

Conducting Monetary Policy with Large Public Debts

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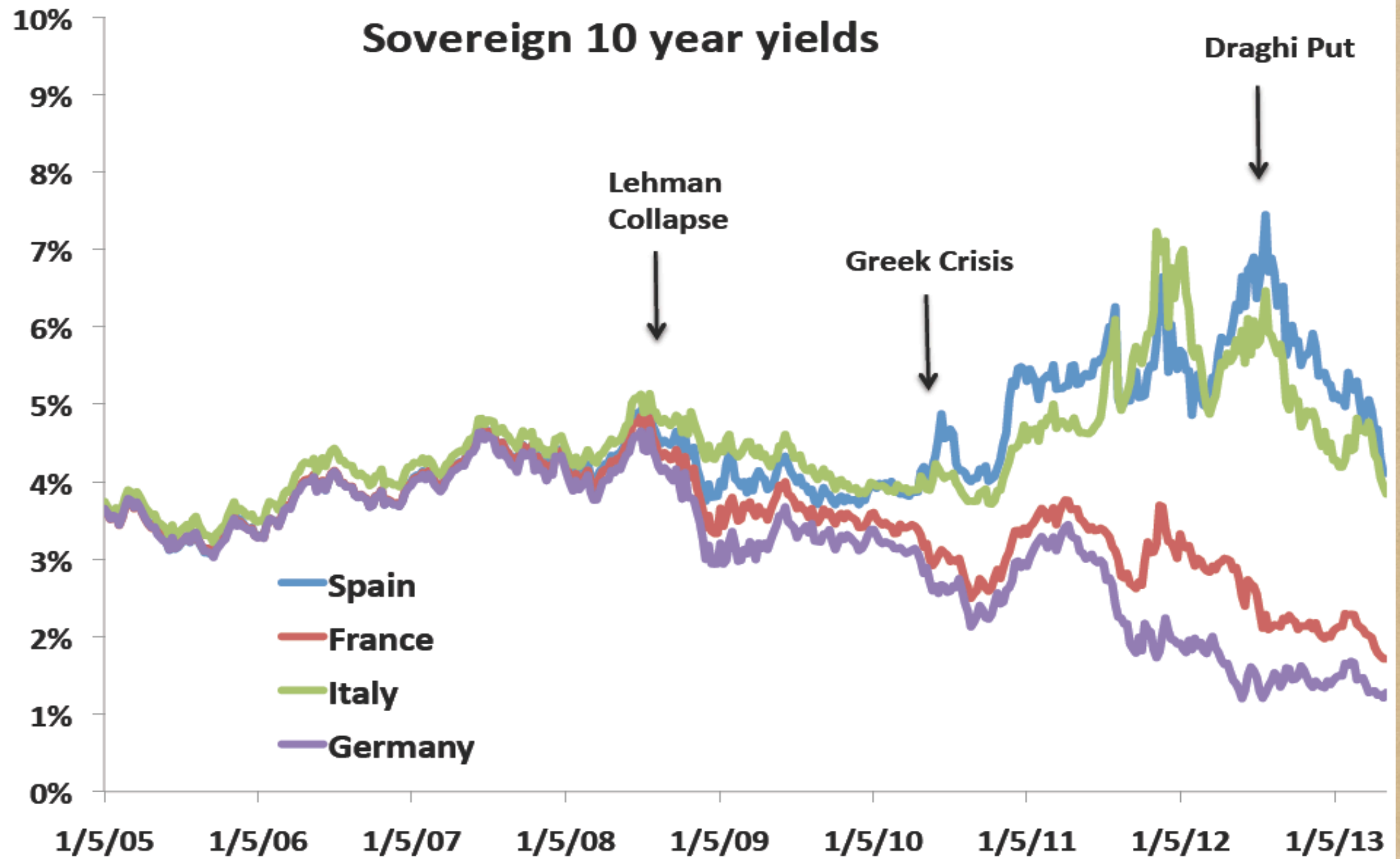
Large Public Debts

	Net Government debt to GDP
Greece	155
Japan	134
Portugal	111
Italy	103
Ireland	102
United States	87
France	84
United Kingdom	82
Spain	71

