Some Macroeconomic Puzzles: Conjectural Refutations

Why Doesn't Capital Flow from High to Low?

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"The gods had condemned Sisyphus to ceaselessly rolling a rock to the top of a mountain, whence the stone would fall back of its own weight. They had thought with some reason that there is no more dreadful punishment than futile and hopeless labor. "

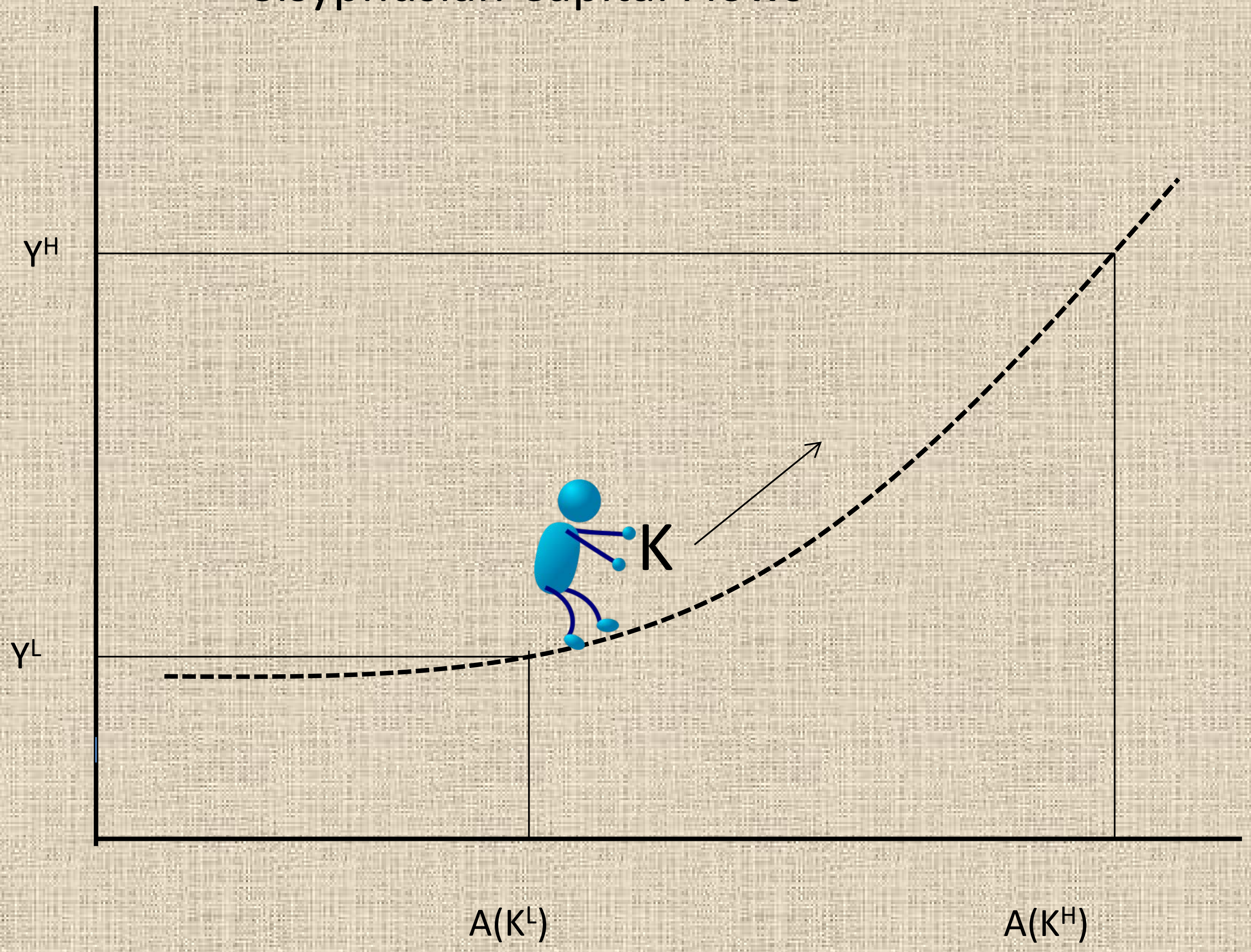
Albert Camus, 1942 The Myth of Sisyphus

"This is what I mean when I say I would like to swim against the stream of time: I would like to erase the consequences of certain events and restore an initial condition. But every moment of my life brings with it an accumulation of new facts, and each of these new facts bring with them consequences; so the more I seek to return to the zero moment from which I set out, the further I move away from it. . . ."

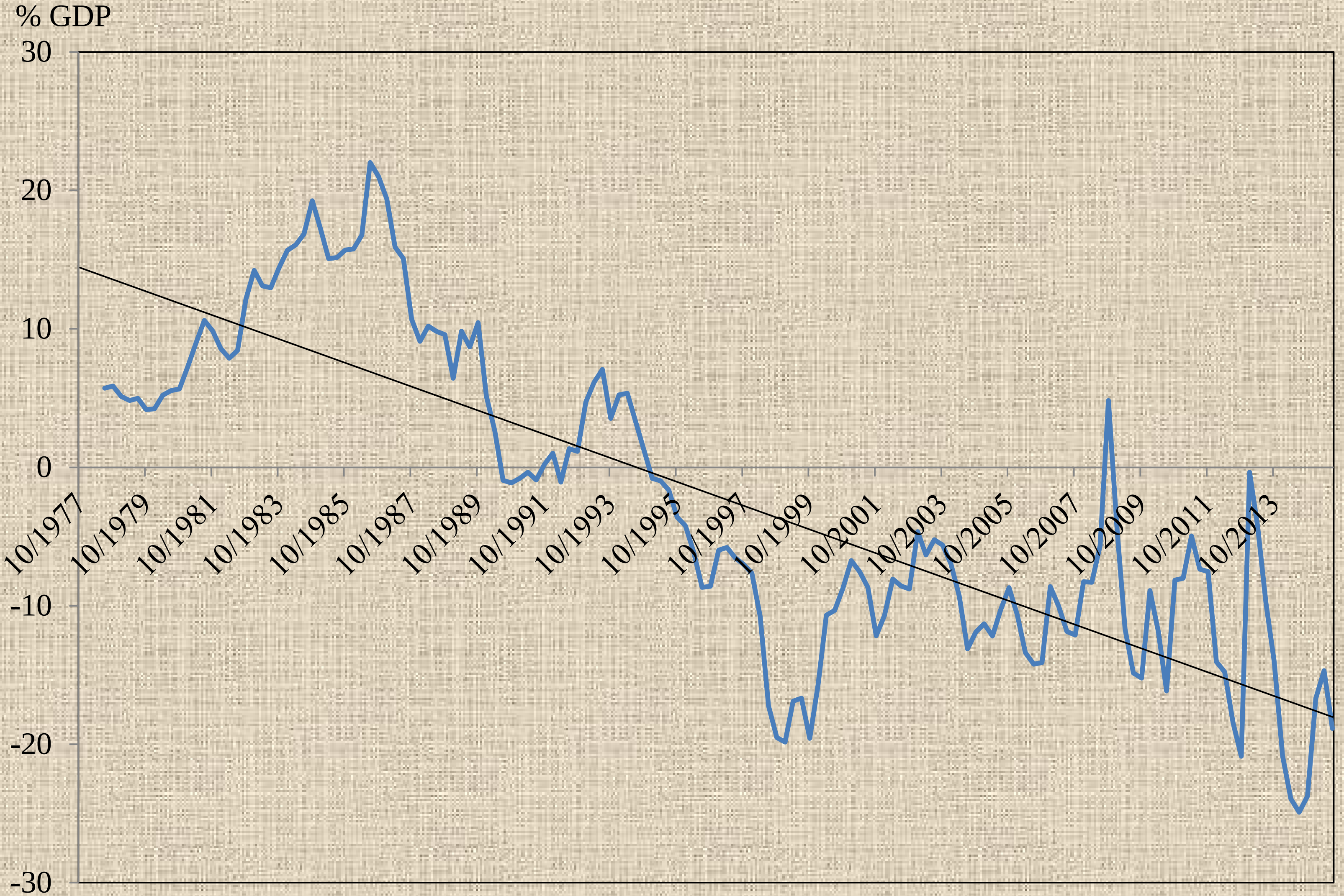
Italo Calvino, 1979, If on a Winter's Night a Traveller.

