# International financial-market integration of central and east European accession countries by Axel Jochem

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#### **General comments**

 Well written, well structured, easy to follow paper, including careful econometric analysis

But:

 Rather weak connections to the main theme: to financial market integration of accession countries

### Main parts of the paper

- Deviation of CIP → interpreted as a measure of the imperfections of money market integration
- Deviation of UIP (using the actual future exchange rate) → interpreted as a measure of the imperfections of foreign exchange market integration
- Analysis of CEE, EMU, non-EMU industrial countries
- Deviation of CIP is modeled
  - Interpreted as country risk in case of EU countries
  - Interpreted as a measure of capital controls in case of EU countries

#### **Outline of the Discussion**

- Is deviation from CIP a good measure of imperfections of money market integration?
- Is deviation from UIP a good measure of imperfections of foreign exchange market integration?
- Suggestions for the analysis of financial market integration

#### **Comments on CIP**

- Is deviation from CIP a good measure of imperfections of money market integration?
- Arbitrage goes through borrowing and investing in domestic & foreign money markets
- However, whether or not capital controls of this kind existed is a factual issue
- How to measure CIP?
- Other measures of money market integration?
  - Interest rates
  - Spread between deposit and lending rates
  - Lending cycles
  - Owner structure of the banking sector

What is the calculated magnitude and the interpretation of a deviation from CIP?

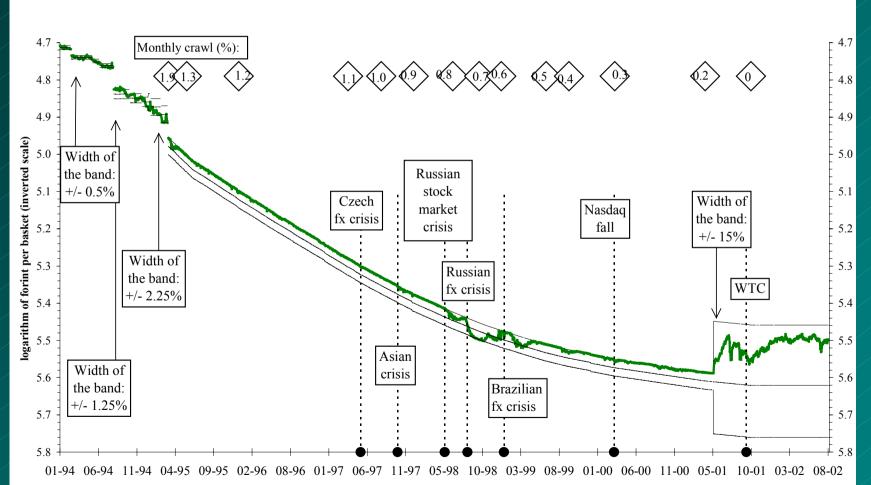
Table 5	Average deviation from CIP, 1999-2001
Czech Rep.	-0.06
Hungary	-0.40
Poland	-1.51
Slovak Rep.	-0.02
EMU-11	0.09
<b>IC-4</b>	-0.17

Paper claims that country risk & transaction costs& capital controls

- Probability of a default on domestic government debt and bank deposits or the probability of the dismissal of convertibility is virtually zero in CEE
- Transactions costs perhaps
- Most importantly: measurement

- Results of an NBH study on Hungarian futures market of second part of the nineties:
  - Market makers centered their bid and ask prices around CIP (i.e. CIP was fulfilled)
  - Bid-ask spreads were rather wide
  - ⇒ The actual forward rate depended on whether the market maker was buying or selling
  - In Hungary (& in Poland) market participants speculated for stronger exchange rates on the futures/forward markets => market makers were buying forward

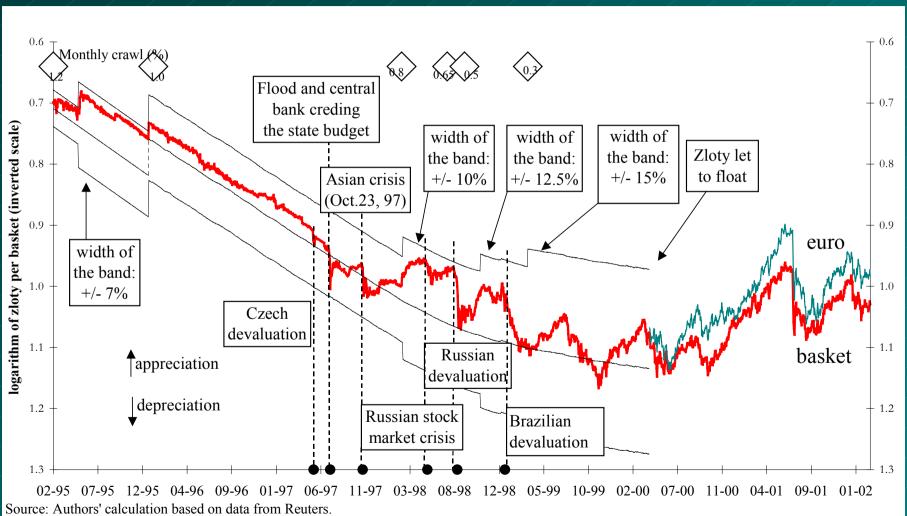
# Nominal Exchange Rate of the Hungarian Forint, January 1994 - March 6, 2002



Source: Authors' calculation based on data from the National Bank of Hungary.