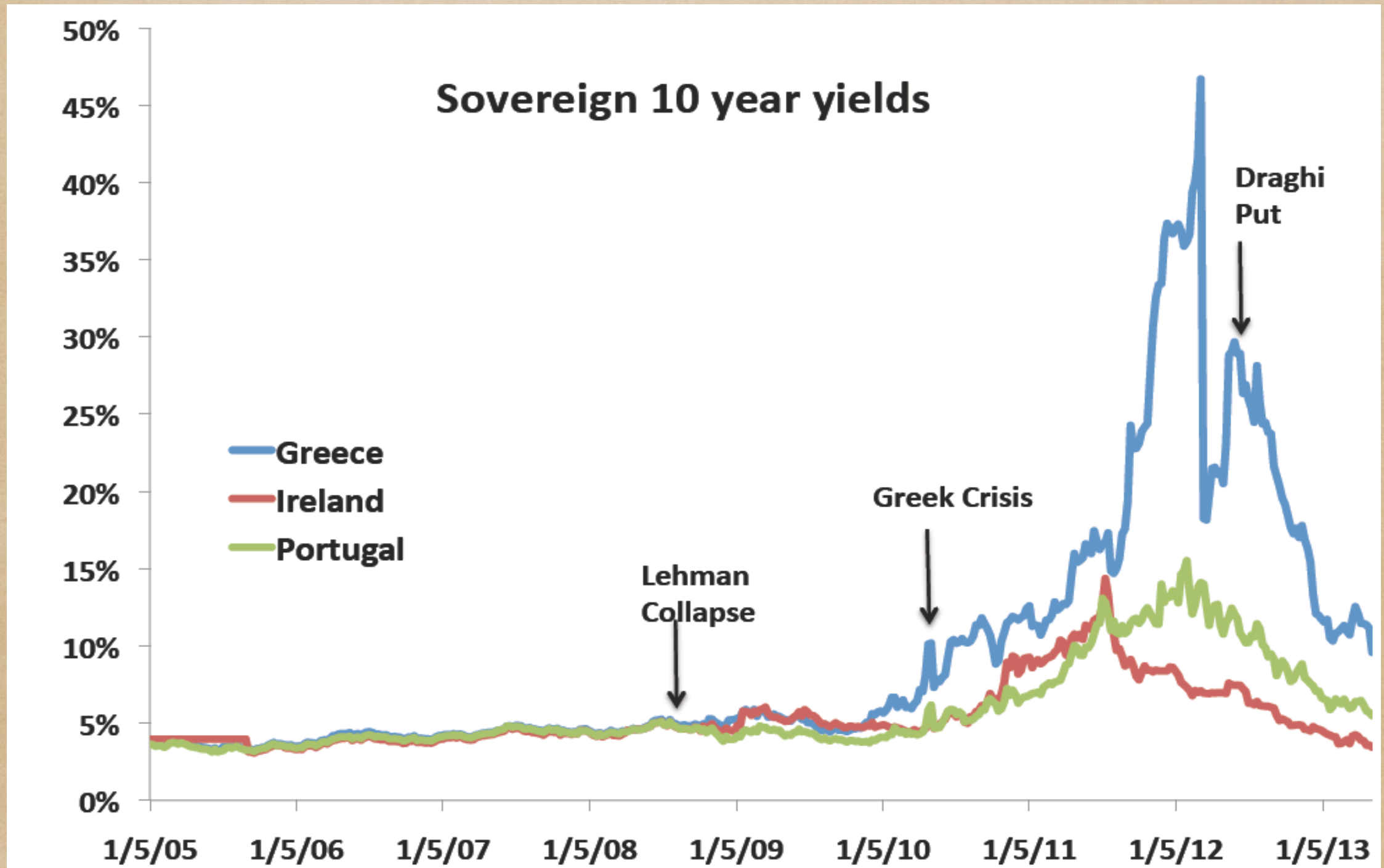
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Self-fulfilling Crises