- Arcane algebra suggests that rolling Sisyphusian capital uphill cannot be stable and the consequences were both the financial crisis and the continuing rocky recovery.

Sisyphusian Capital Flows

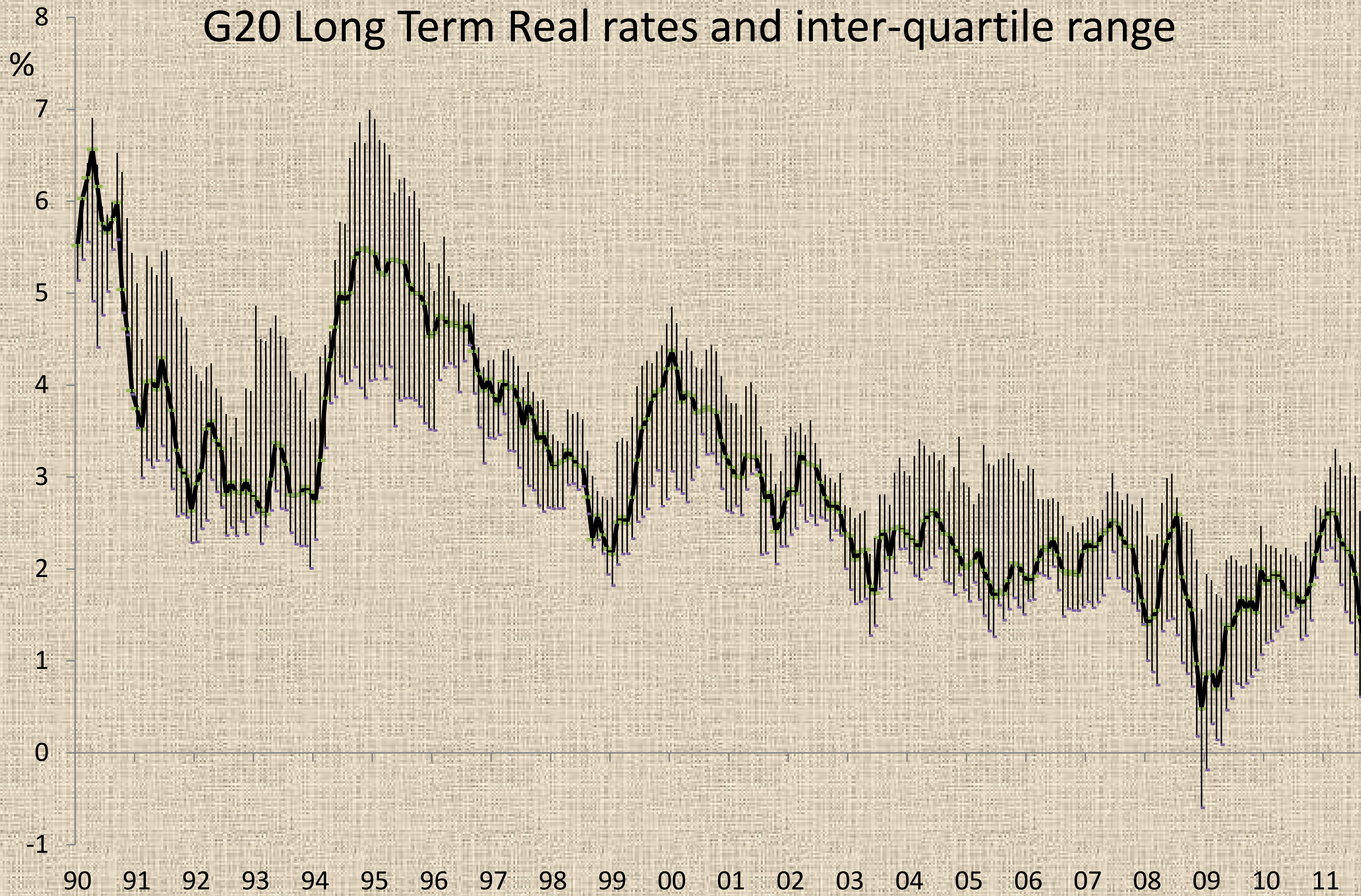


UK's Net International Investment Position



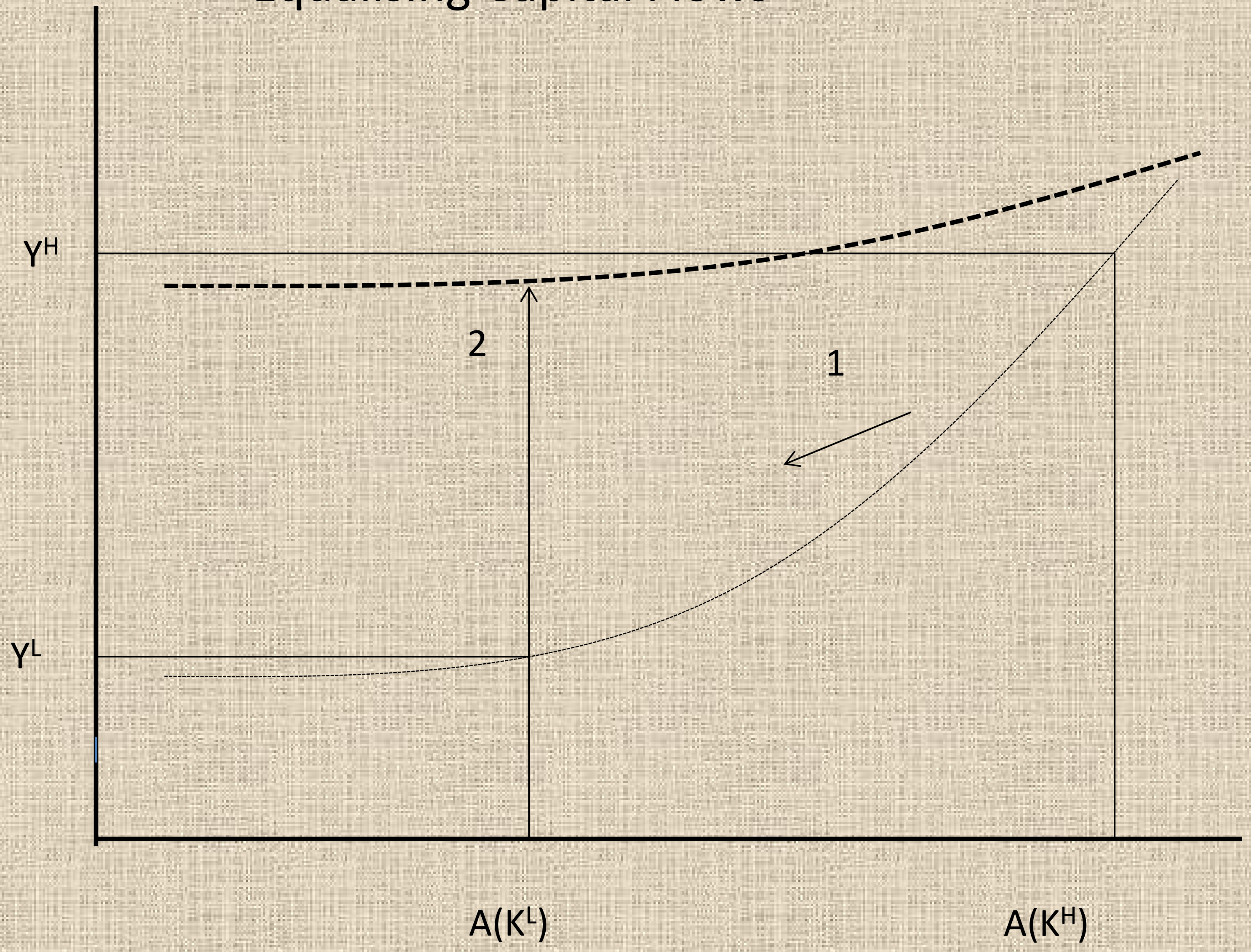
- Net balance is £350Bn with Liabilities of c£10Tn and Assets of c£9.65 (2015)

G20 Long Term Real rates and inter-quartile range



- Real rates falling for structural and conjunctural reasons

Equalising Capital Flows



- Convergence through expected capital flows

The Lucas Paradox 1990

$$Y = A K^a$$

Output, Y, is a function of the level of total productivity, A, and the quantity of capital employed, K^a.

If all countries have access to the A, then only variation K^a explains differences in relative output Y(i)/Y(j).

