Financial Liberalization and Economic Vulnerability in Brazil

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Main question:

What is the impact of financial liberalization on Brazil's external vulnerability?

To respond:

We need a measure of vulnerability, and a way to associate it with liberalization.

Outline:

- Financial liberalization
- Minsky’s financial instability hypothesis
- Index of external fragility: the case of Brazil
- The VAR model: liberalization and fragility
- Conclusions

1 - Introduction

- Financial liberalization processes
- Financial fragility and financial crises
- Procyclical capital flows in developing countries

2 - Financial fragility

- Minsky’s Financial Instability Hypothesis
- Extension: open economies → financial fragility relates to a country’s ability to repay its debts.
- The index of external fragility - EFI (De Paula and Alves Jr., 2000): measures a country’s dependence on external funds to meet short-term financial obligations.

- Calculated as:

$$EFI = \frac{(M + E_I + E_{OS} + A + STC_{-1} + NIP_{-1})}{(X + R_I + R_{OS} + RE_{-1} + FDI + L_{ML})}$$

Where:
M = imports X = exports
$E_{I,OS}$ = expenses on interest and other services
$R_{I,OS}$ = revenues on interest and other services
A = amortization of loans
STC = short term capital
NIP = net portfolio investment
RE = official reserves in foreign currency
FDI = foreign direct investment
L_{ML} = medium and long term loans

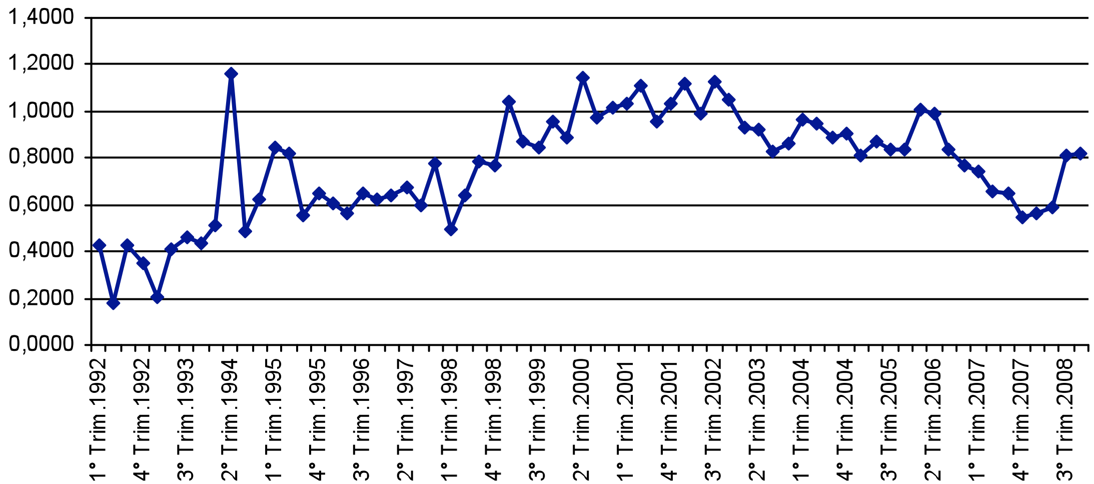
- An alternative index, based on current account only:

$$\frac{CE}{CR} = \frac{(M + E_I + E_{OS})}{(X + R_I + R_{OS})}$$

Note: less volatile than EFI

3 - The case of Brazil

Figure 1: external fragility index (1992-2008)



Two different phases for EFI:

- Period 1992-2001: growing fragility and episodes of financial crises (Mexico, Asia, Brazil, Argentina)
- Period 2002-2008: declining EFI boom in commodity exports and liquidity in international financial markets
- Question: is the problem solved?

