

Comments on “Capital Controls in India and Interest Rate Arbitrage”

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2nd Research Meeting of the NIPFP-DEA Program

New Delhi

March 2008

Comments

- ✦ Caveat: Hard to comment just on presentation
- ✦ But overall, nice ideas on a very important topic
- ✦ Good set of questions
- ✦ However, would need to understand better what authors are doing
- ✦ One main concern: Can effects of capital controls be effectively disentangled with interest rates?
- ✦ Several other questions

Some analytical considerations

$$\begin{array}{c}
 \text{total} \\
 \text{interest rate} \\
 \text{differential} \\
 \left(\dot{i}_{t,k} - \dot{i}_{t,k}^f \right) \underbrace{\quad}_{\dot{i}} = \underbrace{\left(\dot{i}_{t,k} - \dot{i}_{t,k} \right)}_{\text{currency premium}} + \underbrace{\left(\dot{i}_{t,k} - \dot{i}_{t,k}^f \right)}_{\text{country premium}} \dot{i}
 \end{array}$$

Some analytical considerations

anticipated

devauation

exchange rate

risk premium

$$\underbrace{(i_{t,k} - i_{t,k}^i)}_{\text{currency premium}} = s_{t,k}^e \underbrace{i}_{i} + \underbrace{erp_{t,i}}_{i} \underbrace{i}_{i}$$

Some analytical considerations

onshore premium

capital controls

pure default

premium

$$\underbrace{\left(\overset{i}{i}_{t,k} - \overset{i}{i}_{t,k}^f \right)}_{\text{country premium}} = \underbrace{\left(\overset{i}{i}_{t,k} - \overset{offshore}{i}_{t,k} \right)}_{\overset{i}{i}} + \underbrace{\left(\overset{offshore}{i}_{t,k} - \overset{i}{i}_{t,k}^f \right)}_{\overset{i}{i} \overset{i}{i} \overset{i}{i}}$$

Some analytical considerations

- ✚ If forward markets exists and under no currency premium, covered interest parity should hold

$$\left(i_{t,k} - i_{t,k}^f \right) = fd_{t,k}$$

onshore-offshore
differential

?

$$\left(i_{t,k} - i_{t,k}^f \right) - fd_{t,k} = 0$$

- ✚ “Broad version of CIP:” entails different currencies, issuers, and jurisdictions

Some analytical considerations

onshore-offshore

differential

$$\left(i_{t,k} - i_{t,k}^f \right) - fd_{t,k} = \underbrace{\left(i_{t,k} - i_{t,k}^f \right)}_{\text{country premium}} \cdot \underbrace{1}_{\text{country premium}}$$

onshore-offshore

differential

onshore premium

capital controls

pure default

premium

$$\left(i_{t,k} - i_{t,k}^f \right) - fd_{t,k} = \left(i_{t,k} - i_{t,k}^{\text{offshore}} \right) + \left(i_{t,k}^{\text{offshore}} - i_{t,k}^f \right)$$