$$R = a A K^{a-1}$$

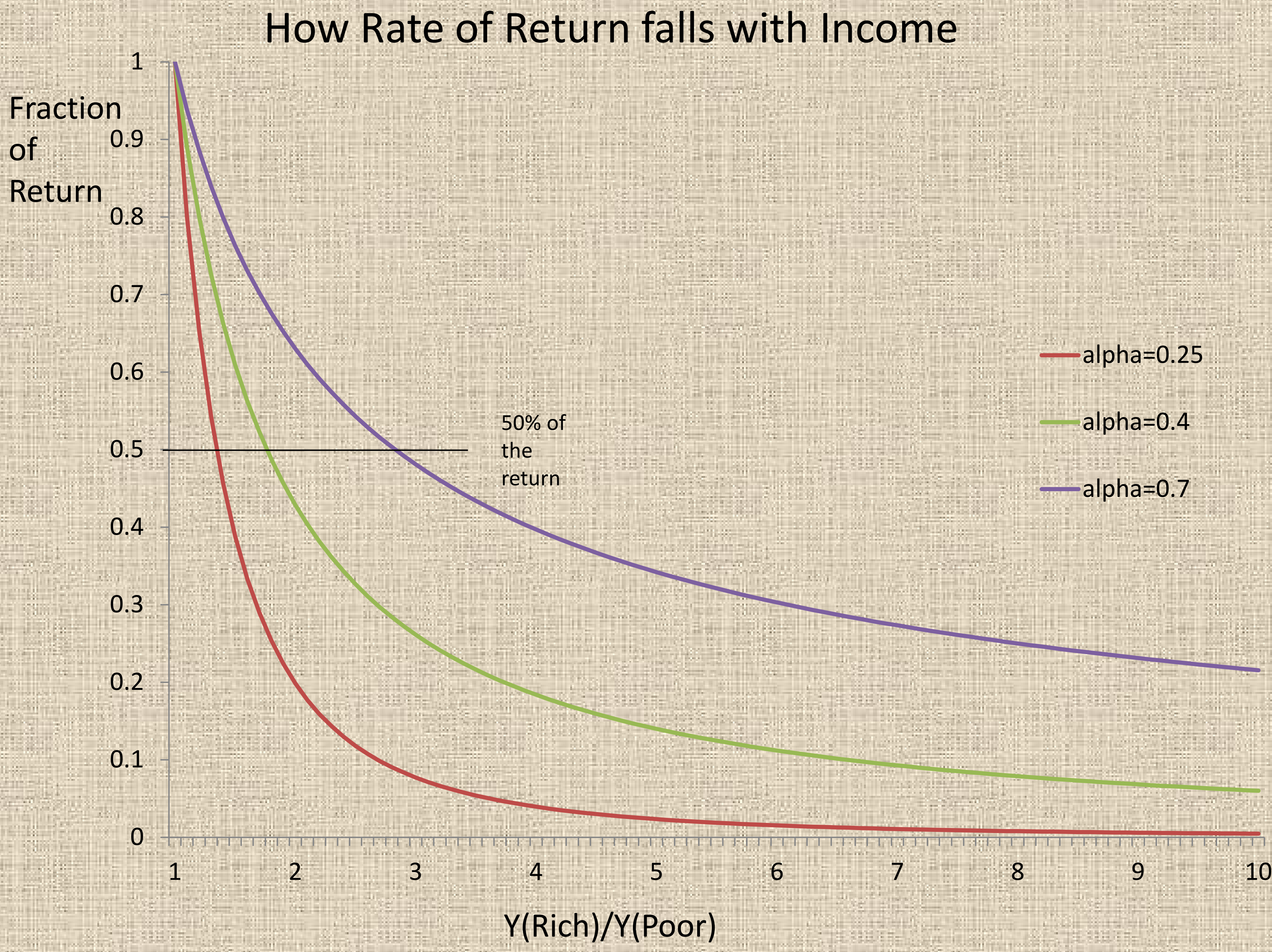
Or

$$R = a A^{1/a} Y^{a-1/a}$$

Because $0<a<1$, R must fall in both K and Y.

Which means that at high levels of income the rate of return on capital is lower than at lower levels of income

This means that capital should flow to where returns are high i.e. low income countries….BUT.

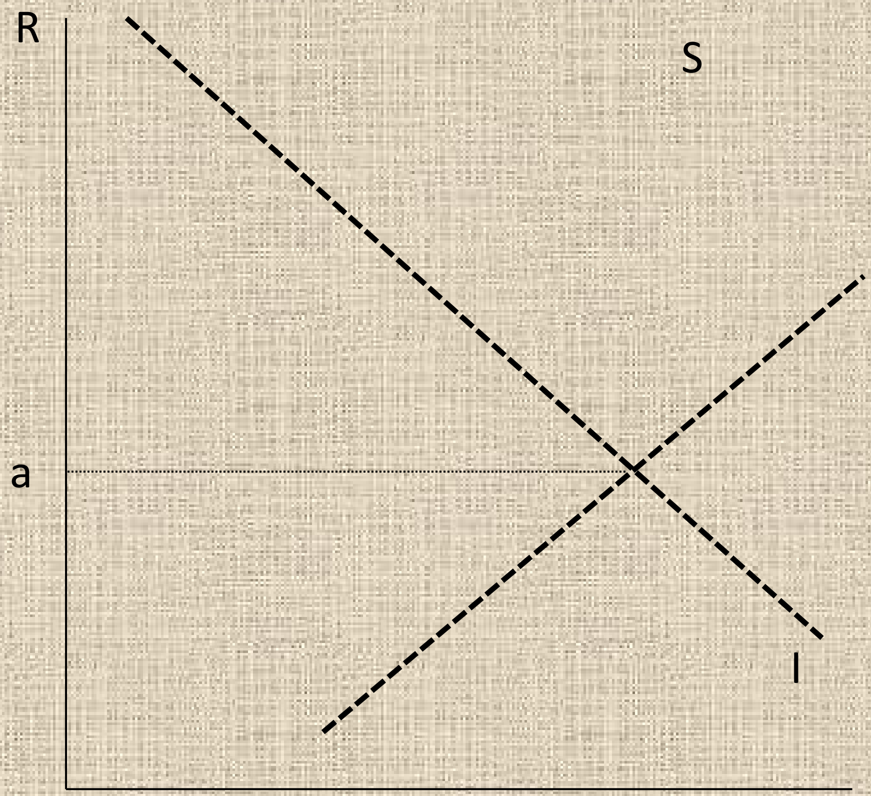

How Rate of Return falls with Income
Fraction of Return
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
50% of the return
alpha=0.25
alpha=0.4
alpha=0.7
1
2
3
4
5
6
7
8
9
10
Y(Rich)/Y(Poor)

Explanations

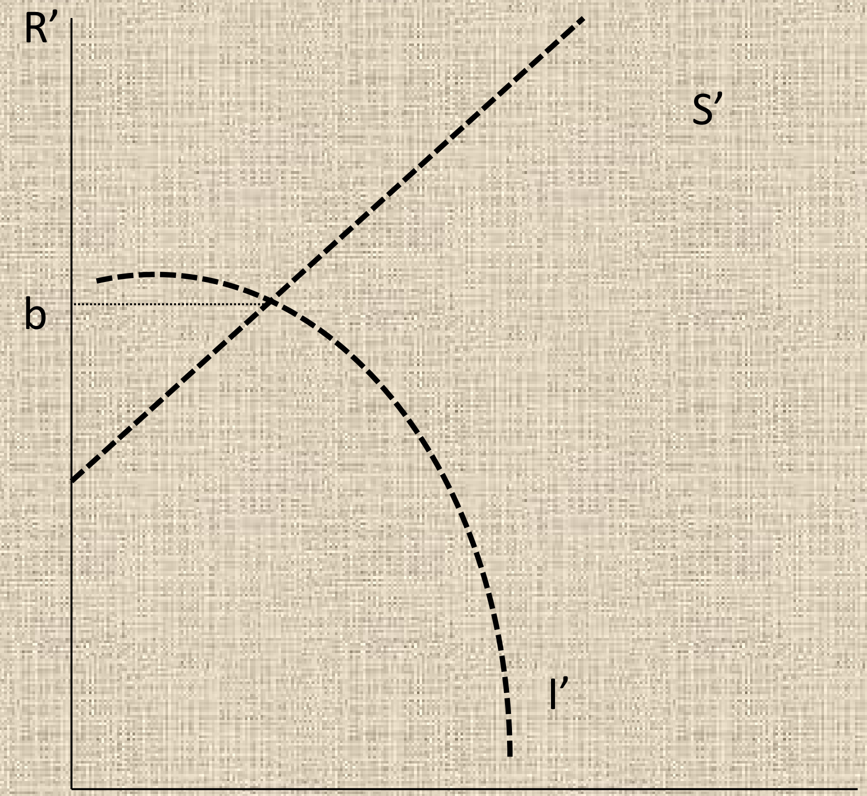
1. If we re-scale by effective worker rather per capita than part of the difference may be accounted for differences in labour productivity so that we have than $Y/L = A K^a$
2. If we have another source of differences for example each country (i) has its own level of A(i) or there is human capital we have than $Y/L = A(i) K^a h^g$ then we can other source of differences
3. Dynamic Inconsistency – if EDCs borrow today they will pay back tomorrow but if I think they will not pay back tomorrow, I will not lend to them today
4. Protection – EDC monopolies with political power may not wish to have their practices challenged by foreign capital

- Are arguments used to explain the paradox about globalisation not being shared? Or about lack of institutional capability or distortions in EDCs?

