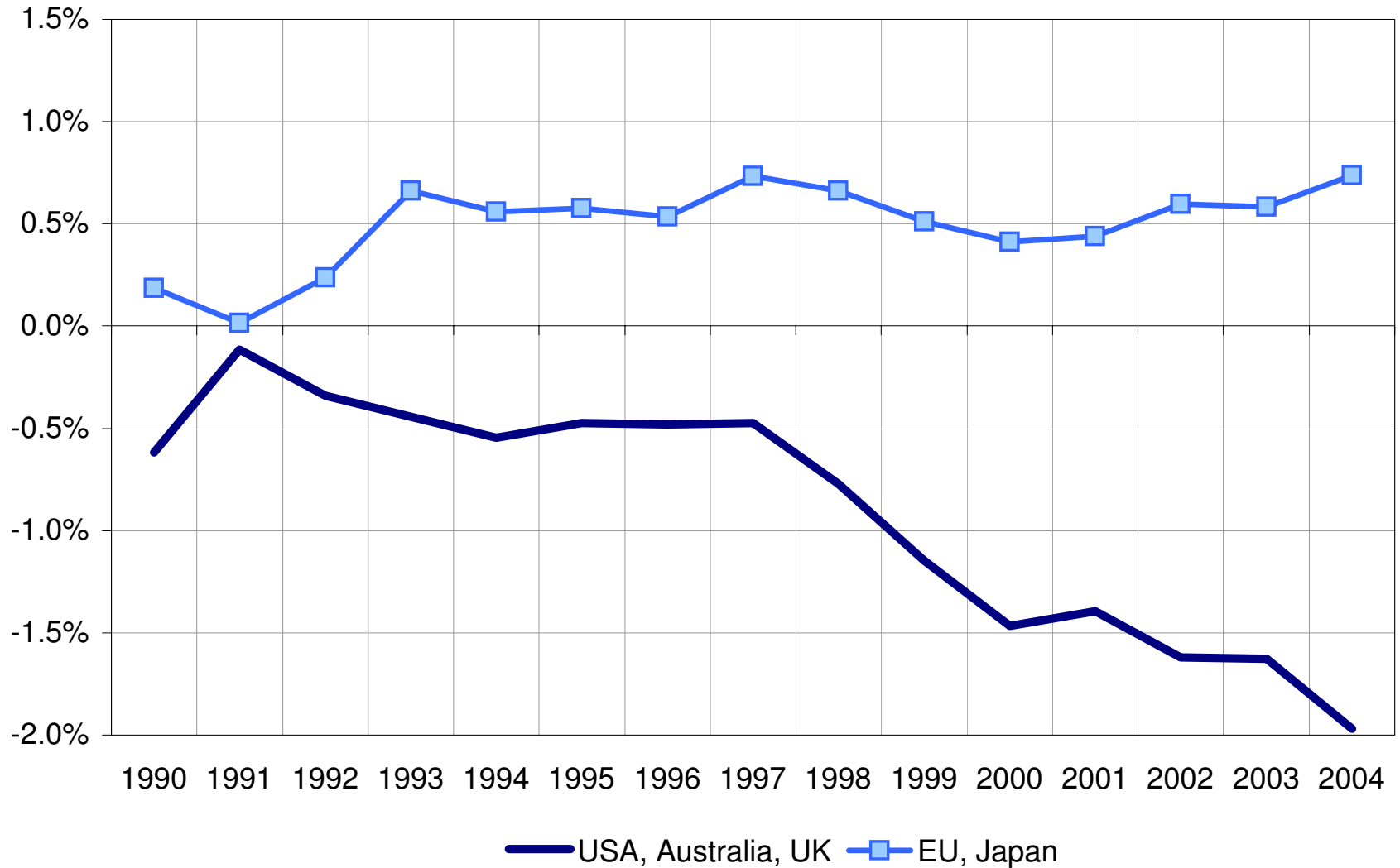
% of World GDP



— USA, Australia, UK