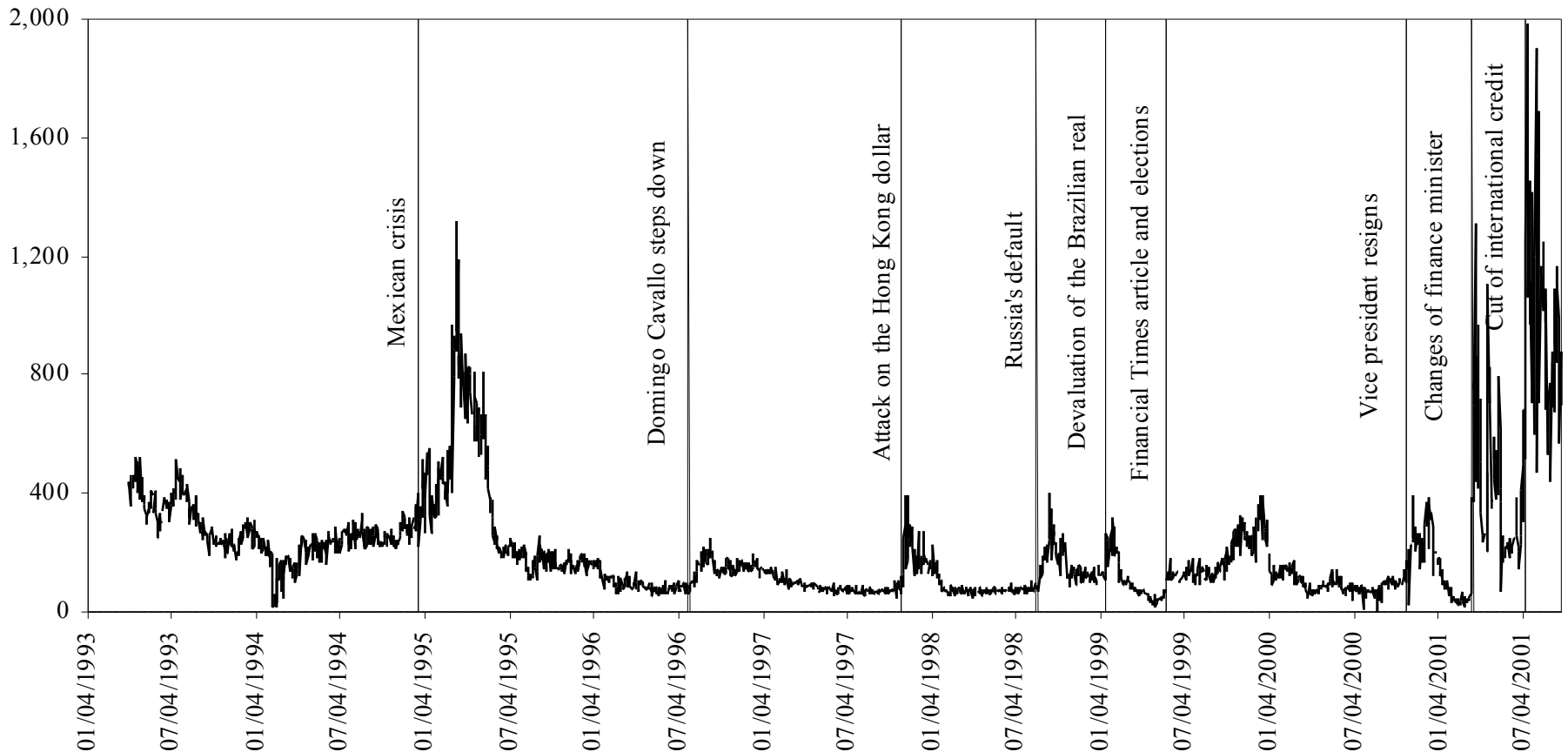
Some analytical considerations

- ✦ Analysis abstracts from who does the arbitrage (domestic/foreign investor)
- ✦ Also from whether the arbitrageur has funds