The Expected Metzler Diagram



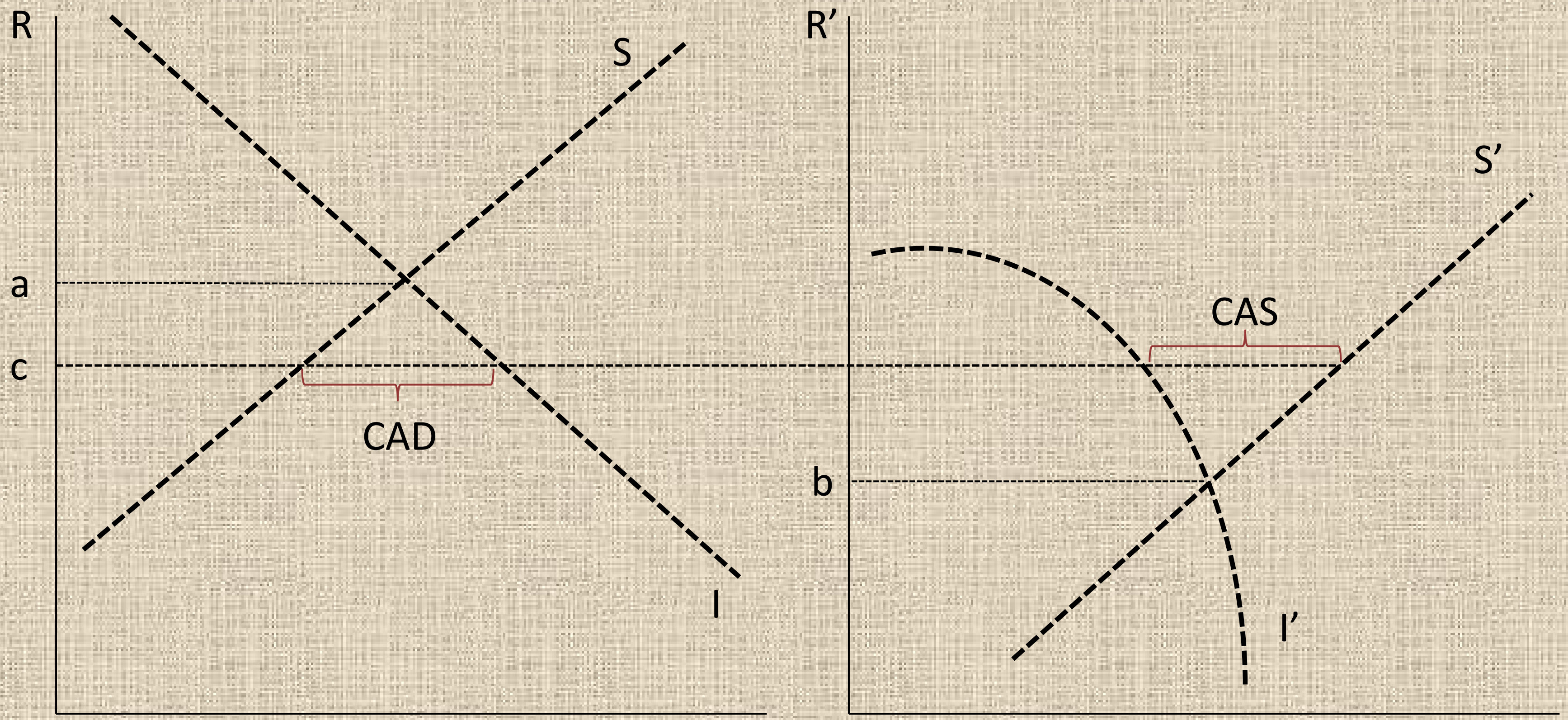
Advanced Countries: Savings and Investment



EDCs : Savings and Investment

- Capital should flow from a to b raising advanced real rates and creating advanced country surpluses…

