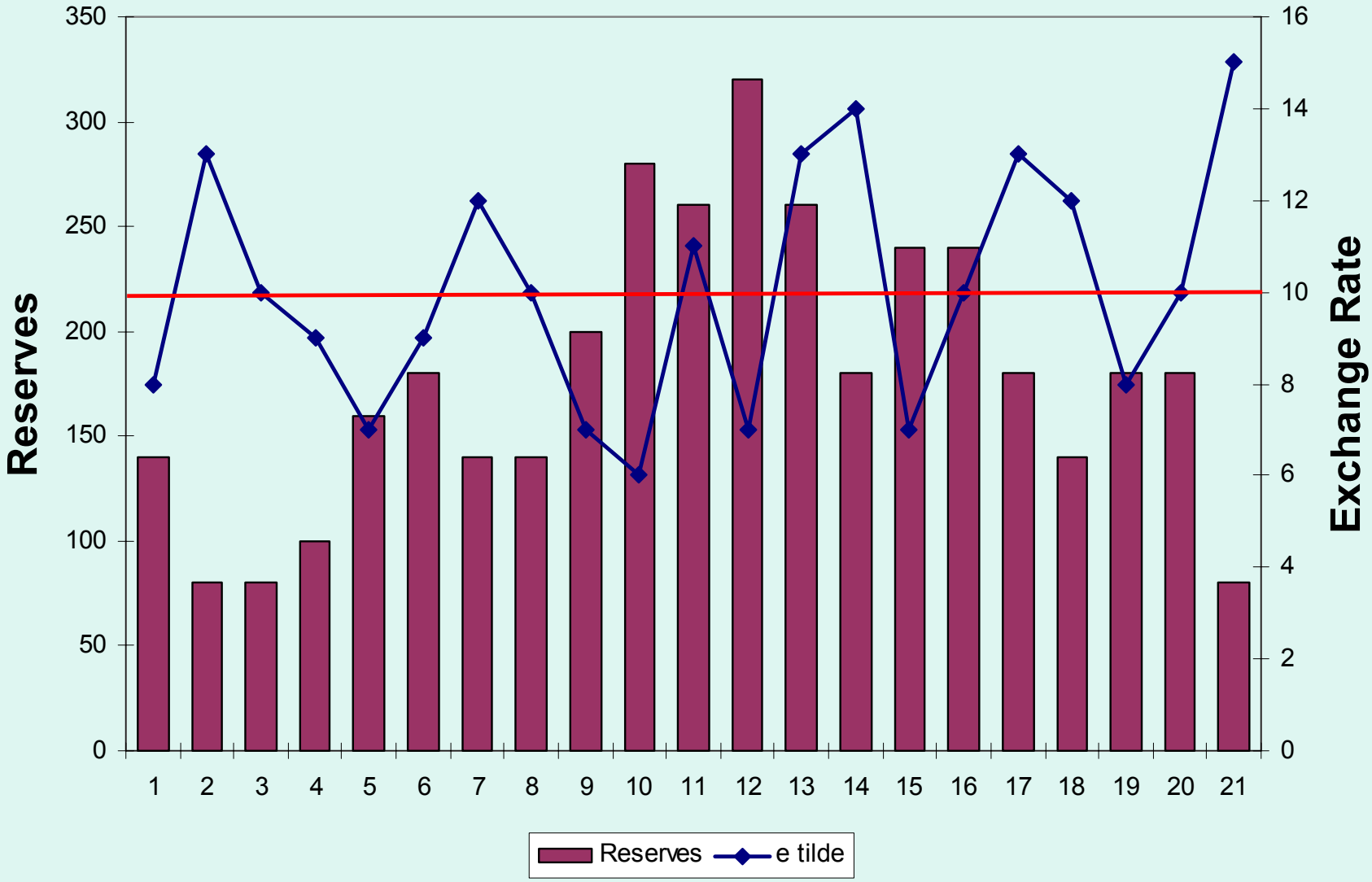
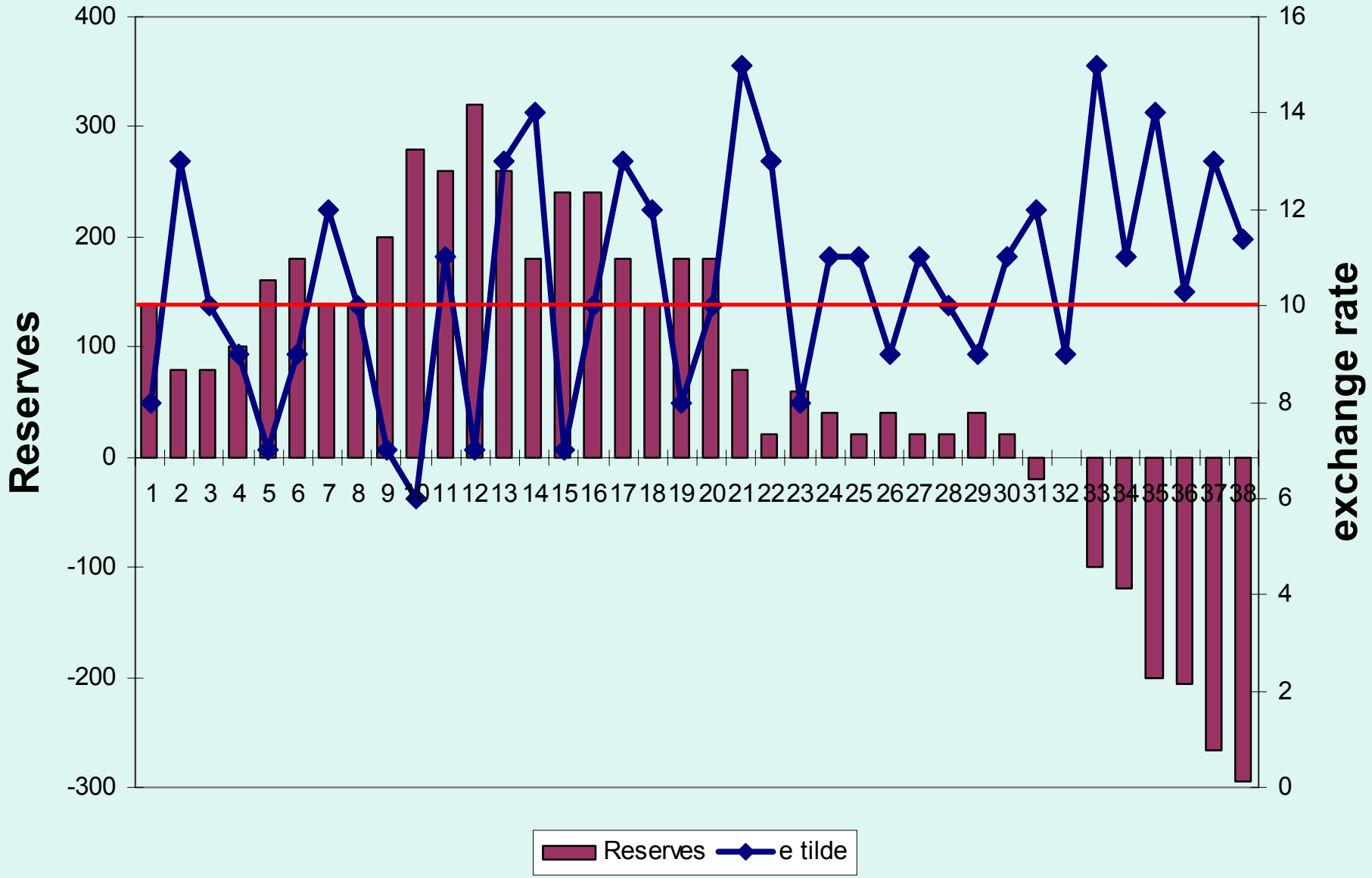
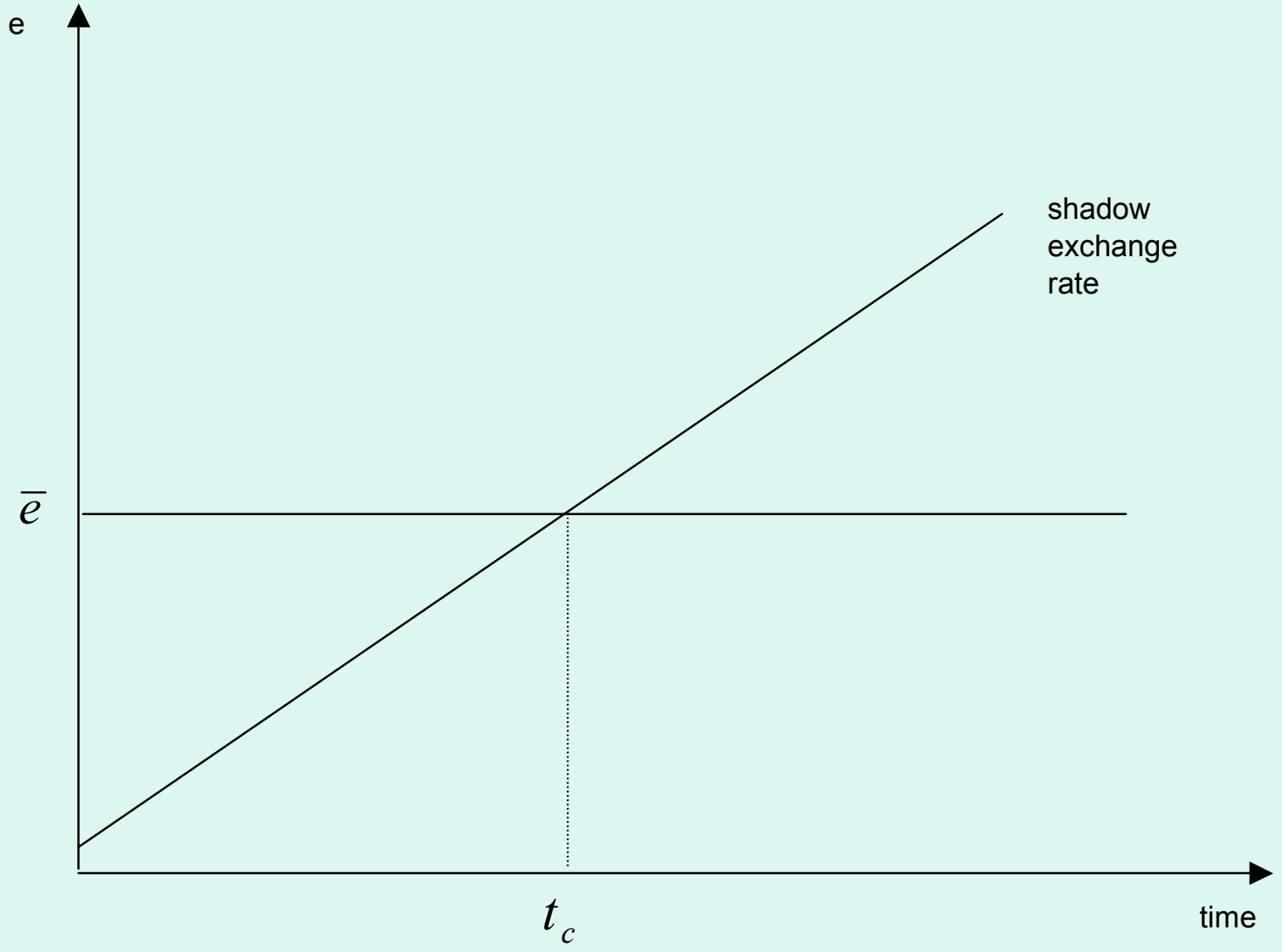
A Sustainable Exchange Rate ($\bar{e} = 10$)

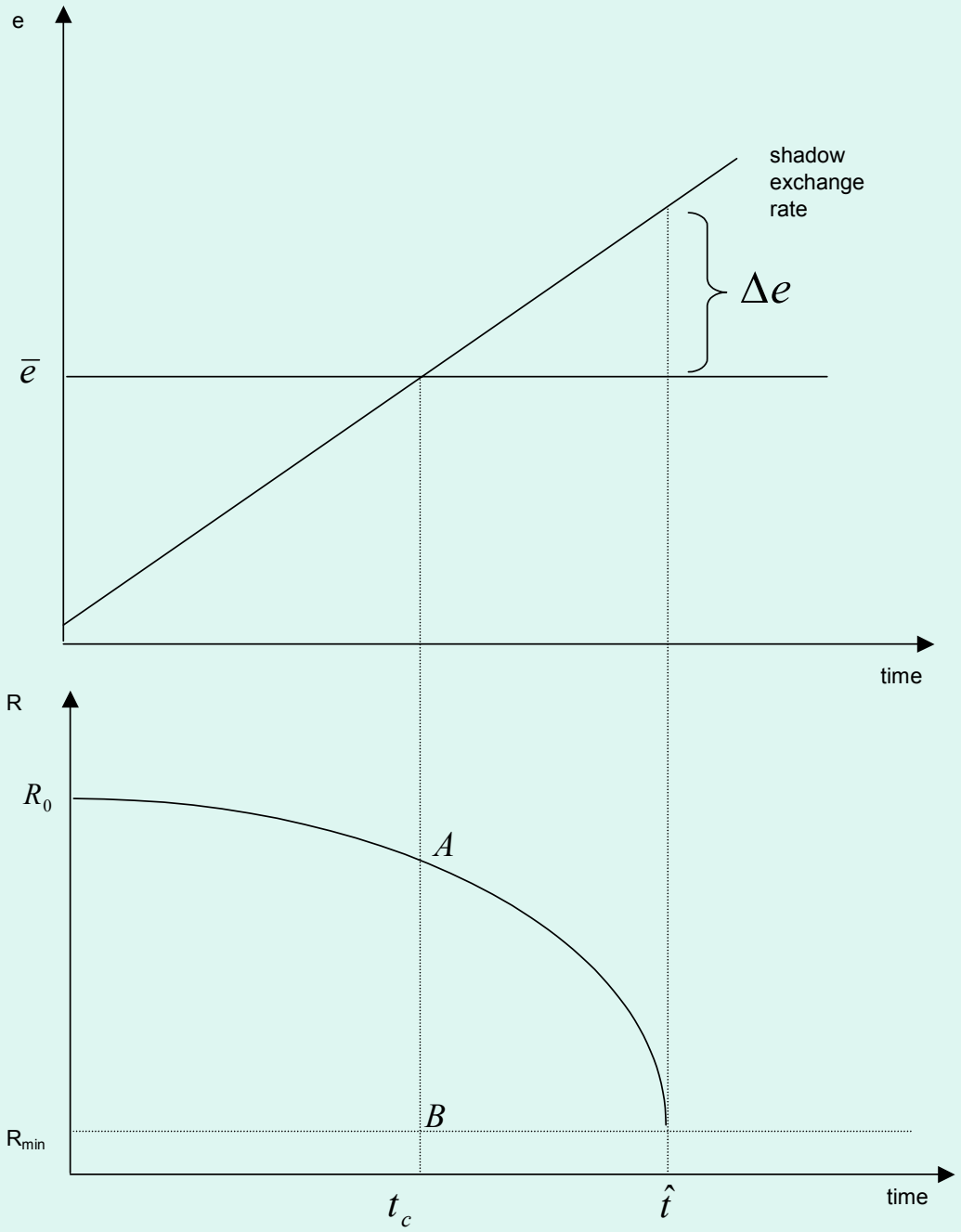


Unsustainable Fixed Exchange Rate ($\bar{e} = 10$)