Currency premium

Argentina

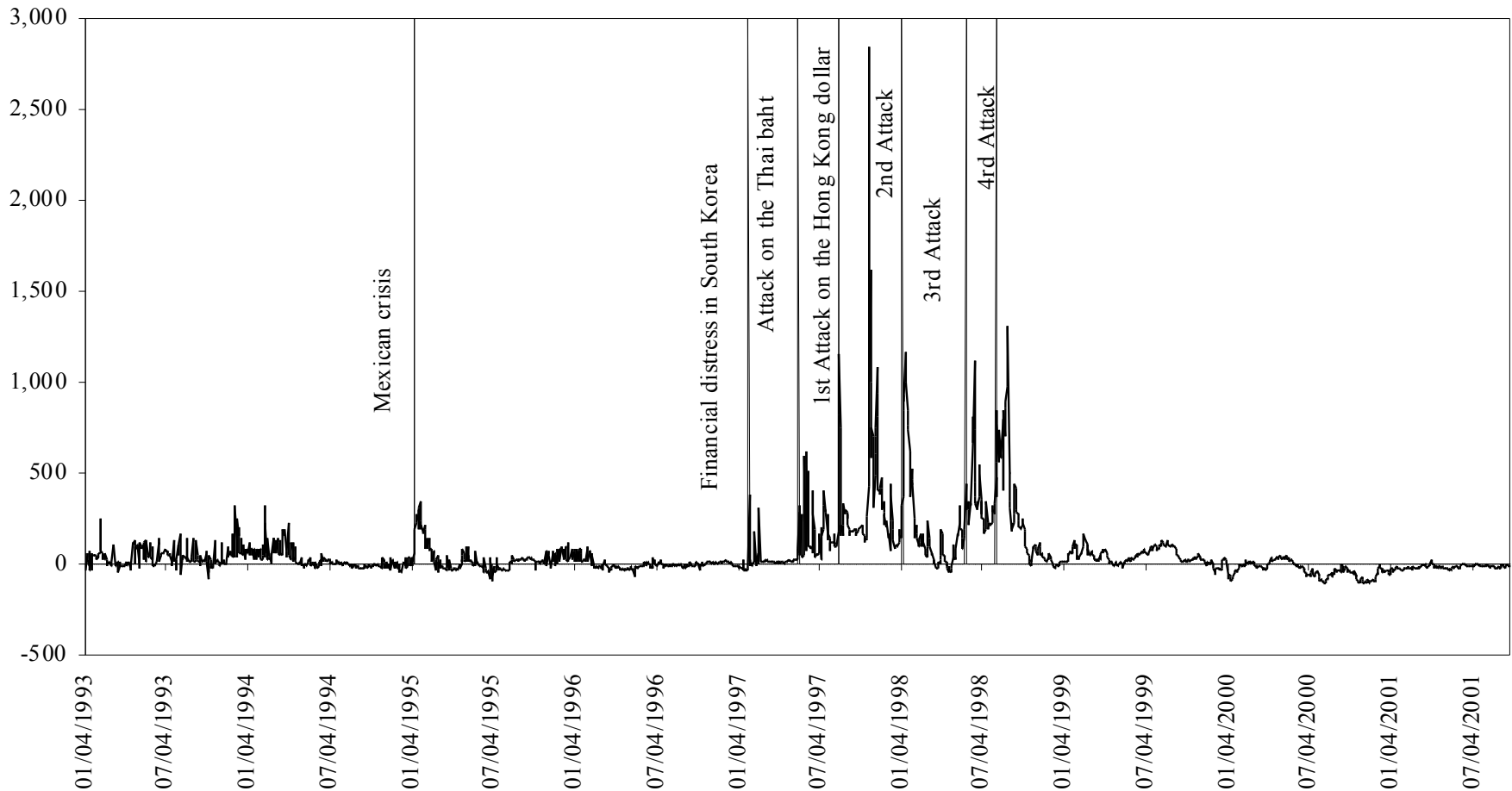
Currency Risk Premium from Argentina's Time Deposit Rates



