Exchange rate regimes and shocks

Fabrizio Coricelli

Budapest, November 28, 2002

Outline

- CEECs are characterized by high volatility
- Volatility of shocks, volatility of policy
- Exchange rate regime: shock absorber or source of shocks
- Real and financial shocks
- Real: structural change and productivity shocks (Balassa-Samuelson)
- Financial: emerging market features
- Conclusons: Skepticism on flexibility

Volatility

	GDP	*Terms of trade***	*Real effective exchange rate***	*Real interest rate***	*Gov't revenue/GDP*
*CEECs**	4,10	4,40	12,66	6,34	2,31
Latin America	3,74	8,70	18,00	13,18	2,19
Emerging Asia	4,11	5,92	8,65	2,52	1,82
Advanced countries	2,09	3,73	5,90	2,07	1,02

*1993-2001

**Only Czech republic, Hungary, Poland and Romania

Evolution of shocks

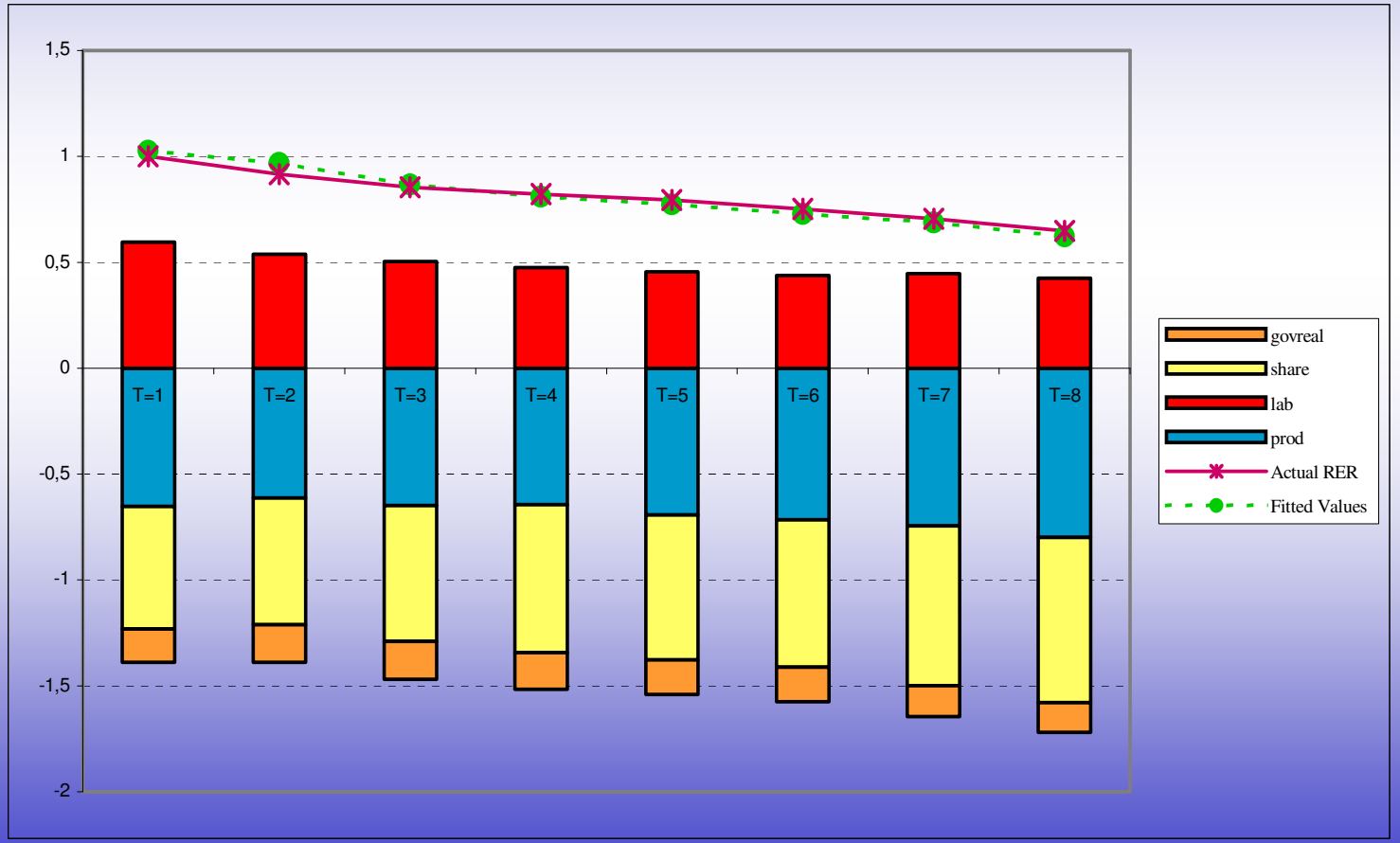
- Initially: price liberalization and structural change
- Over time: trade opening and integration with EU
- Over time: opening to capital flows (financial shocks)