Time of Collapse

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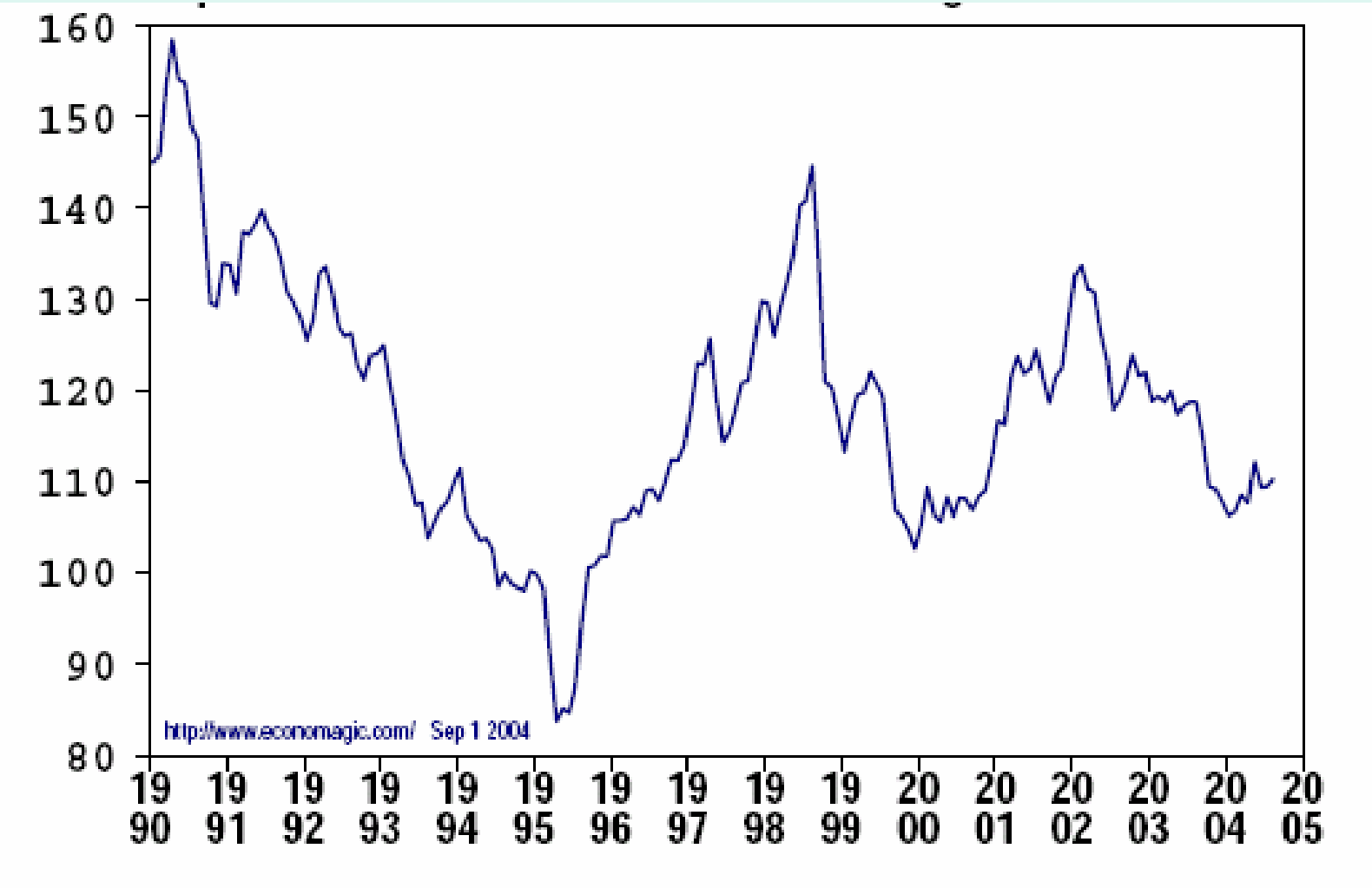
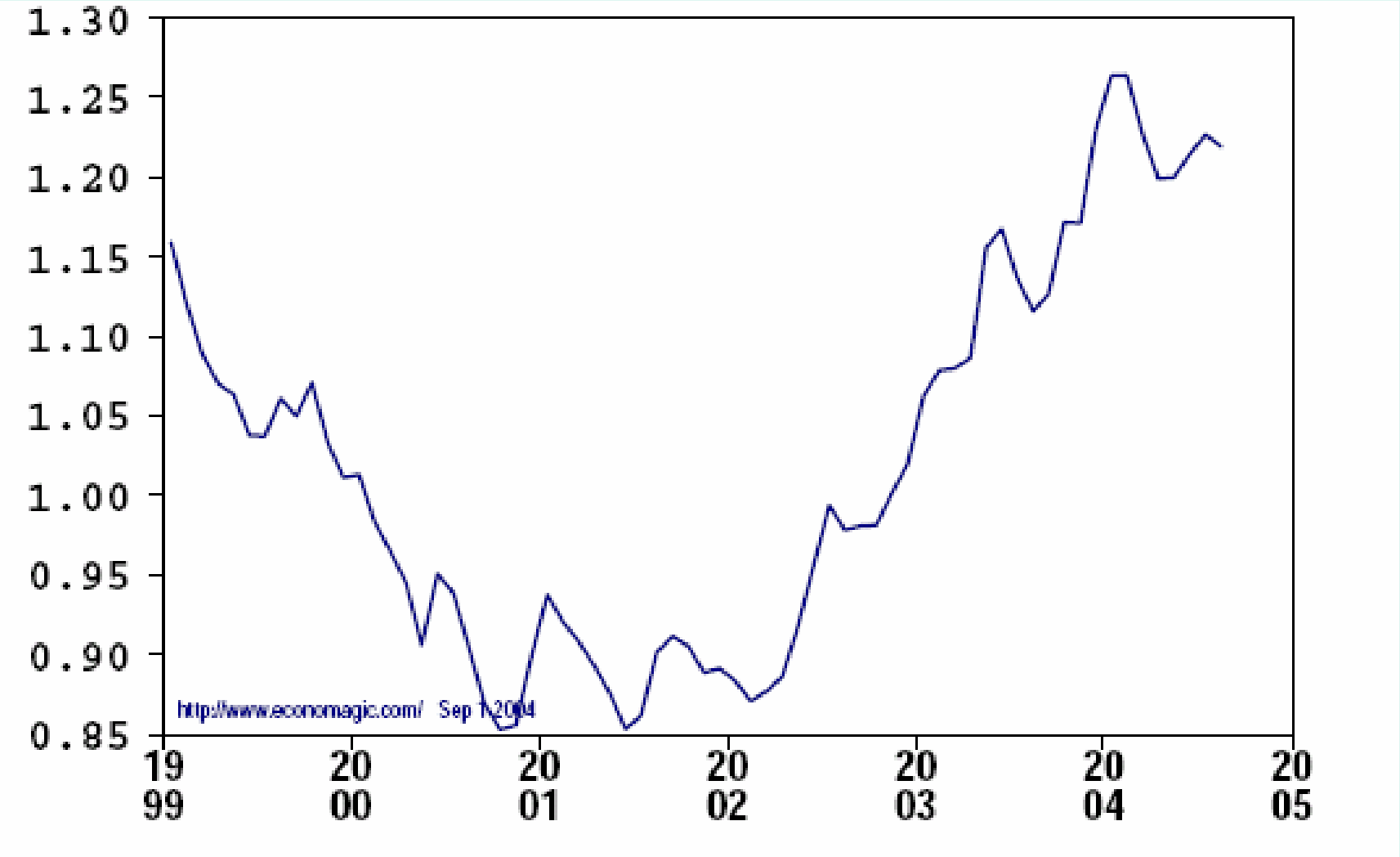
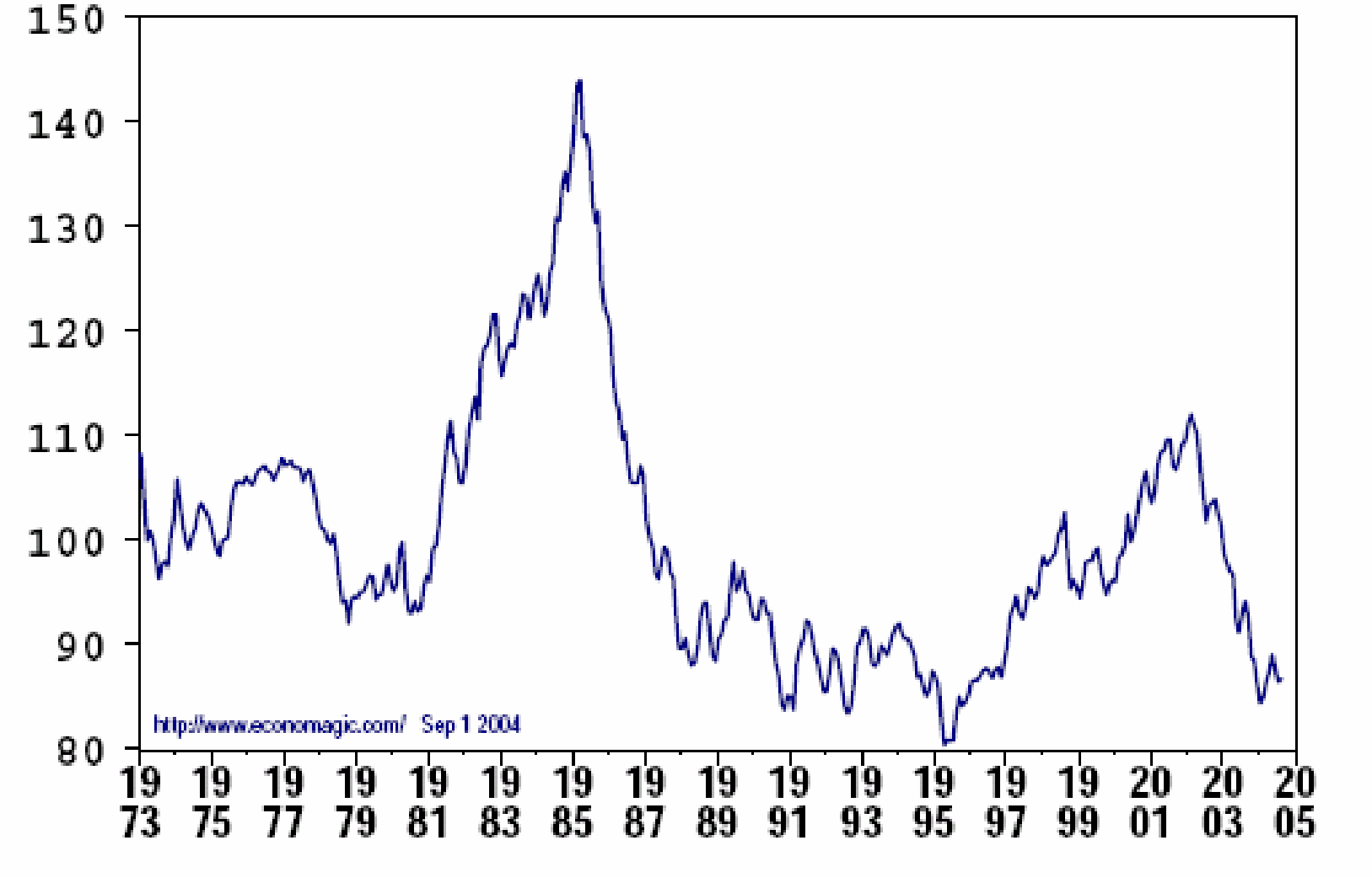
Yen-Dollar Rate



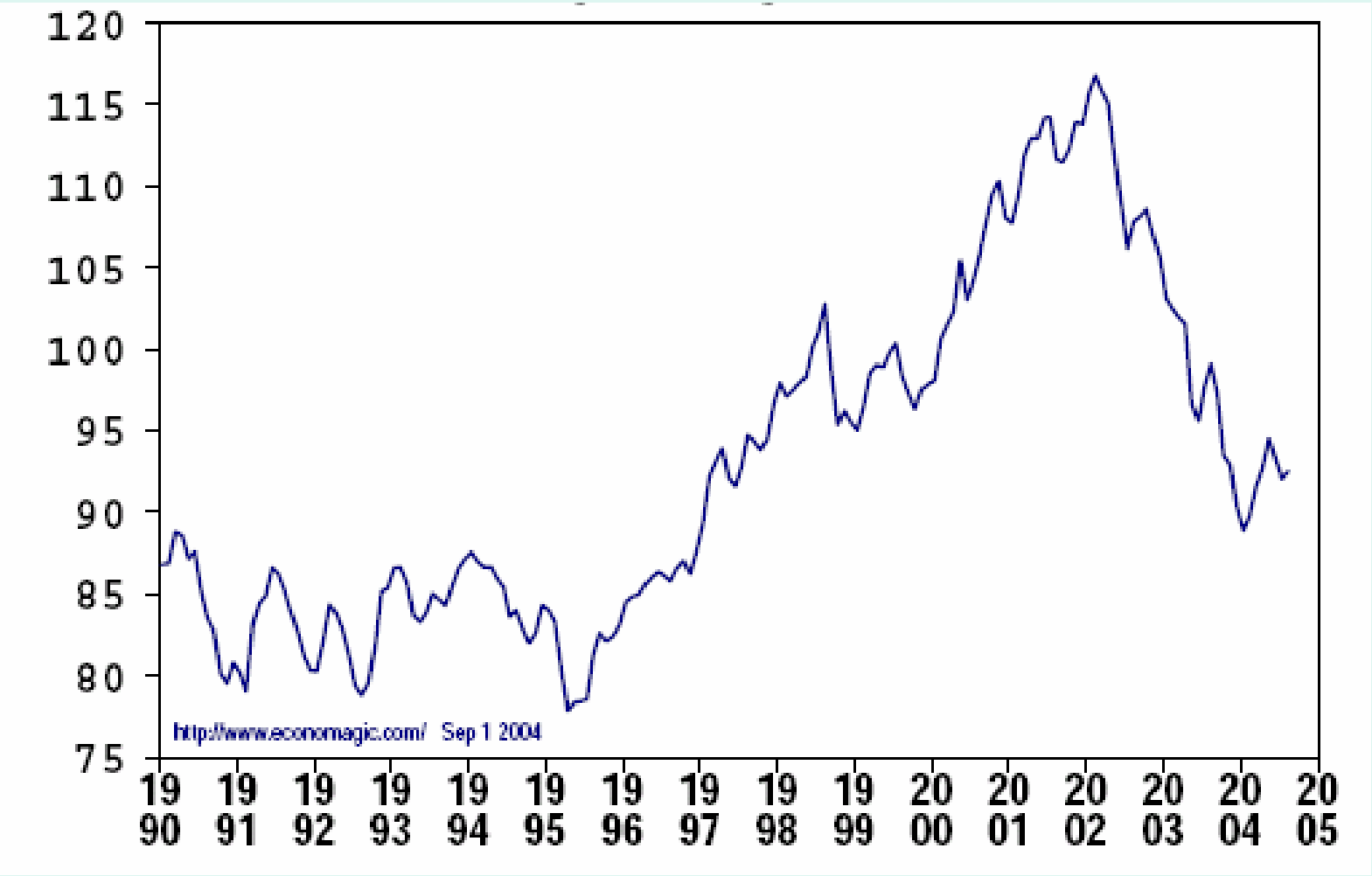
Dollar Price of a Euro



Trade-Weighted Value of the Dollar (Major Currencies)



Trade-Weighted Value of the Dollar (Real, Major Currencies)



Global foreign exchange market turnover

Daily averages in April, in billions of US dollars

Instrument	1989	1992	1995	1998	2001	2004
Spot transactions	317	394	494	568	387	621
Outright forwards	27	58	97	128	131	208
Foreign exchange swaps	190	324	546	734	656	944
Estimated gaps in reporting	56	44	53	60	26	107
Total "traditional" turnover	**590**	**820**	**1,190**	**1,490**	**1,200**	**1,880**
Memorandum item:						
Turnover at April 2004 exchange rates[2]	650	840	1,120	1,590	1,380	1,880

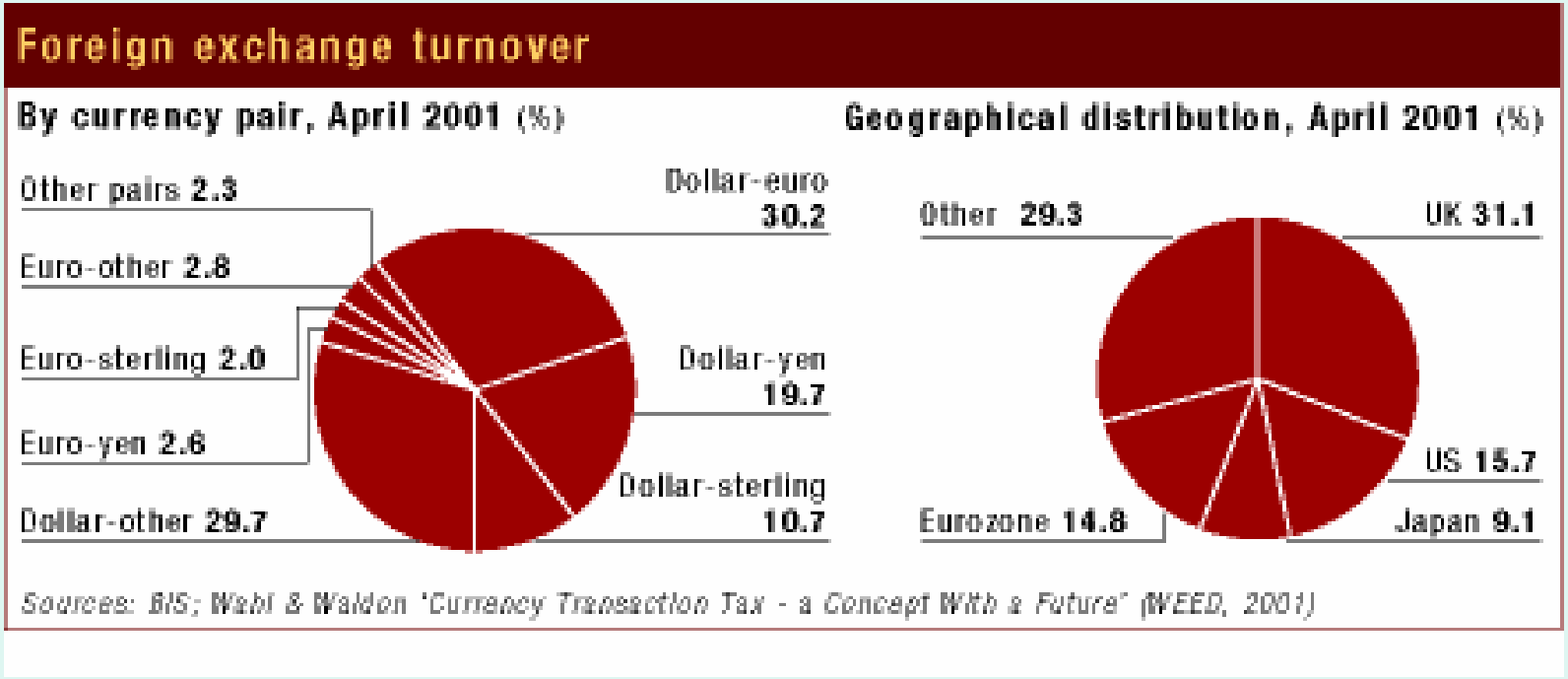
[1] Adjusted for local and cross-border double-counting. [2] Non-US dollar legs of foreign currency transactions were converted into original currency amounts at average exchange rates for April of each survey year and then reconverted into US dollar amounts at average April 2004 exchange rates.

Currency distribution of reported foreign exchange market turnover

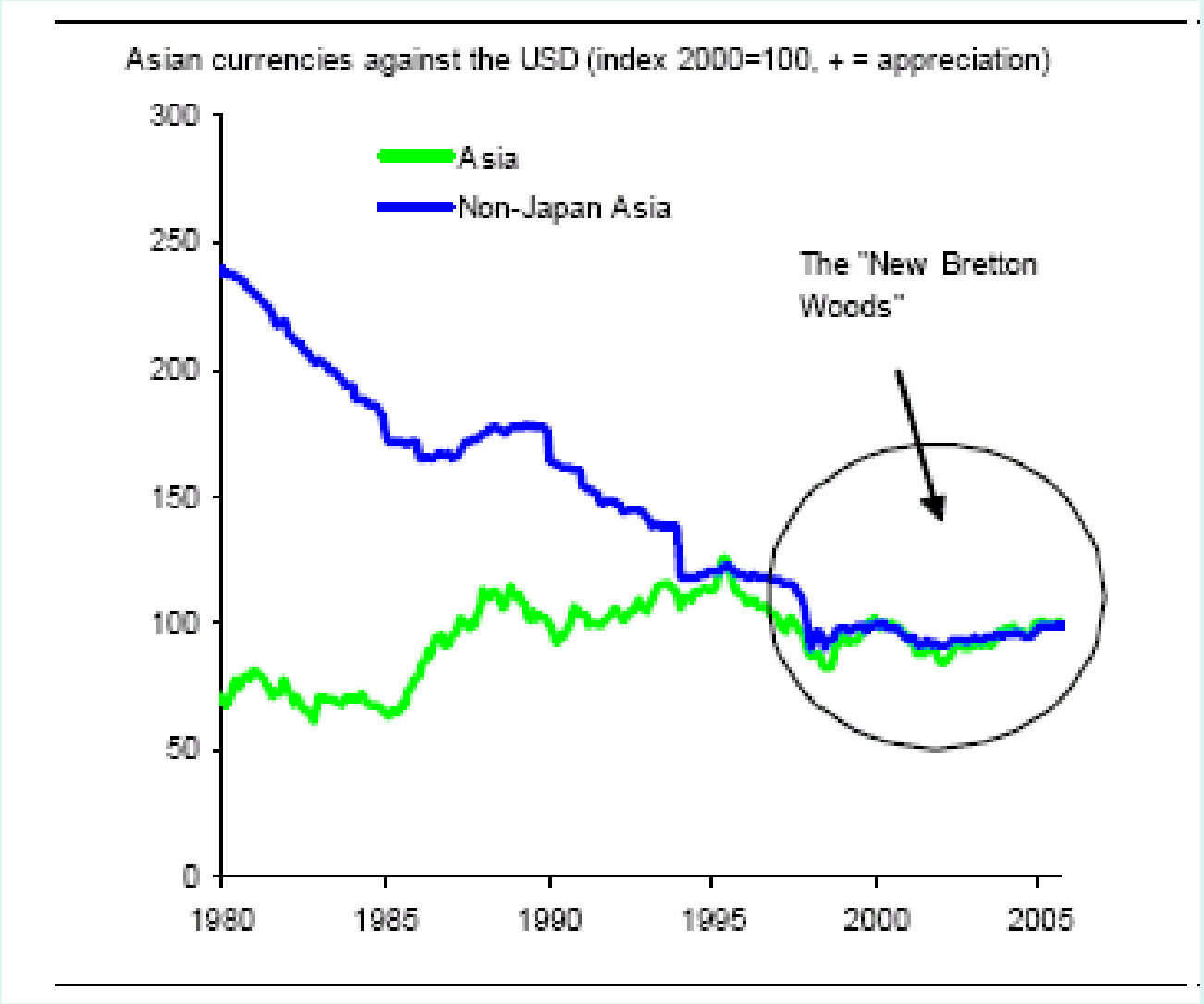
Percentage shares of average daily turnover in April

Currency	1989	1992	1995	1998	2001	2004
US dollar	90	82.0	83.3	87.3	90.3	88.7
Euro	.	.	.	.	37.6	37.2
Deutsche mark[2]	27	39.6	36.1	30.1	.	.
French franc	2	3.8	7.9	5.1	.	.
ECU and other EMS currencies	4	11.8	15.7	17.3	.	.
Japanese yen	27	23.4	24.1	20.2	22.7	20.3
Pound sterling	15	13.6	9.4	11.0	13.2	16.9
Swiss franc	10	8.4	7.3	7.1	6.1	6.1
Australian dollar	2	2.5	2.7	3.1	4.2	5.5
Canadian dollar	1	3.3	3.4	3.6	4.5	4.2

