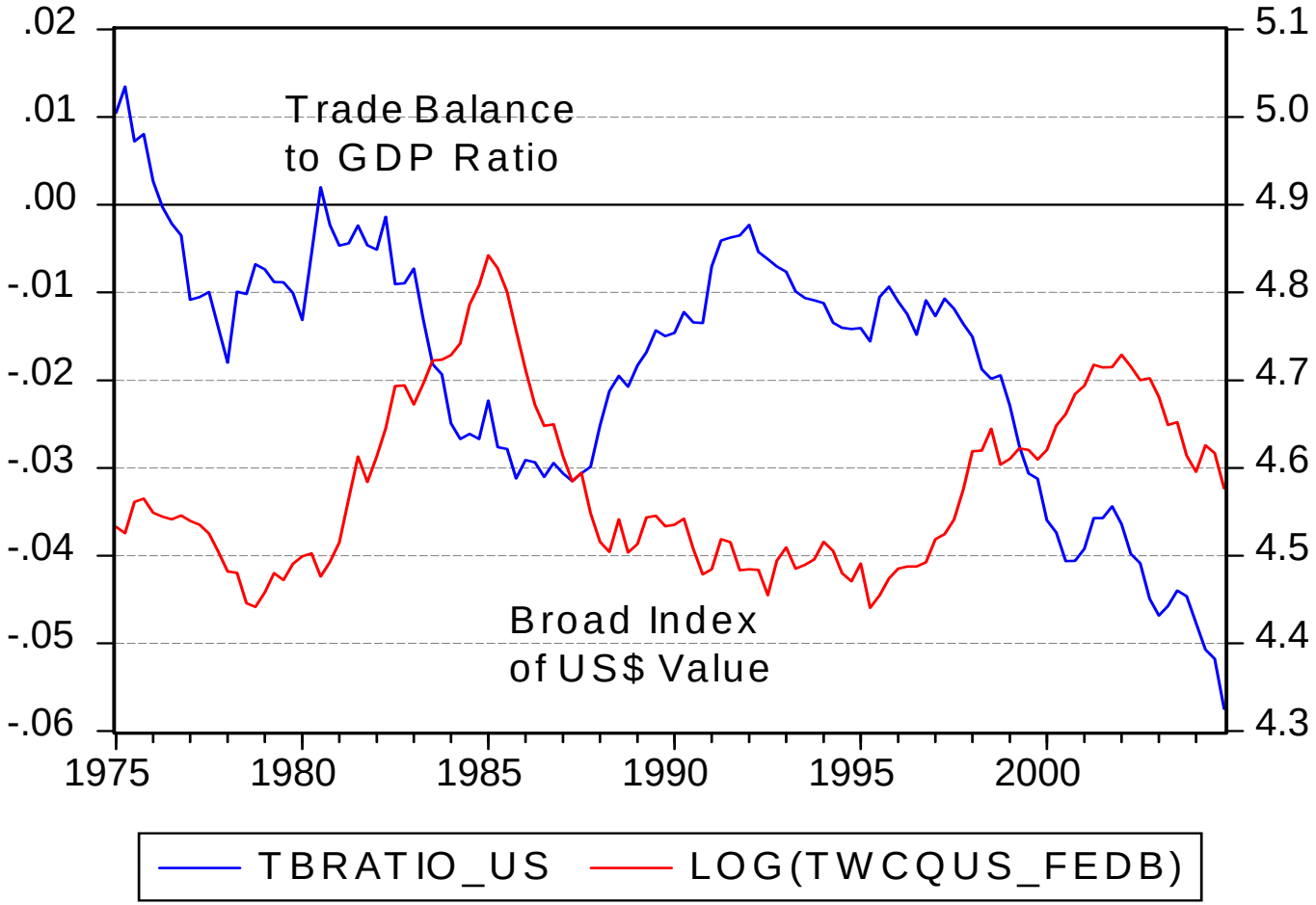
Resolving Stock and Flow Explanations for Dollar Decline

Excerpts from Blanchard et al.

NBER WP 11137

By Menzie Chinn

Elasticities Approach: How big is the trade balance?