Trend effects and dynamics

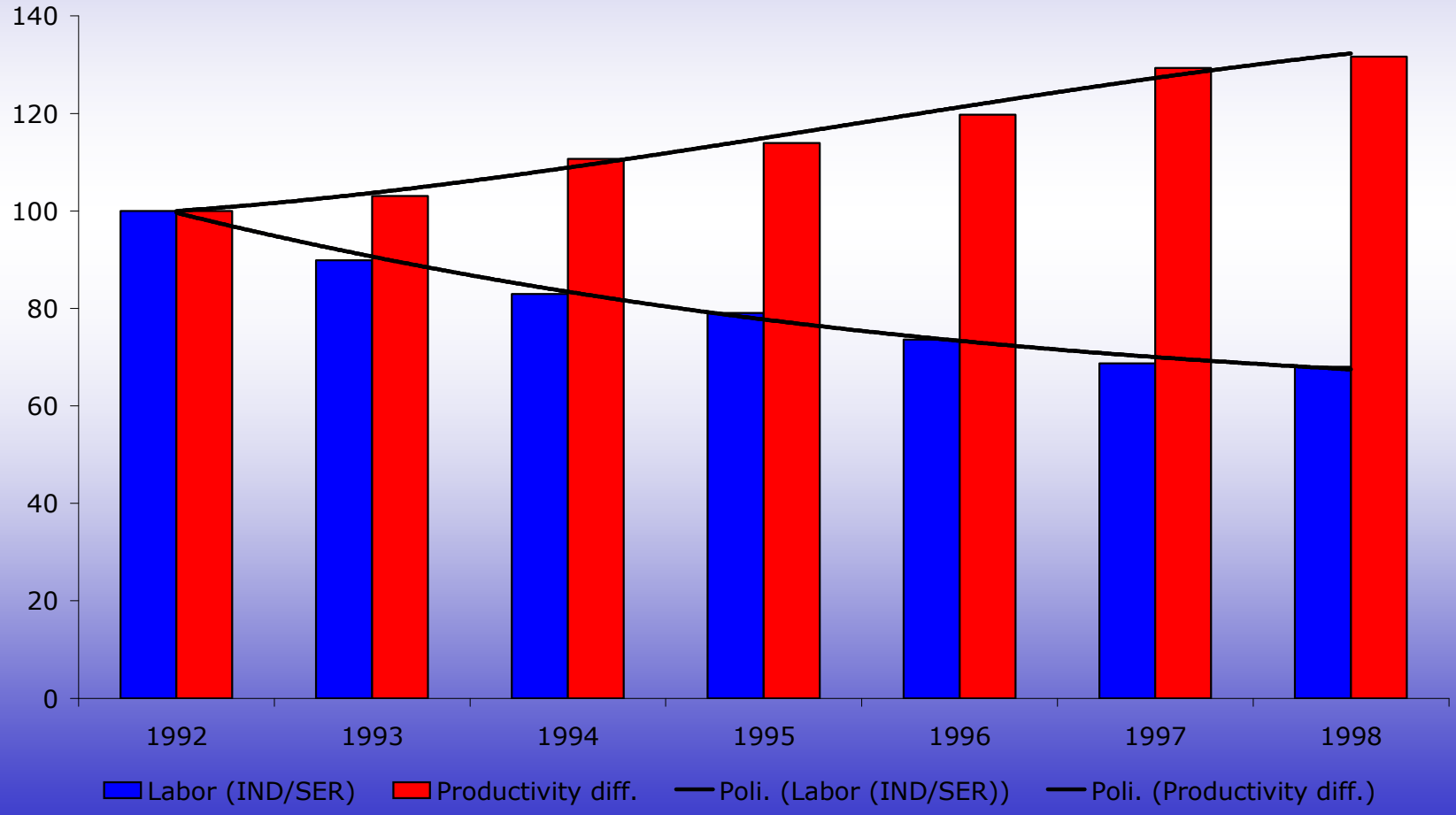
- Trend real appreciation (Balassa-Samuelson): productivity shocks
- Cyclical co-movements
- External shocks: contagion

Accounting for REA

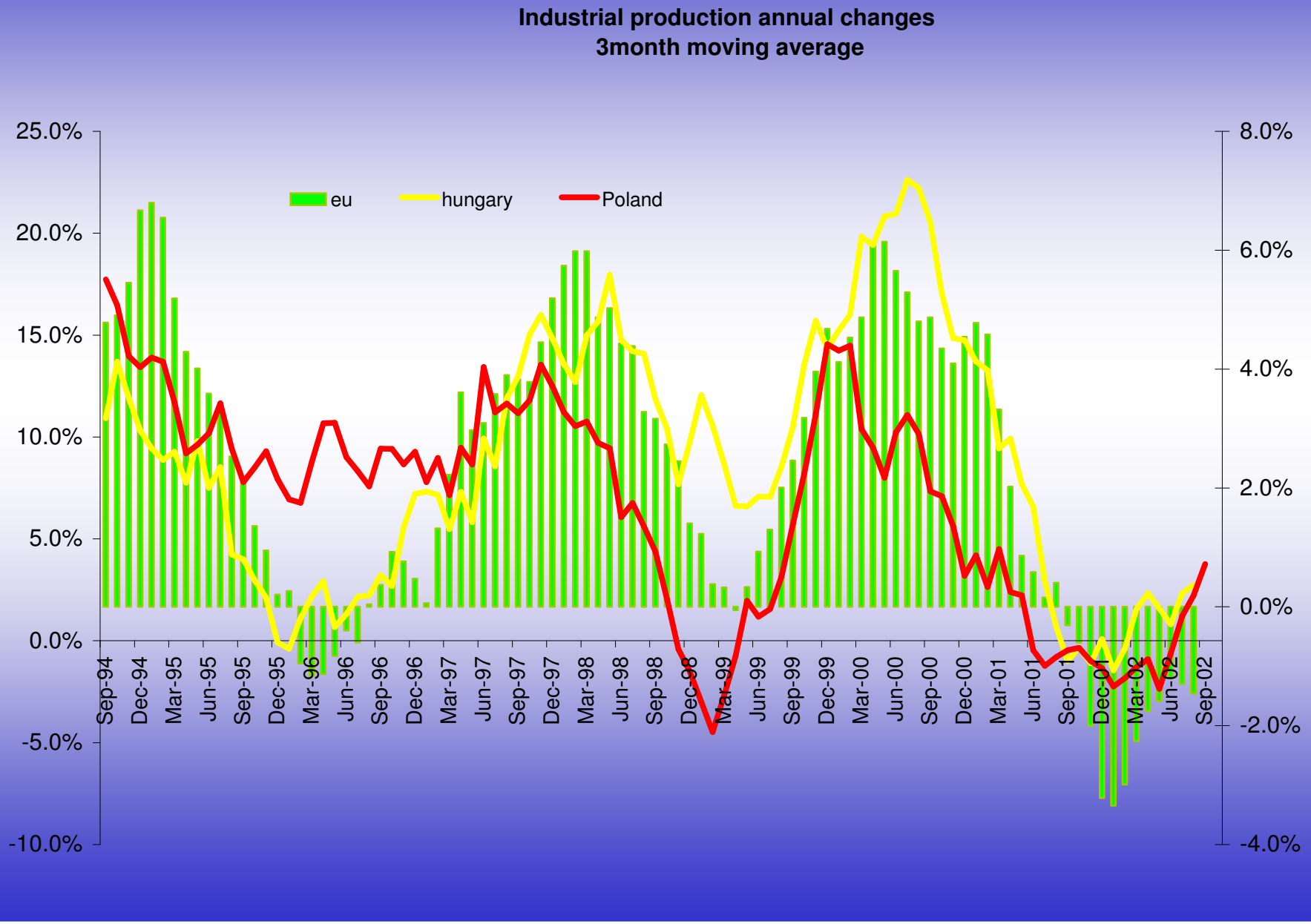
$$\log(P_T/P_N)_{i,t} = \alpha_{oi} - \alpha_1 \log(a_T - a_N)_{i,t} - \alpha_2 share_{i,t} - \alpha_3 govreal_{i,t} + \alpha_4 lab_{i,t} + \varepsilon_{i,t}$$



