# Fiscal Rules and the Sovereign Default Premium by Hatchondo, Martinez and Roch

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# Overview

- **Should we regulate debt based on levels or spreads?**
- **This paper: spreads!**

| *Country* | *Debt / GDP* | *Spread vs. Bund* (10 *yr.*) |
|---|---|---|
| *Japan* | 230 | −19.9 |
| *Greece* | 158 | 731.1 |

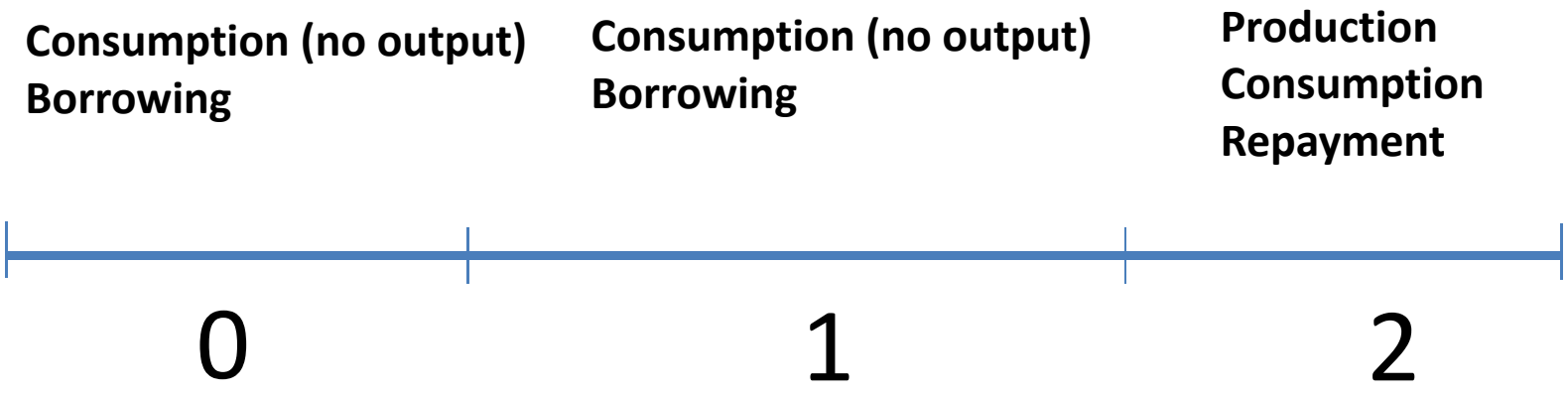
- **Simple insight: for heterogeneous countries/circumstances**
  - Common debt limits may be restrictive for some, lose for others
  - Spreads better measure of "debt tolerance"
- **Embed insight in quantitative model of sovereign debt**

# General reaction

- Important and sensible message
  - Spreads provide country/state-specific information about debt sustainability
  - Why discard them?
- Somewhat reminiscent of old debate in monetary policy
  - Should the CB target quantities (aggregates) or prices (interest rate)
    - ★ Poole (1970): depends on the environment
- (Too?) complete, thorough paper
  - Intuition, three-period model, quantitative analysis
- Convincing: there are situations where it is better to target spreads