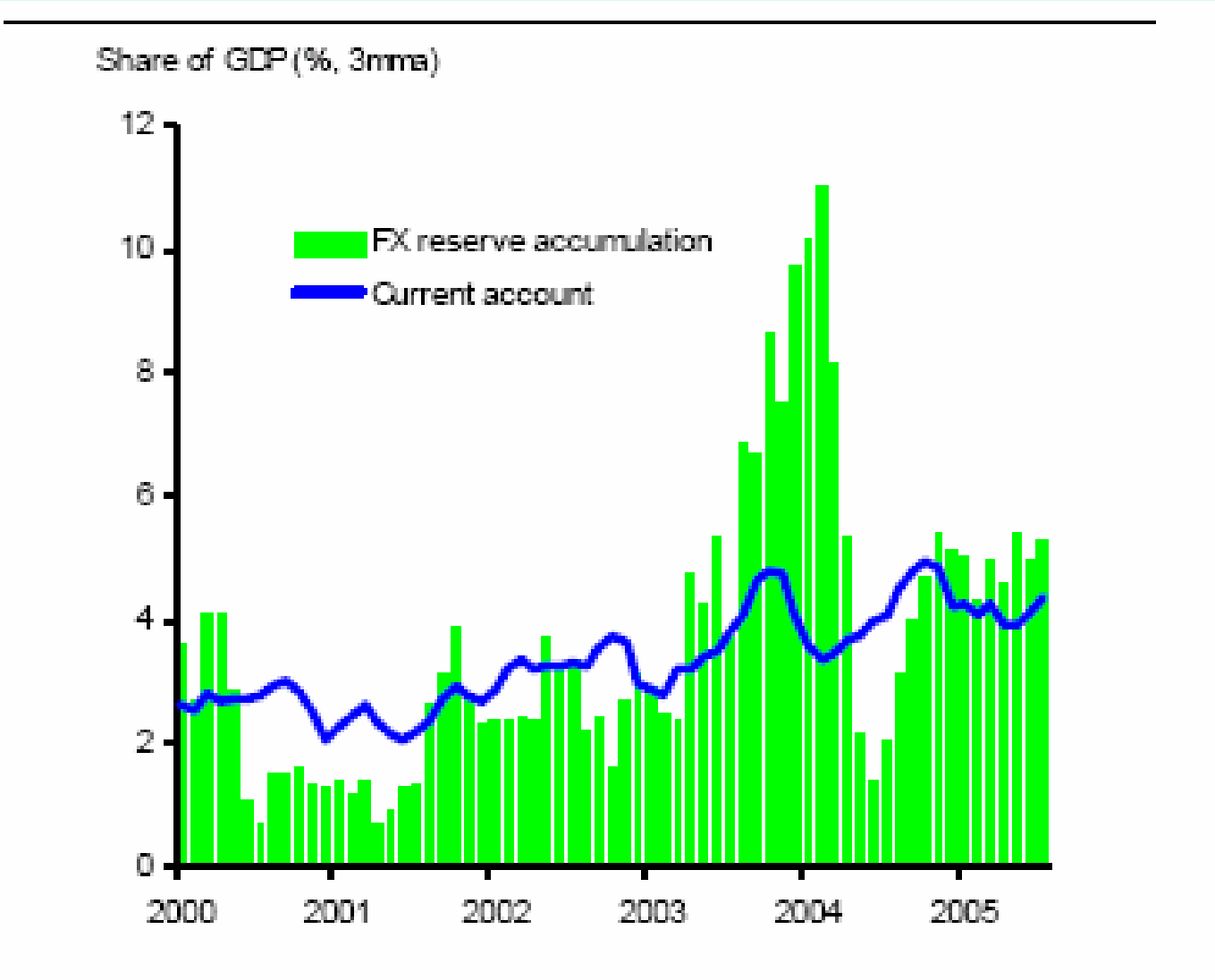
Foreign Exchange Turnover, Currency and Region



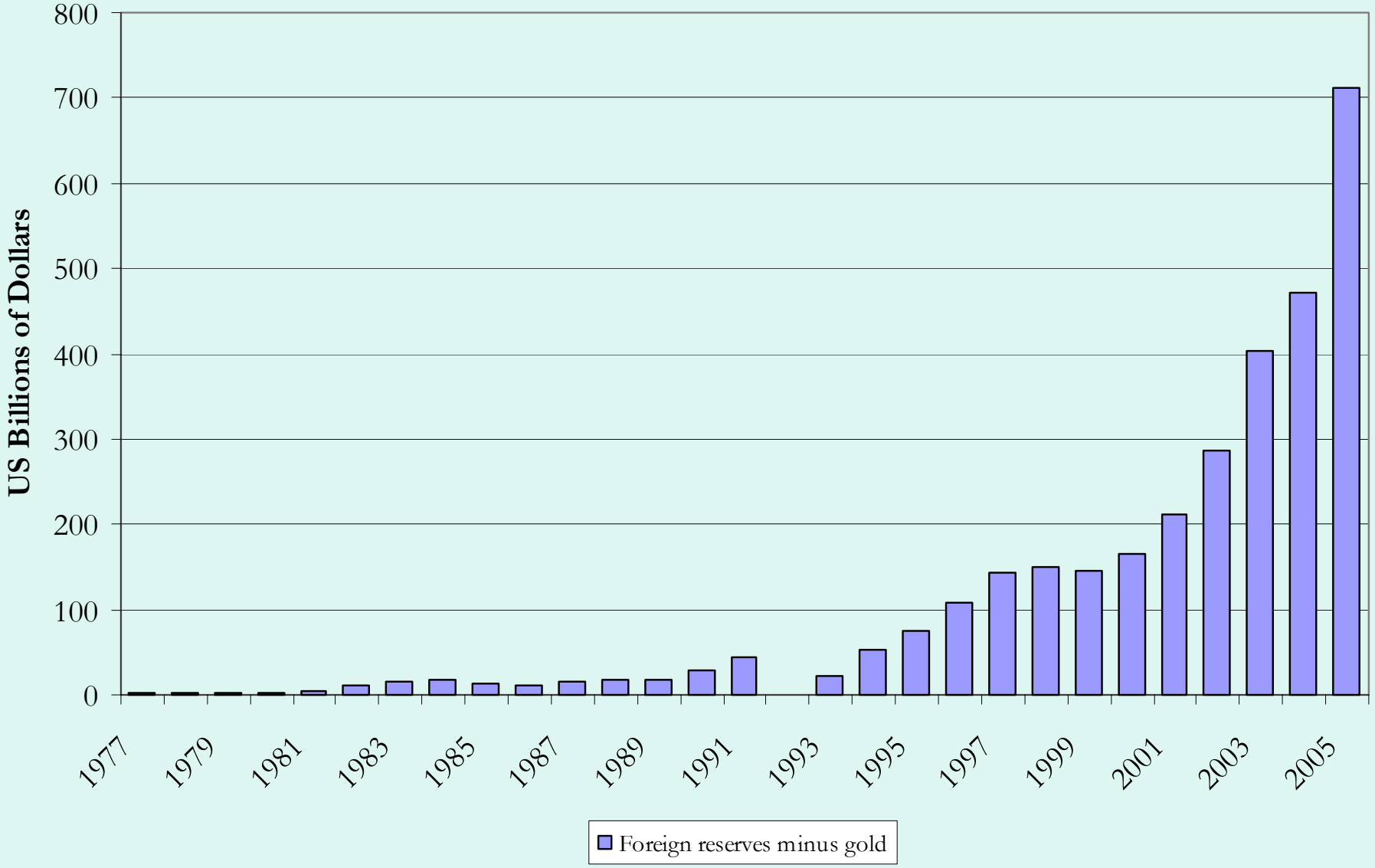
Since 2000, “pegged to the dollar”