Figure 2: EFI and the capital account

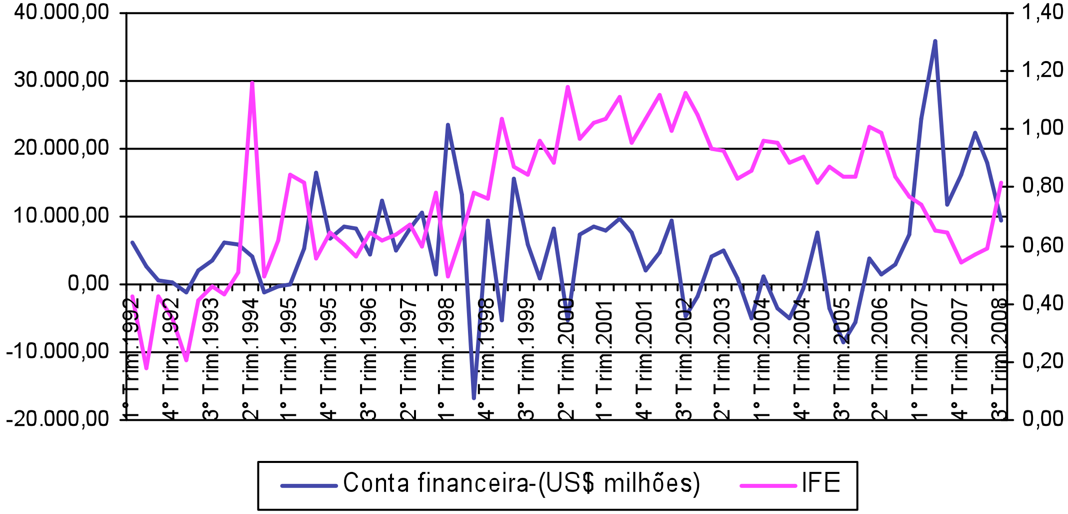
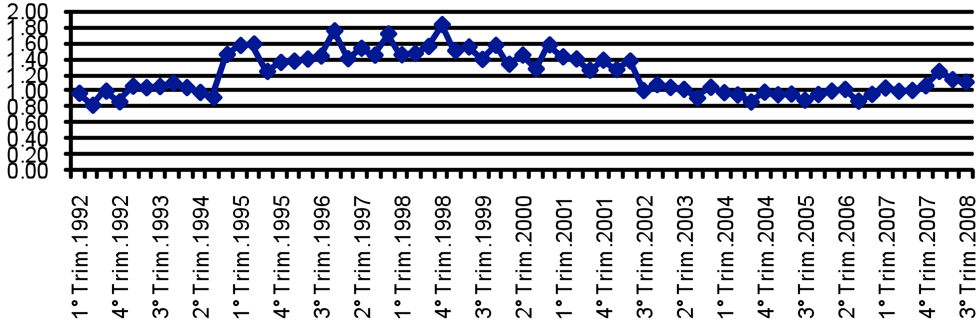


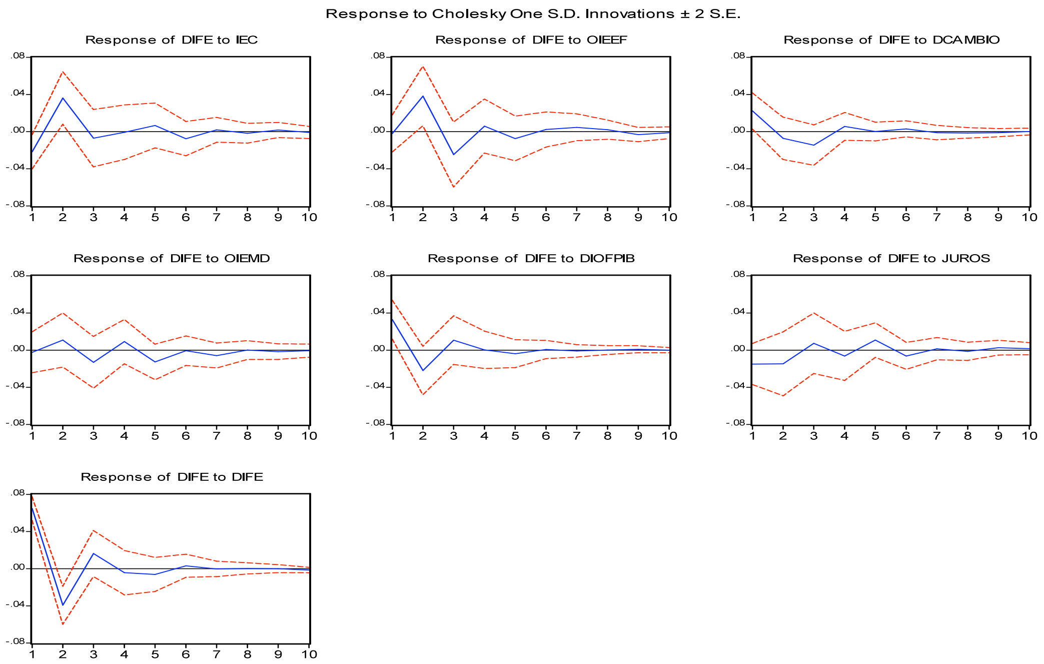
Figure 3: the CECR index



4 - Empirical analysis

- VAR model: relation between liberalization and vulnerability
- Variables: EFI, 3 different measures of short-term capital flows in proportion to GDP, interest rate, exchange rate, tax on financial transactions in proportion to GDP
- Control variables: reserves, foreign debt to GDP ratio
- Quarterly data from 1-1995 to 4-2008

Results: impulse response functions



5 - Conclusion

- Financial liberalization, vulnerability in Brazil
- Results suggestive but not conclusive
- Explanation: two different phases - growing EFI until 2001, falling EFI from 2002-2008
- Disguised vulnerability in good times…
- Problems: reliance on volatile capital flows and on commodity exports