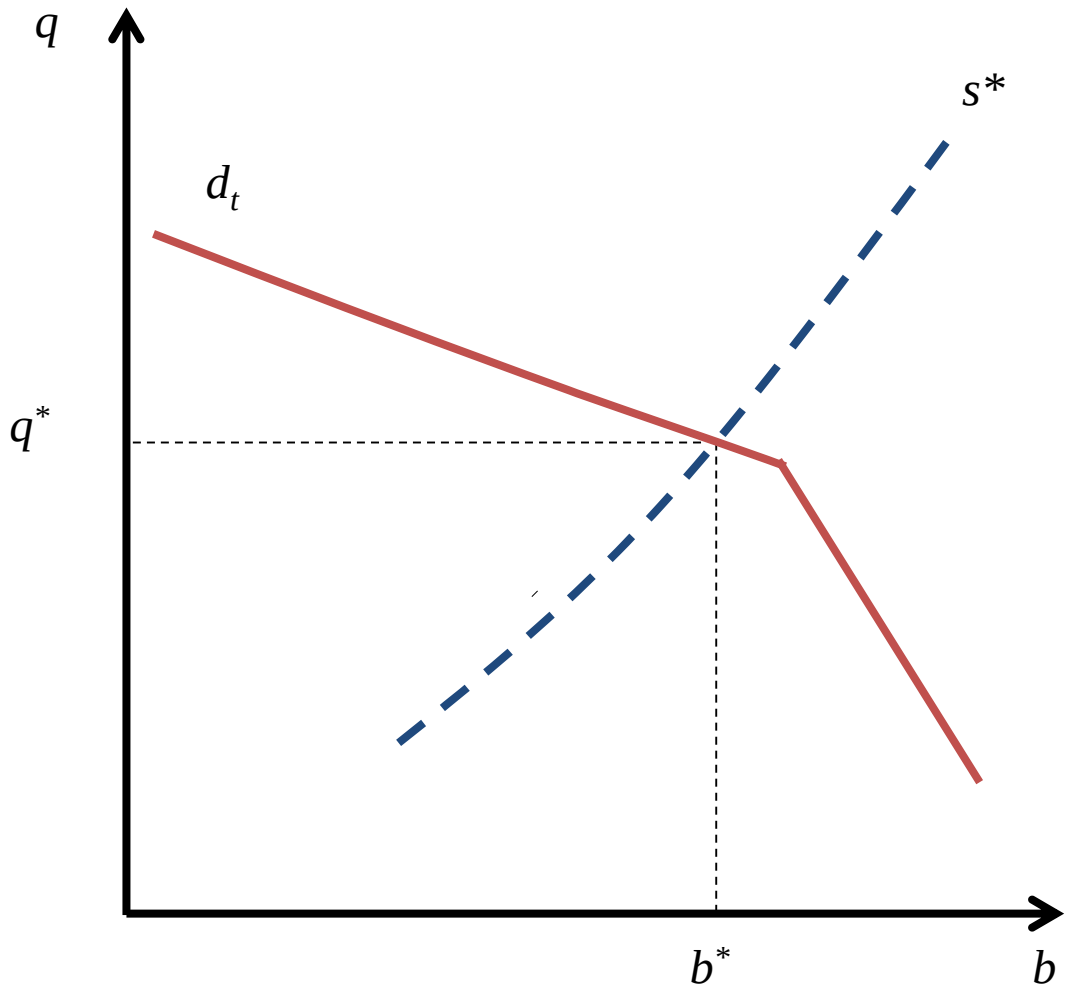
# The model

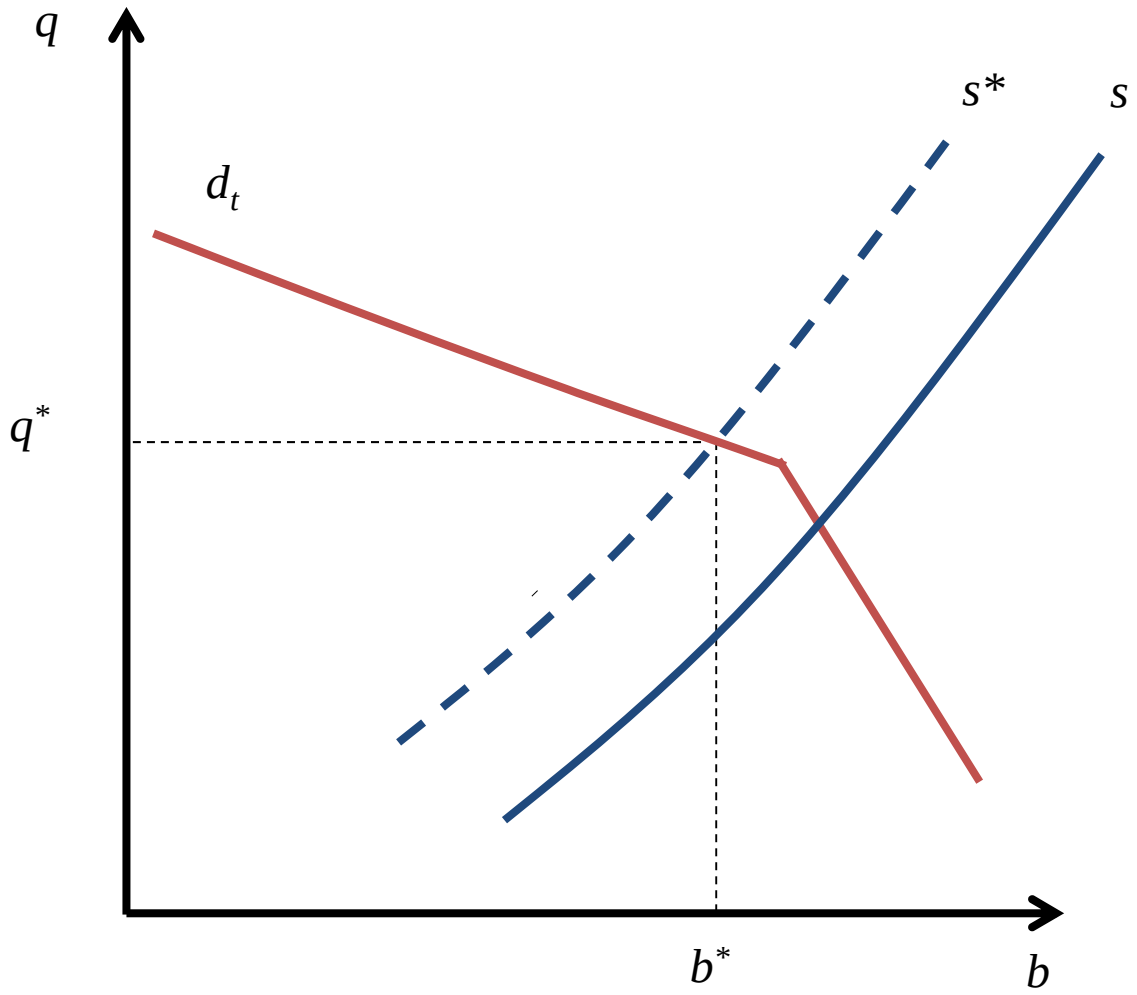
- Why regulate debt?: dilution
- Three period, small/open economy, $t = 0, 1, 2$
  - Output only at $t = 2$: fraction $\phi$ can be pledged to creditors
  - Concave utility: consumption smoothing
- Government:
  - Borrows at $t = 0$ and $t = 1$
  - Cannot commit to future path of debt
  - Issues some LT debt


Consumption (no output)
Borrowing
Consumption (no output)
Borrowing
Production
Consumption
Repayment
0
1
2

# The model (II)

- At $t = 1$: incentive to dilute pre-existing debt
  - Why? New debt raises default probability
  - Part of this cost is borne by legacy creditors
- At $t = 0$: government would like to commit to debt level at $t = 1$
  - Equivalence between debt and spread limit