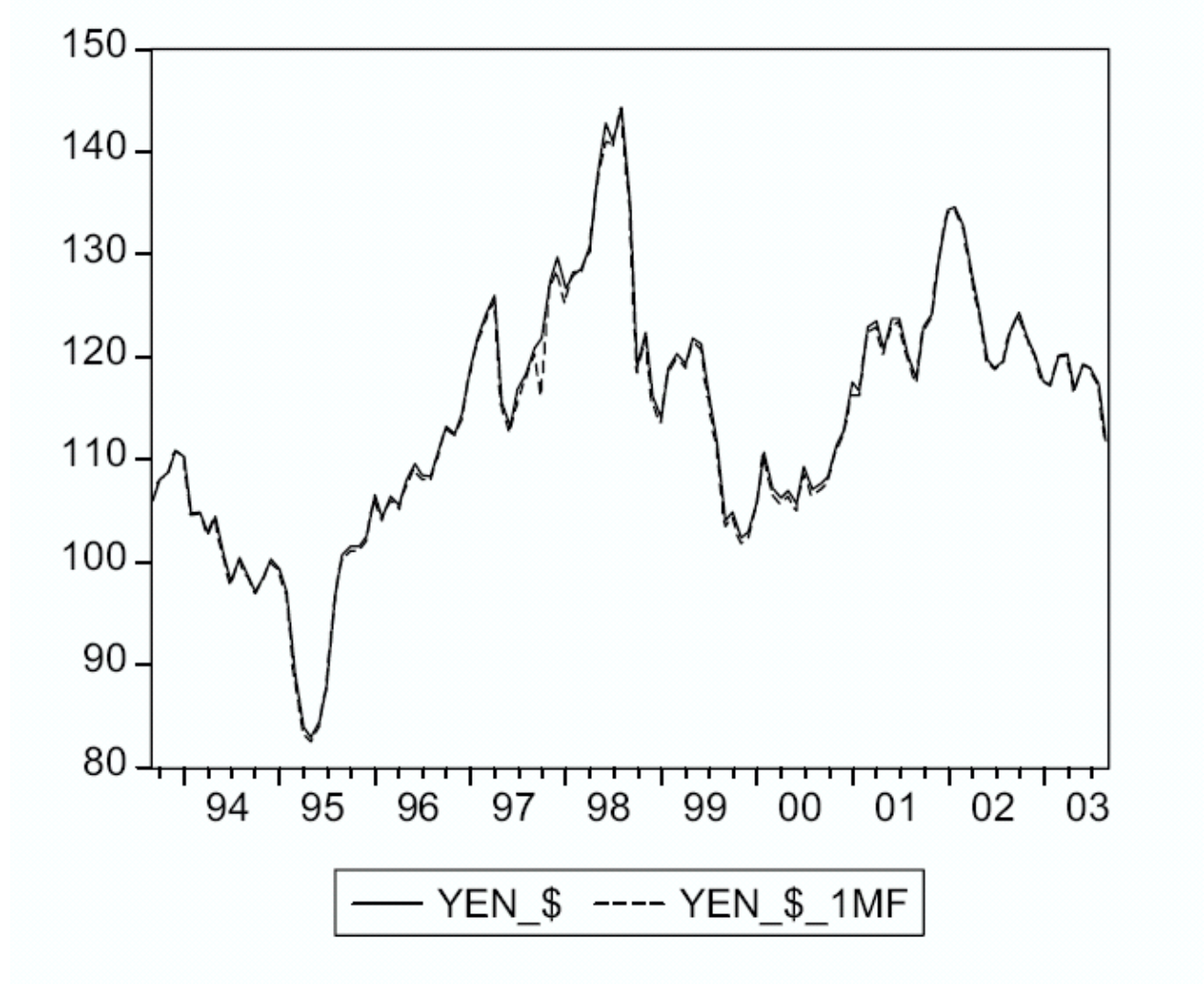
Reserve Accumulation



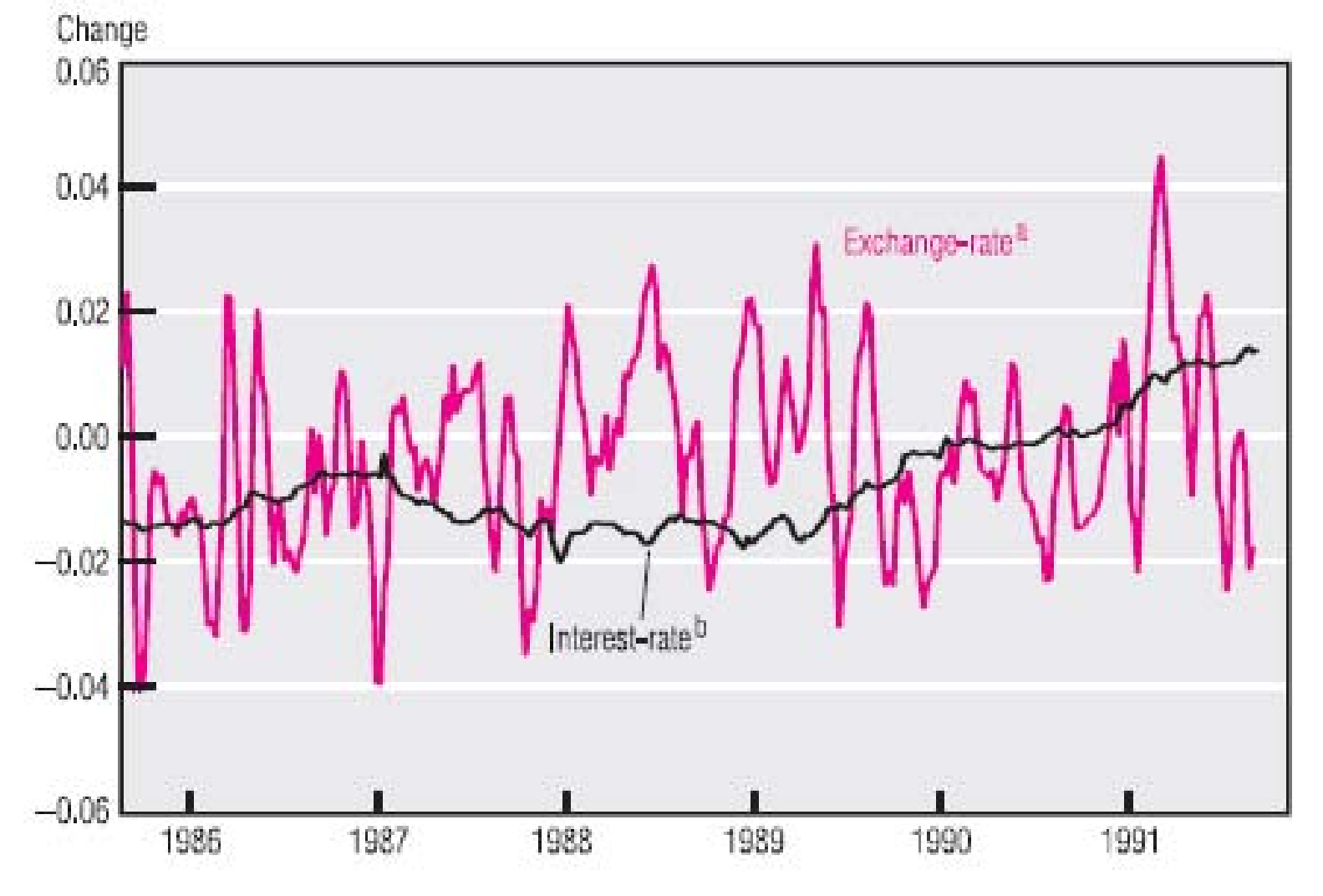
China's Reserves



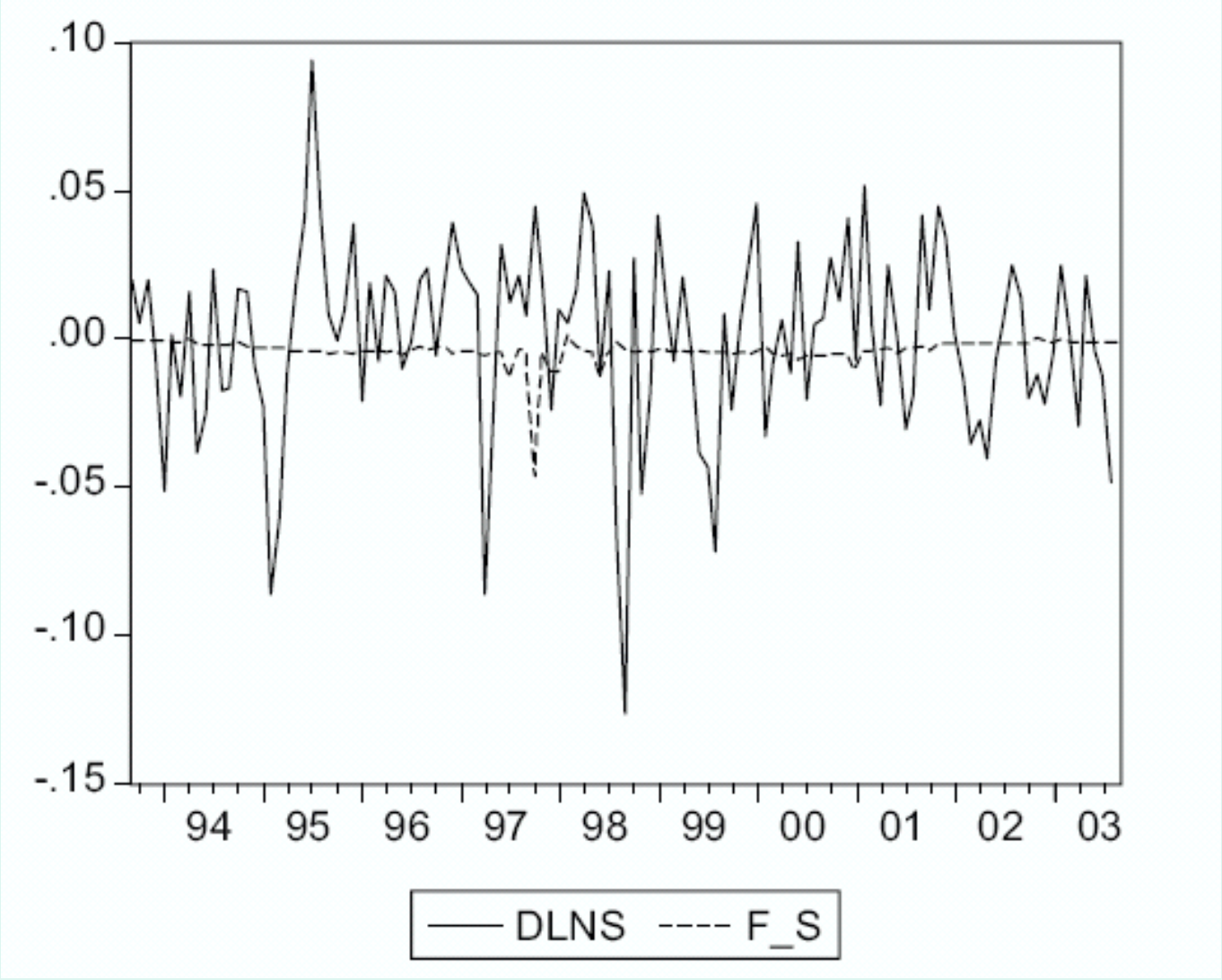
Yen Spot and Forward Rate



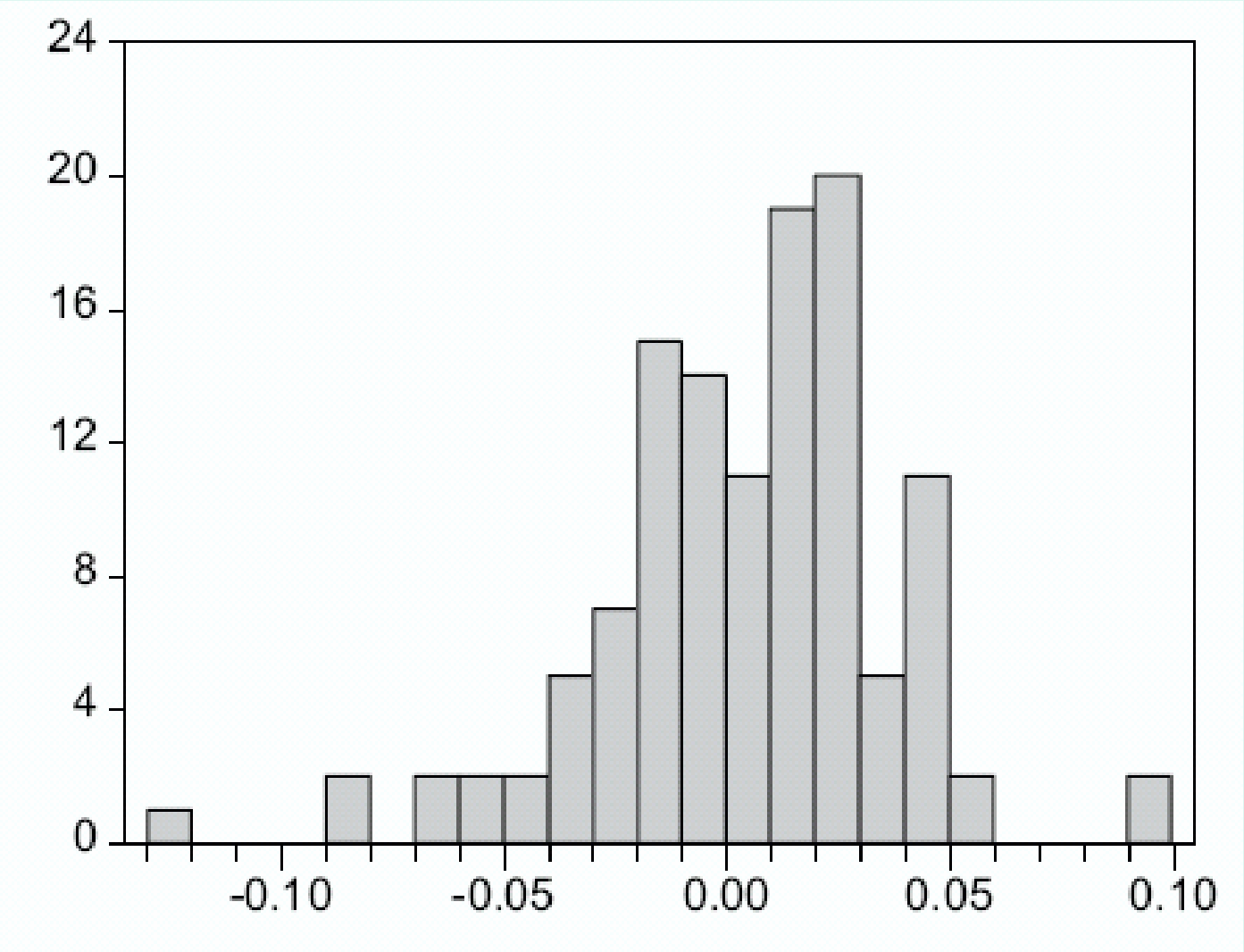
Dollar – DM forward puzzle



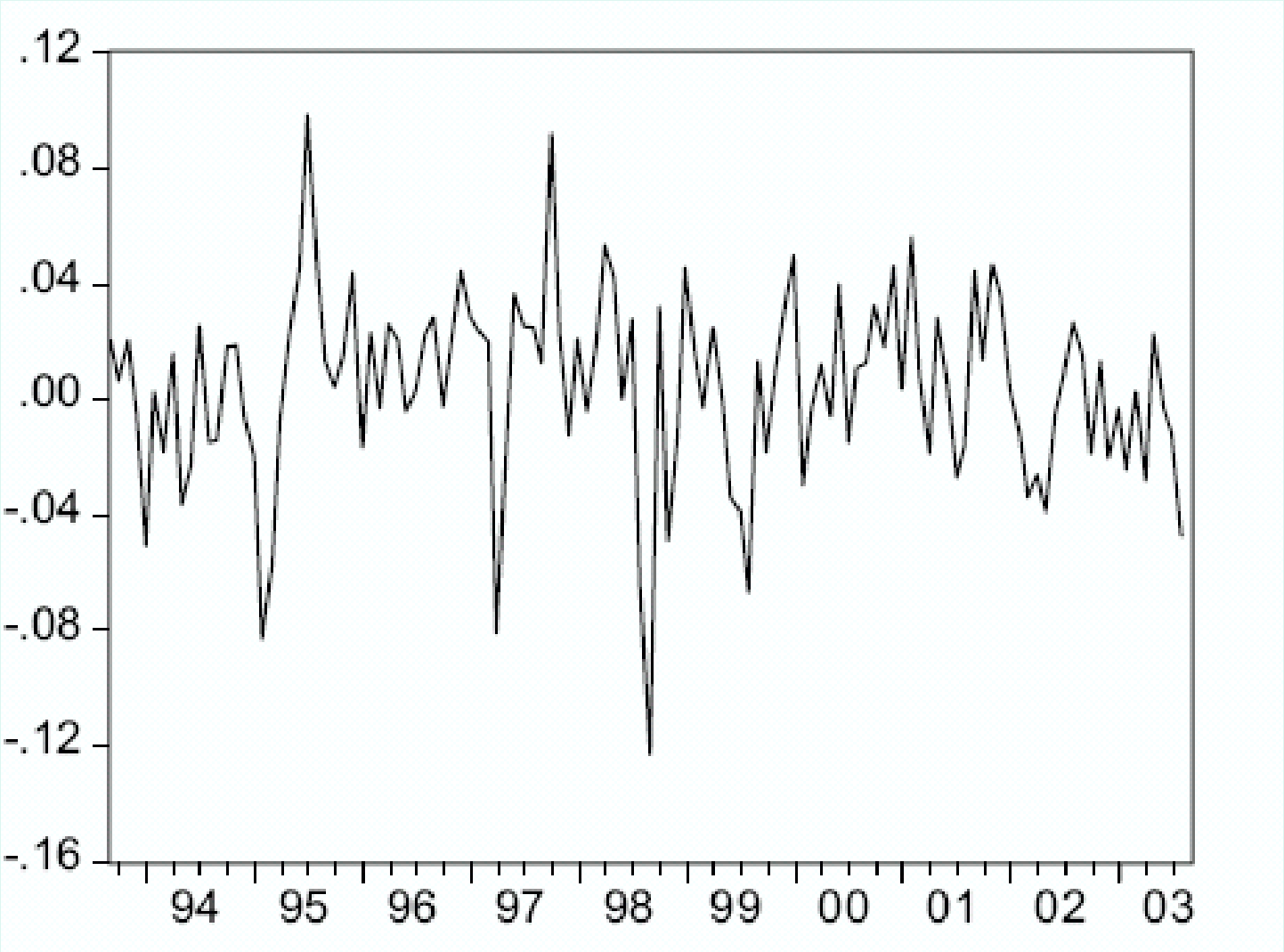
Realized Changes and the Forward Premium, Yen



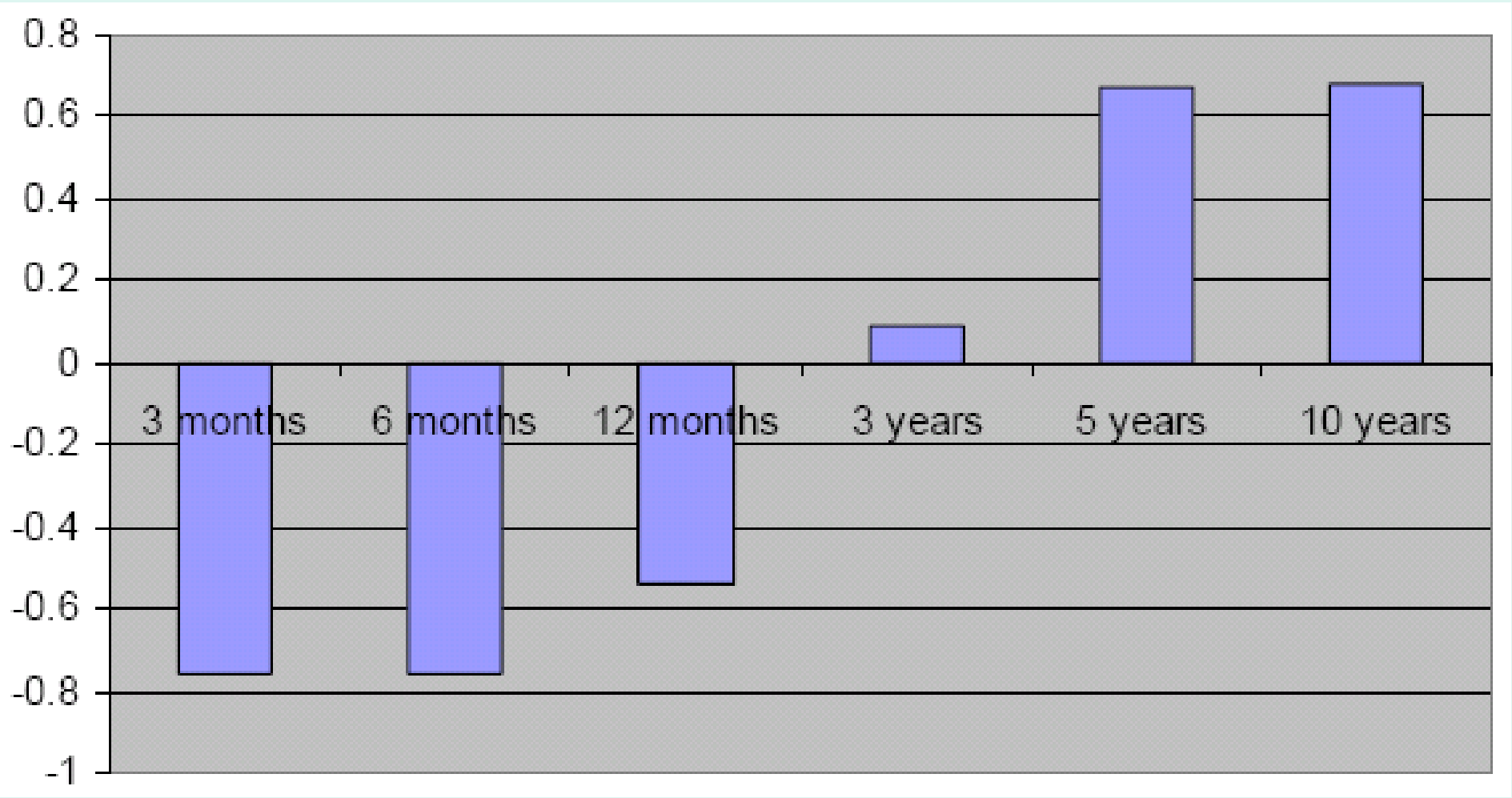
Realized Profits on Yen Arbitrage



Realized Profits on Yen Arbitrage



Beta Coefficients



Short-Horizon Tests

Table 1. Short-Horizon Estimates of b

$$\Delta s_{t,t+k} = \alpha + \beta\left(i_{t,k} - i^{*}_{t,k}\right) + \varepsilon_{t,t+k}$$

	Maturity		
Currency	3 months	6 months	12 months
Deutsche mark	–0.809* (1.134)	–0.893*** (0.802)	–0.587*** (0.661)
Japanese yen	–2.887*** (0.997)	–2.926*** (0.800)	–2.627*** (0.700)
U.K. pound	–2.202*** (1.086)	–2.046*** (1.032)	–1.418*** (0.986)
French franc	–0.179 (0.904)	–0.154 (0.787)	–0.009 (0.773)
Italian lira	0.518 (0.606)	0.635 (0.670)	0.681 (0.684)
Canadian dollar	–0.477*** (0.513)	–0.572*** (0.390)	–0.610*** (0.490)
Constrained panel[1]	–0.757*** (0.374)	–0.761*** (0.345)	–0.536*** (0.369)

Notes: Point estimates from the regression in equation (7) (serial correlation robust standard errors in parentheses, calculated assuming k-1 moving average serial correlation). Sample is 1980: Q1–2000: Q4. *, **, *** indicate different from null of unity at, respectively, the 10 percent, 5 percent, and 1 percent marginal significance level.

[1]Fixed-effects regression. Standard errors adjusted for serial correlation (see text).

Long-Horizon Tests, Annual Data

$$\Delta s_{t,t+k} = \alpha + \beta\left(i_{t,k} - i^{*}_{t,k}\right) + \varepsilon_{t,t+k}$$

5-Year Government Bond Yields

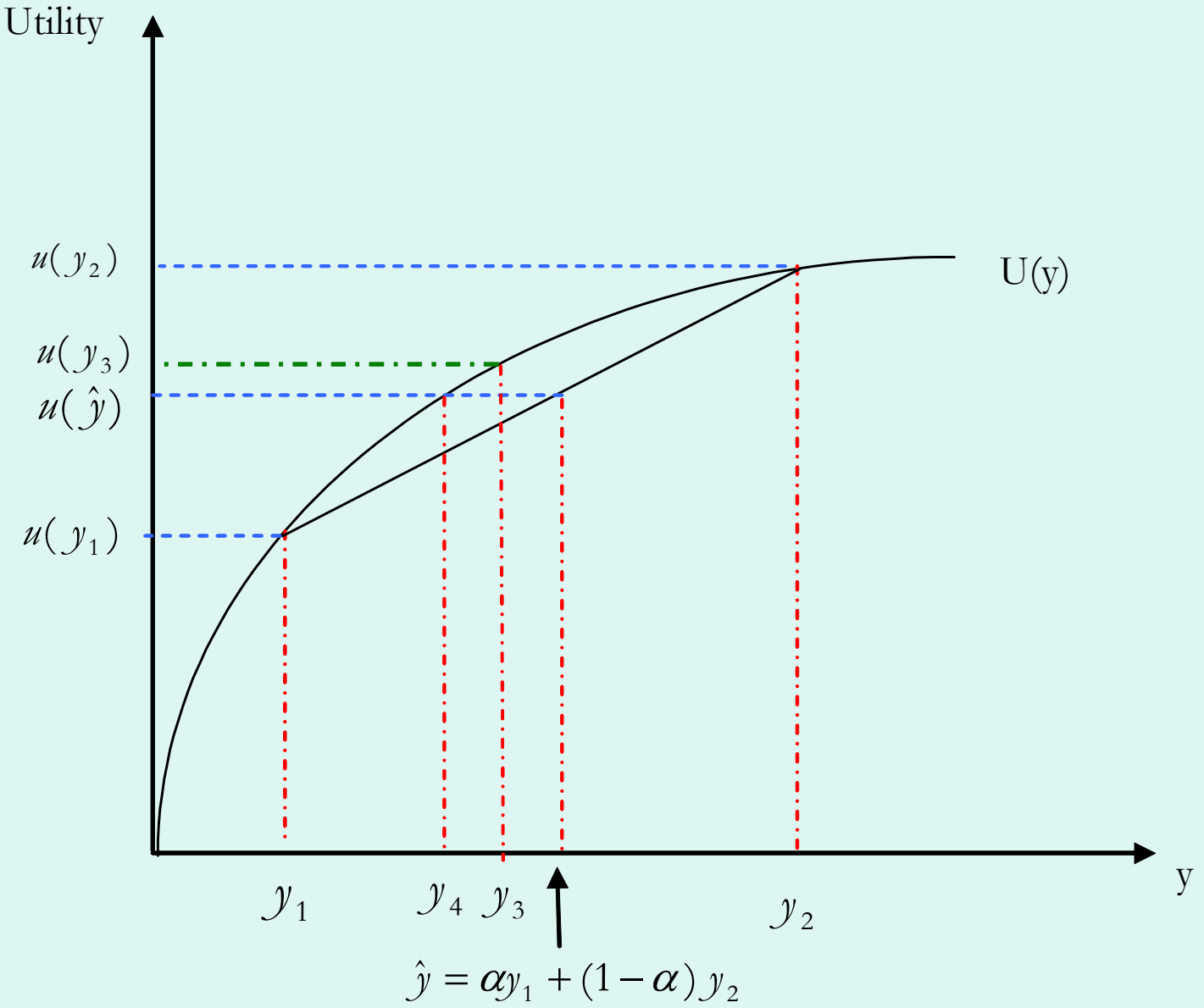
(MA(4)-adjusted standard errors in parentheses)

	$\hat{\alpha}$	$\hat{\beta}$	Reject H_0: $\beta = 1$	R^2	N
Deutsche mark	0.001 (0.013)	0.608 (0.902)		0.03	21
U.K. pound	0.001 (0.018)	0.402 (0.529)		0.02	21
Canadian dollar	–0.006 (0.009)	0.608 (0.534)		0.04	21
Constrained panel[1]	. . .	0.514 (0.473)		0.06	63

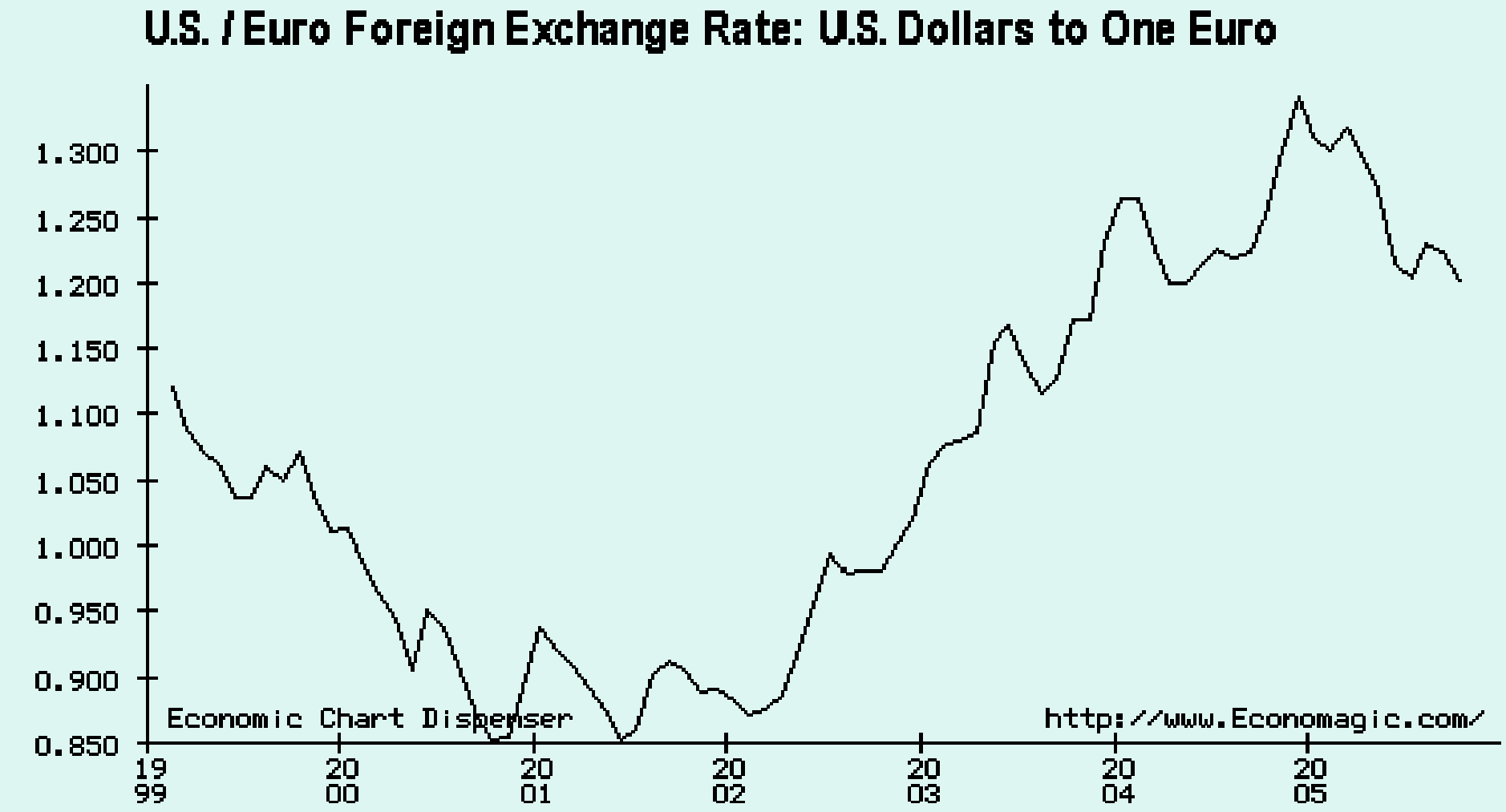
Notes: Point estimates from the regression in equation (7) (serial correlation robust standard errors in parentheses, calculated assuming k-1 moving average serial correlation). Sample period: 1980: Q1–2000: Q4. *, **, and *** indicate different from null hypothesis at, respectively, the 10 percent, 5 percent, and 1 percent marginal significance level.

[1]Fixed-effects regression. Standard errors adjusted for serial correlation (see text).