Currency premium

Hong Kong

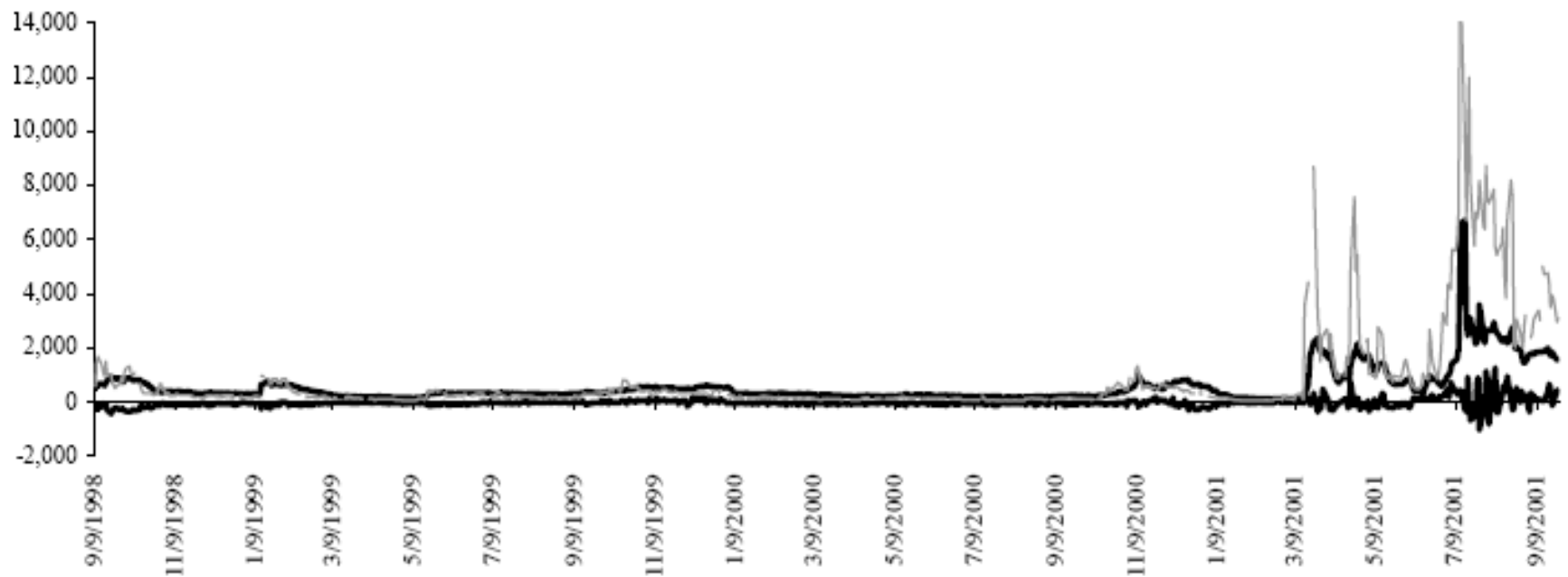
Currency Risk Premium from Hong Kong's Forward Exchange Rates