The Un-expected Metzler Diagram

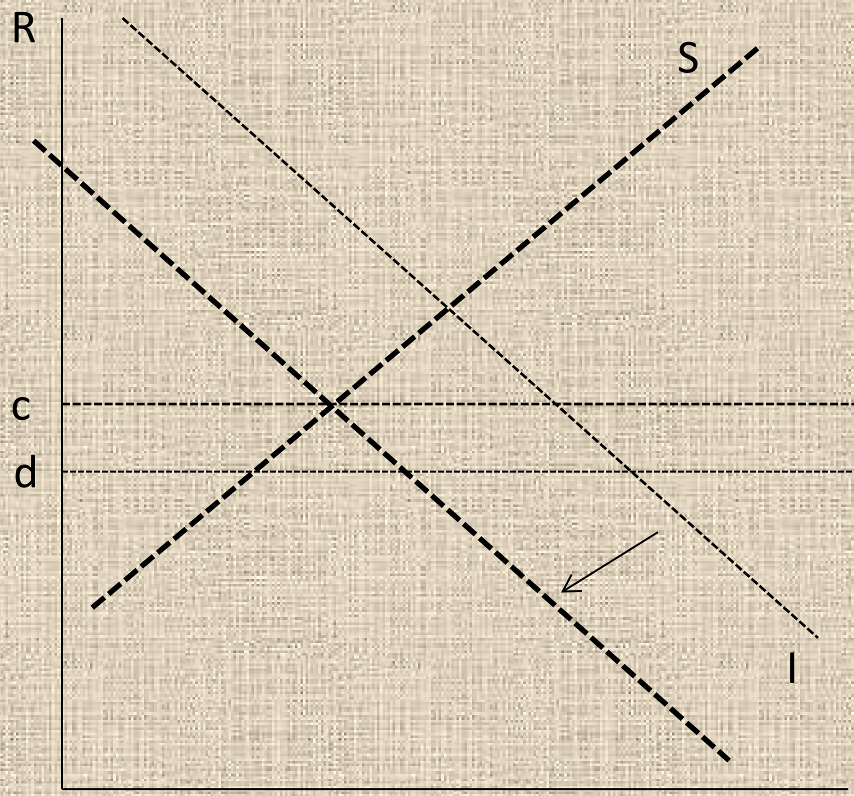


Advanced Countries: Savings and Investment

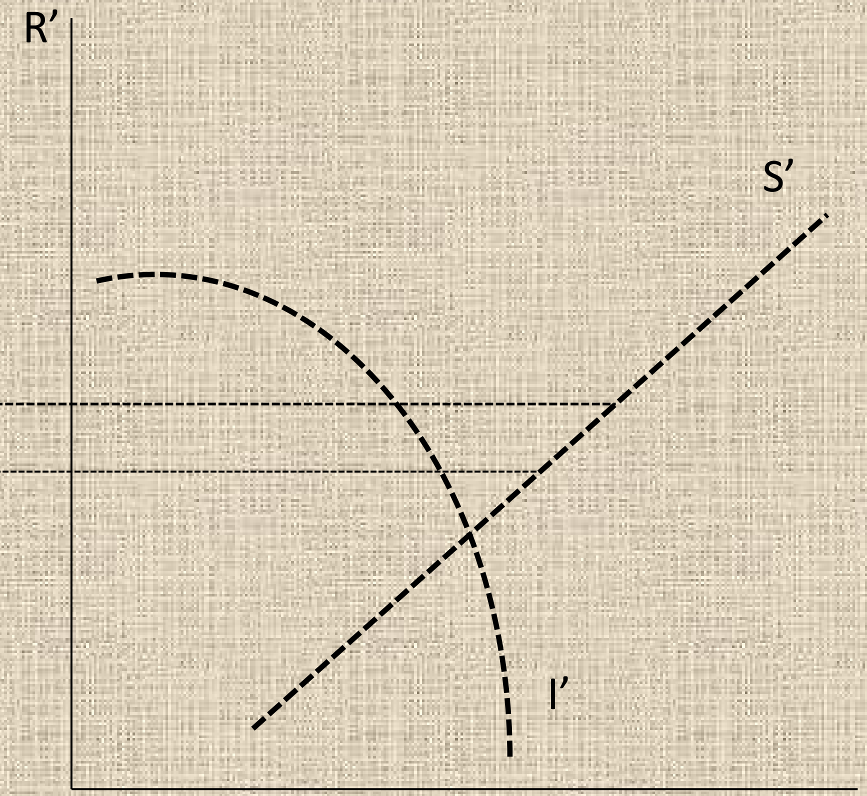
EDCs : Savings and Investment

- Real Rates Fall and Emerging economies develops claims on the rich

Let’s Reduce Demand in the West….



Advanced Countries: Savings and Investment



EDCs : Savings and Investment

- Reducing investment in the Advanced world, only leads to even lower rates, lower activity and continuing claims.