National Savings Identity: What's Nat'l Savings doing?

$$C + S + T = Y = C + I + G + EX - IM + R$$

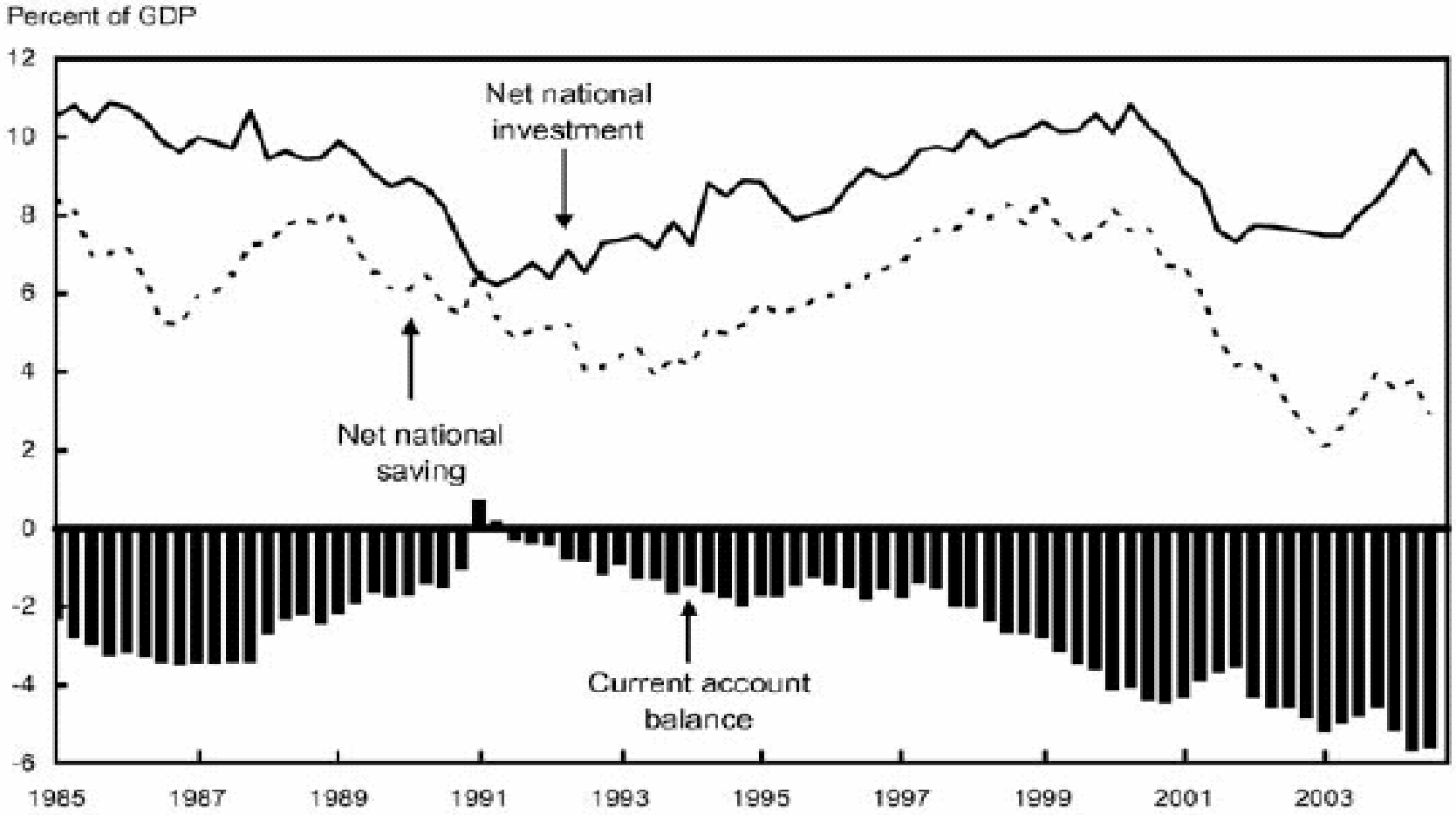
$$S + T = I + G + EX - IM + R$$

$$(S + T - G) - I = EX - IM + R$$

Nat'l Savings – Nat'l Investment = CA

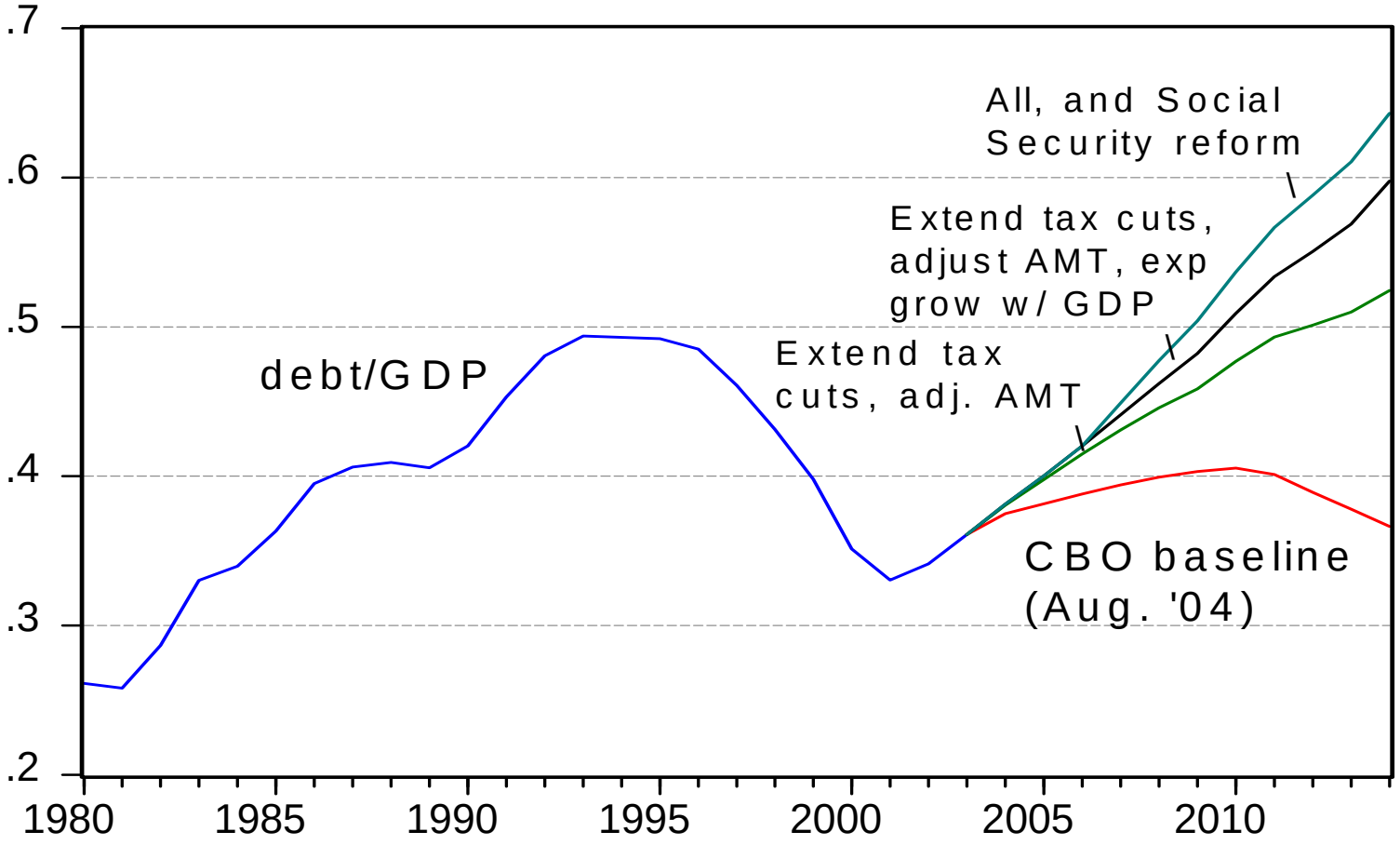
Chart 1-3 **Saving, Investment, and the Current Account Balance**

Lower national saving primarily accounts for the widening of the current account deficit since 2000.



Source: Department of Commerce (Bureau of Economic Analysis).

Portfolio Balance: What is the stock of US gov't debt doing?



Resolving stock and flow views of the dollar's prospects

- It would seem that there are three different views.
- But each is part of a whole.
- This doesn't mean that you can use them all indiscriminately
- Challenge: How to fit the explanations together.

Blanchard et al. (2005)

- Uses a portfolio balance model to interpret the dollar's prospects
- Basic conclusion: Higher US net debt must be associated with weaker dollar, *in the presence of home bias.*
- Why? As wealth is transferred to the RoW, demand for US assets fall, and hence a weaker dollar.