CIP under no capital controls

Argentina's NDF and no-arbitrage bands

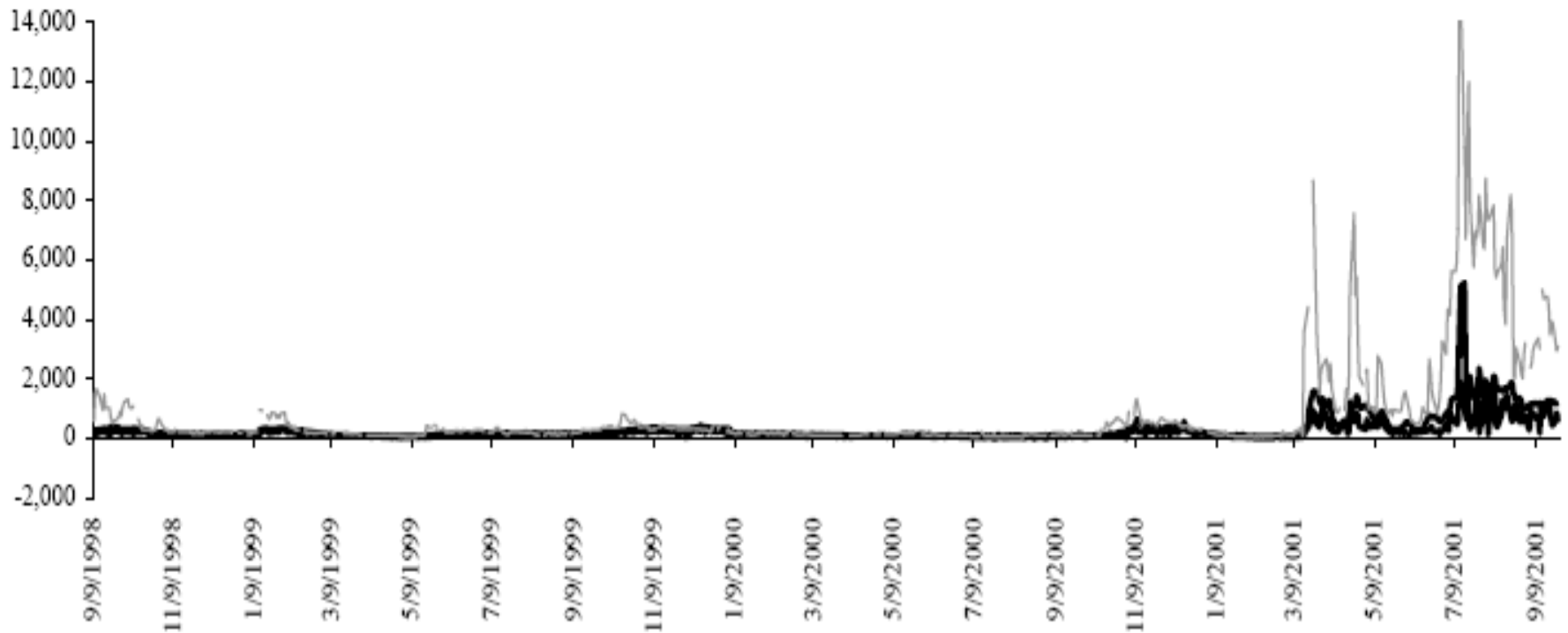
Case 2:
$$\underbrace{(i_{t,k}^{lending} - i_{t,k}^{deposit,*})}_{\text{upper band}} \geq f d_{t,k} \geq \underbrace{(i_{t,k}^{deposit} - i_{t,k}^{lending,*})}_{\text{lower band}}$$