q
s*
$d_t$
$q^*$
$b^*$
b



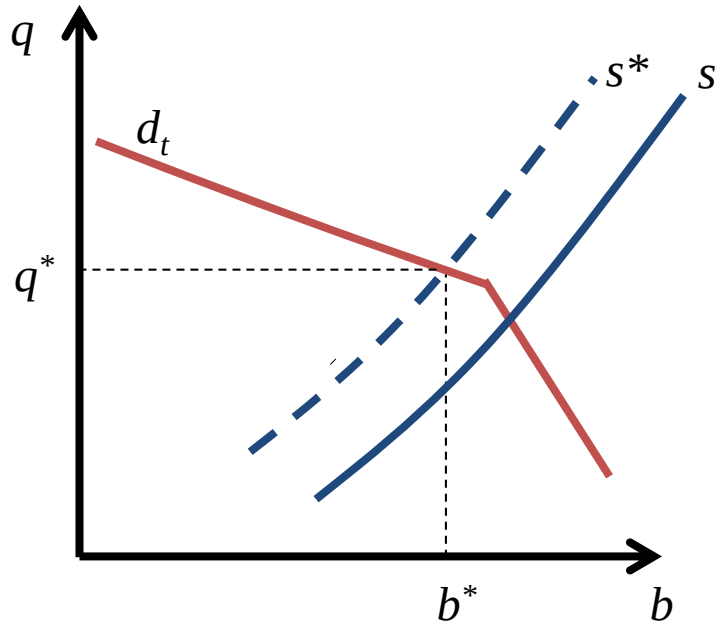

Spread limit ($q \geq \underline{q} = q^*$) equivalent to debt limit ($b \leq \bar{b} = b^*$)

# The model (II)

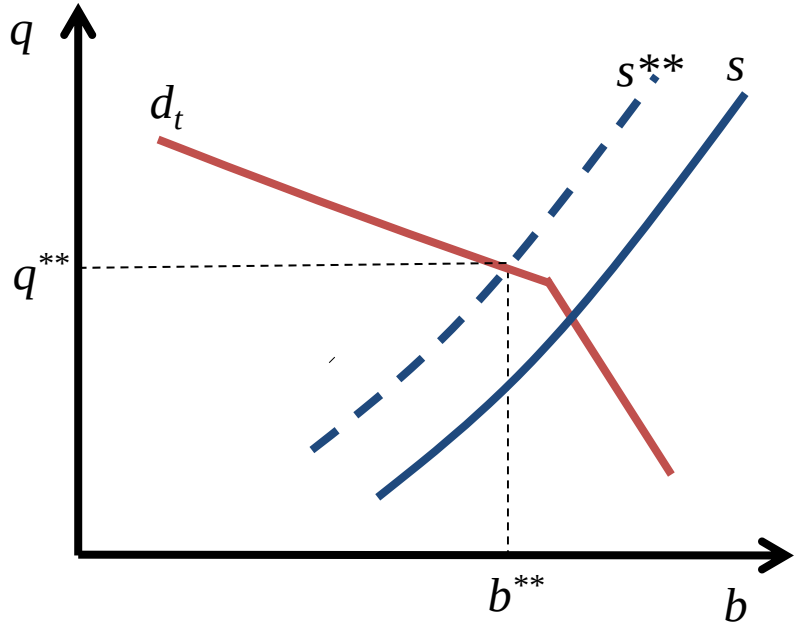
- At $t = 1$: incentive to dilute pre-existing debt
  - Why? New debt raises default probability
  - Cost partially borne by legacy creditors
- At $t = 0$: government would like to commit to debt level at $t = 1$
  - Can do so either through debt or spread limit
- What if countries are heterogenous?
  - Difference in $\phi$: "debt tolerance"
  - Ceiling on spreads outperforms debt limit