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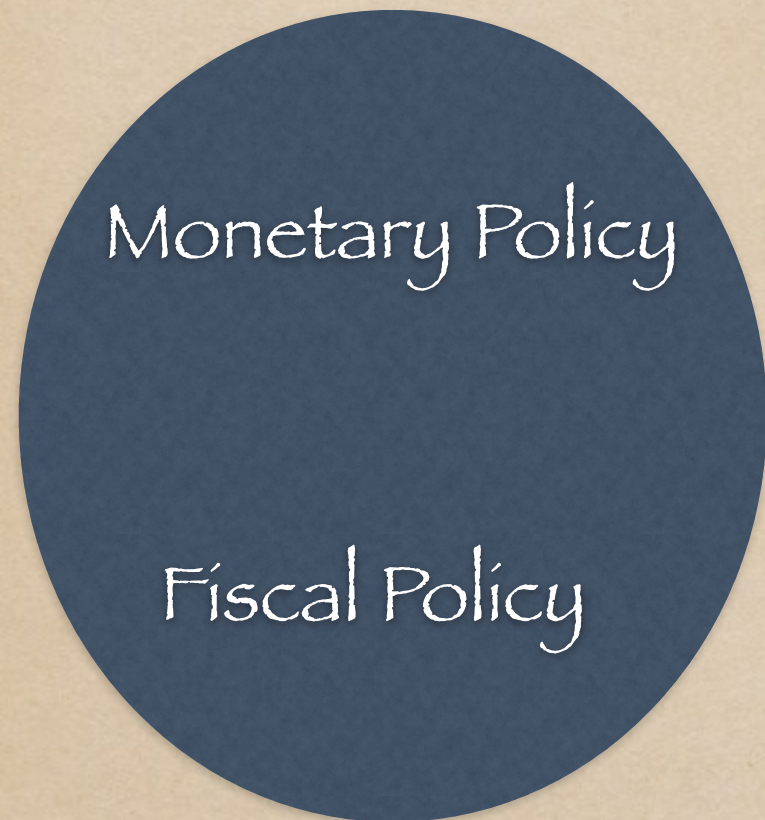
Questions

1. Does ability to inflate reduce exposure to roll-over crises?
2. Should monetary policy play an active role in debt crises?
3. How much of inflation commitment is optimal?

Papers

- ◆ Aguiar, Amador, Farhi and Gopinath (2014)
 - ◆ Crisis and Commitment: Inflation Credibility and the Vulnerability to Self-fulfilling debt crisis
 - ◆ Coordination and Crises in a Monetary Union

Case 1: SOE



Case 2: MU



Environment (SOE)

- ◆ Government issues **nominal** bonds
- ◆ Lenders expect real risk free rate
 - ◆ compensated for expected inflation and default risk.

Environment

1. Preferences

$$\int_0^{\infty} e^{-r^* t} (u(c_t) - \psi_0 \pi_t) dt$$

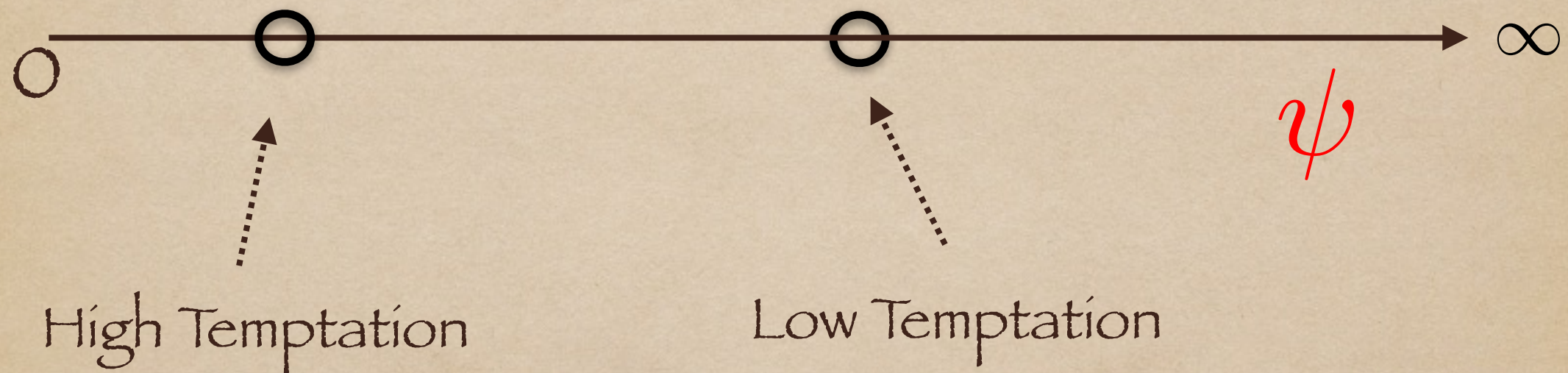
2. Budget Constraint

$$c_t = y + \dot{b}_t - (r_t - \pi_t) b_t$$

Environment

Government lacks commitment to inflation:

Cost ψ



Foreign currency debt: $\psi \rightarrow \infty$

Environment

Government lacks commitment to repay

-Cost is exclusion from financial markets

Roll-over Risk

- ◆ **Coordination failure** among lenders
- ◆ For high values of debt
 - ◆ if each lender thinks all other lenders will roll-over: no crises
 - ◆ if each lender thinks all other lenders will not roll-over: then **debt run**

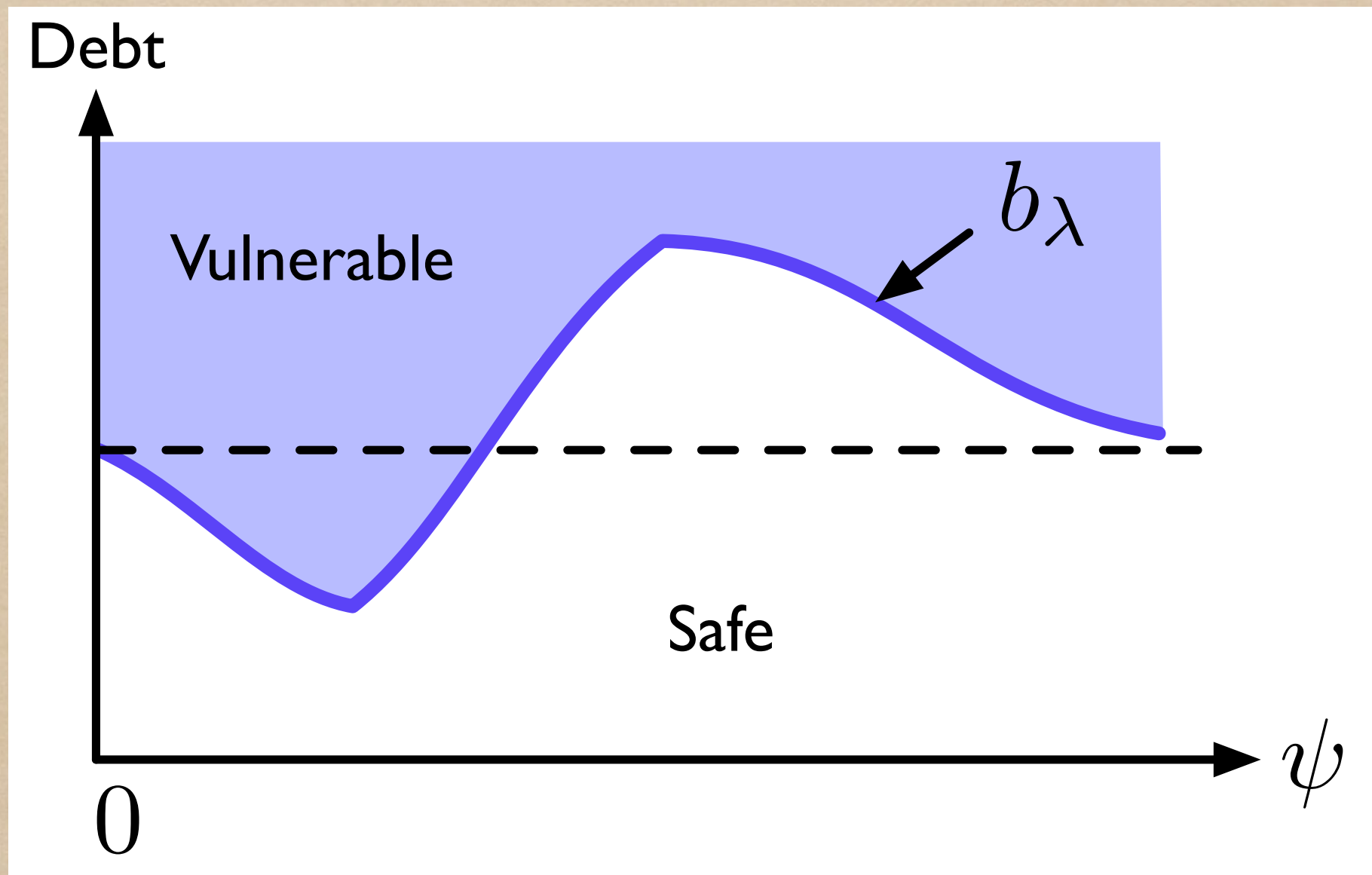
Constructing Debt Runs

- ◆ Suppose the government cannot roll over
- ◆ To avoid default, needs to repay
 - ◆ generate fiscal surpluses
 - ◆ use inflation
- ◆ If the value of repayment is below the default value
 - ◆ roll-over crisis is self-fulfilling: vulnerable to crisis