Certain and Uncertain Income and Utility



Dollar rises against Euro



Euros per dollar

Pounds per Dollar

Yen per Dollar

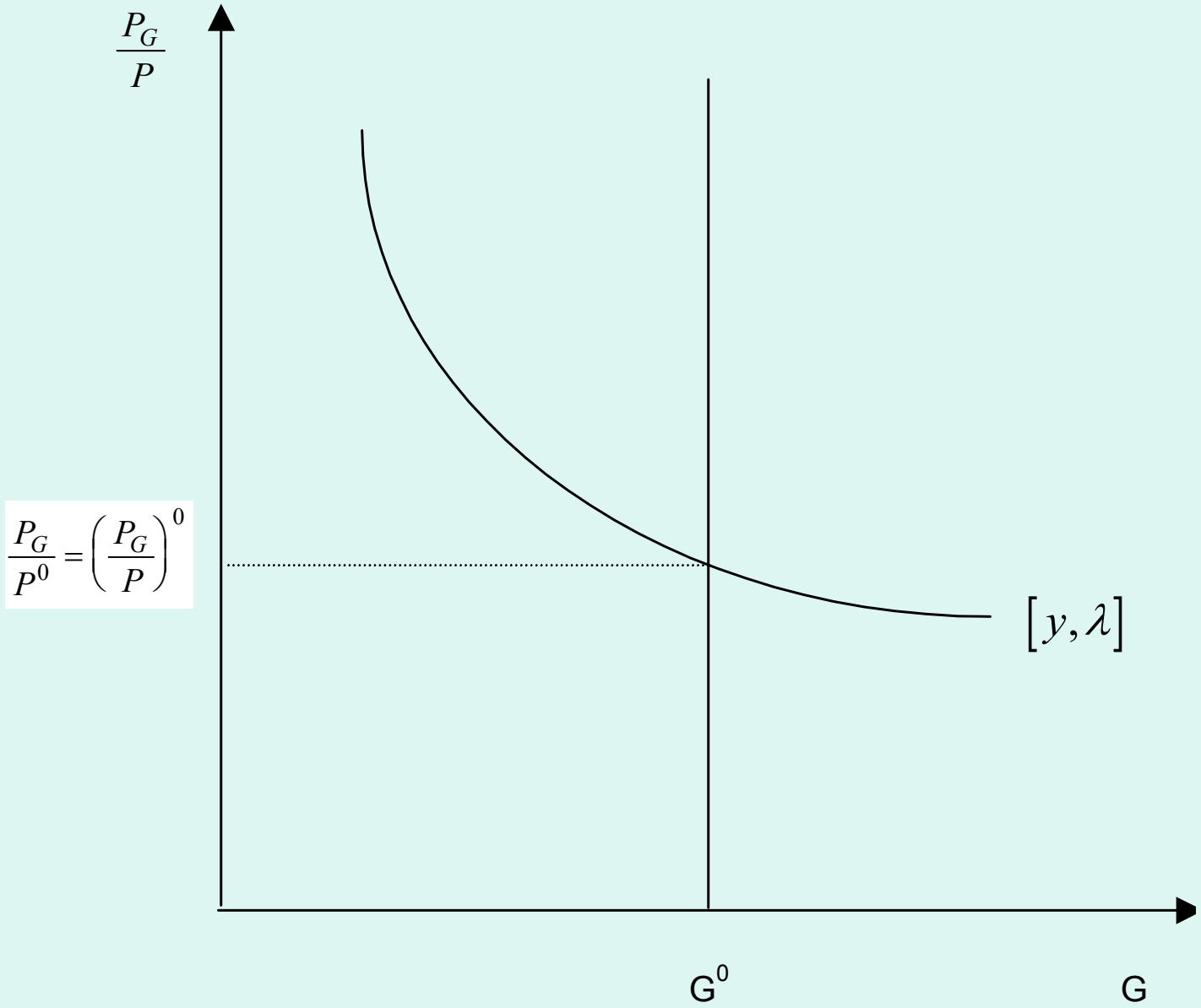
Hume: Specie-Flow Mechanism

- "Suppose four-fifths of all the money in Great Britain to be annihilated in one night...what would be the consequence? Must not the price of all labour and commodities sink in proportion, and everything be sold as cheap as they were in those ages? What nation could then dispute with us in any foreign market, or pretend to navigate or to sell manufactures at the same price, which to us would afford sufficient profit? In how little time, therefore, must this bring back the money which we had lost, and raise us to the level of all the neighbouring nations? Where, after we have arrived, we immediately lose the advantage of the cheapness of labour and commodities; and the farther flowing in of money is stopped by our fullness and repletion." Hume, Of Money.

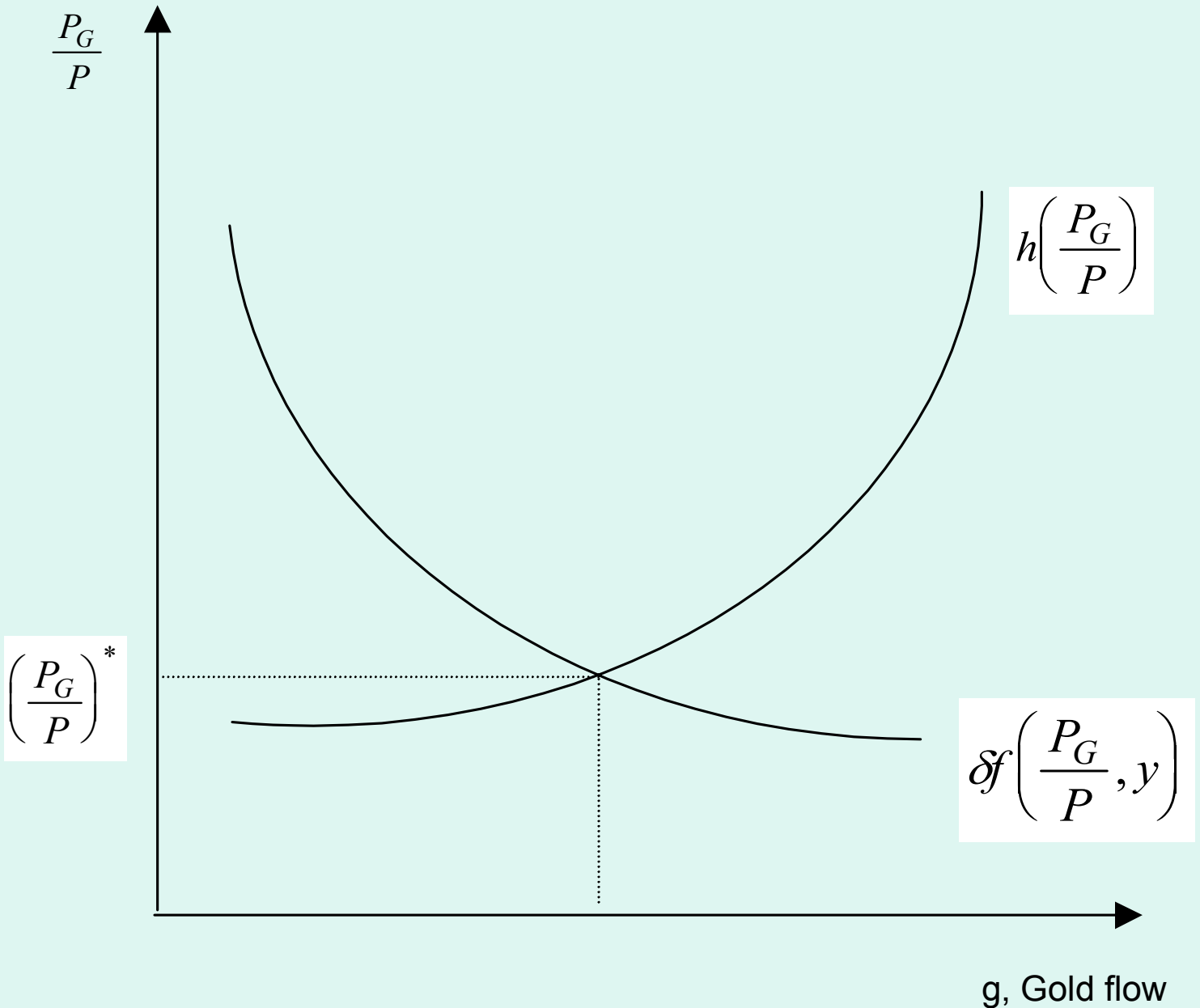
Rules of the International Gold Standard

1. Fix a gold price (parity) and convert gold freely between domestic money and gold at that price.
2. No restrictions on the export of gold by private citizens or of capital across countries.
3. Back national banknotes and coinage with gold reserves and condition long-run money growth on gold reserves
4. In short-run liquidity crises resulting from a gold outflow, have the central bank extend liquidity at higher interest rates (Bagehot's Rule).
5. If rule 1 is temporarily suspended restore convertibility at the soonest feasible point in time at the old parity.
6. Allow the common worldwide price level to be determined endogenously by world demand and supply of gold.

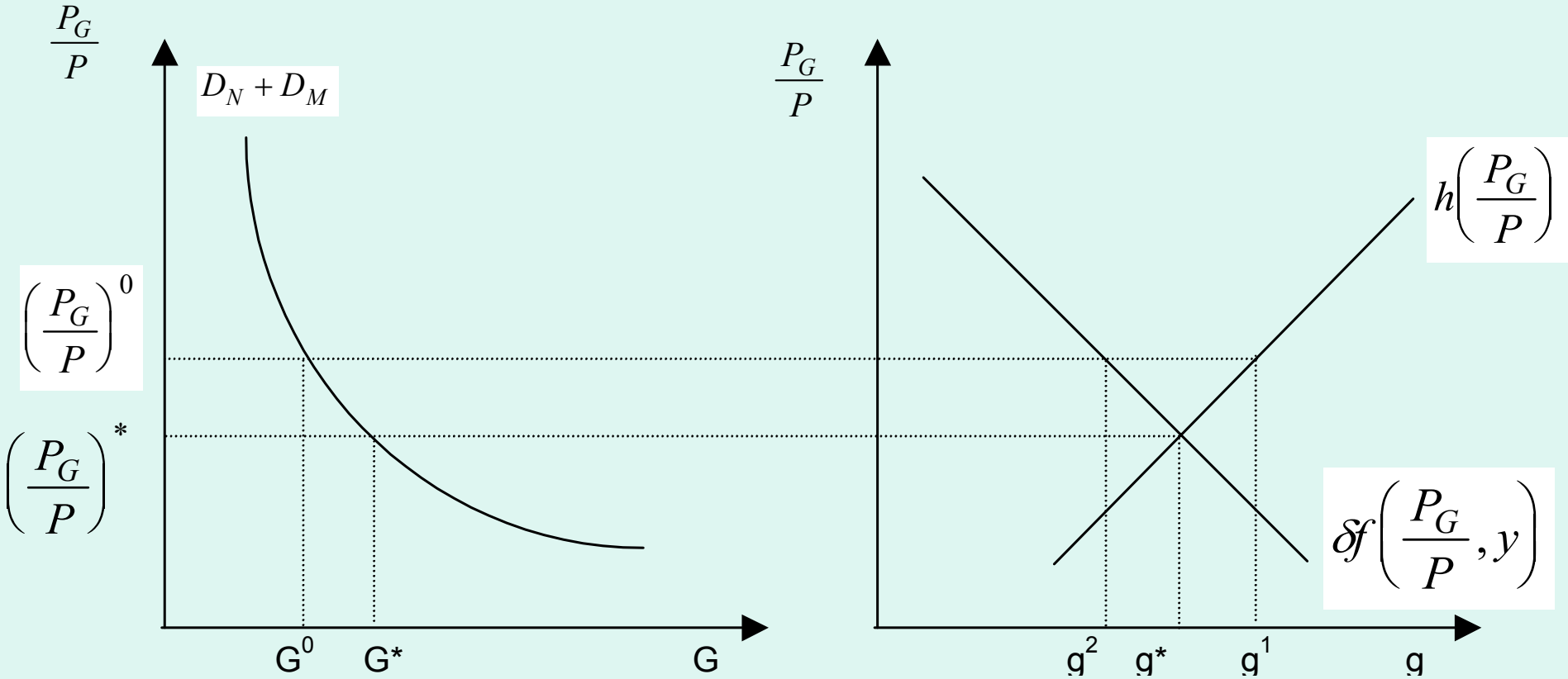
Price Determination under the Gold Standard