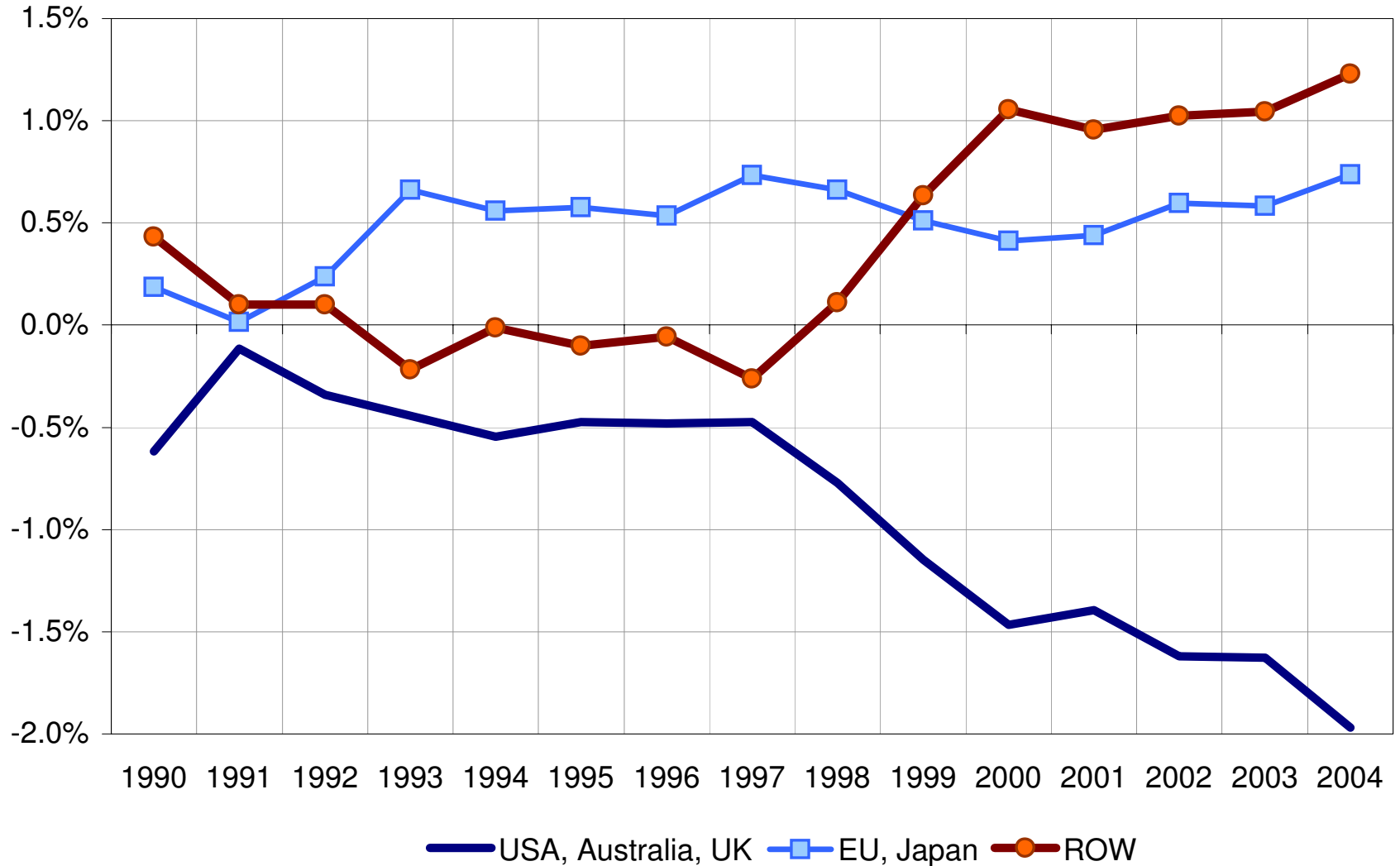