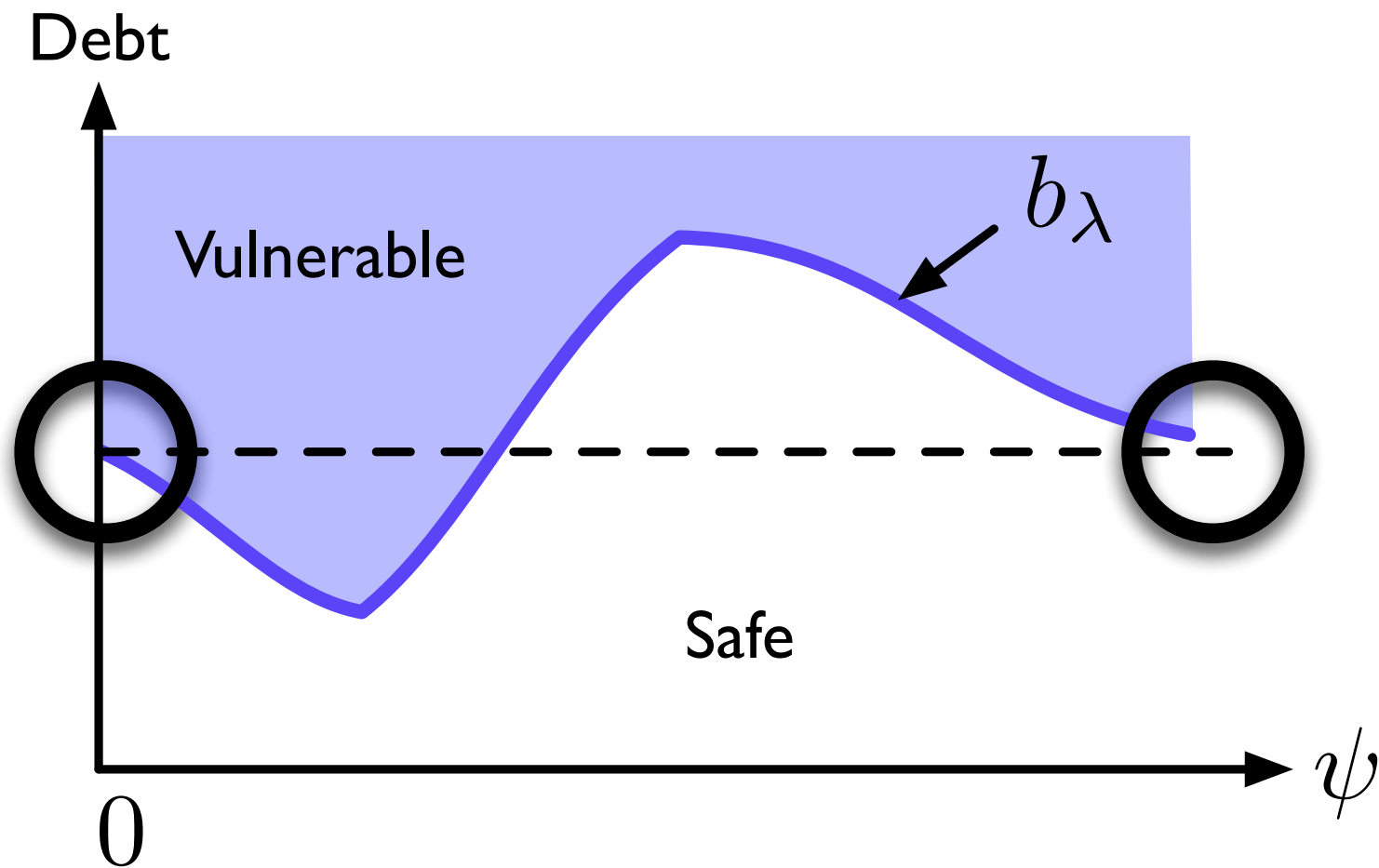
Debt Threshold

- ◆ How does the vulnerability debt cut-off depend on the ability to inflate ?