# Heterogeneous countries

Low debt tolerance

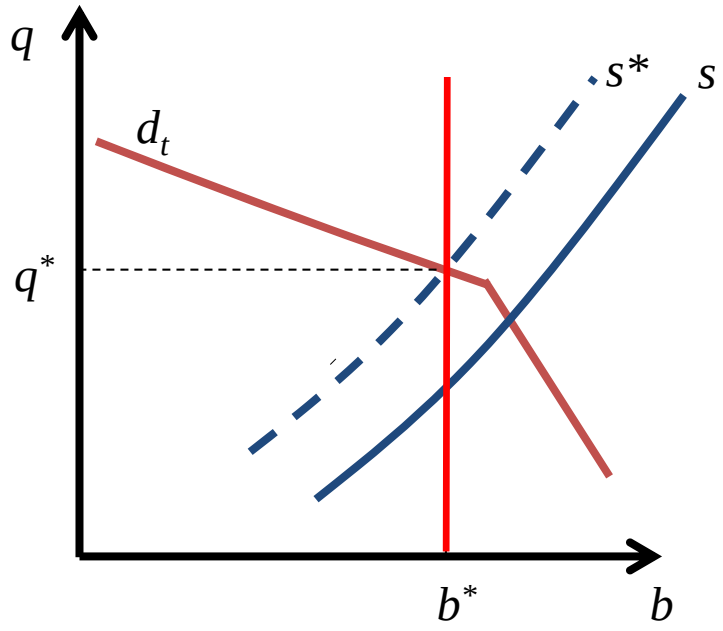



High debt tolerance

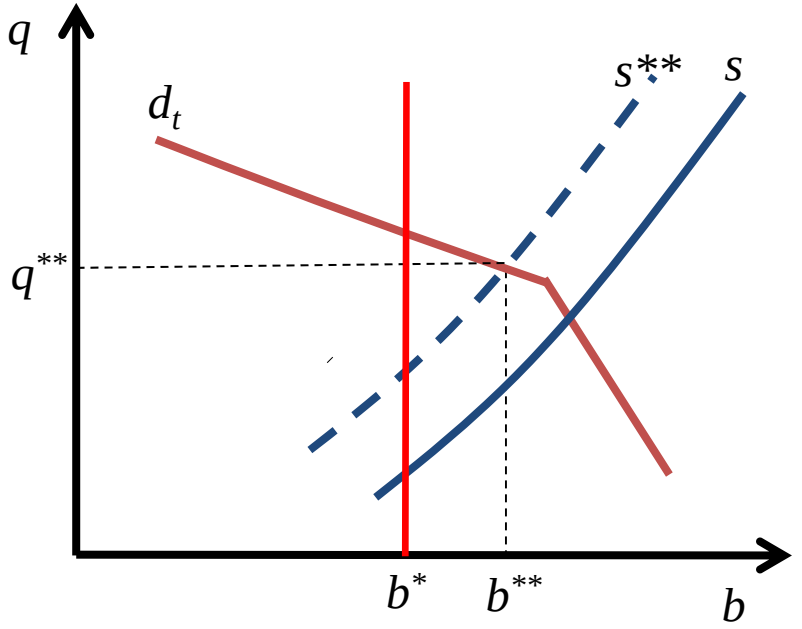


# Heterogeneous countries: debt limit

Low debt tolerance

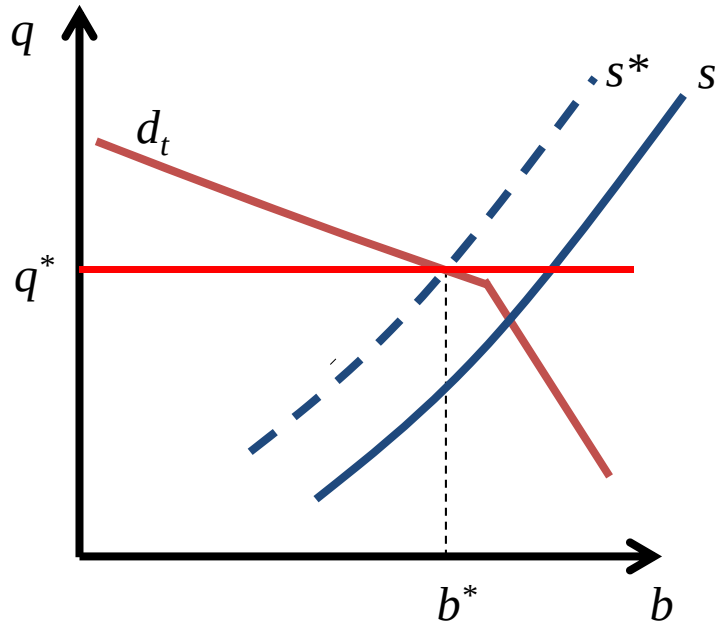



High debt tolerance

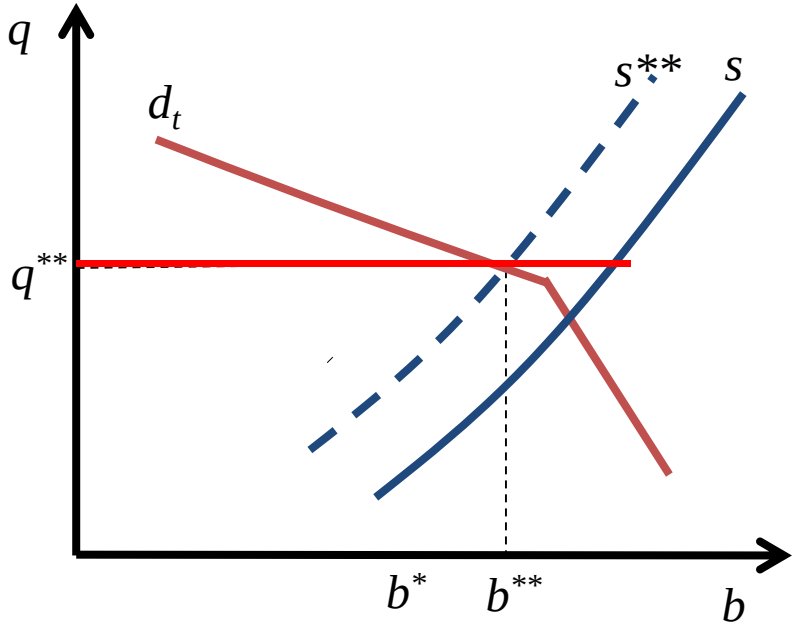


# Heterogeneous countries: spread limit

Low debt tolerance




High debt tolerance



# Main result

- Intuition: variation in spreads lower than variation in debt levels
  - Here simple example
  - **Beyond example, quantitative statement:** can it be made more formal?
- Insight embedded in calibrated model of sovereign debt
  - Single country: debt sustainability is time-varying
    - ★ Both spread (.45%) and debt limits (52.5%) reduce equilibrium debt and spreads
    - ★ But raise revenues!
  - **Incidentally:** would be nice to show dispersion of debt / spreads
- Spread limit delivers higher welfare gains
  - Intuition: variable debt limit
  - 0.34 vs. 0.24 of steady state consumption
- Many extensions (heterogeneous countries)

