

# Sovereign Default: The Role of Expectations

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# Sources of Multiplicity

1. Endogenous future payments
2. Price-taking Behavior

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- ▶ Some floating rate debt has been issued

## 2. Price-taking Behavior

# Sources of Multiplicity

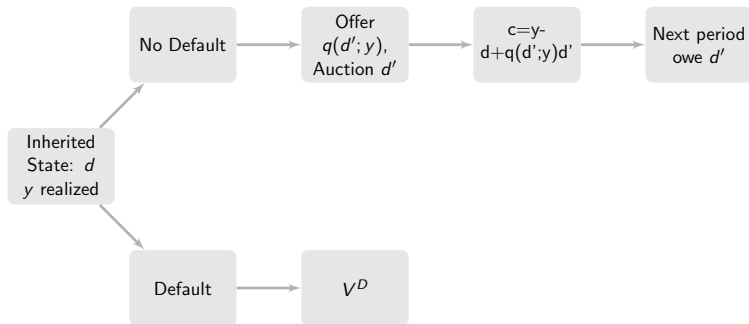
## 1. Endogenous future payments

- ▶ Not really how sovereigns issue debt
- ▶ Typically coupon is fixed and price is endogenous
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## 2. Price-taking Behavior

- ▶ More important departure

# Eaton-Gersovitz Timing



# Key Assumptions

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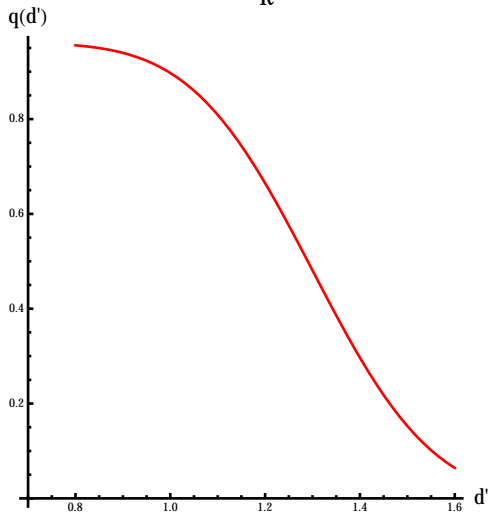
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- ▶ Acts as a monopolist in its own debt: Internalizes that by issuing more debt,  $q$  will fall.

# Eaton-Gersovitz Equilibrium

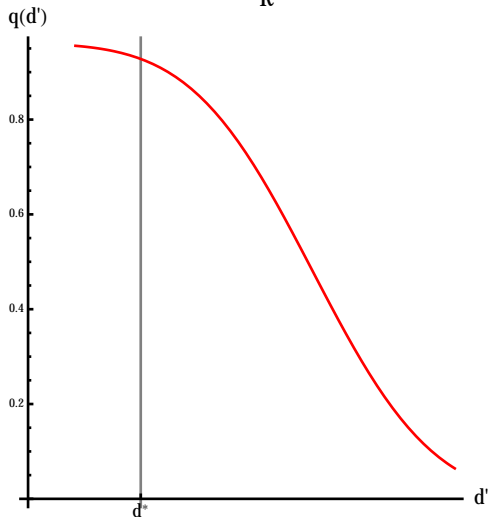
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# Eaton-Gersovitz Equilibrium

Government's Best Response:  $d^*$

$$q(d') = \frac{1 - F(y_{Aut} + d')}{R^*}$$



# ANNT Alternative

- ▶ Government faces a price (scalar) for *any* amount of debt issued
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- ▶ where  $B(d)$  replacing  $d'$  is the government's debt-issuance policy function given current state  $d$  (and associated policy  $qBR(d)$ )