Debt Threshold



Debt Threshold



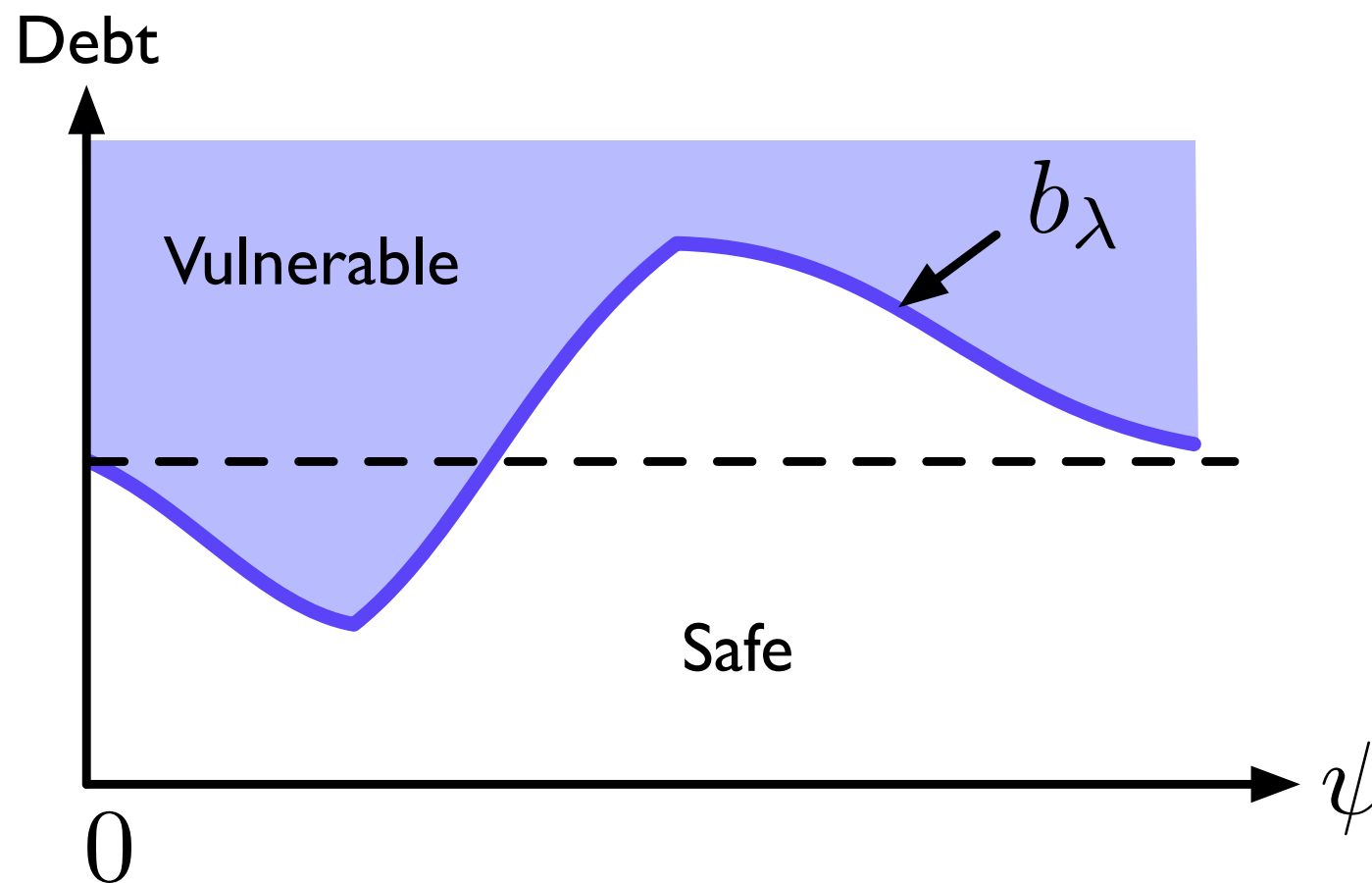
Two extremes cases: $\psi = 0$ and $\psi = \infty$