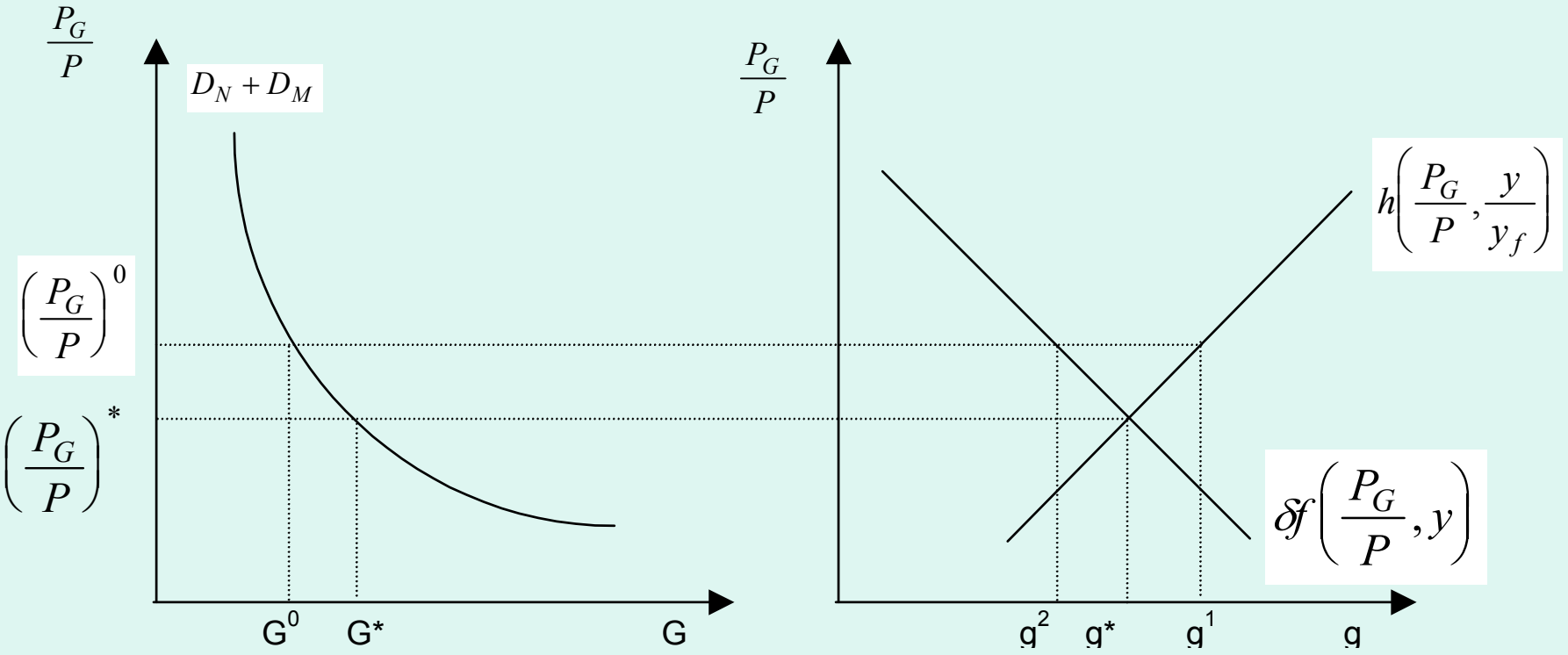
Flow supply and demand for gold



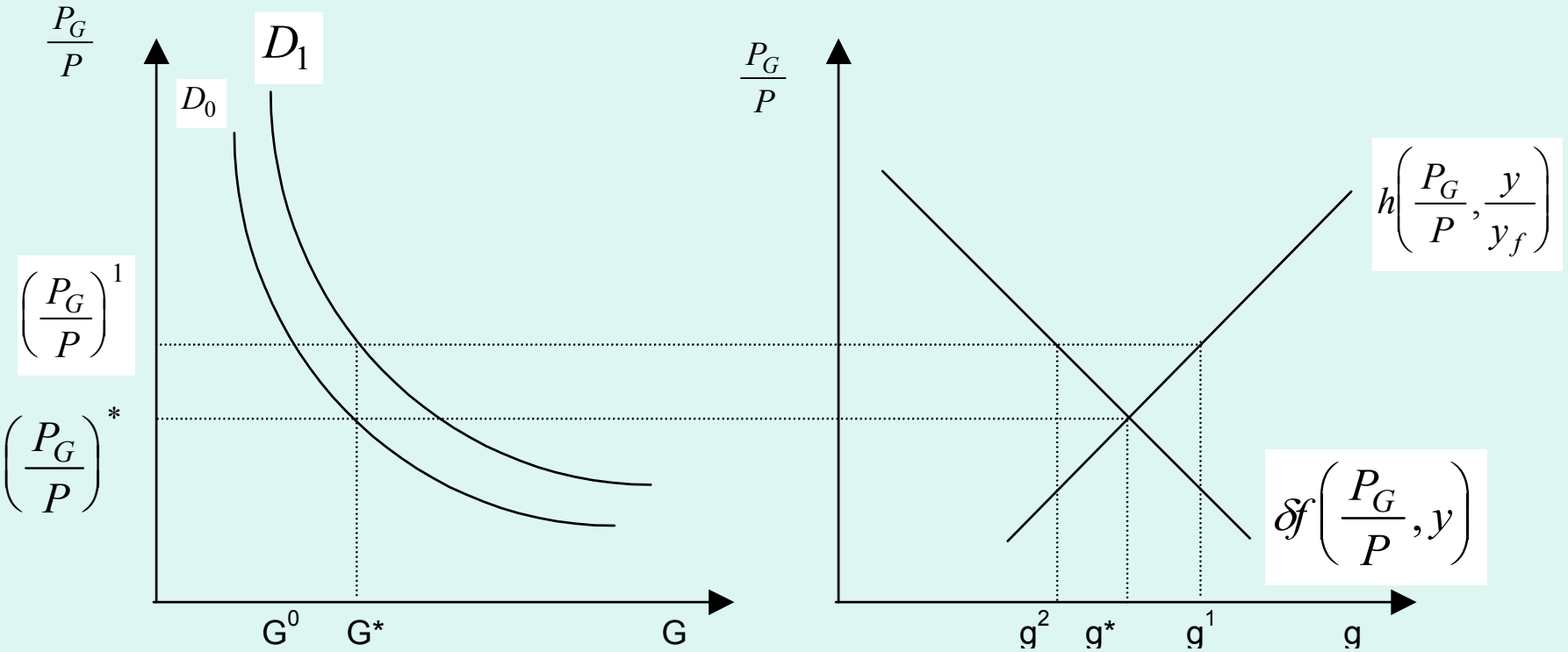
Gold Standard Model



Gold Standard in the Open Economy

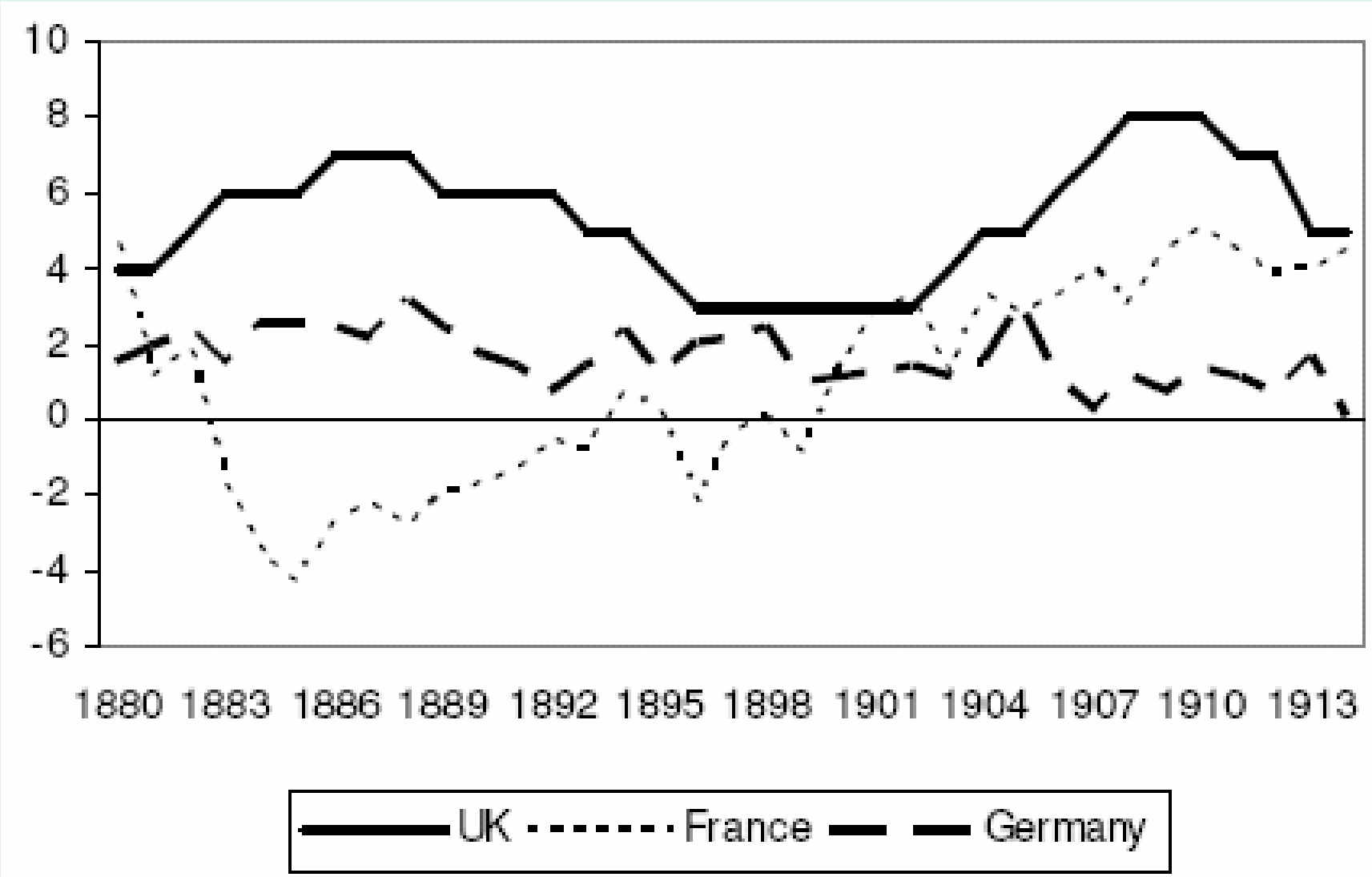


An increase in Money Demand



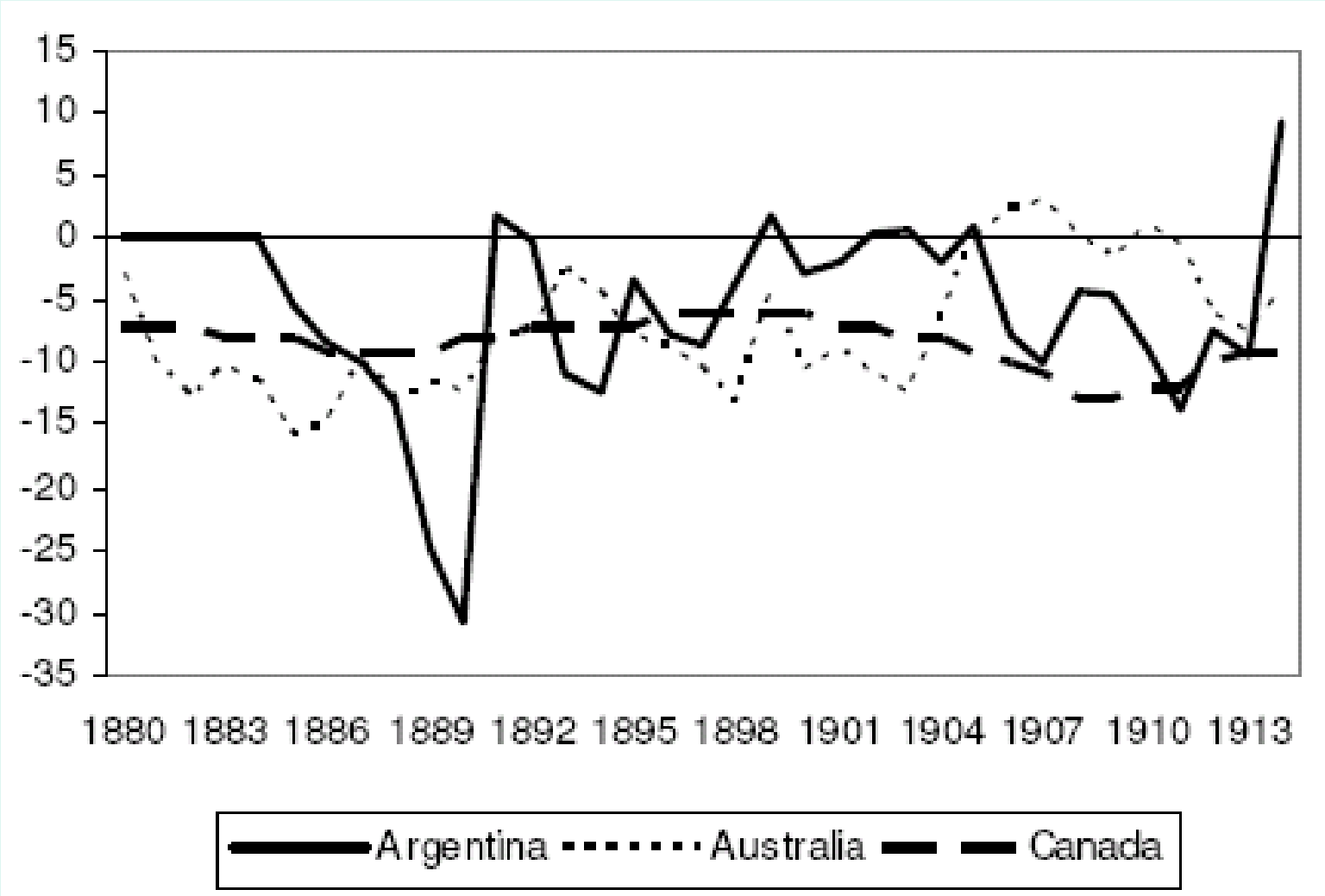
Surplus Countries During Gold Standard

CA/GDP

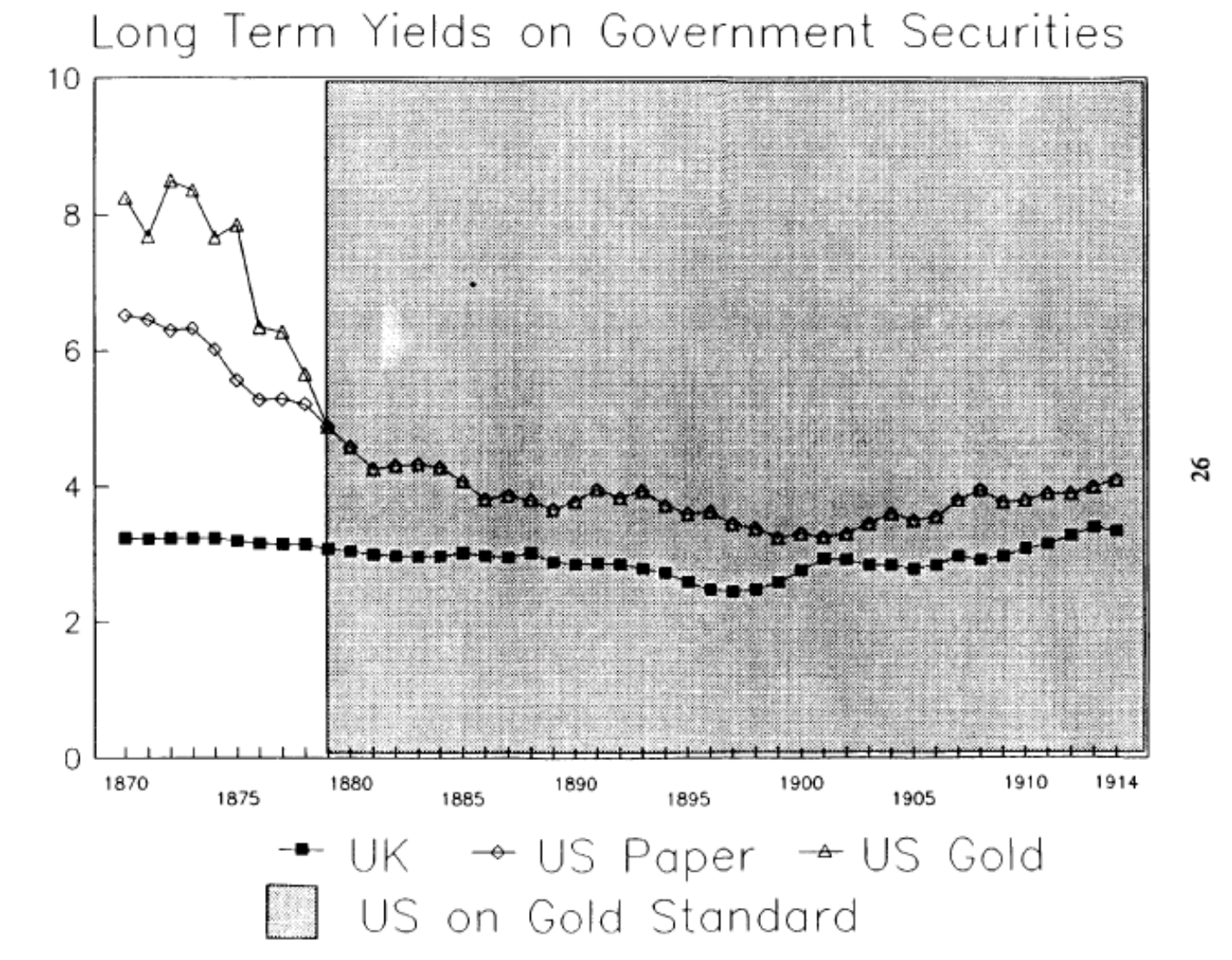


Deficit Countries During Gold Standard

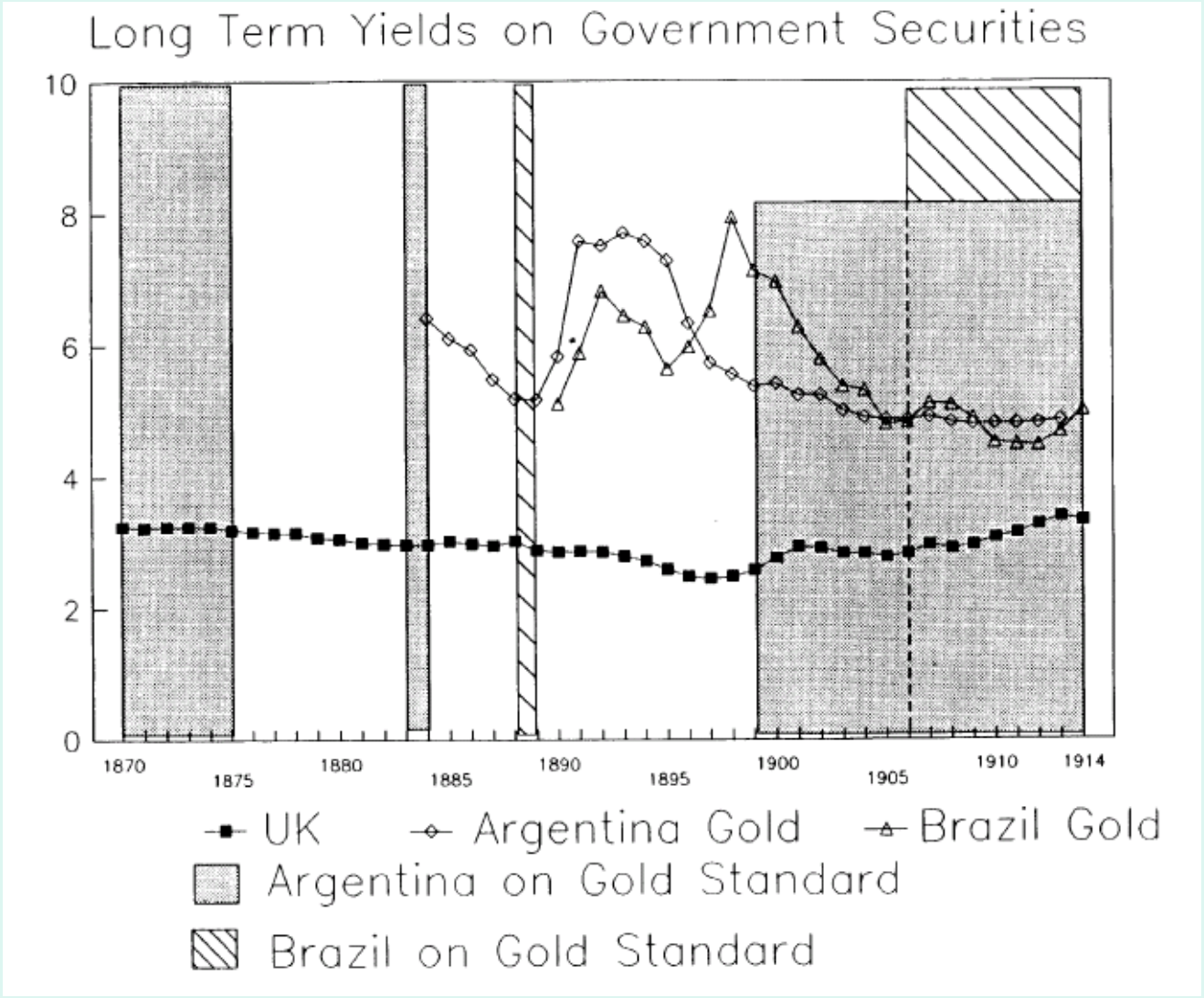
CA/GDP



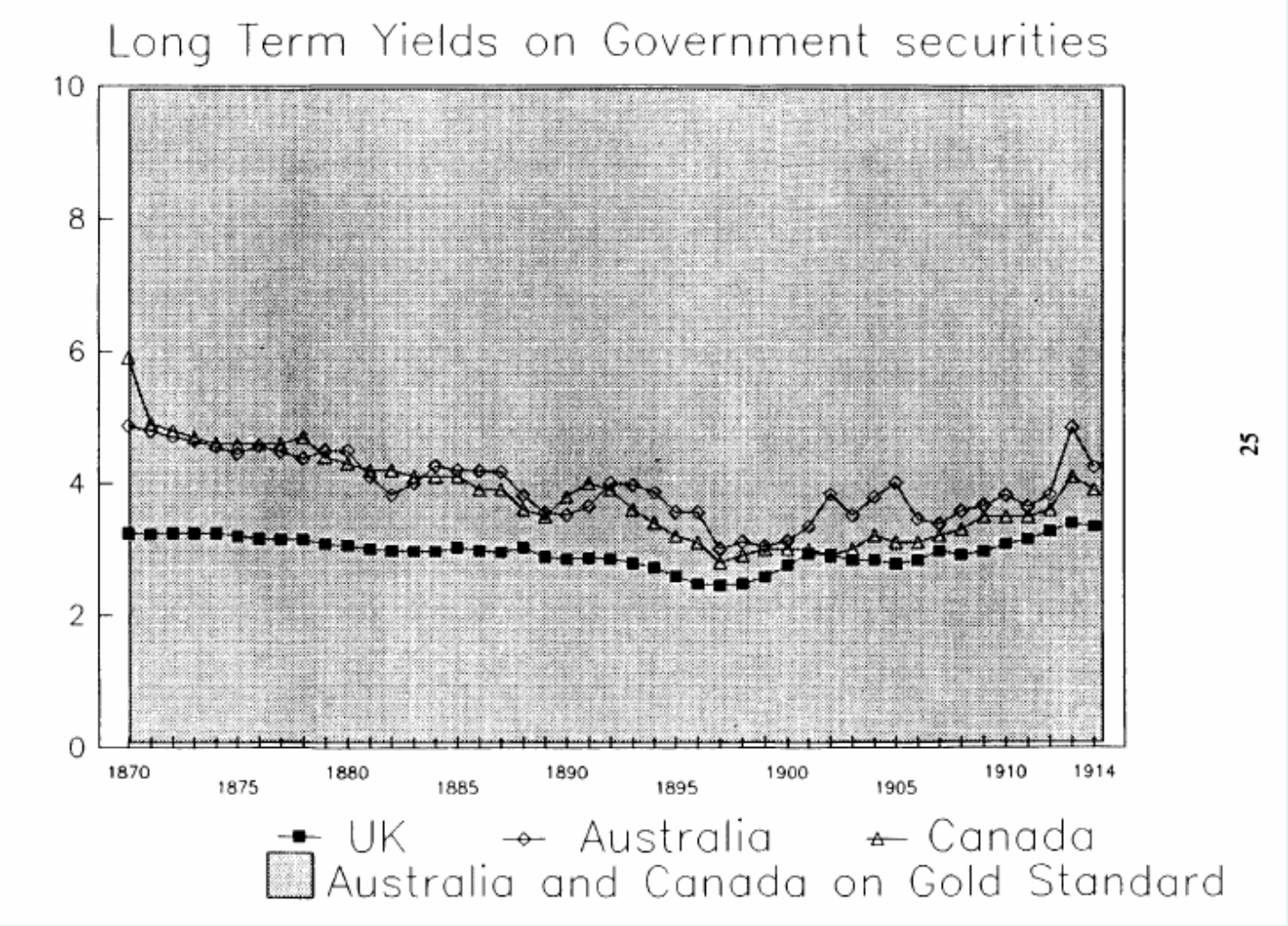
Value of Adhering to Gold, US



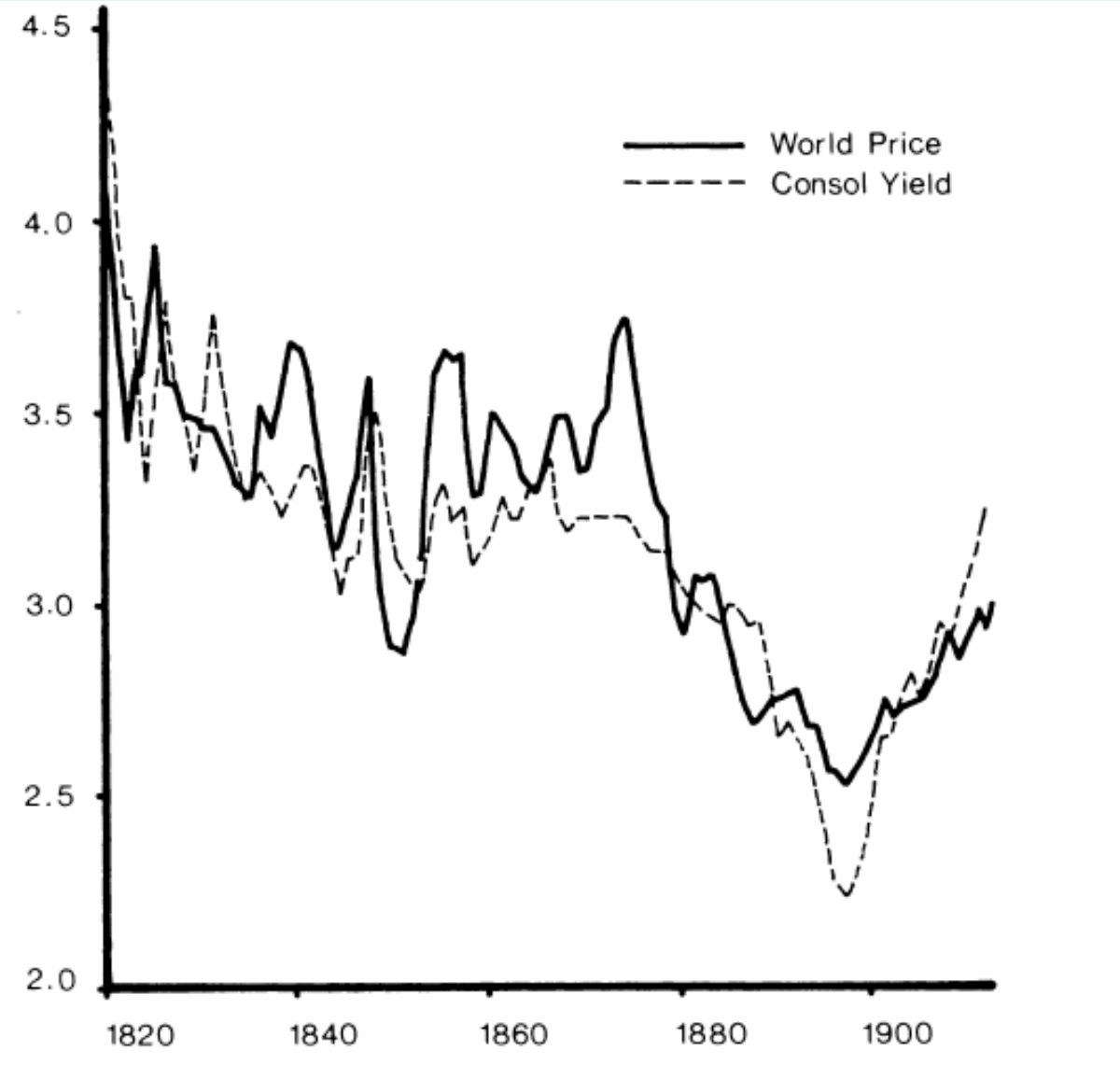
Value of Adhering to Gold,
Argentina and Brazil