Balassa-Samuelson: Slovenia

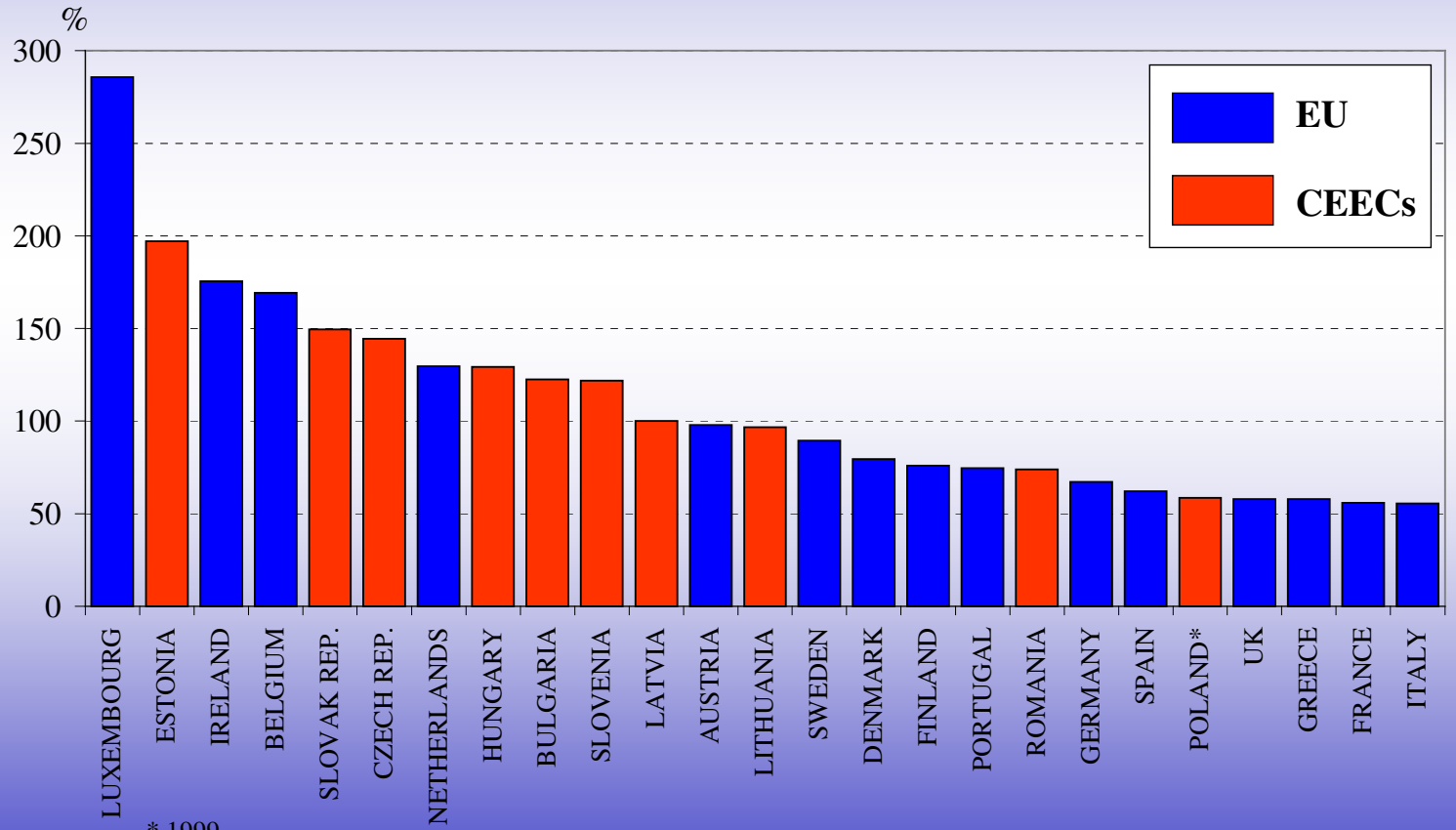


Cyclical co-movements



Trade openness

Figure 1: Degree of Openness in the EU and the CEECs
(exports plus imports of goods and services as percent of GDP in 2000)