In the first: inflate all the time

In the second: never inflate

Same vulnerability: inflation is not state contingent

Debt Threshold



More generally two **opposite** effects when ψ increases

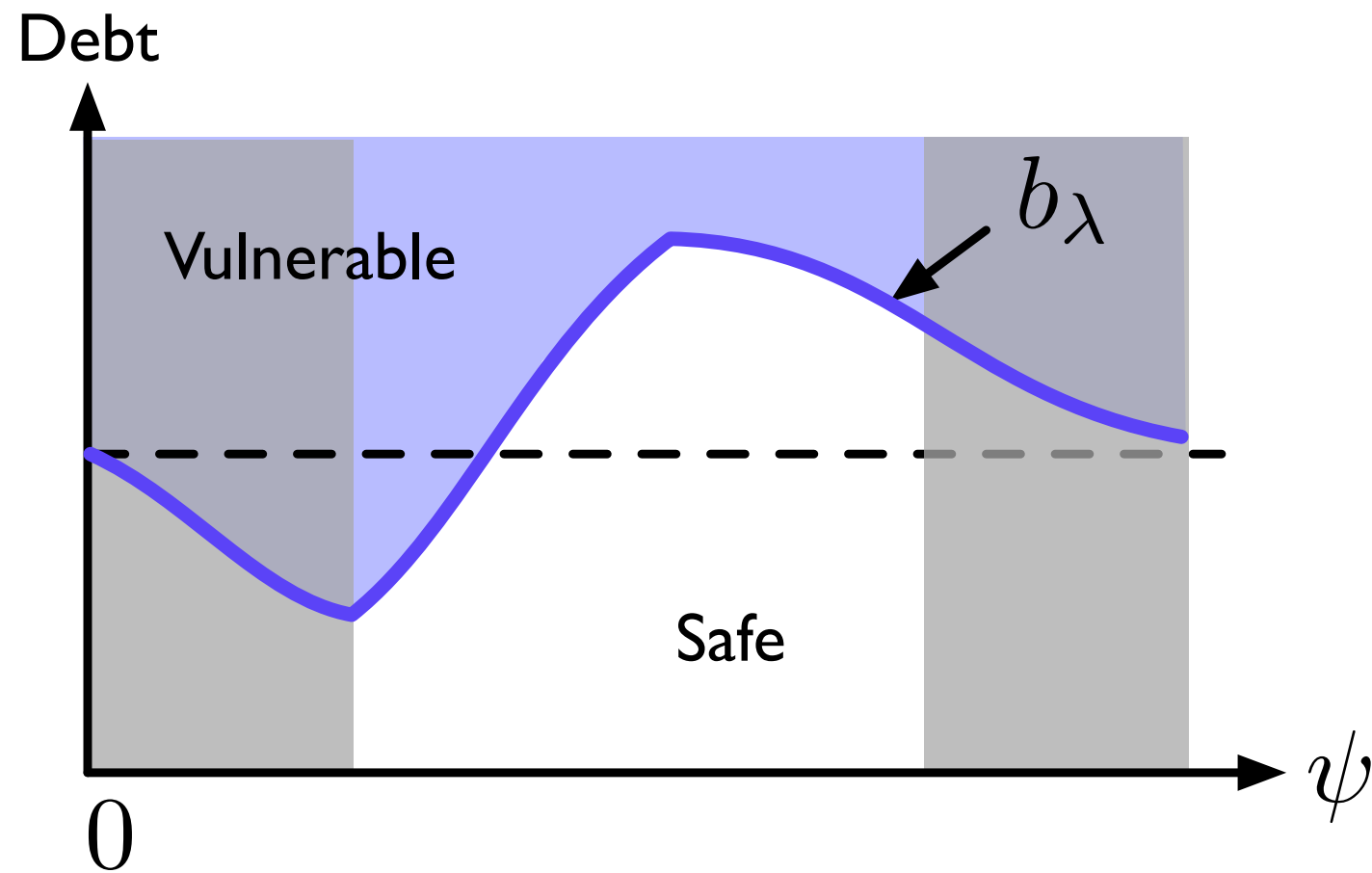
Increases the
cost of repaying
in case of a run

It may reduce equilibrium inflation
Reduces equilibrium interest rate



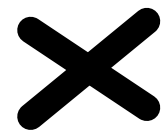
Reduces the cost of repaying in
case of a run