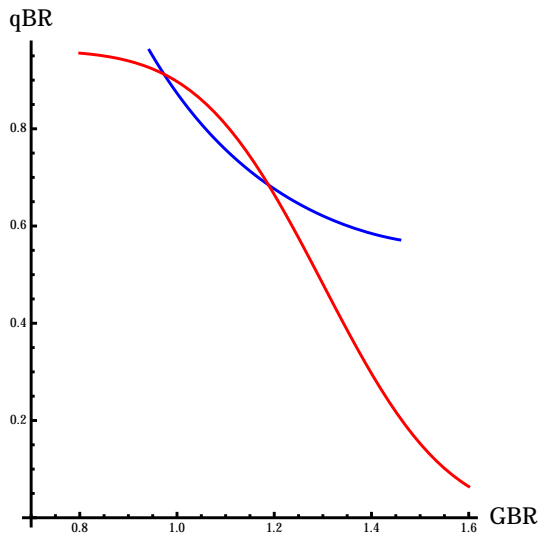
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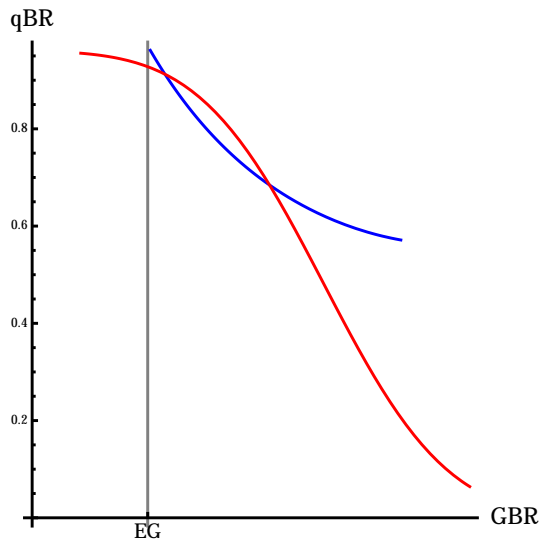
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- ▶ where  $B(d)$  replacing  $d'$  is the government's debt-issuance policy function given current state  $d$  (and associated policy  $qBR(d)$ )
- ▶ There now may be multiple equilibria

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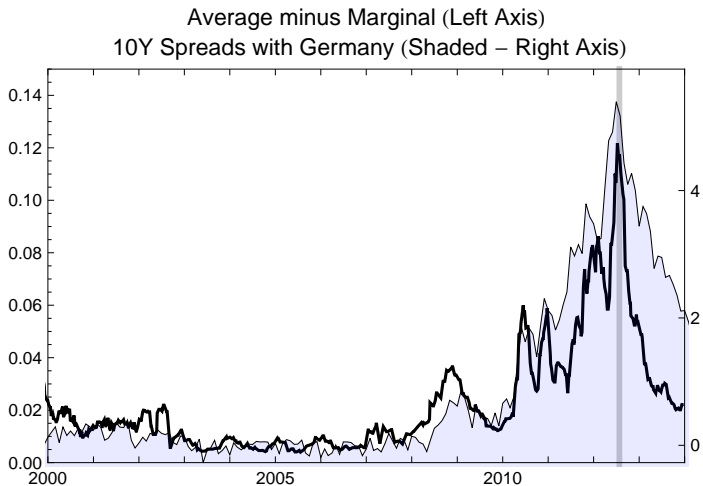
# Are Government's Price Takers?

- ▶ Not really
- ▶ Fiscal authorities recognize that prices depend on debt issuances
- ▶ Typical auction mechanics:
  1. Announce projected debt issuances at time of budgeting (may be updated)
  2. Announce debt auction calendar (may be updated)
  3. Before auction, announce target amount (in consultation with primary dealers)
  4. Collect bids (prices and quantities)
  5. Finalize auction amount and price (may differ from target)

# Key Features

- ▶ Within an auction, bids induce a downward sloping “demand curve”
- ▶  $\text{Marginal price} < \text{Average price}$

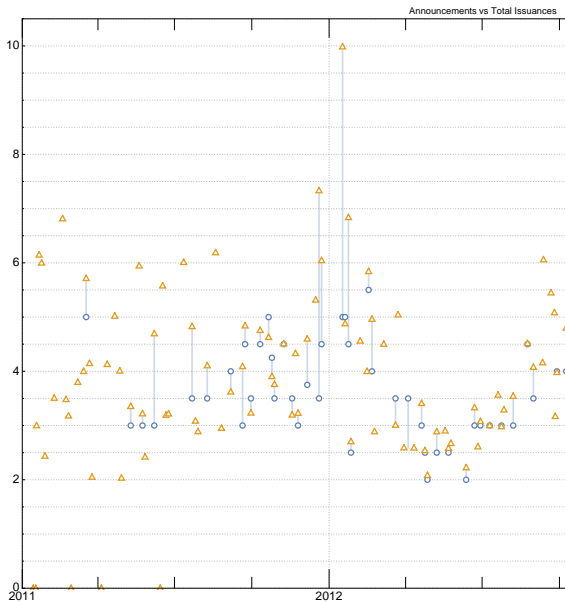
# Marginal-Average Spread



# Key Features

- ▶ Within an auction, bids induce a downward sloping “supply curve”
- ▶  $\text{Marginal price} < \text{Average price}$
- ▶ However...bids are entered based on forecasted debt issuance, not realized issuances

# Announced versus Realized Issuance





# Assessment

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  - ▶ May renege on debt targets
- ▶ But also not price takers
- ▶ Repeated game – perhaps MPE not the right concept