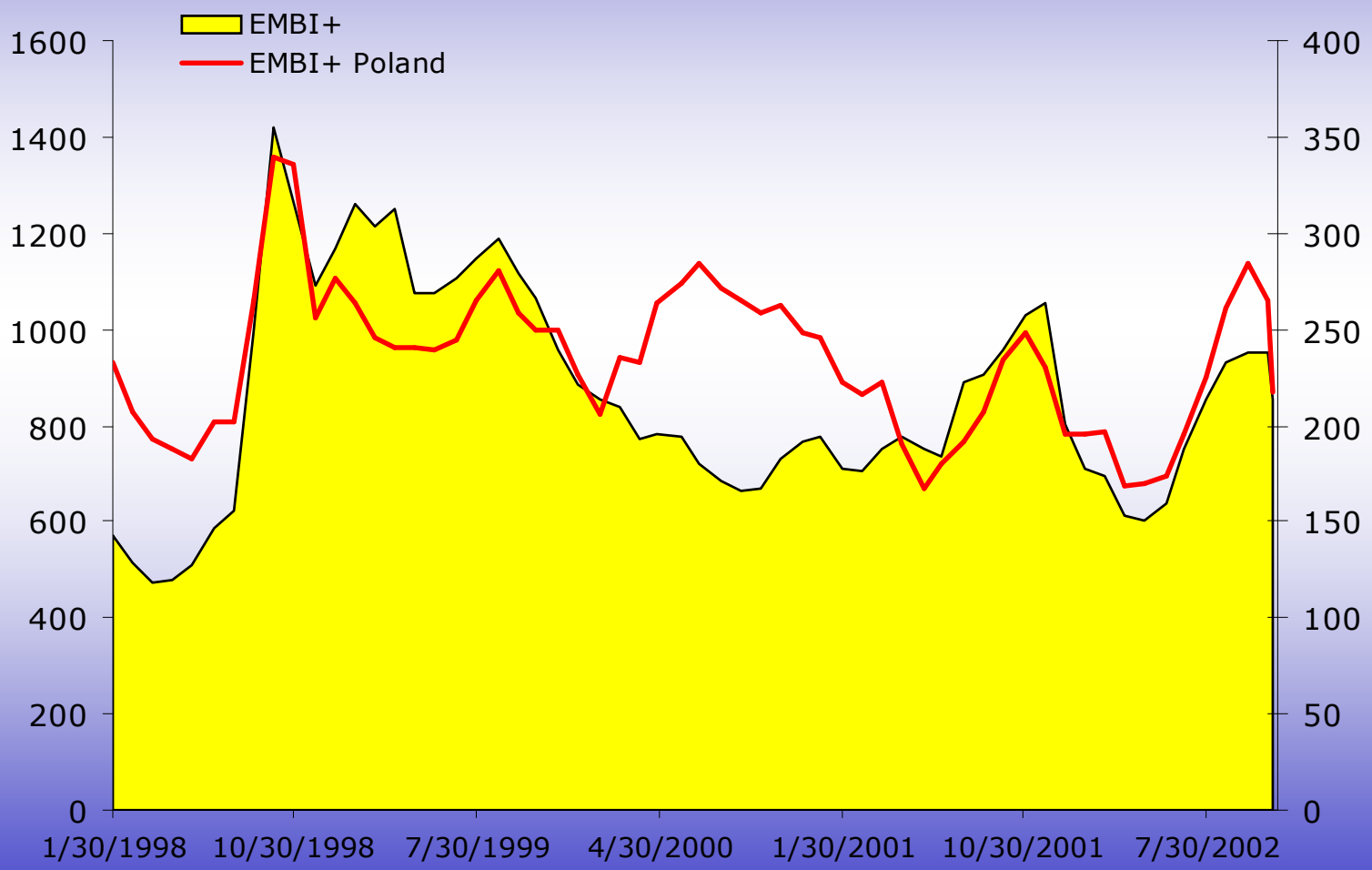


* 1999

Source: IMF: International Financial Statistics

Poland: Flexible exchange rates

Risk premium: Poland



Risk premium: Poland 2

- After adoption of flexible rates (in 2000) risk premium jumps up
- Before and after high correlation with EMBI+

Evolution of regimes

	Fix	Intermediate	Float
Stabilisation phase 1990-1994	Czech Rep. Estonia Hungary Latvia Lithuania Malta Poland Slovakia	Cyprus	Bulgaria Slovenia Romania
Transition phase 1995-2000	Bulgaria Estonia Latvia Lithuania Malta	Czech Rep. Cyprus Hungary Poland Slovakia	Slovenia Romania
Preparatory phase 2001 - ERMII	Bulgaria Estonia Latvia Lithuania Malta	Cyprus Hungary	Czech Rep. Poland Slovakia Slovenia Romania

De jure classification according to the IMF. *Fix:* currency board, conventional peg, narrow band; *Intermediate* : tightly managed, broad band; *Float* : managed float, free float