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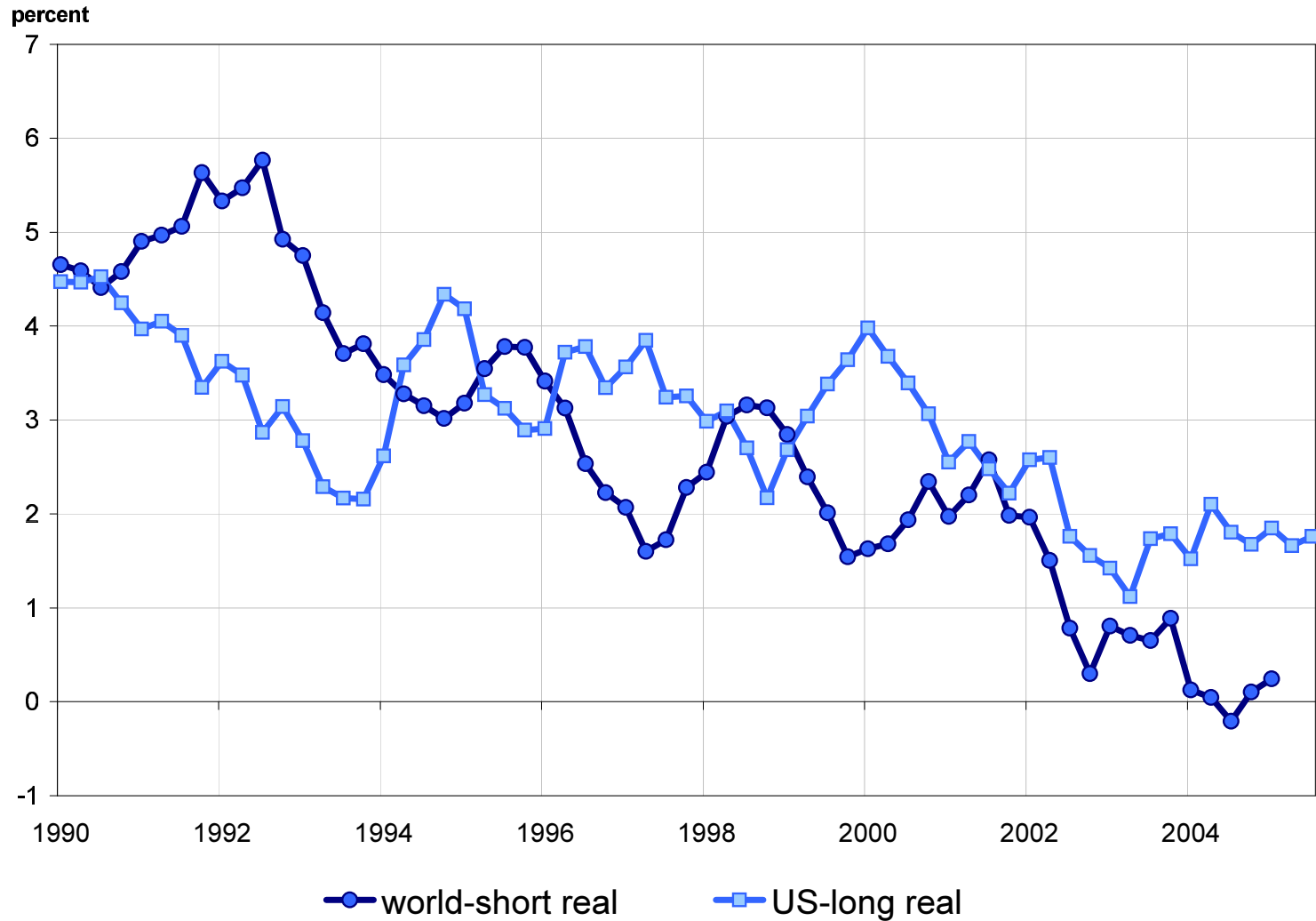