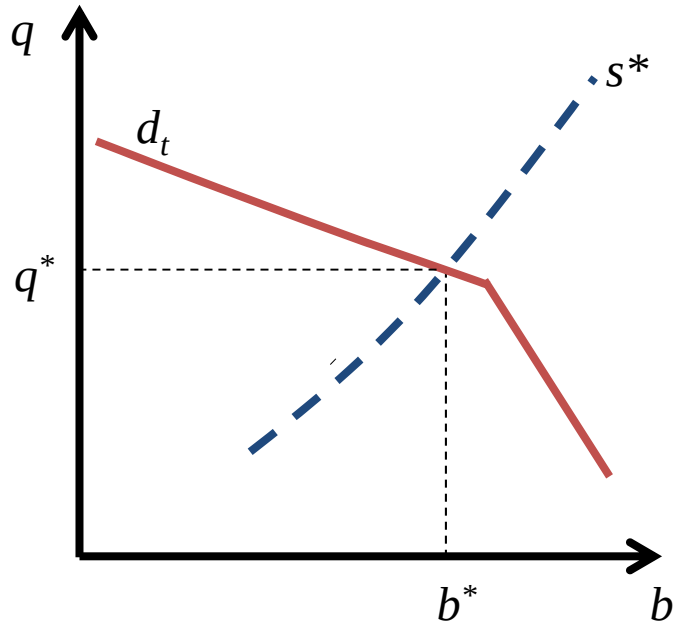
# Comments

- Source of distortion
- Limits to spread
- Time consistency

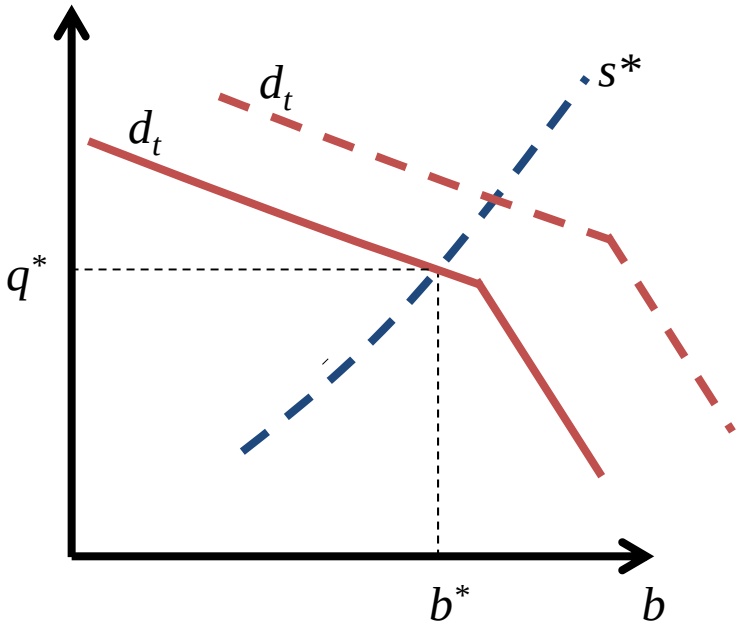
# Comment I: source of distortion

- In the paper: dilution
  - No need for supranational intervention
- Consider alternative distortion:
  - Expected bailouts (IMF, EU)
  - Role for supranational regulation