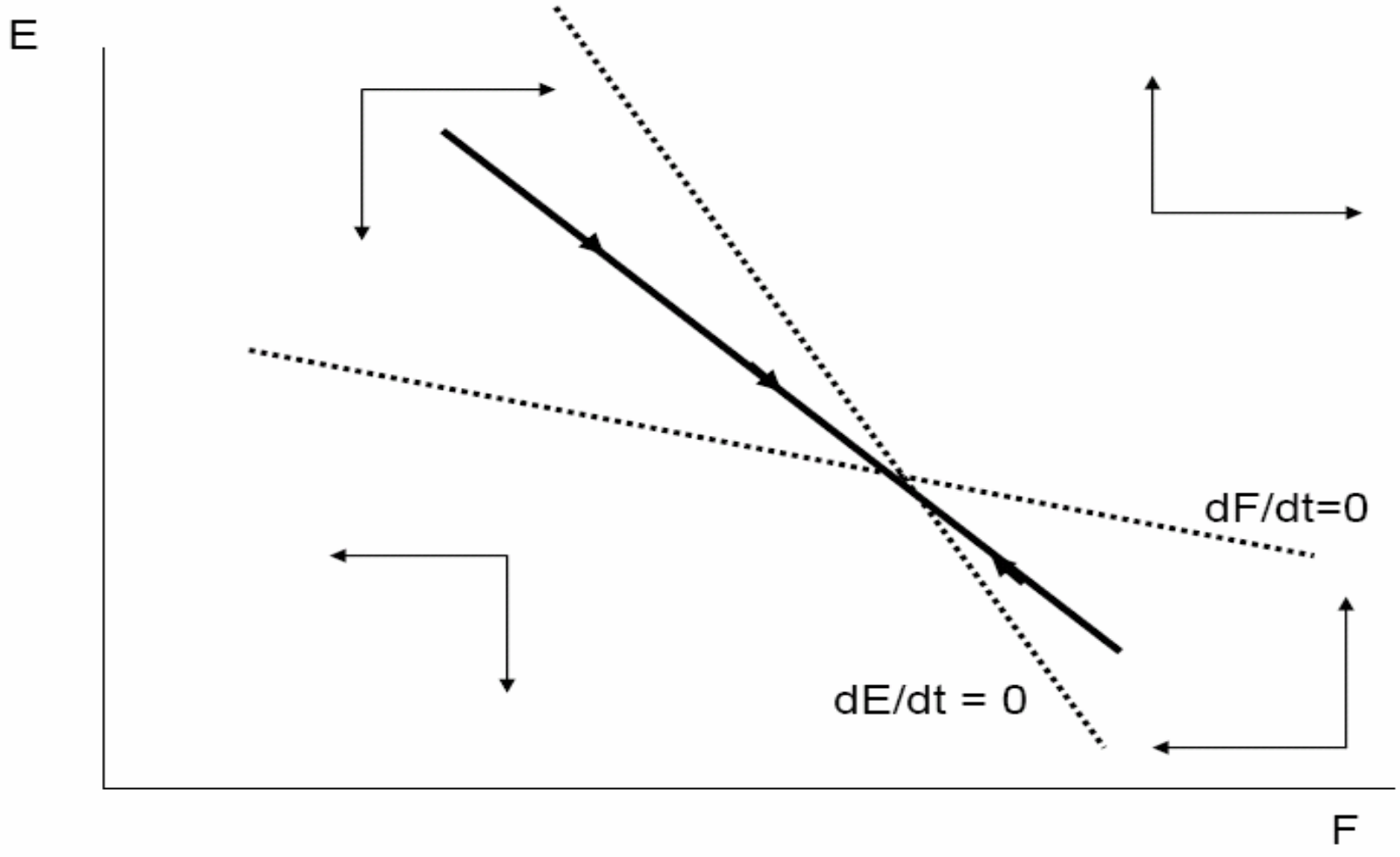
The model

$$X = \alpha(1 + \frac{\dot{E}^e}{E})\,(X - F) + (1 - \alpha^*(1 + \frac{\dot{E}^e}{E}))\,(\frac{X^*}{E} + F)$$

$$\dot{F} = rF + (1 - \alpha(1 + \frac{\dot{E}^e}{E}))\,\frac{\dot{E}}{E}\,(X - F) + D(E)$$

Where E is real value of the US dollar; X gross assets, F is US net debt, D is the US trade deficit, all in terms of US goods.

Equilibrium



What’s required to eliminate the CA deficit?