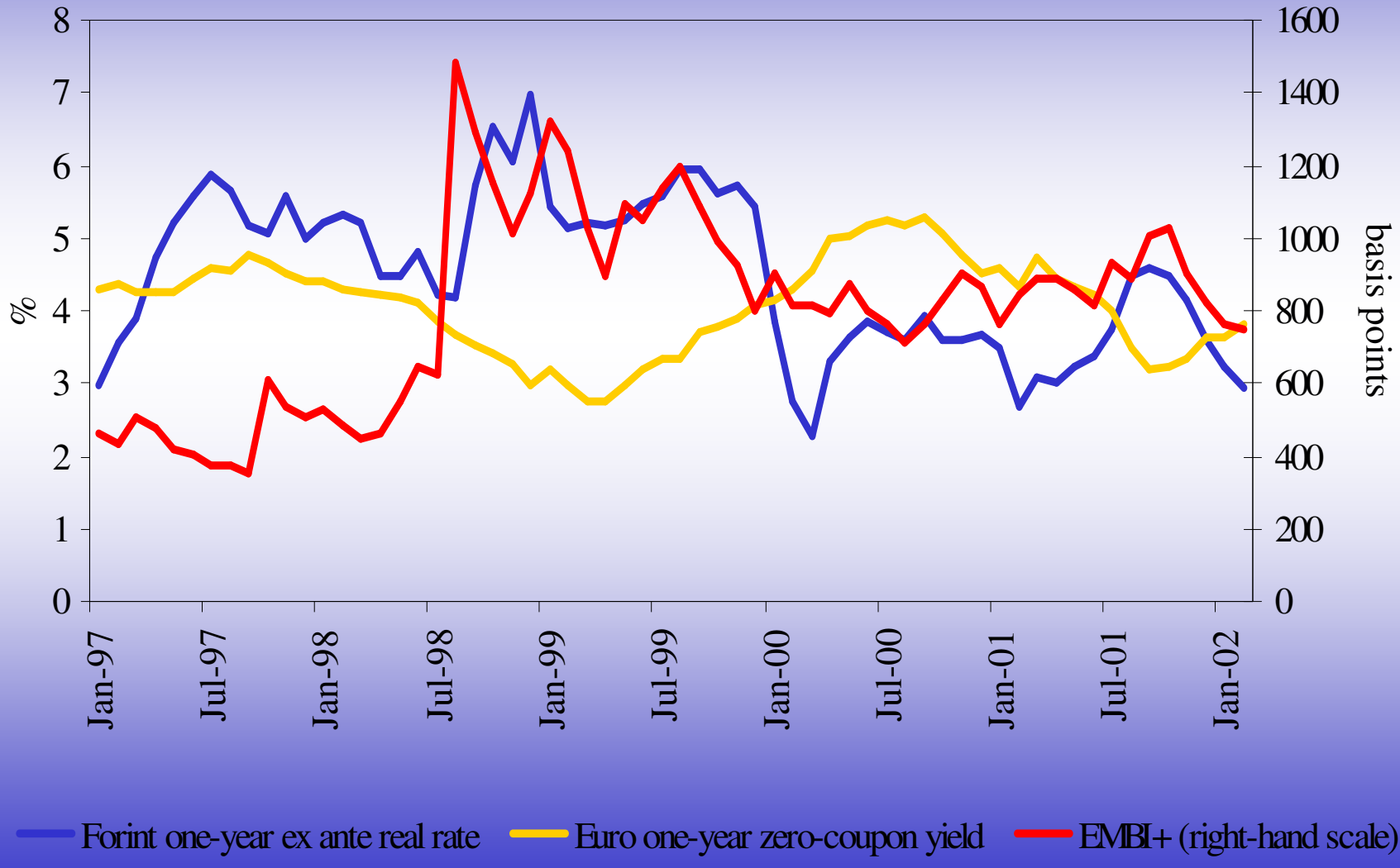
Heterogeneity

- Movement towards extremes
- Euro is the end-point:is the movement towards more flexibility reasonable?
- It depends on the ability of flexible rates to absorb shocks and insulate from currency and financial crises

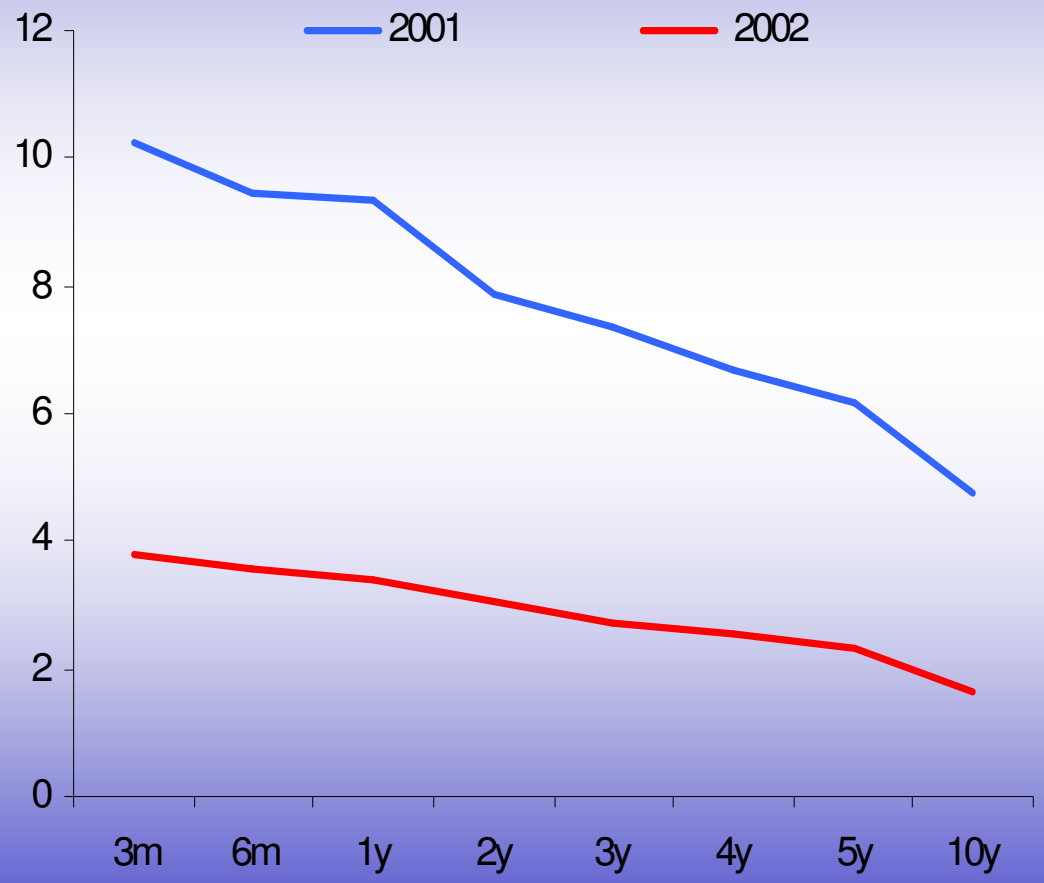
Exchange rate shock absorber?