CIP under no capital controls

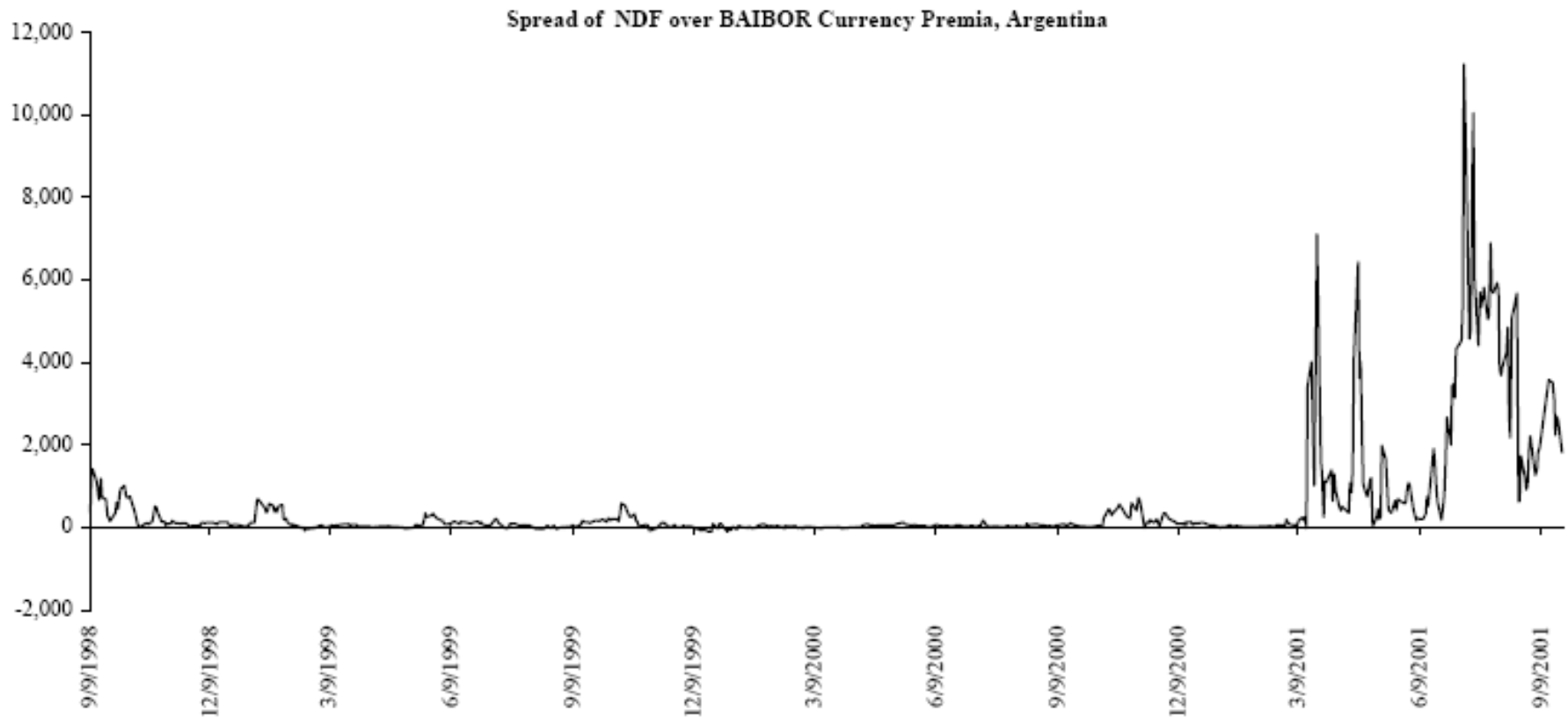
Argentina's NDF and no-arbitrage bands

Case 1:
$$(i_{t,k}^{lending} - i_{t,k}^{lending,*}) = fd_{t,k} = (i_{t,k}^{deposit} - i_{t,k}^{deposit,*})$$