# Current Account by Region

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# World and US Interest Rates



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- The (changing) conventional view: Mostly partial equilibrium or no model. Sudden Stop or 1980s analogy.
- A simple asset-supply / asset-demand model.
- Conclusion: The current situation is a reasonable and sustainable equilibrium given world heterogeneity in growth potential and financial development. (Note: this is different from saying that it will persist...)



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- Key: Region's are heterogeneous in growth potential and financial development
  - $U: \delta, g$
  - $E: \delta, g^E < g$   
(note:  $E$  competes with  $U$  in producing global assets)
  - $R: \delta^R < \delta, g^R \geq g$   
(note: it matters a great deal *who* is growing faster than  $U$ )

# Asset Supply

$$K \longrightarrow \{X_{t+s}\}$$

↗  $\left\{ \begin{array}{l} \delta X_{t+s} \\ \text{financial asset} \end{array} \right.$

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$$V_t = \frac{\delta X_t}{r - g}$$

# Asset Demand

- Long run:

$$W_t = \frac{(1 - \delta)X_t}{\theta + g - r}$$



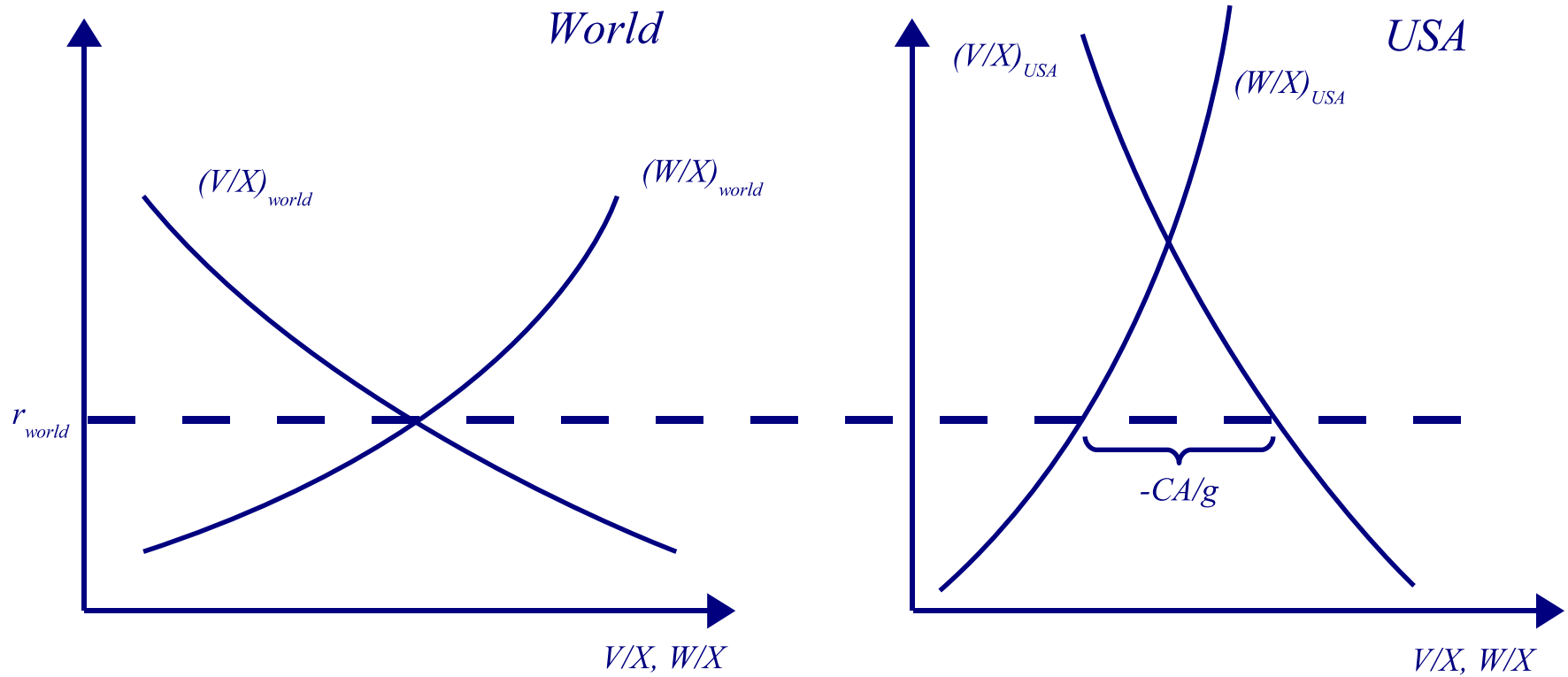
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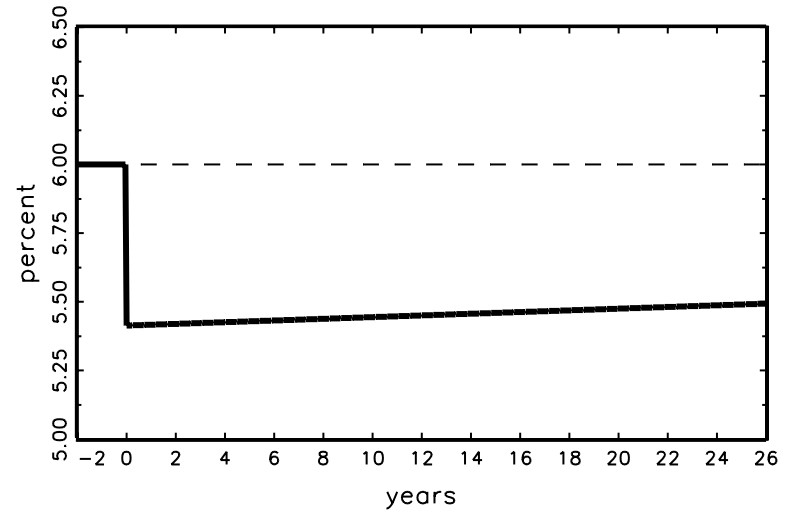
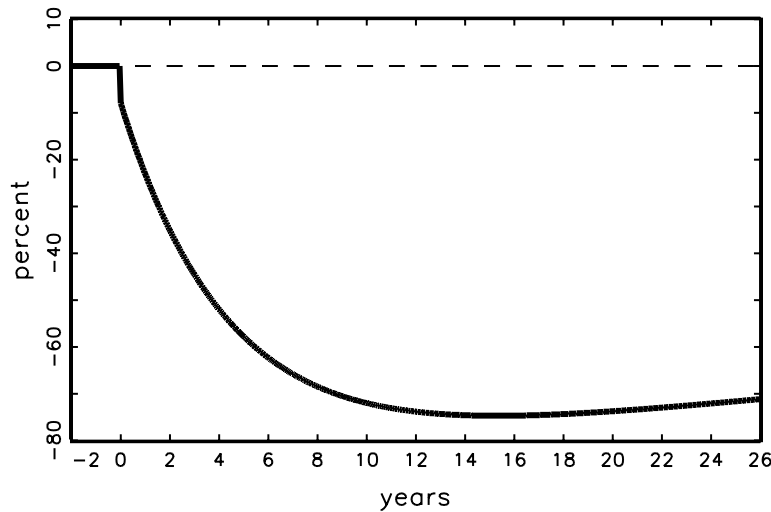
- Short run = Long run plus valuation effects (home bias)