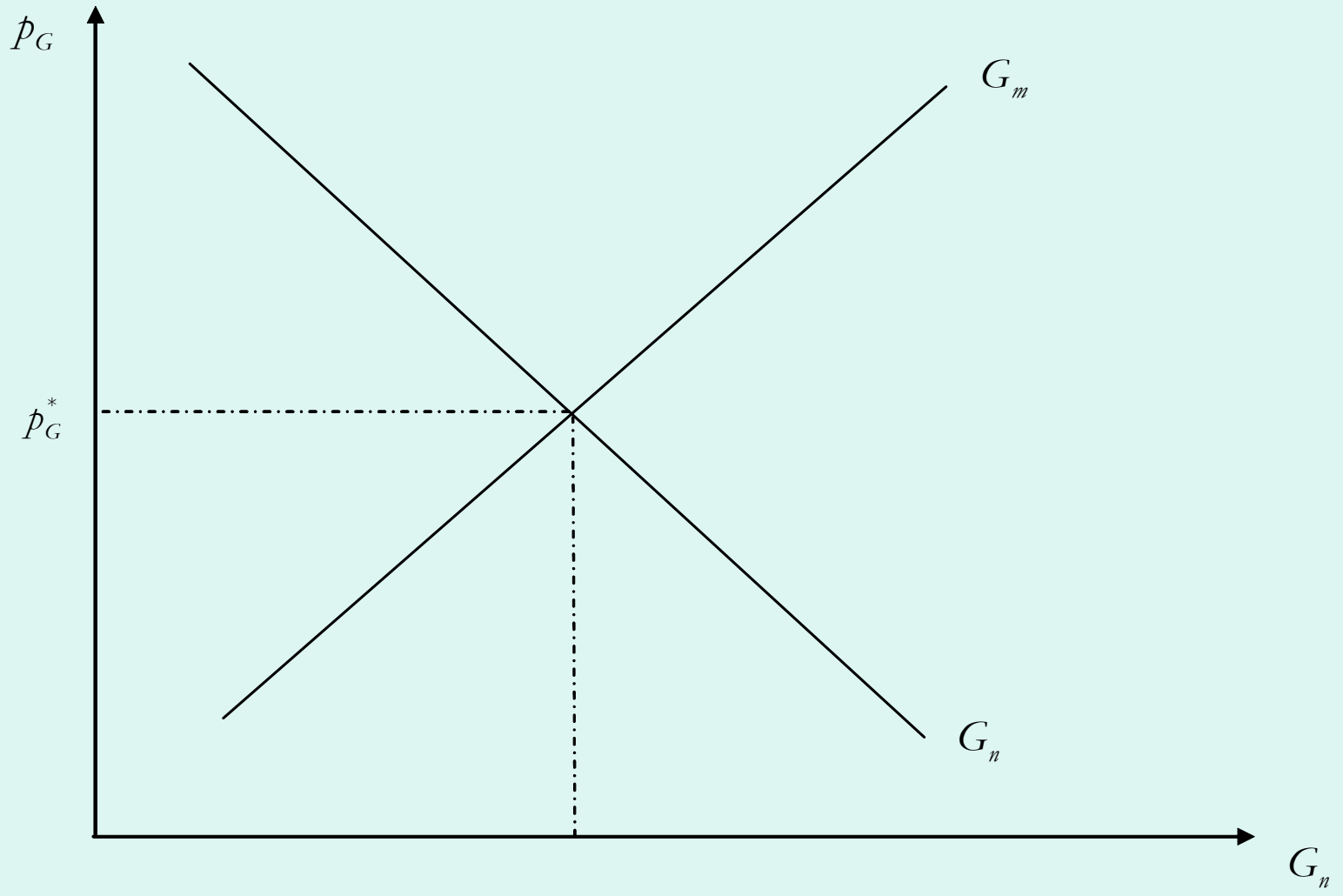
Australia and Canada



Gibson's Paradox:
World Price Level and Interest Rates



Determination of the price of gold



Bimetallism

Key Characters

Farmers

William Jennings Bryan

Honest (Midwestern) American

Worker

Grover Cleveland

Wicked Witch of the West = drought

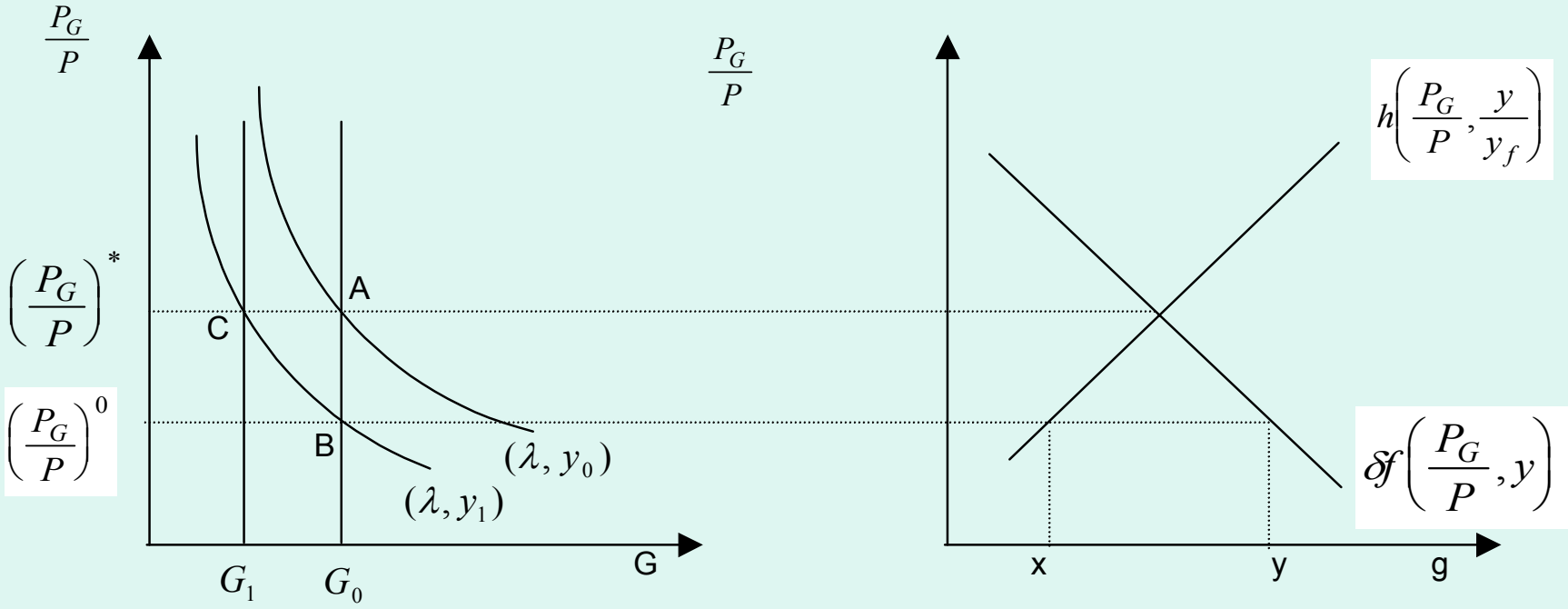
Good Witch of the South

Morale of the story

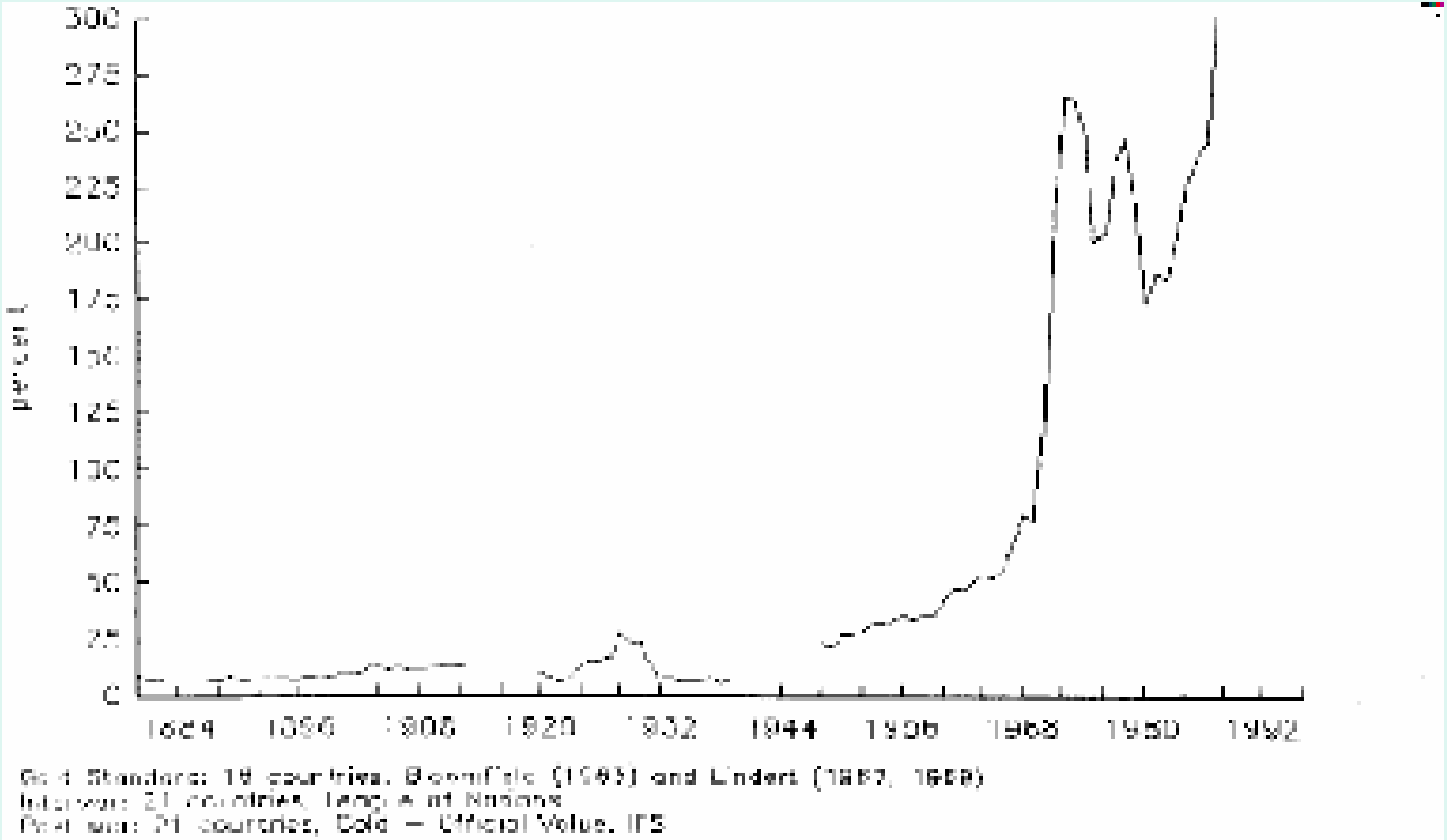
- On the next to last page of the book Baum has Glinda, Witch of the South, tell Dorothy, "Your Silver Shoes will carry you over the desert.....If you had known their power you could have gone back to your Aunt Em the very first day you came to this country." Glinda explains, "All you have to do is knock the heels together three times and command the shoes to carry you wherever you wish to go." (p.257). William Jennings Bryan never outlined the advantages of the silver standard any more effectively. Not understanding the magic of the Silver Shoes, Dorothy walks the mundane -- and dangerous -- Yellow Brick Road.

Yellow brick Road, Emerald City

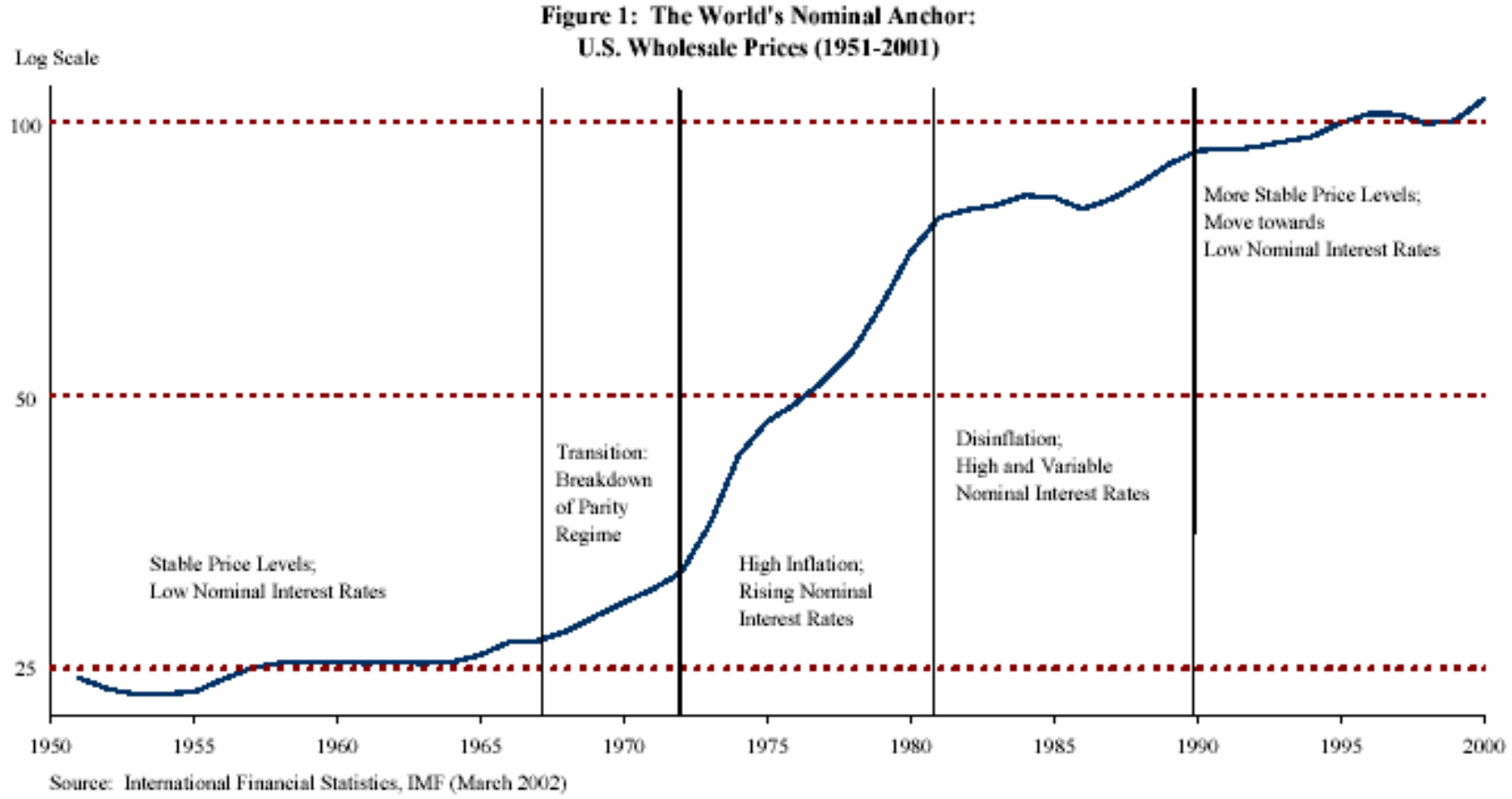
Too Low a Price for Gold



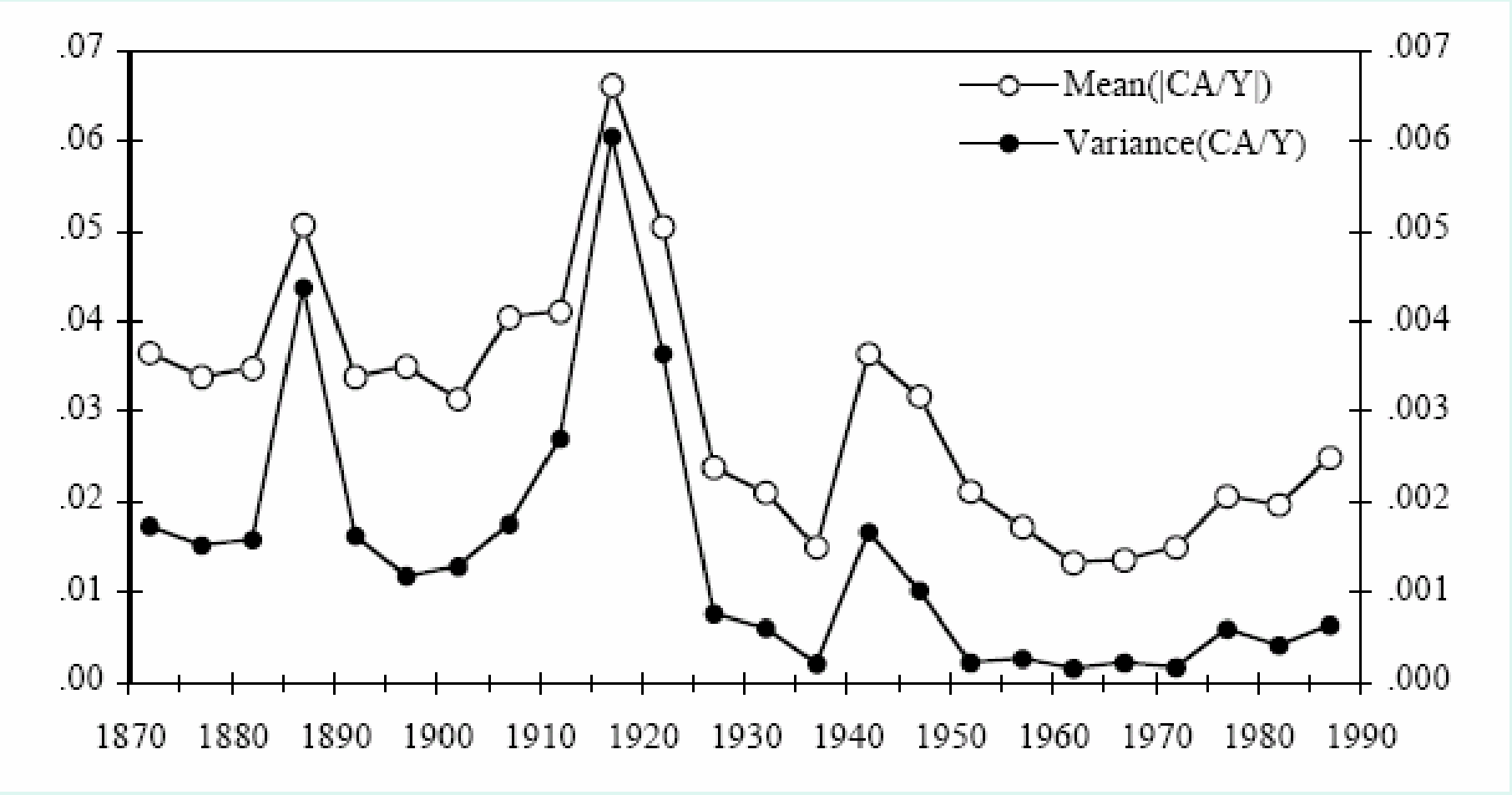
Ratio of Foreign Exchange Reserves to Gold