- Response of exchange rate to external shocks
- Response of interest rates
- Habib (2002): high sensitivity to external shocks (change in risik premium). Poland and Czech Republic: Exchange rate follows EMBI+ shocks. Hungary and Slovenia: interest rate reacts.
- In both cases either real exchange rates and/or real interest rates move in response to international shocks

Contagion and interest rates: Hungary



Poland: interest rate spreads



- *Short term spreads vs. euro still large*
- *Long-term expectation of entry in the eurozone*

External constraint

- External constraint not to be underestimated
- Exposure to swings in foreign financing
- Low liability "euroization"? Need to be qualified (example of Hungary)
- These elements should be factored in when advising flexibility of exchange rates

External position, 2000-01

	External debt/GDP	External debt/Exports	FDI /GDP	Current Account/ GDP
Bulgaria	86.4	148.3	8.3	5.9
Czech	42.8	56.2	9.1	4.8
Estonia	61.4	64.6	6.4	6.8
Hungary	67.3	97.3	2.6	3.9
Latvia	65.9	144.0	5.6	6.8
Lithuania	42.9	95.1	3.3	6.0
Poland	42.9	214.5	5.9	6.3
Romania	27.0	81.7	2.7	3.7
Slovakia	56.3	76.5	10.7	3.7
Slovenia	34.3	58.1	0.2	3.3
avg. CEECs	52.7	103.6	5.5	5.1

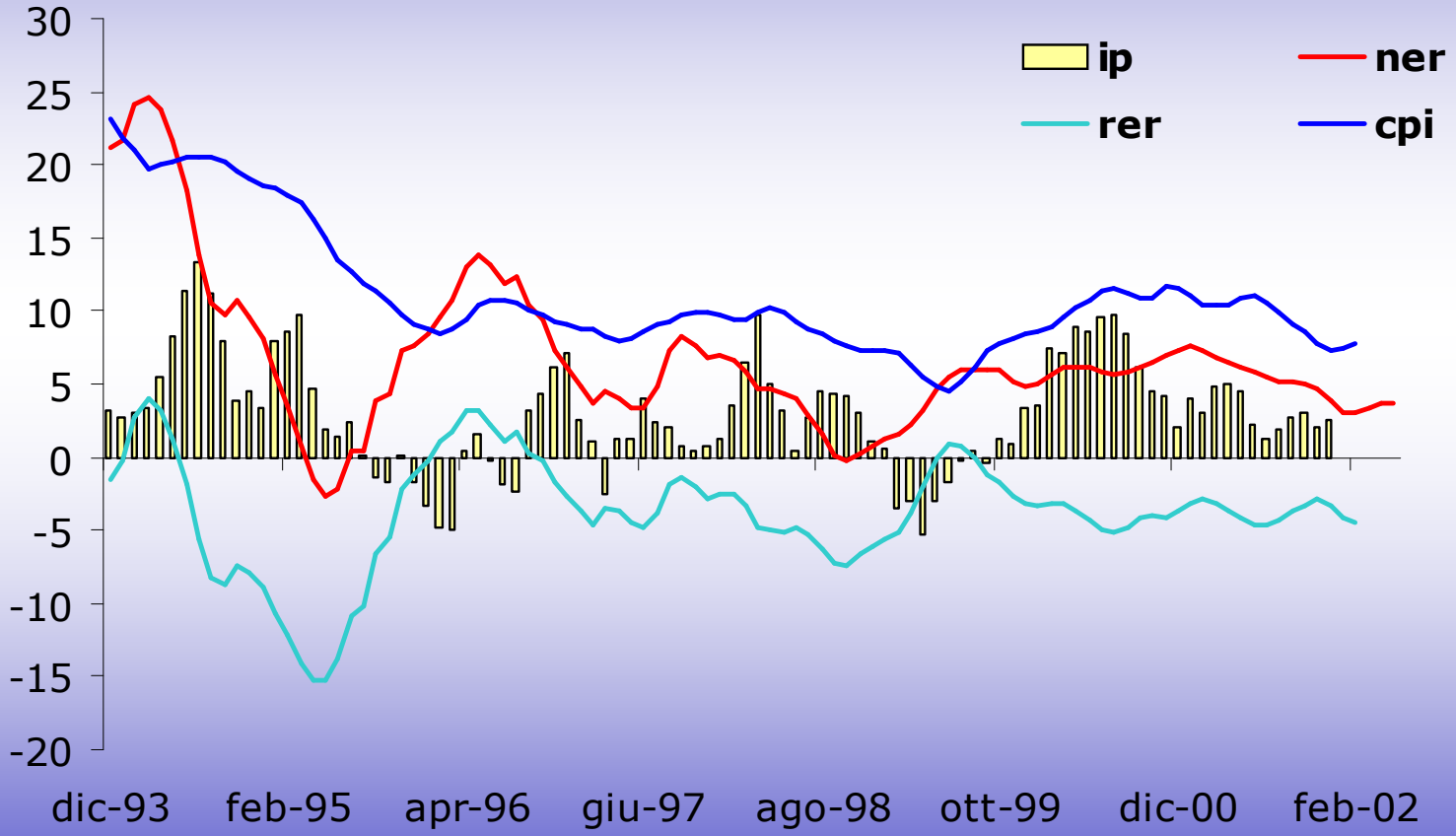
Exchange rate and inflation 1

- Pass-through: eg. Darvas (2001); Coricelli et al. 2002
- High pass-through, especially in Slovenia and Hungary
- Problem with inflation targeting