# Equilibrium



# A U – E World

- From early 1990s: European and Japanese slowdown (especially relative to US)



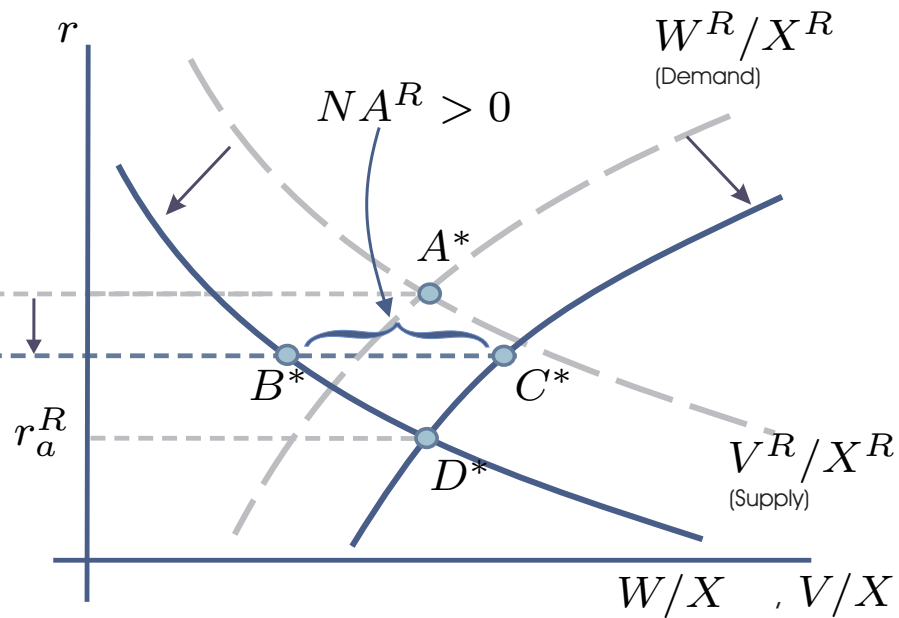
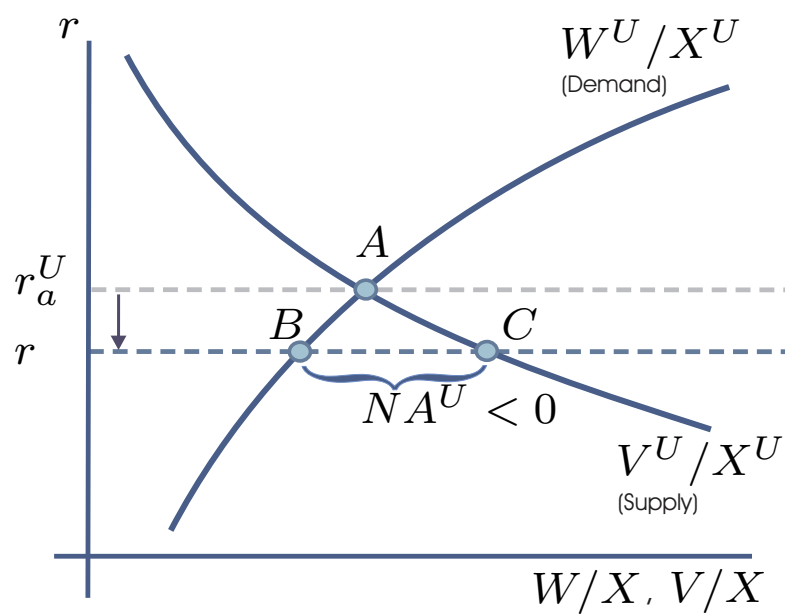
A Collapse in  $g^E$ : NFA and Interest Rates