Debt Threshold



More generally two **opposite** effects when ψ increases

✓ Increases the cost of repaying in case of a run

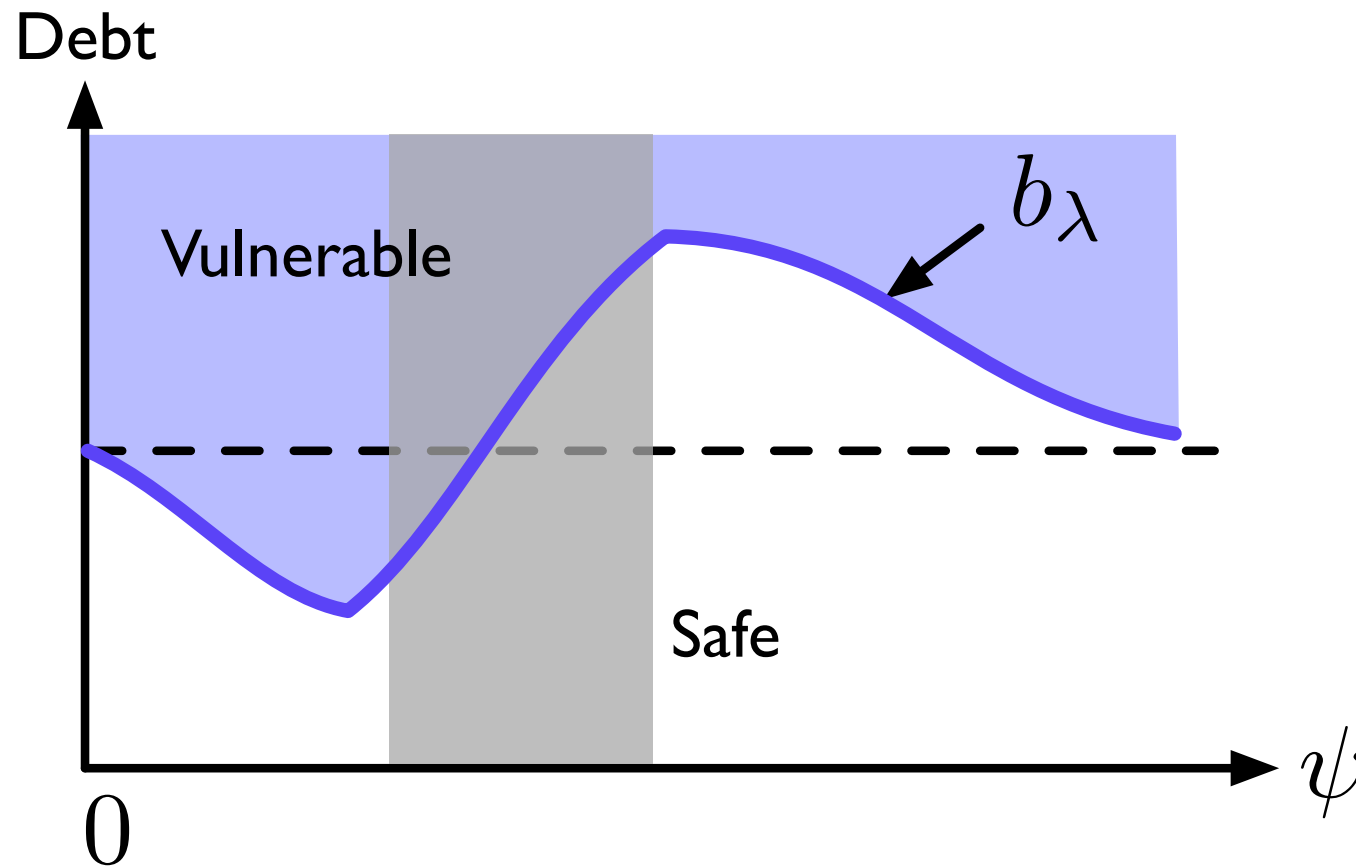


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Reduces the cost of repaying in case of a run

Debt Threshold



More generally two **opposite** effects when ψ increases

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Reduces the cost of repaying in
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Monetary Union

1. Fiscal Externality
2. Heterogenous Debt Levels

Heterogeneity in Public Debts in Euro Area

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Greece	155
Portugal	111
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Germany	57
Netherlands	32

Fiscal Externality

- ◆ Countries do not internalize the impact of their debt decisions on borrowing costs
 - ◆ Too much debt
 - ◆ Not save enough
 - ◆ Too high inflation

Heterogenous Debt Levels

- ◆ Incentive to inflate depends on the fraction of high debtors in the union.
- ◆ Roll-over risk makes joining a union with low debtors costly for high debt countries.
- ◆ Monetary intervention “off-equilibrium” promise, so low-debtors do not have to necessarily loose.

Take Aways

- ◆ Does ability to inflate reduce exposure to roll-over crises? Not necessarily
- ◆ Should monetary policy play an active role in debt crises? Yes
- ◆ How much of inflation commitment is optimal? Intermediate