

Discussion of
“Sudden Stops and Sovereign Defaults”

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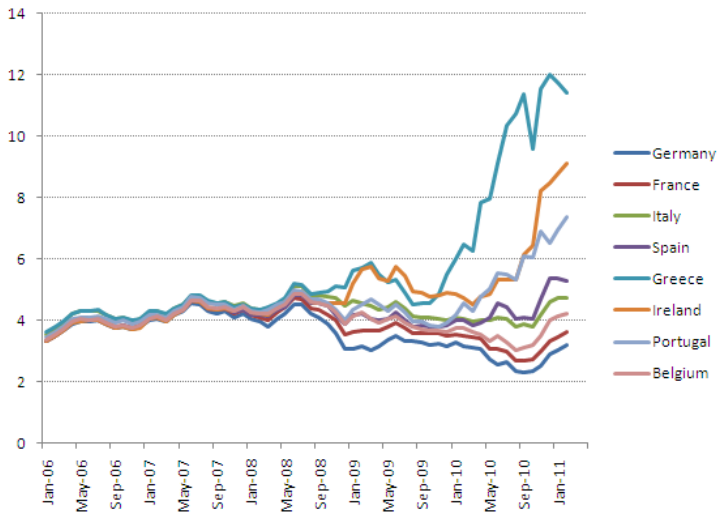
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Two patterns in Euro Zone

- ① Convergence in prices and wages in the 'South', without equivalent convergence in productivity
- ② Convergence in interest rates, without equivalent convergence in risk fundamentals

Long term interest rates (in %) on sovereign debt of selected euro countries, 2006 - Feb 2011



- Why Greece paid the same interest rate as Germany?
 - ① Myopic banks? Low probability events?
Information-insensitive debt? [▶ illustration](#)
 - ② Implicit bail-out guarantee?
 - a form of (very distortionary) within-Europe transfer

- Why Greece paid the same interest rate as Germany?
 - ① Myopic banks? Low probability events?
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 - ② Implicit bail-out guarantee?
 - a form of (very distortionary) within-Europe transfer
 - ③ This paper: imperfect information and signaling
 - information on government solvency is imperfect
 - market access for borrowing is a signal of (in)solvency
 - defaultable debt

Model

- Risk-neutral competitive lenders
- Risk-neutral borrower with a project and no cash
- Payoffs

Period $t =$	0	1	2
Invest	1	a	—
Income	—	$1 \pm \epsilon$	$R \cdot (1 \pm \epsilon \pm \epsilon')$
Borrow/repay	1	b	$-1 \cdot r_0 - b \cdot r_1(b)$

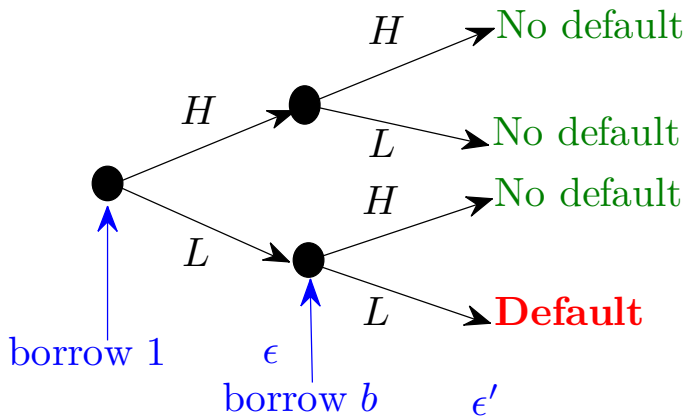
- Efficiency: invest if $NPV > 0$
- **Default** if

$$(1 - \eta)R(1 \pm \epsilon \pm \epsilon') \geq R(1 \pm \epsilon \pm \epsilon') - r_0 - br_1(b)$$

or

$$\eta R(1 \pm \epsilon \pm \epsilon') \leq r_0 + br_1(b)$$

Timing



Results

- (i) Equilibrium is efficient if project is financed iff NPV is positive
 - under certain circumstances, positive NPV projects are not financed (market break-down)
- (ii) Country receives full NPV, banks receive zero
- (iii) In a pooling equilibrium, L receives informational rents at the cost of H
- (iv) L always wants to pool, H always wants to separate
- (v) Separation always possible

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Modification: If at $t = 1$, L can invest $\leq a - 2\epsilon$ to obtain $R' \ll R$ at $t = 2$, then pooling equilibrium can also exist. Pooling equilibrium is inefficient. Pooling can lead to market break-down at $t = 0$.

Interpretation of the results

- In a separating equilibrium, $b = b(\epsilon)$ is a signal of sovereign risk at $t = 2$
- If $b > \hat{b} \equiv a - (1 + \epsilon)$, then country is assessed as L and it pays higher interest rates \rightarrow negative shift in supply of funds schedule ('sudden stop')
- Increase in spreads upon this signal and more likely future 'sovereign default'
- When countries pool, both countries face the same interest rates, but investment in L is diverted and it necessarily defaults
- Equilibrium is constrained efficient, but can be far from first best

Comments

- ① Work in progress
 - spell out objectives of agents, assumptions, and rules of the game more clearly
- ② Push towards either more theory or more quantitative
- ③ Very ad hoc lending contract
- ④ Little consequences for welfare (unless lending breaks down);
No room for policy
- ⑤ Example rather than general result (taxonomy of cases)
- ⑥ A lot of strong statements about quantitative success of the model
- ⑦ Next steps:
 - dynamic model with curvature (costly signaling)
 - merging signaling with currency crisis

Information-insensitive debt

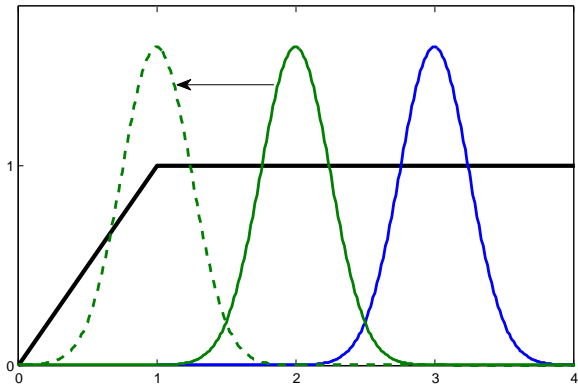


Figure: Debtor payoff and distribution of outcomes