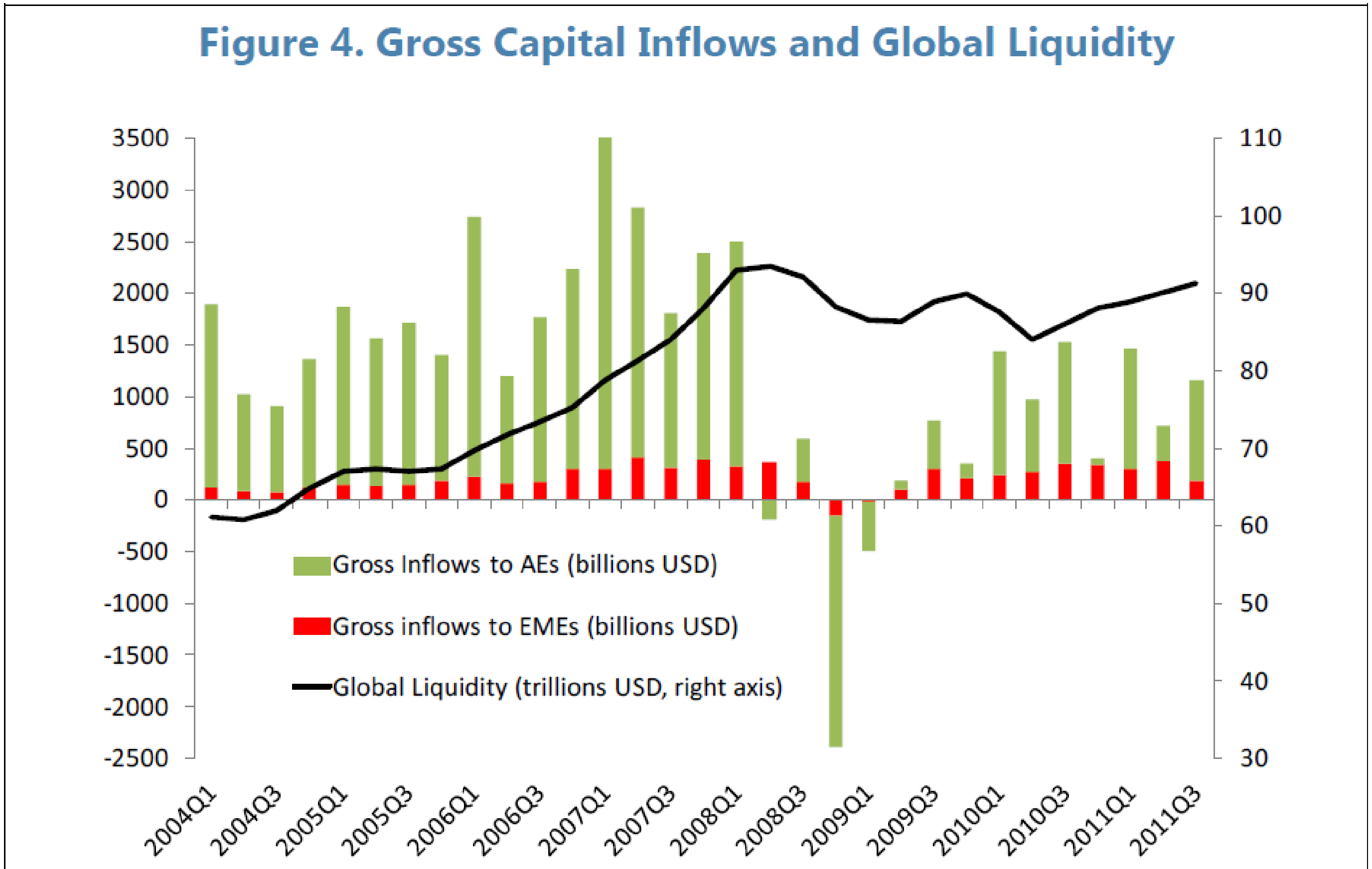
Implications

- Why did “excess” activity not prove inflationary?
- Have we “induced” future deflation?
- Cause is excess savings in EDCs, which lowers global and EDC interest rates
- Some temporary reversal after the GFC in response to extraordinary loose policy but return of paradox seems a key threat to the world economy
- Net debtors e.g. UK, US and Euro Area may suffer increasingly volatile exchange rates
- Lack of Safe Assets e.g. Caballero at al. (2009).
- Evidence in GE models that for capital to flow to high investment-output countries there must be a subsidy for savings in EDCs, e.g. Gourinchas and Jeanne (2013)

Bernanke (2005) ‘savings glut'

‘a more direct approach is to help and encourage developing countries to re-enter international capital markets in their more natural role as borrowers, rather than as lenders. For example, developing countries could improve their investment climates by continuing to increase macroeconomic stability, strengthen property rights, reduce corruption, and remove barriers to the free flow of financial capital. Providing assistance to developing countries in strengthening their financial institutions--for example, by improving bank regulation and supervision and by increasing financial transparency--could lessen the risk of financial crises and thus increase both the willingness of those countries to accept capital inflows and the willingness of foreigners to invest there.'

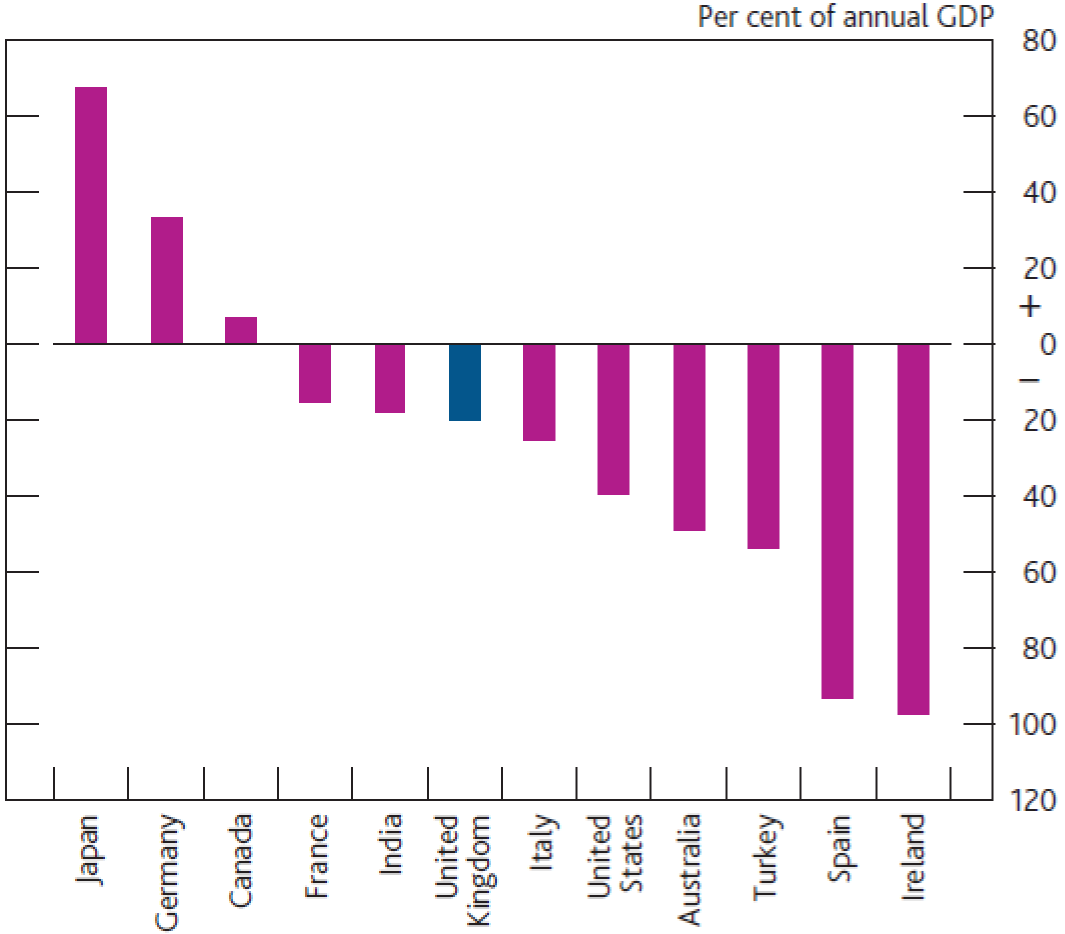
IMF paper on Capital Flows and Liquidity



Source: Chen et al., 2012 and IMF staff calculations.
Note: Global liquidity is the volume of total liabilities of financial institutions in the G4; namely, Euro Area, Japan, U.K. and U.S. (see Chen et al., 2012)