CIP under no capital controls

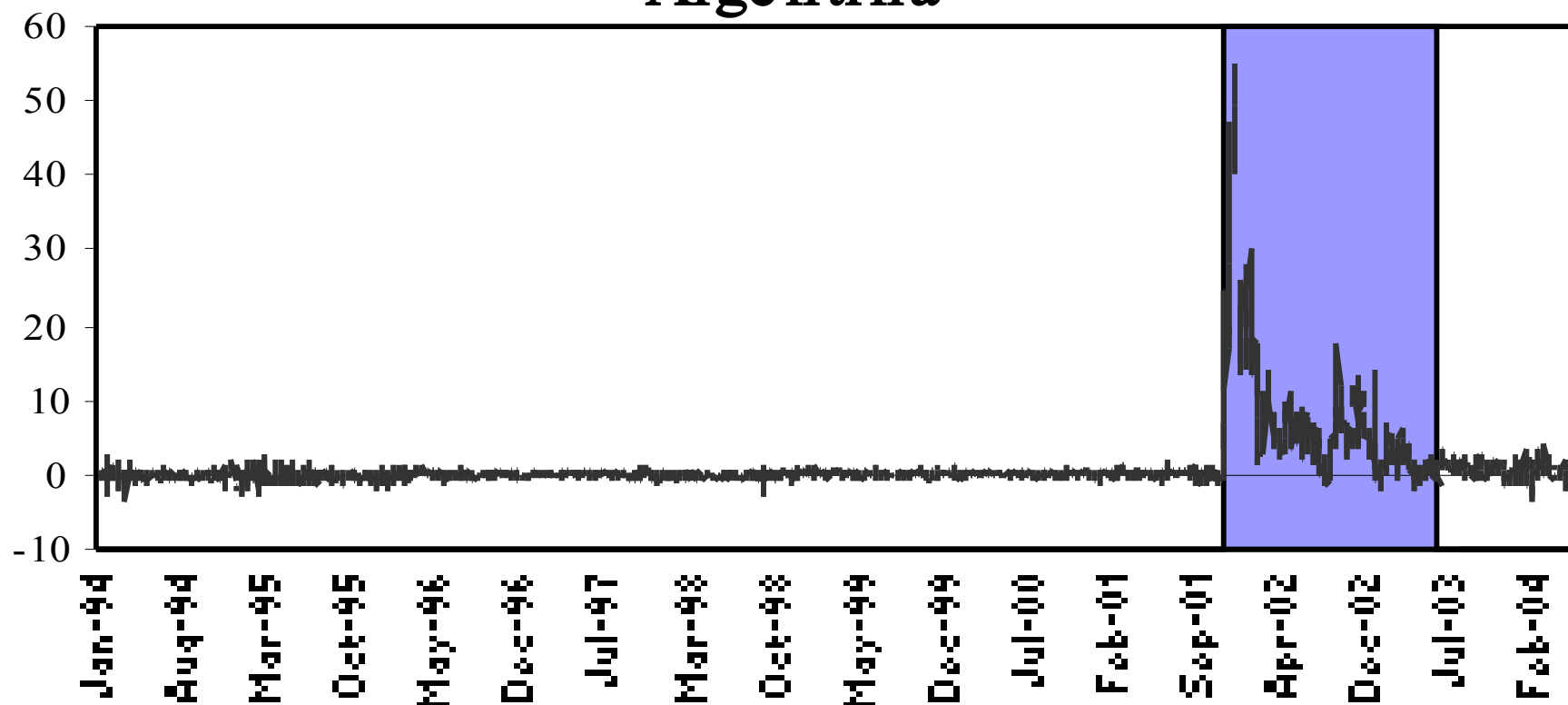
Spread of NDF over Currency Premium - Argentina