# A $U - R$ World

● Shock:  $\delta^R = \delta - \Delta_\delta$

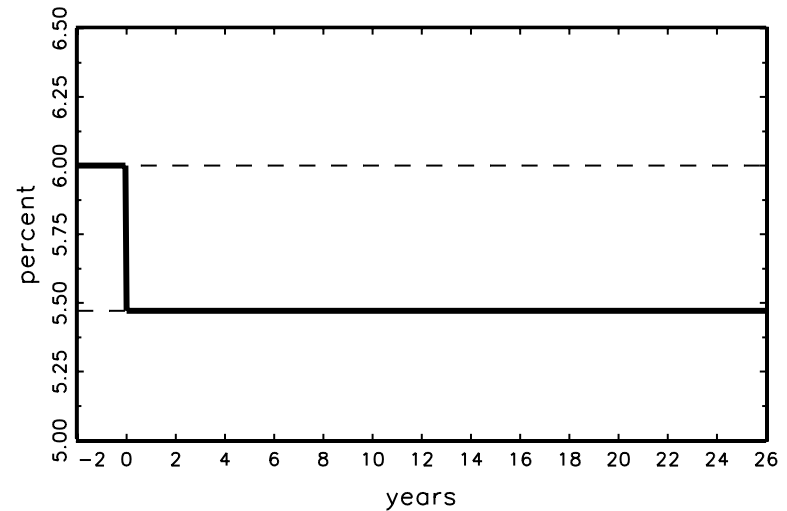
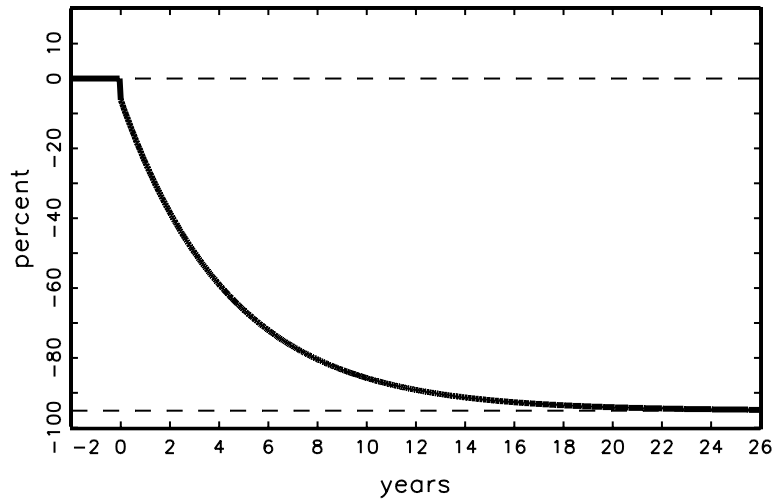
# A U – R World

