Discussion of "A Quantitative Theory of Hard and Soft Sovereign Defaults" by Gordon and Guerron-Quintana

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INTRODUCTION

- Main empirical fact: Larger haircuts (hard defaults) associated with worse growth outcomes.
- Goal of the paper: quantitative model to account for it.
- Main innovation: barganing approach.
- Causality: sovereign offers larger haircuts when growth is lower.

Relevant topic

- Extensive literature analyzing the efficacy of debt renegotiation procedures.
- Perception about debt renegotiations (Pitchford and Wright 2013):
 - Renegotiations take too long.
 - Impose large renegotiation costs.
 - Subject to coordination failures among creditors.

Upon agreement...

- Poor macroeconomic conditions and indebtedness persist.
- Sovereigns often face new defaults and yet further renegotiations.
- Role for policy?

PAPER INNOVATION VS STANDARD MODELS Value of repayment:

$$V^{R}(b,z) = \max_{b'} u(c) + \beta E \left[\max_{N'} \left\{ \begin{array}{l} N'V(b',z') \\ +(1-N')V^{R}(b',z') \end{array} \right\} \right]$$

s.t. $c + qb' = b + y(z)$

Value of default:

$$V^{D}(b,z) = u(c) + \beta E \left[V(b',z') \right]$$

s.t. c = $\phi(y(z))$
b' = $R^{d}b$

Value of negotiating:

$$V(b,z) = \max_{h \in [0,1]} \begin{bmatrix} A(h, b, z) V^{R} ((1-h) b, z) \\ + (1 - A(h, b, z)) V^{D} (b, z) \end{bmatrix}$$

RICH QUANTITATIVE ENVIRONMENT

- Long-term debt.
- Growth vs transitory shocks.
- RER fluctuations (tradables and non-tradables).
- Application to Argentina.

FIGURE: Size of haircut and GDP growth

(A) data





Quantitative model matches the empirical pattern!



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THE BARGAINING APPROACH

- Borrower makes a single haircut offer.
- Creditors either accept it or not.
- Risky negotiations:
 - Probability $\overline{\alpha}$ of not being able to accept offer.
 - Shocks to the value of accepting or rejecting the offer.

$$A(h, b, z) = \frac{\overline{\alpha}}{1 + e^{-(Q^A(h, b, z) - Q^D(h, b, z))/\sigma_\alpha}}$$

- Without new offers in the future and shocks to negotiation, haircut would be 100% and no borrowing would take place.
- Where is the risk in negotiations coming from? Is it desirable to seek policies to reduce the risk?

Statistic	Bench.	$R^D=1$	$\bar{\alpha}=1$	$\rho\downarrow$	$\theta_T\uparrow$	$\sigma_{\alpha}\downarrow$	$\chi\uparrow$	$\beta\uparrow$
Debt to GDP no default	0.965	0.990	0.121	0.951	1.065	0.956	1.024	0.978
Spreads no default	0.076	0.102	0.132	0.074	0.077	0.081	0.082	0.054
Haircut size	0.663	0.403	0.551	0.672	0.657	0.659	0.654	0.676
Haircut size s.d.	0.184	0.197	0.091	0.174	0.182	0.174	0.179	0.182
RER	1.607	1.638	1.398	0.922	2.498	1.598	1.608	1.576
RER s.d.	0.714	0.740	0.575	0.454	1.107	0.718	0.778	0.729
Corr. of haircut and du- ration	0.645	-0.324	0.083	0.668	0.663	0.665	0.642	0.659
Log default duration	2.836	2.887	0.510	2.837	2.787	2.811	2.788	2.900
Fraction of time in de- fault	0.377	0.460	0.037	0.371	0.383	0.386	0.378	0.312
Fraction of time with pre-emptive restructur-ing	0.001	0.001	0.021	0.001	0.001	0.001	0.000	0.000

Table 3: Alternative parameter values

- Moments not sensitive to σ_{α} . Why?
- Only alternative values for R^D and $\overline{\alpha}$ produce relevant changes.
- Benchmark value for $\overline{\alpha}$ is 0.06.

FINAL REMARKS

- Great paper! Quantitative success!
- Literature has explored a wide range of bargaining procedures.
- The paper could explore more the risk in negotiations. Where is it coming from? Is there role for policy interventions?
- In the case of Argentina, the perception was that negotiations would be too complex given the heterogeneity in securities and creditors. Is that related to risk?
- In the case of Uruguay, the renegotation was perceived as simpler...

FIGURE: Growth of Real GDP per capita: ARG vs URY