- Assume the sum of import and export elasticities sums to 1.7 (Chinn estimates about 1.1)
- Unexpected depreciation implies revaluation effect a la Gourinchas-Rey (15% depreciation yields 0.4 ppt decrease in interest payments)
- So 15% depreciation yields 1.4 ppt CA improvement

Starting and ending points

- Trade deficit is 5% of GDP
- NIIP is -25%
- Interest rate 4%
- Current account deficit 6%
- 90% depreciation (ignoring valuation effects)
- 65% depreciation (w/valuation effects, unexpected depreciation)

Reducing the implied depreciation

- Allowing for higher rates of return on US assets vs. US liabilities: 57%
- Allowing for US growth of 4% p.a. (hence to stabilize NIIP/GDP, CA deficit to 1% of GDP): 47%

Figure 2a. Adjustment of the exchange rate and the net debt position to a shift in the trade deficit.

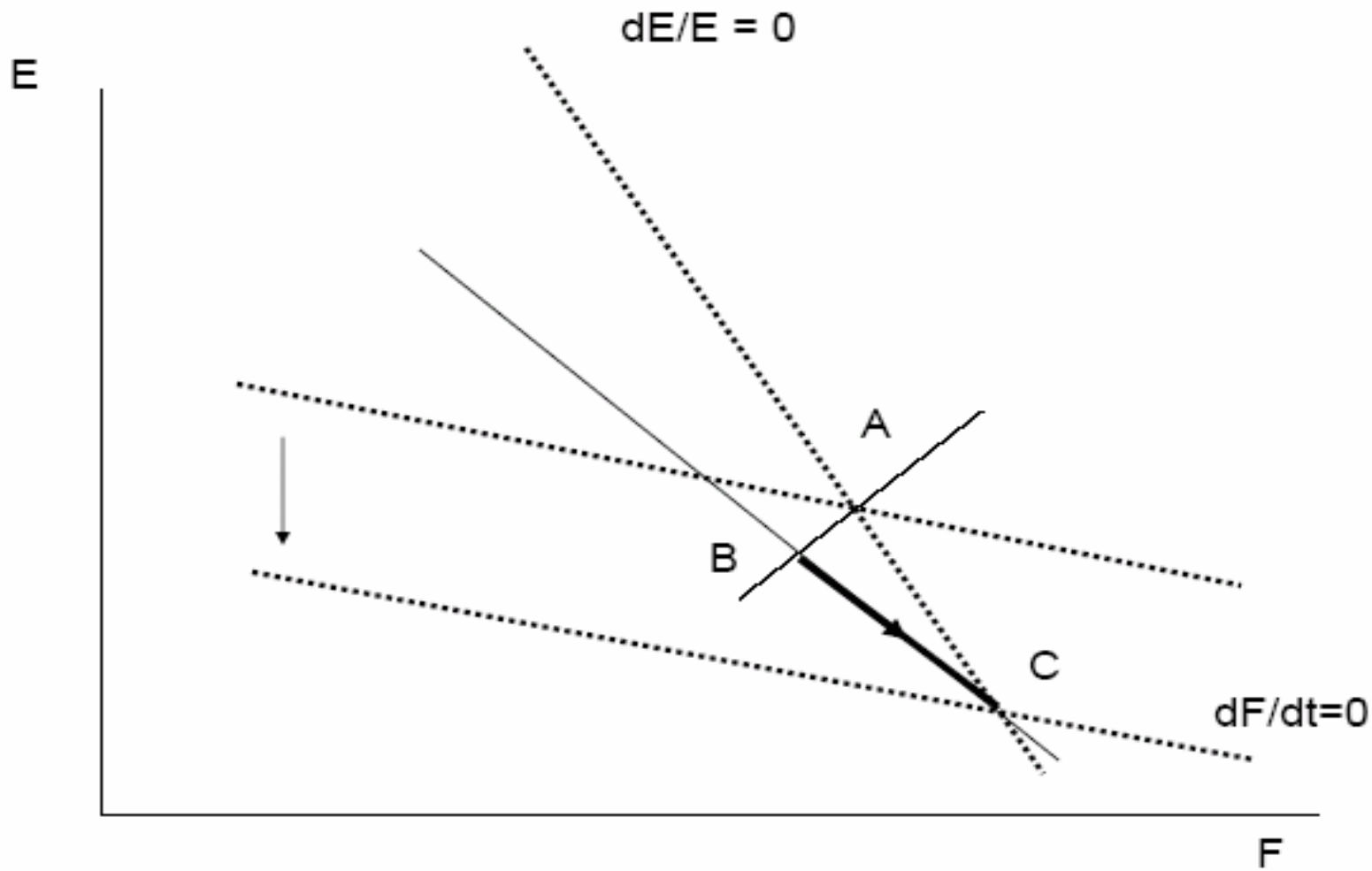


Figure 2b. Adjustment of the exchange rate and the net debt position to a portfolio shift towards U.S. assets