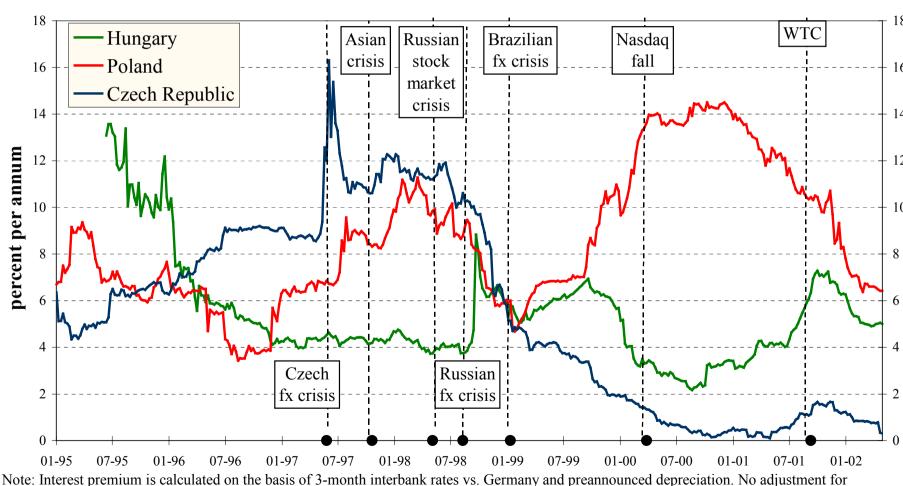
Notes: Composition of the basket: 50% DM+50% USD for August 1993 - May 1994; 70% ECU+30% USD for May 1994 - December 1996; 70% DEM+30% USD for January 1997 - December 1998; 70% EUR+30% USD for January - December 1999; 100% EUR since 2000.

# Nominal Exchange Rate of the Polish Zloty, February 1995 - March 6, 2002



*Notes*: Composition of the basket prior to 1999: 45% USD, 35% DM, 10% GBP, 5% FRF, 5% CHF; since 1999: 55% EUR, 45% USD. Zloty was let to float in April 2000. For better comparison we use both the compositon of the last basket and the euro for the floating period.

### Interest Rate Premia (=i-i\*-crawl) 1995-2002



exchange rate changes is made for the Czech Republic where the currency was either fixed or floating, and for Hungary and Poland since they ended the crawling band regime. Source: Updated from Darvas-Szapáry (2000)

Conclusion: the observed deviation from CIP in Hungary and Poland is due to positive assessment of risk/return characteristics (i.e. violation of UIP)

and results from the wide bid-ask spreads

Perhaps due to the small number of market makers?

Analysis of forward market characteristics might be useful (turnover, bid-ask spreads, frequency of trade, number of market makers, other available derivatives)

Capital controls on borrowing and investing in FX of market makers did not exists (at least in 3 of the 4 countries)

(In Hungary, up to June 2001 there were restrictions on foreign participation of the futures/forward market, but no restrictions applied to domestic agents)

⇒Consequently, interpretation of the deviation from CIP as resulting from the endogenous response of capital controls is rather questionable

#### **Comments on UIP**

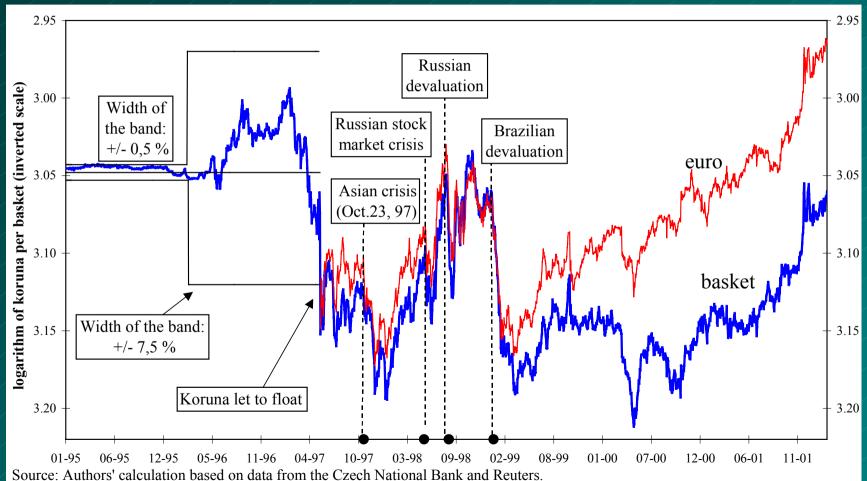
- Is deviation from UIP a good measure of imperfections of foreign exchange market integration?
- The literature is full of papers rejecting UIP: all FX markets of the world are separated?
   (Perhaps the only exemption is the individual EMU member currencies prior to EMU entry)
- UIP is about risk neutrality and rational expectations
- Other possible measures:
- Co-movement against 3rd currencies
- Market characteristics: turnover, bid-ask spreads
- Degree of convertibility

### Summary of suggestions

- Money market integration:
- Besides CIP, study of other measures (Interest rates, spreads, lending cycles, owner structure of the banking sector)
- Direct study of capital controls
- · CIP:
- Getting more detailed price information
- Survey of market makers
- Analysis of forward markets characteristics
- FX market integration:
- Instead of UIP, study of other measures (comovement against 3rd currencies, spot FX markets characteristics, capital controls)

## The End

# Nominal Exchange Rate of the Czech Koruna, January 1995 - March 6, 2002



*Notes*: Basket used prior to May 1997: 65% DEM - 35% USD. For better comparison we use both the compositon of the last basket and the euro for the floating period.