Effects of controls on alternative measure

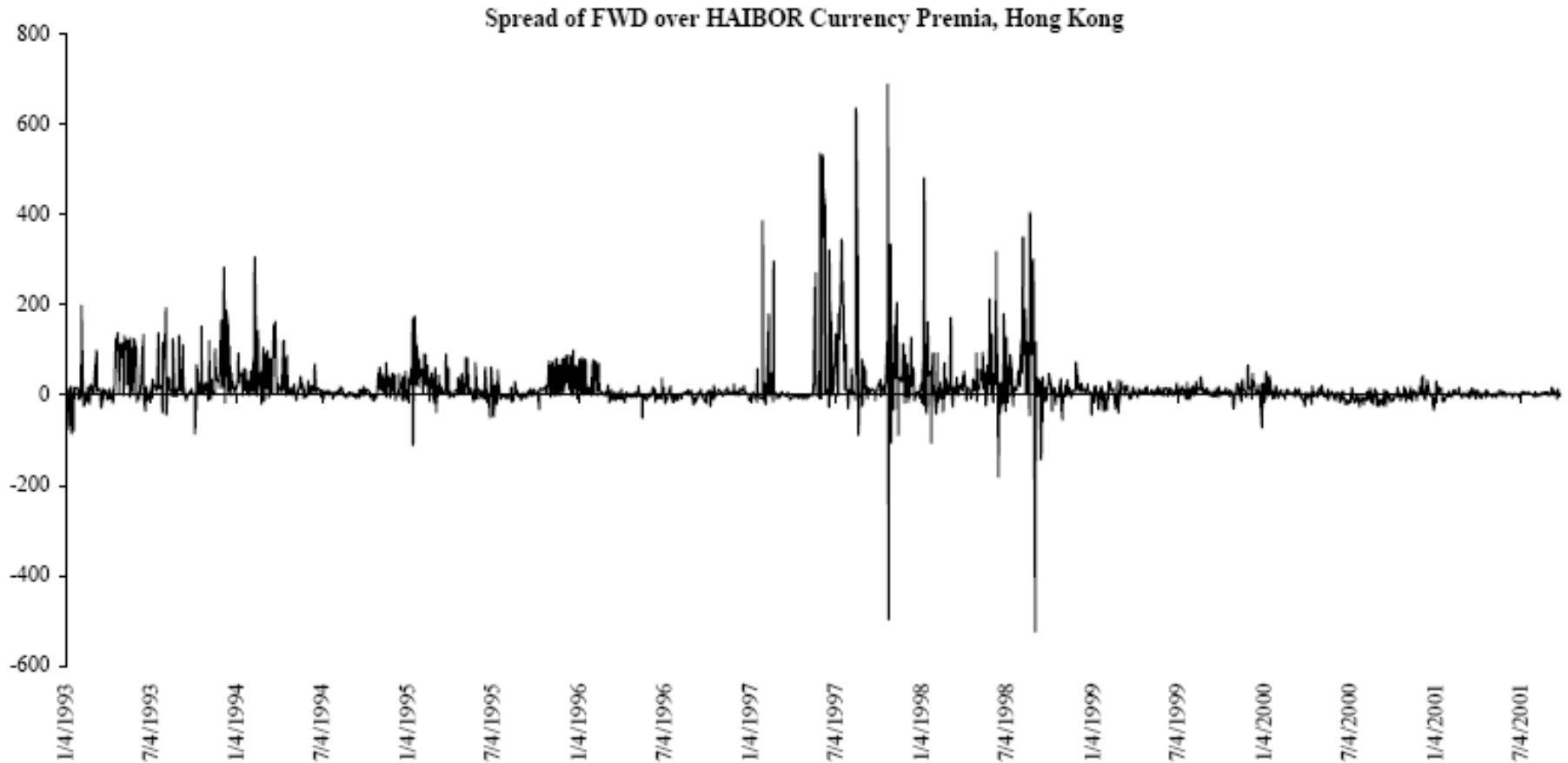
ADR Premium and Capital Controls

Argentina



CIP under no capital controls

Spread of NDF over Currency Premium - Hong Kong



To sum up

onshore-offshore

differential

$\dot{i} > 0$

onshore premium

capital controls

$\dot{i} > 0$

$\dot{i} < 0$

pure default

premium

$\dot{i} > 0$

$\dot{i} > 0$

$$\underbrace{(i_{t,k} - i_{t,k}^f) - fd_{t,k}}_{\dot{i}} = \underbrace{(i_{t,k}^{\text{onshore}} - i_{t,k}^{\text{offshore}})}_{\dot{i}} + \underbrace{(i_{t,k}^{\text{offshore}} - i_{t,k}^f)}_{\dot{i}}$$

Other questions

- ✚ Clarification on effects of controls
 - Controls on outflows would depress domestic rate?
 - Controls on inflows would increase domestic rate?
- Can disentangle effects of different controls over time?
- List evolution of capital control regulations
- Explain MIBOR
- Pros and cons of data

Other questions

- ✦ Clarify some statements, as below
- ✦ “When currencies are fully convertible, NDF markets are not observable”
- ✦ “When access to an onshore forward market is restricted, an offshore NDF market may develop”
- ✦ “When access to local currency securities markets is limited, the NDF forward rate will reflect the expected future spot rate of the currency”

Other questions

- + Clarify information in tables and figures
 - + Frequency
 - + Overlapping effects (e.g. 3-month rate on monthly data)
 - + Longer time series?
 - + Discuss magnitudes
 - + Discuss differences across tables
 - + What are the structural tests measuring?
 - + Why fluctuations in differential? Meaningful? Recurrent changes between positive and negative
 - + What explains the variation in AR(1)? Meaningful?
 - + What is the expected sign of regressors? Why not significant?

Conclusions

- + Nice ideas already
- + Also nice ideas for future work
- + Promising research agenda
- + Look forward to reading paper