

**Comments on:**

**Firm Dollar Debt and Central Bank Dollar  
Reserves: A Case of Moral Hazard  
by Rajeswari Sengupta**

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\*The views expressed herein are those of the authors and should not<sup>1</sup>  
be attributed to the IMF, its Executive Board, or its management.

# Paper in a Nutshell

- Looks relationship between official FX reserves and FX corporate borrowing in Latin America during 1991-2007
- Relatively novel dataset (from the IADB) on nonfinancial firms' FX exposure
- Controls for firm specific and macro factors
- Author finds that hoarding of reserves *encourages* firms to borrow in FX (note the causality)

# Where does this paper fit?

- Paper contributes to important strands international finance:
- Fear of Floating (why do central banks smooth exchange rate volatility?)
- Why do firms borrow in FX?
  - Corporate finance considerations aside, how are borrowing decisions affected by the exchange rate regime (FX volatility, central bank reserves, etc.)
  - Two Views:
    - Moral hazard
    - Incomplete markets (hedging instruments)
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# Detour and back to paper findings

- Moral hazard view:
  - CB's FX intervention => low FX volatility (*signal* of government guarantee) => increased FX borrowing by firms  
*Recall the causality!*
- Incomplete markets view:
  - Limited hedging opportunities => some firms (large corporates in emerging markets) will borrow too much in FX
    - How much is too much? Don't know, but FX borrowing (unhedged FX exposure) should not depend to FX volatility
- Paper finds evidence in favor of Moral Hazard View

# More on the Paper

- Cleverly applies pooled Tobit (censored) to address large fraction of firms with zero dollar debt
- Controls for firm-specific and macro factors (more on this soon)

*FX debt/ total debt = F (res/GDP, FX vol, firm\_size, export sales, ...)*

- Author finds that coefficient on res/GDP (or res/M2) is positive and coefficient on FX volatility is negative
- Paper shows that findings are robust (but how robust would the findings be to different measures of FX exposure? )

# Unresolved Issues/Questions

- Given that degree of market completeness changed tremendously (exogenously?), how can one be sure about causality?
  - **Could** the author zoom in and focus on a country with limited or no change in availability of hedging instruments?
  - I read footnote 14 on lagged regressors: is it enough to address endogeneity?
- What to make of the magnitude of the coefficients?
  - Why is the coefficient on FX volatility small (or is it?)
  - Why is the coefficient on  $r - r^*$  small and insignificant in the case of net debt/debt?
  - Why is the effect of reserves not significant for Brazil? (How significant were the changes in the availability of hedging instruments?)
- Could the author look at alternative measures of FX exposure to assess the robustness of the results?

# More Issues and Policy implications

- What are the implications for FX intervention policy? Are central banks accumulating too much reserves?
- => Paper seems to suggest yes, CB does not internalize cost of “excessive” borrowing
- But then Reserves have shielded some countries from the worst of the recent crisis...
- Should the paper focus more on FX volatility?
  - After all some countries (including two countries in the sample) have had reserve accumulation programs while allowing the exchange rate to “float”

# Concluding Remarks

- Nice paper: interesting question, clever use of technique, good data set, interesting results
- As with any good paper: interesting questions remain unanswered
- Policy implications are less clear (but to be fair not the objective of the paper!)