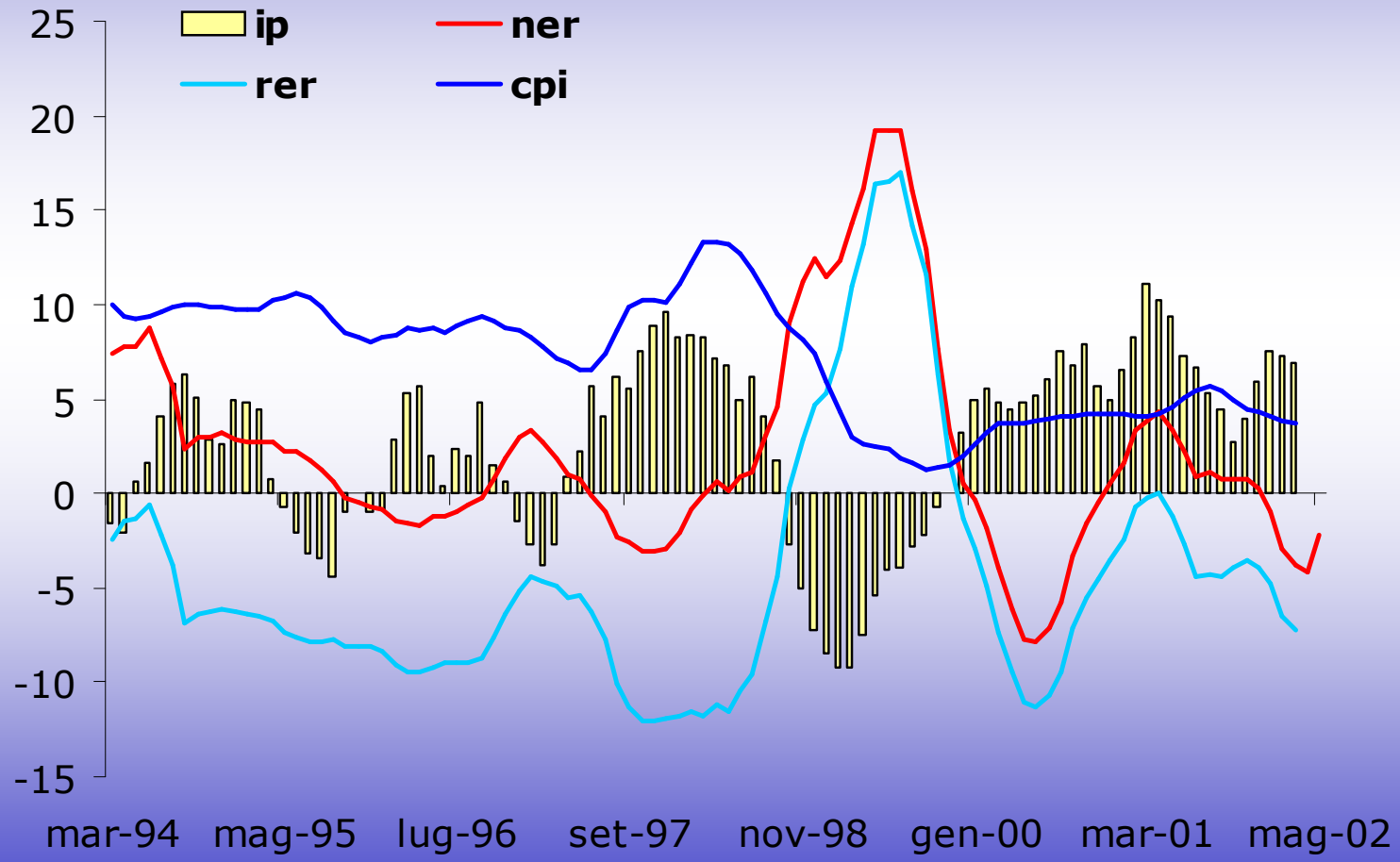
Exchange rate and inflation 2

- Difficulties in bringing down inflation at low rates
- Exchange rate flexibility may in fact make it worse
- Implicit real exchange rate targets internalized in the price setting…….