- Link made to incoming flows and growth in banking sector balance sheets

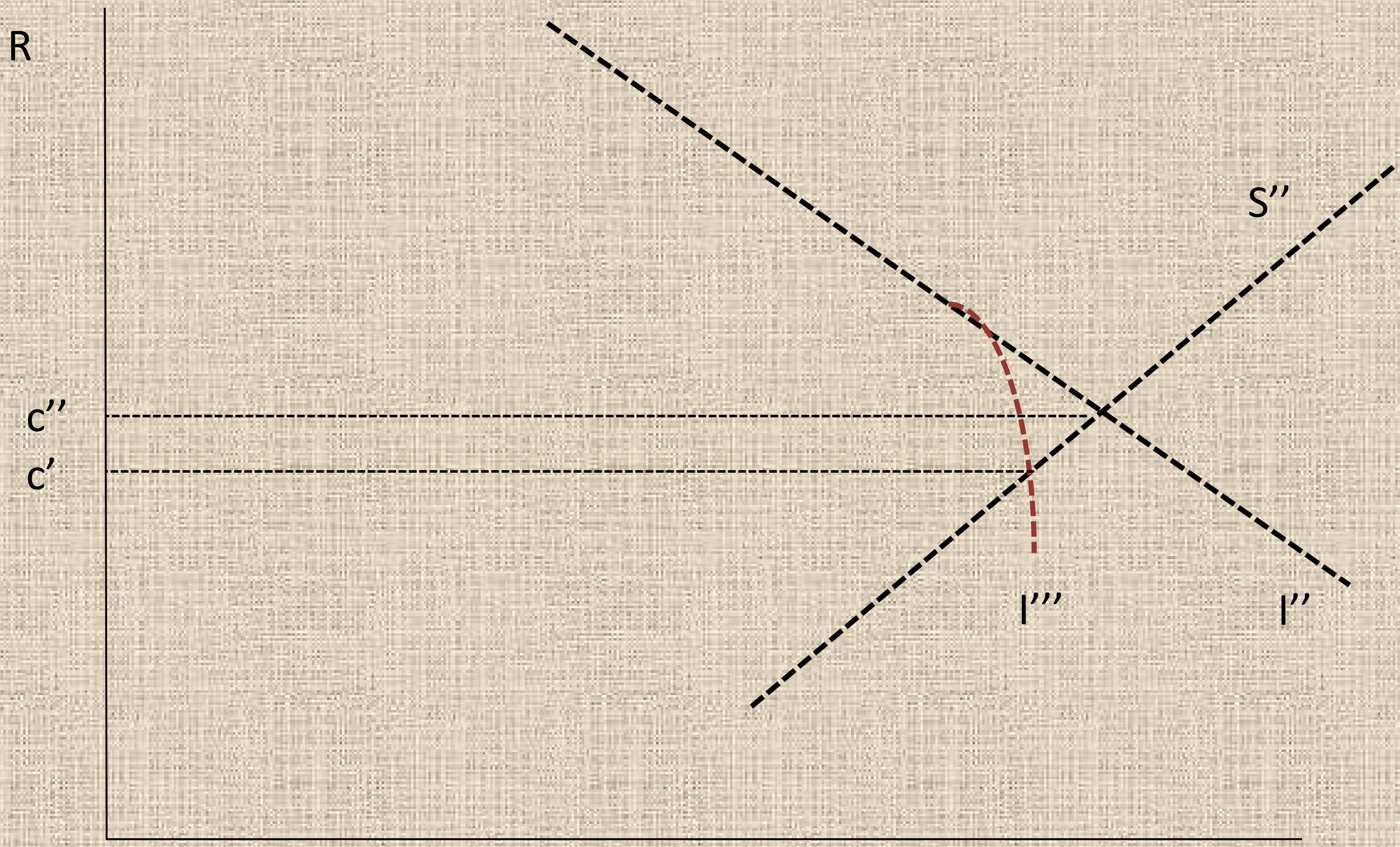
Net international investment positions at end-2014



Sources: Eurostat, IMF *World Economic Outlook*, ONS and Bank calculations.

- Euro Area, UK and US all net debtors: July 2015, FSR.

World Savings and Investment



- Lack of investment opportunities will make real rates and asset prices more to shifts in savings

Productivity Catch-up and Borrowing from Abroad

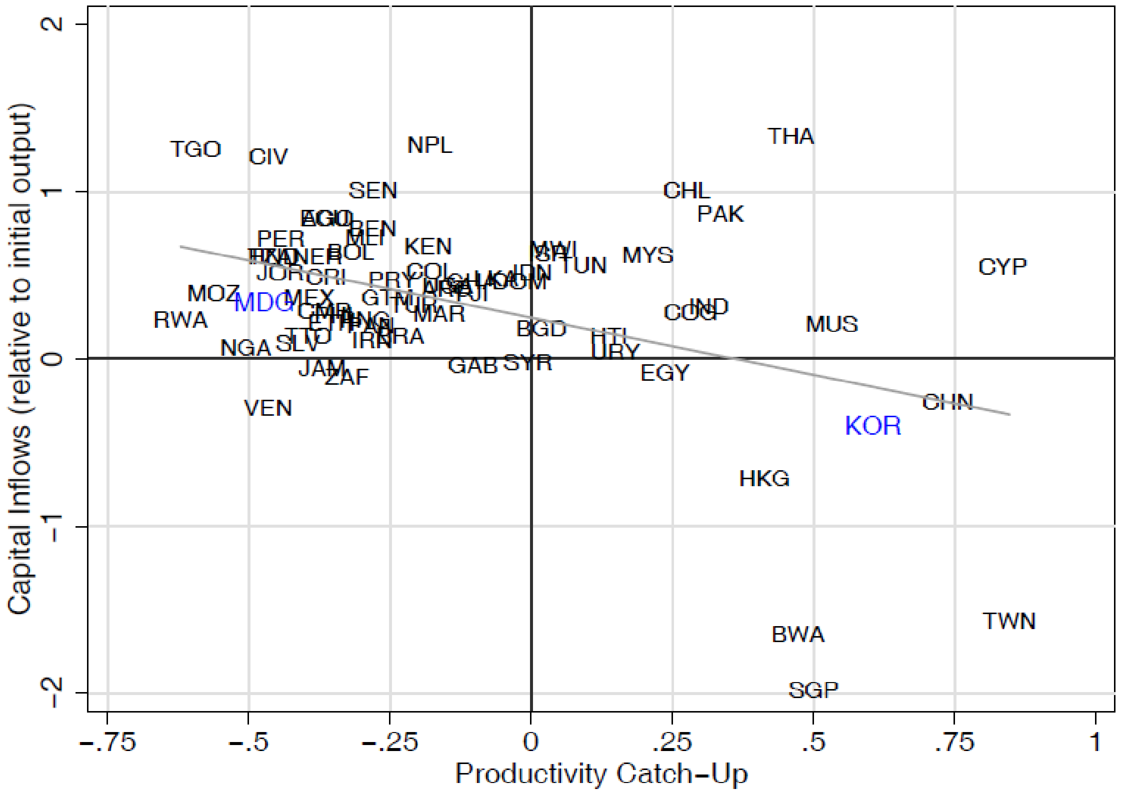


Figure 2: Productivity catch-up (π) and change in external debt $\left(\frac{\Delta D}{Y_0}\right)$.

- Capital does not seem to chase high productivity states

Concluding Remarks

- Mercantilism versus Strategic Complementarities
- Globalisation and vulnerability to shocks – policy and institutional response e.g. reserve accumulation
- Importance of General Equilibrium Effects – one shock affects many markets, and may be amplified and/or persistent
- EDCs saving 'too much'
- Advanced economies not saving enough

or with the wrong split between consumption and investment