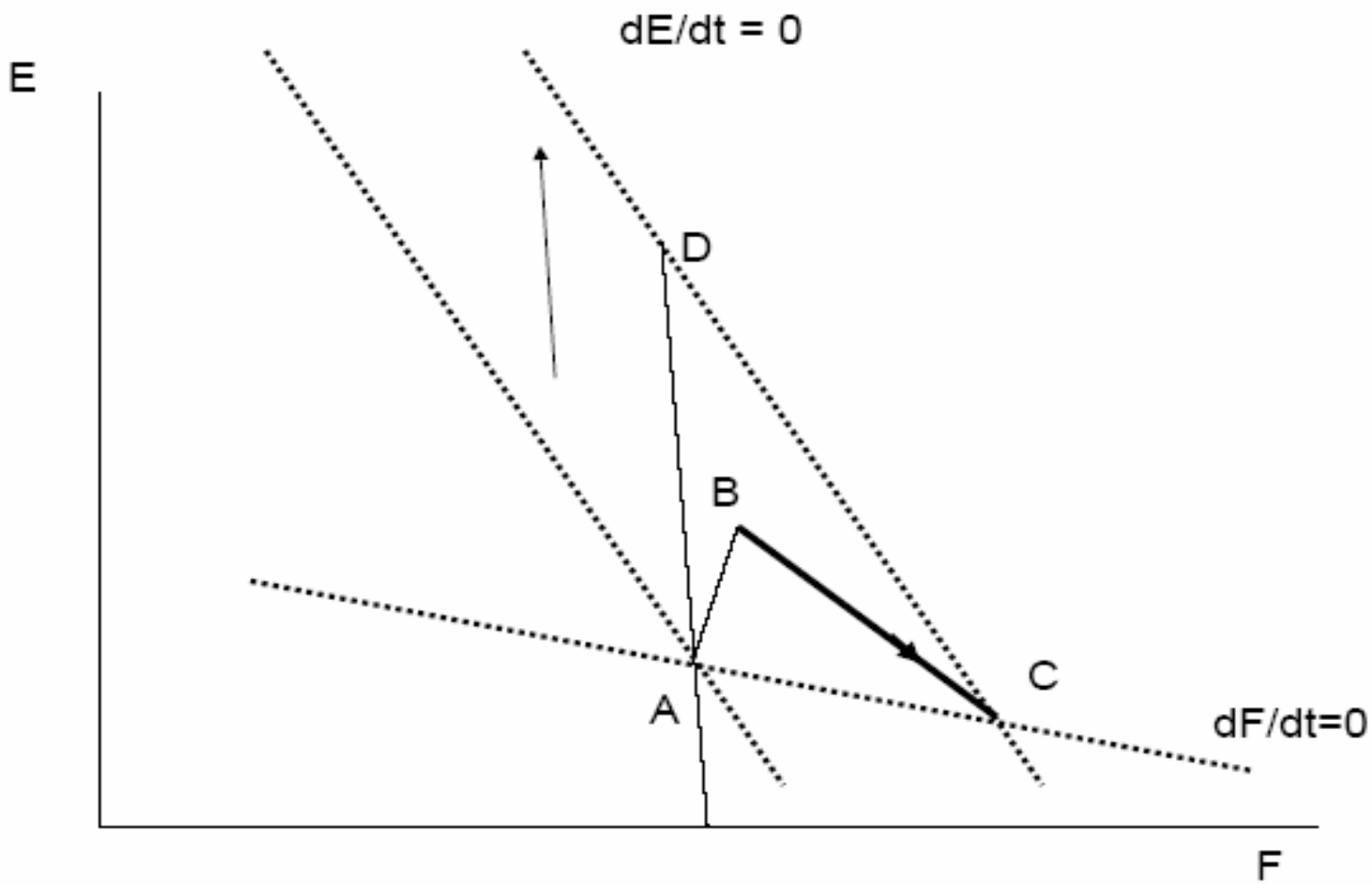


Figure 4. Adjustment of the exchange rate and the net debt position to the end of pegging.