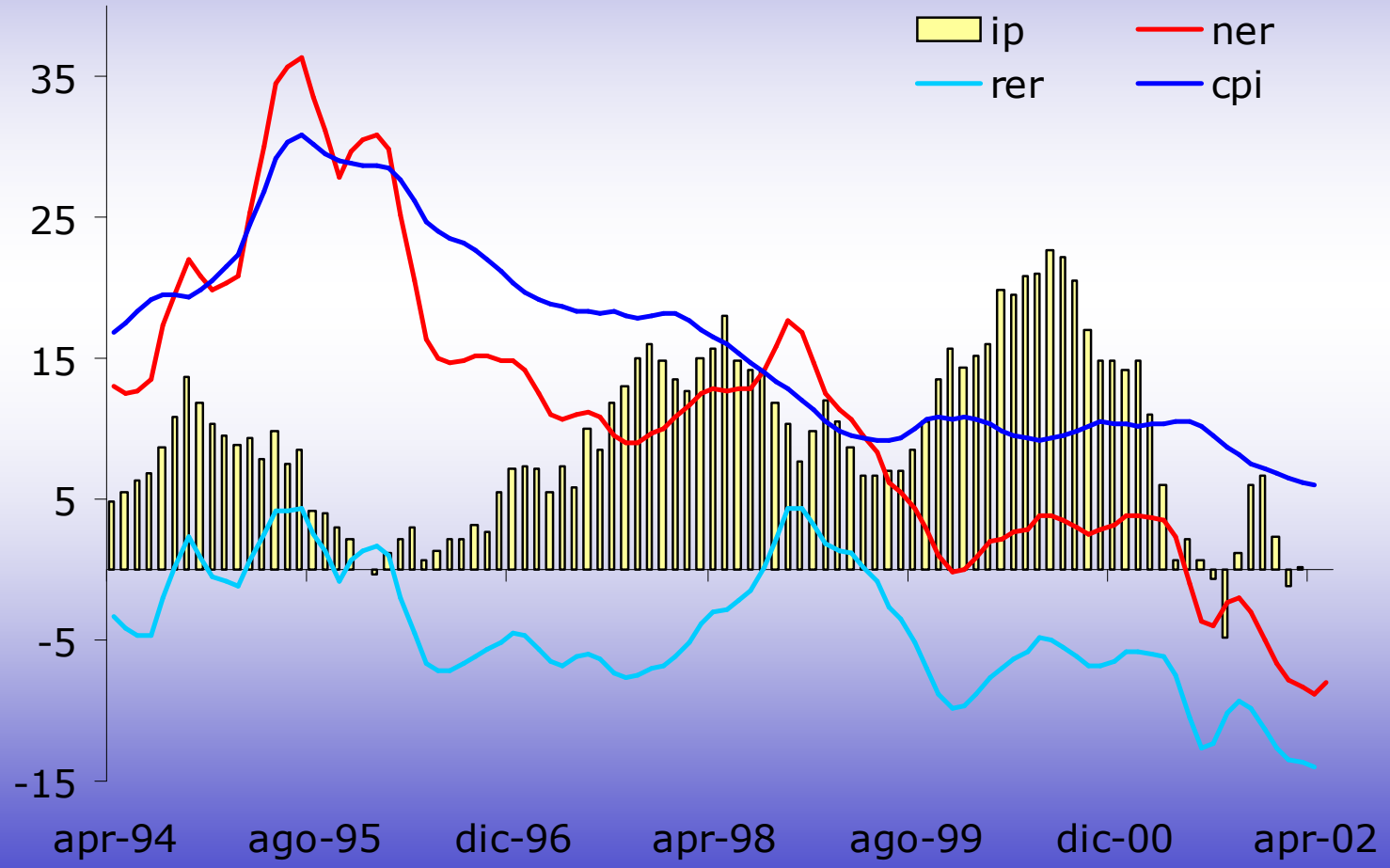
Slovenia


30
25
20
15
10
5
0
-5
-10
-15
-20
dic-93
feb-95
apr-96
giu-97
ago-98
ott-99
dic-00
feb-02
ip
ner
rer
cpi

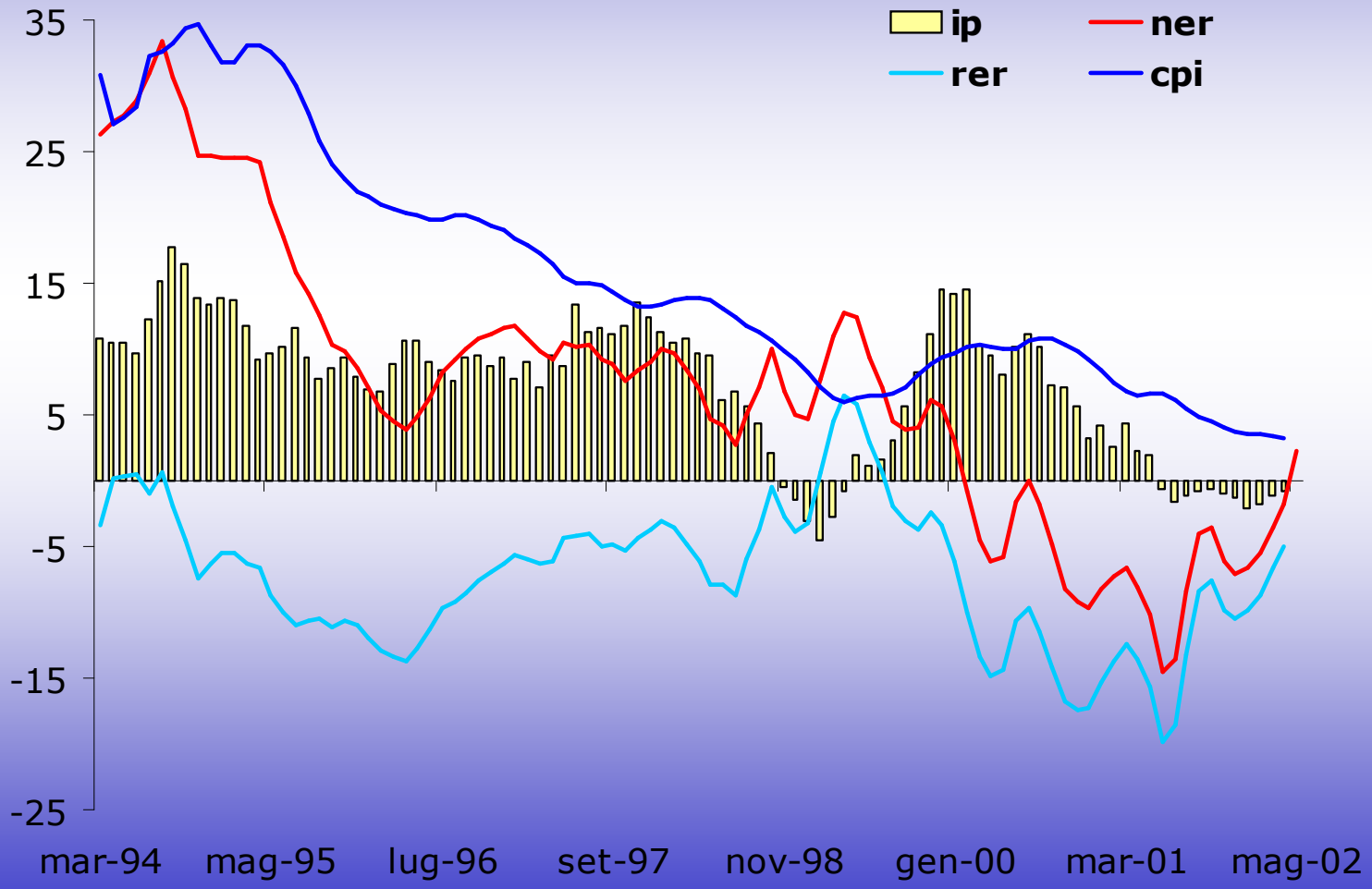
Czech Republic



Hungary


ip
ner
rer
cpi
35
25
15
5
-5
-15
apr-94
ago-95
dic-96
apr-98
ago-99
dic-00
apr-02

Poland


ip
ner
rer
cpi
35
25
15
5
-5
-15
-25
mar-94
mag-95
lug-96
set-97
nov-98
gen-00
mar-01
mag-02

Advantages of flexibility not obvious

- True: with inflationary inertia in the non tradable sector fixing the exchange rate may cause a temporary drop in output in non-tradables
- However, there would be gains in welfare associated to the reduction of losses due to monopolistic behavior in non tradable sectors (Calvo et al. (2002)

Adoption of the euro

- Would avoid real appreciation induced by nominal appreciation arising from capital inflows
- Would allow immediate convergence in interest rates
- Would reduce inefficiency of monopoly power in non-tradable sectors
- Thus, nominal convergence may be less costly with euro than with flexibility of exchange rates