- Shock:  $\delta^R = \delta - \Delta_\delta$
- *Interpretation?* The perception that, in the aggregate, financial instruments are less sound; following, e.g., the collapse of a bubble, corporate governance problems, loss of intermediation capital, decline in property rights protection, increased perception of ‘crony capitalism’.... (factors present in Asian/Russian crises)



The Metzler diagram for a permanent drop in  $\delta^R$

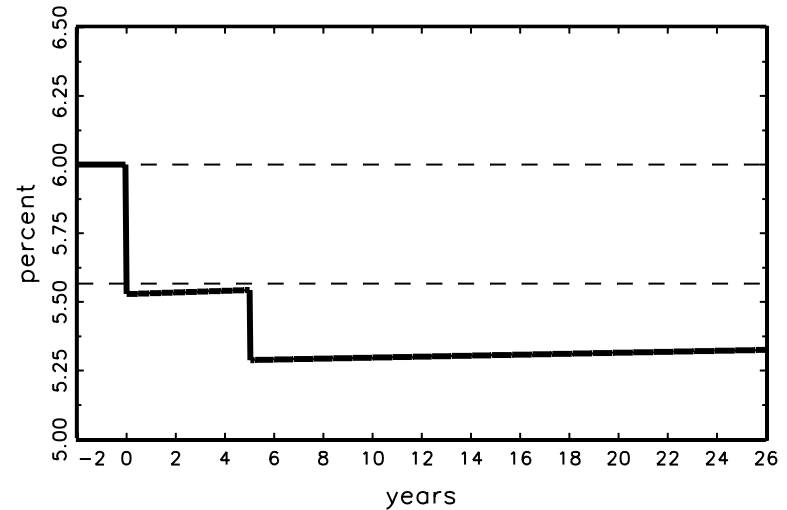
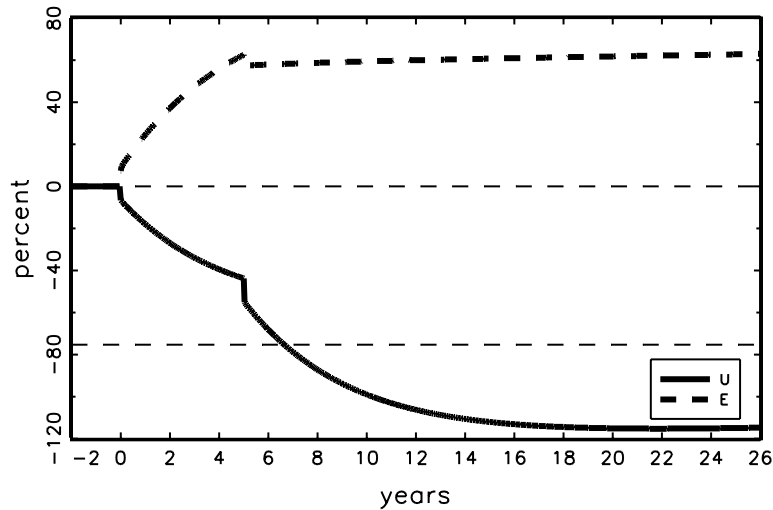
# A U – R World



A Collapse in  $\delta^R$  when  $g^R = g$ : NFA and Interest Rates

Larger if  $g^R > g$ !

# The Three-Region World



A Collapse in  $g^E$  followed by a collapse in  $\delta^R$ : NFA and Interest Rates



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  - A side show

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- FDI as a substitute for domestic financial development
- Large gross flows and permanent trade deficits in the US (and Europe?). Interest rates rise over time.

## ● Exchange rates

- A side show
- Initial appreciation of dollar and then gradual depreciation of the order of 20-30%.

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- Fiscal deficits, savings-glut, and so on...

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- A key distinction: Errors of framework versus shocks
  - Recovery in Japan and Germany
  - Financial deepening in Asia
  - A sharp decline in the price of oil
  - A sharp decline in China and neighbors
  - Something we can't imagine at this time (pandemic, etc.)



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- It is an equilibrium, given observed growth and financial development heterogeneity, not an anomaly that has to go away just because it doesn't fit conventional wisdom...