Price Levels and Regimes



CA/GDP of major countries, 1870-1990



Real Exchange Rate Since Napoleon

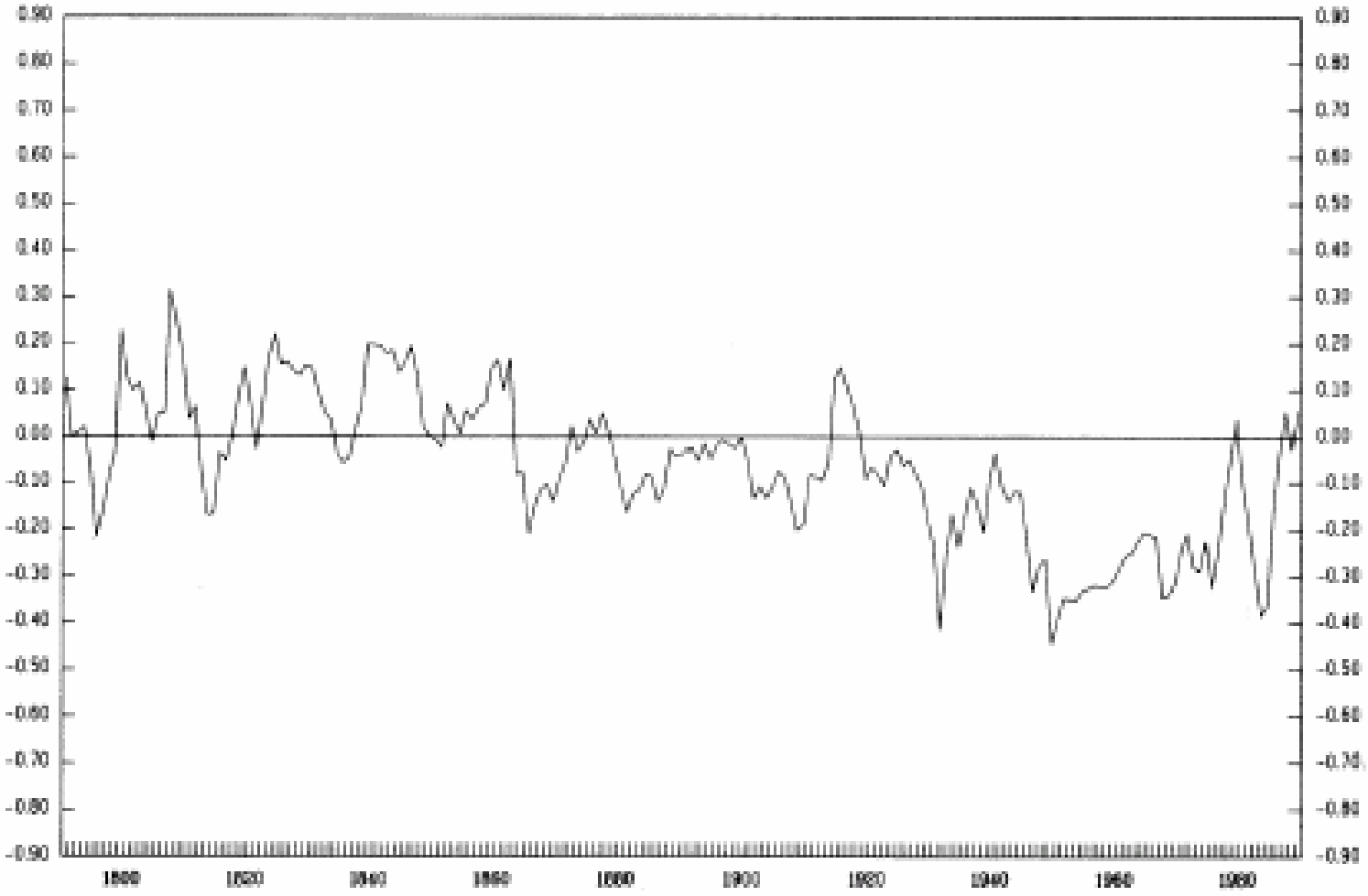
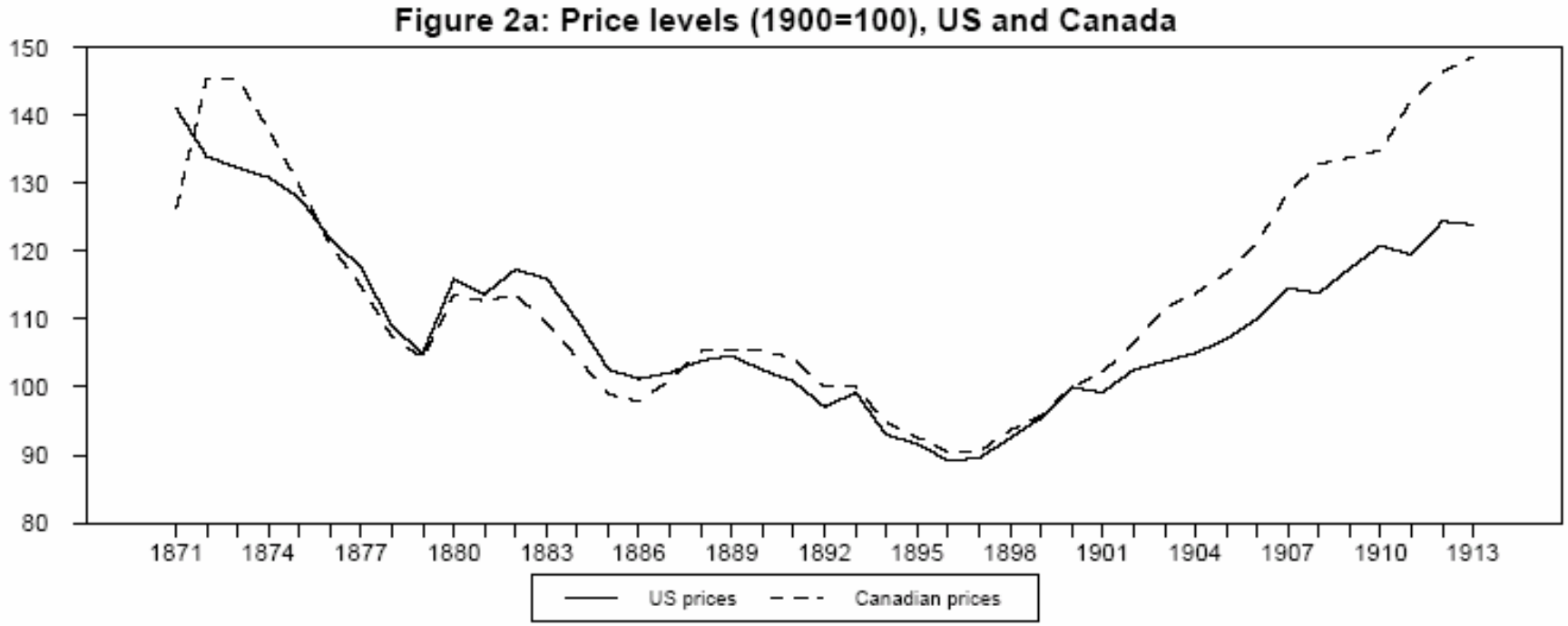
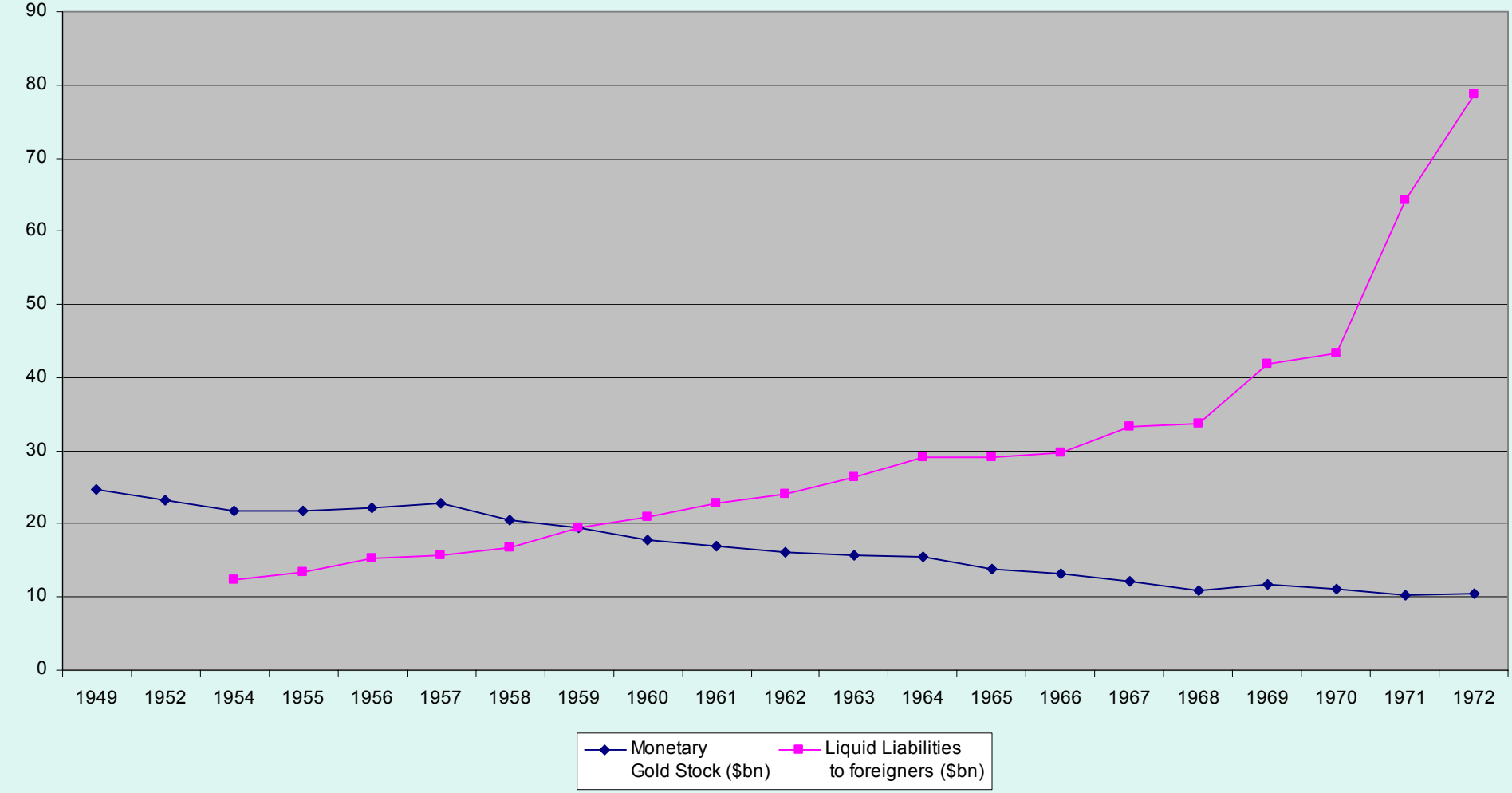


FIG. 1.—Logarithm of dollar-sterling real exchange rate, 1791–1990 (1900 = 0; increase = sterling appreciation).

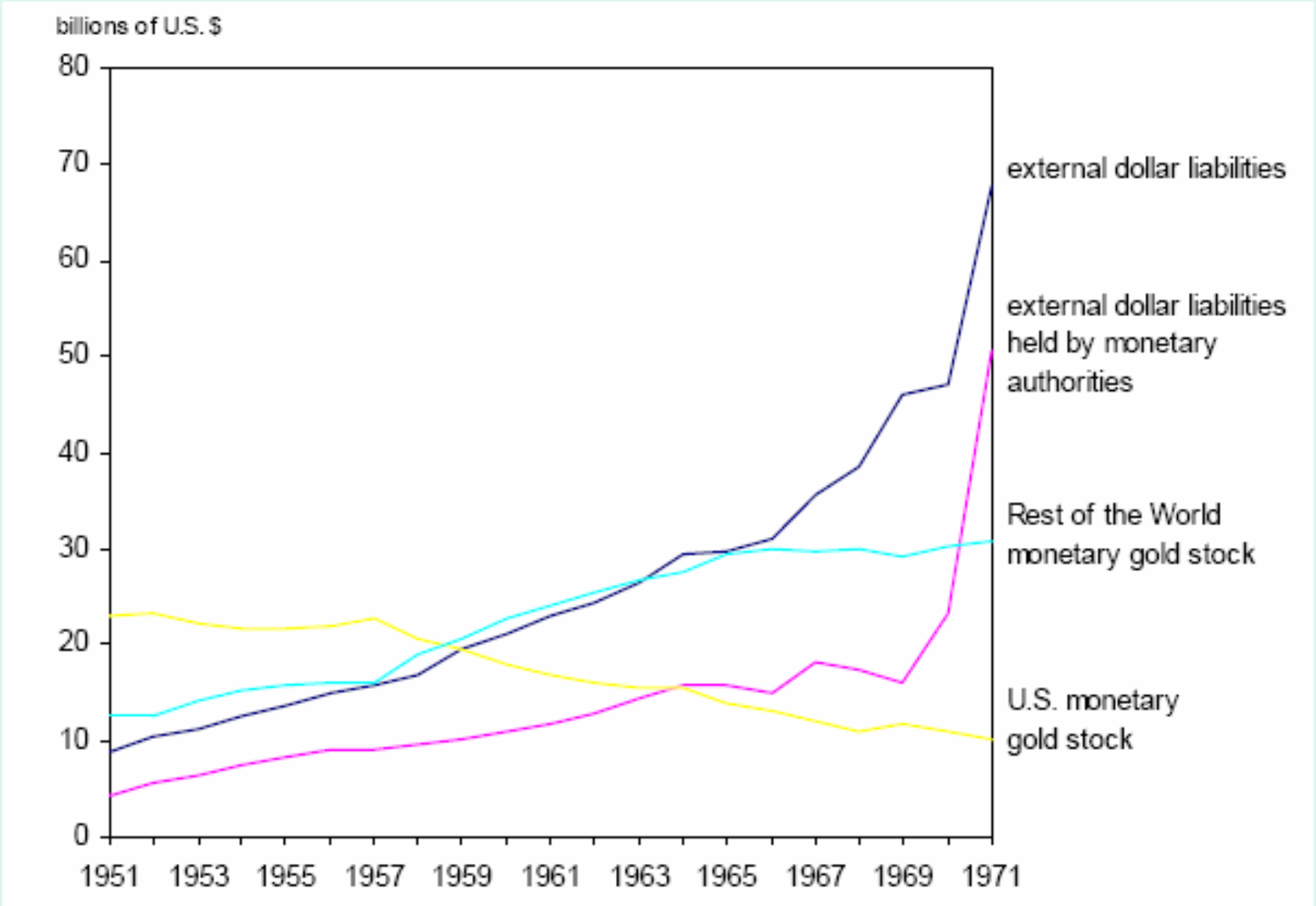
Price Levels and the Gold Standard



Triffin Dilemma

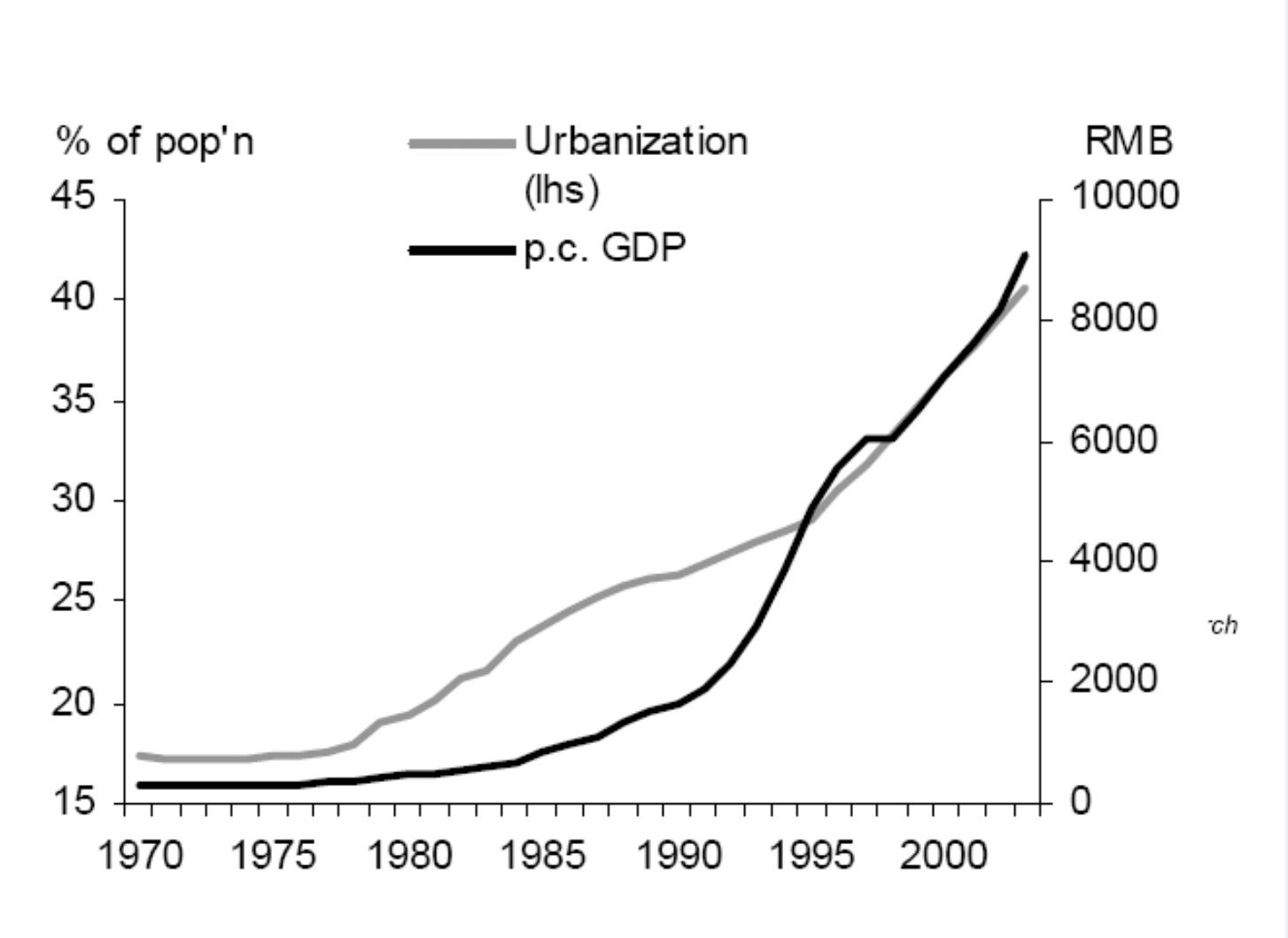


Monetary gold and dollar holdings, US and Row, 1951-71

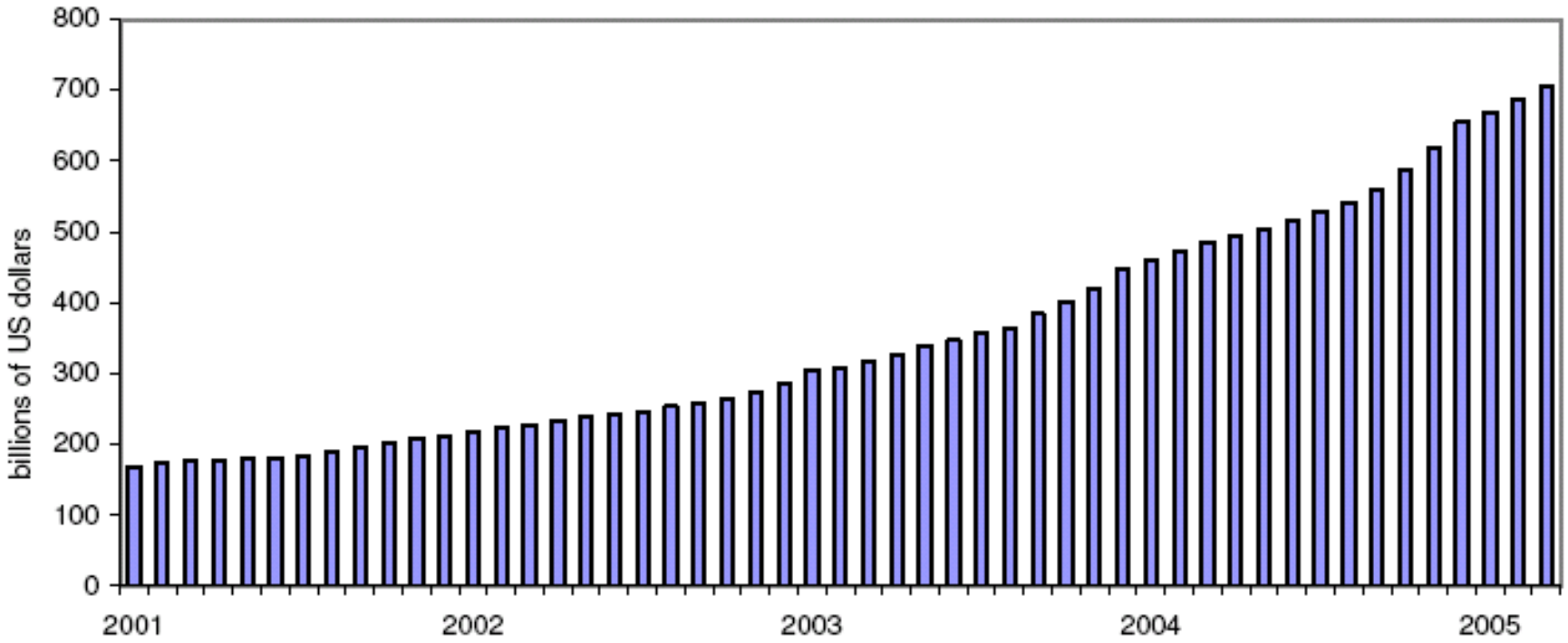


China's Demographics

Urban population growth =20 million p.a.



China's Foreign Exchange Reserves



Note: After 12/2003, foreign exchange figures are adjusted to reflect $45 billion transfer to SOCB.

Varieties of Exchange Rate Regimes