No Bailout

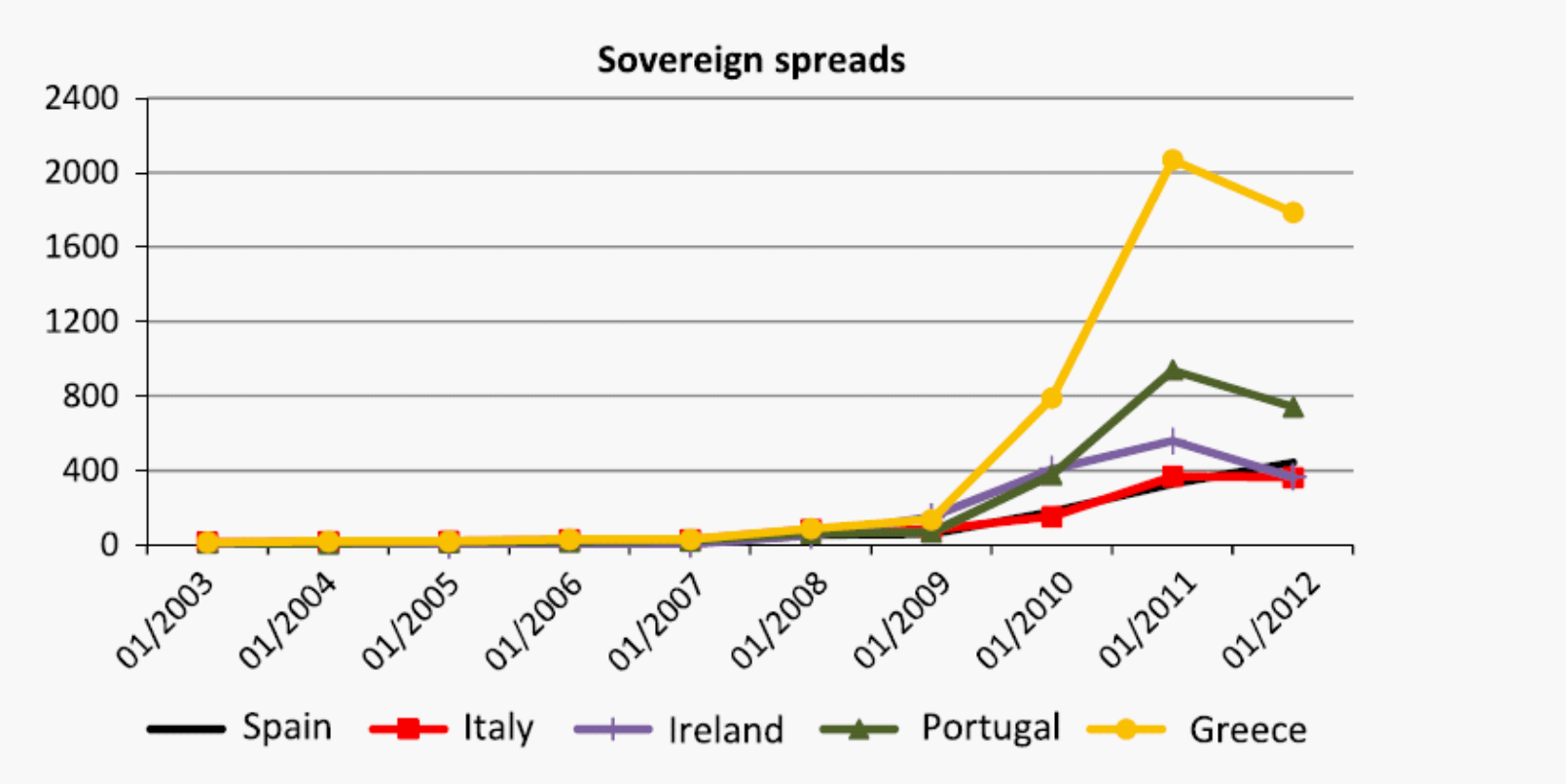



Bailout



# Comment I: source of distortion

- In the paper: dilution
  - No need for supranational intervention
- Consider alternative distortion:
  - Expected bailouts (IMF, EU)
- In this example, debt limits work better
  - In equilibrium, spread is too low!
  - Greece? Maastricht?
- Analogy with bank regulation: capital requirements, not spreads!


Sovereign spreads
2400
2000
1600
1200
800
400
0
01/2003
01/2004
01/2005
01/2006
01/2007
01/2008
01/2009
01/2010
01/2011
01/2012
Spain
Italy
Ireland
Portugal
Greece

# Comment I: source of distortion

- Alternative distortion
  - Country issues excessive debt: paid for by future generations
  - Not necessarily leads to large increase in spread
    - ★ Extreme example: no increase! (e.g. commodity boom)
- Intuitively, seems to call for some type of limit on debt

# Comment II: limits to spreads

- Boom bust cycle common in debt markets
- Spreads can be very low but may be prone to sudden increases
  - Both in roll over and fundamental crises
  - Different reasons:
    - ⋆ Market myopia: neglected risks, e.g. contingent liabilities (Shleifer and Vishny)
    - ⋆ Financial repression
- Japan today:
  - Very low spreads
  - Yet growing unease with size of debt burden:
    - ⋆ *Japan is heading for a full-blown solvency crisis as the country runs out of local investors and may ultimately be forced to inflate away its debt....*Olivier Blanchard, FT, April 2016
- Debt limits might prove more robust

# Comment III: time consistency

- Why respect these rules?
- In initial three-period example
  - Government would always violate them ex post
- In quantitative model
  - Claim: there is no state in which government wants to deviate
  - Why not? Unclear
- Two issues:
  - Deviate and dilute existing debt when situation is dire
    - ★ Are limits on spreads more time consistent than limits on debt?
  - If people do not believe rule, is it optimal to abide by it?
    - ★ There appears to be scope for multiple equilibria

# Conclusion

- Interesting, relevant paper
- Natural yet powerful insight:
  - Total reliance on (non-contingent) debt limits probably not optimal
- My takeaway:
  - Spreads should be incorporated in the design of fiscal rules
    - ⋆ *Debt cannot increase if the spread exceeds X%*
  - However, not convinced debt limits should be scrapped
- Too many extensions
  - Perhaps expand the discussion on time consistency