



# Monopsony, Income Risk and $R^*$ Multiplicity

Federica Romei - Department of Economics, University of Oxford

WEDNESDAY 3<sup>RD</sup> JULY 2024, ECB FORUM ON CENTRAL BANKING 2024

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# Introduction | Goal of the Talk



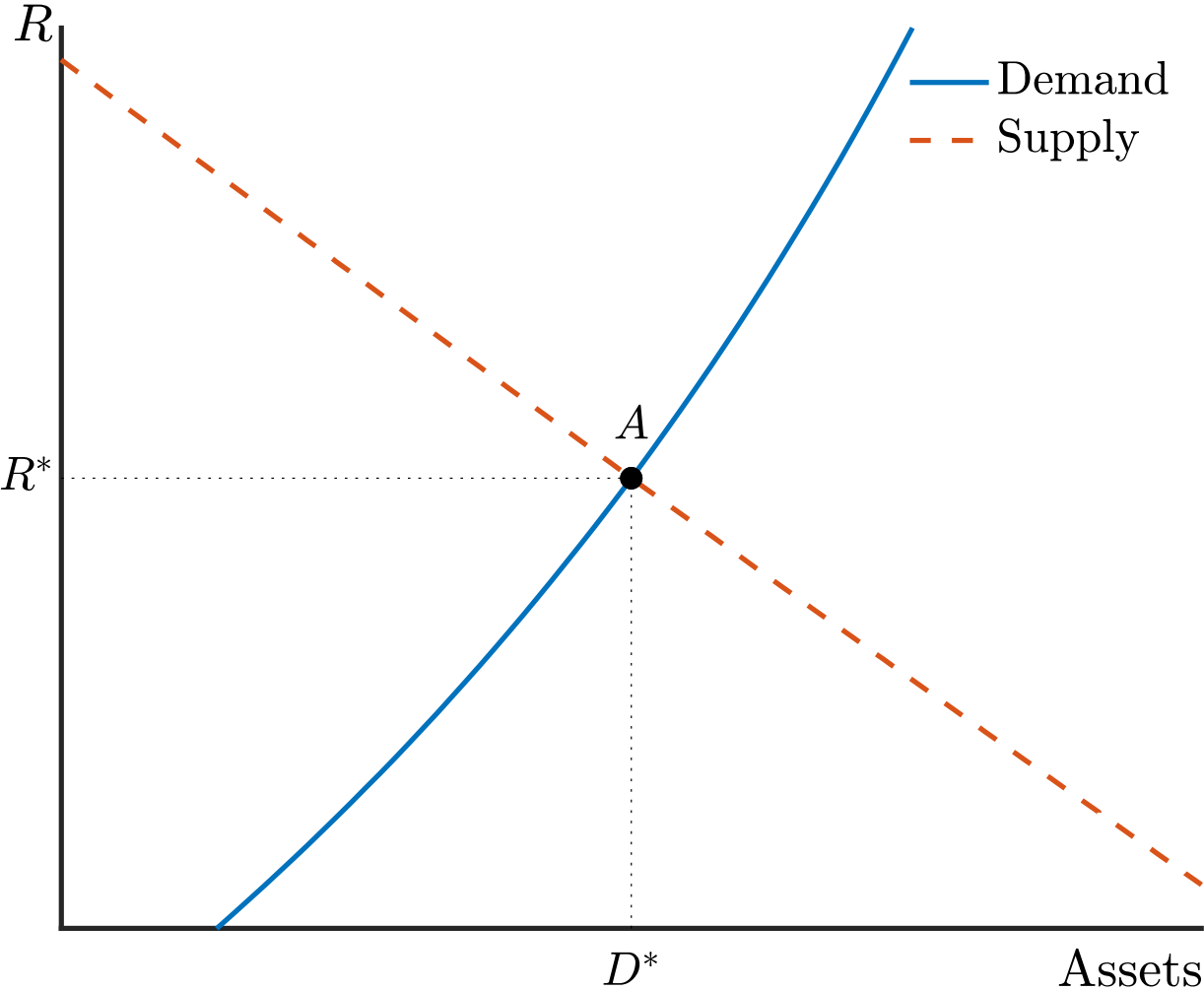
- Provide a framework to understand the behaviour of the neutral real interest rate ( $R^*$ ) that equilibrates asset markets in the long run
  - In order to inform policy makers

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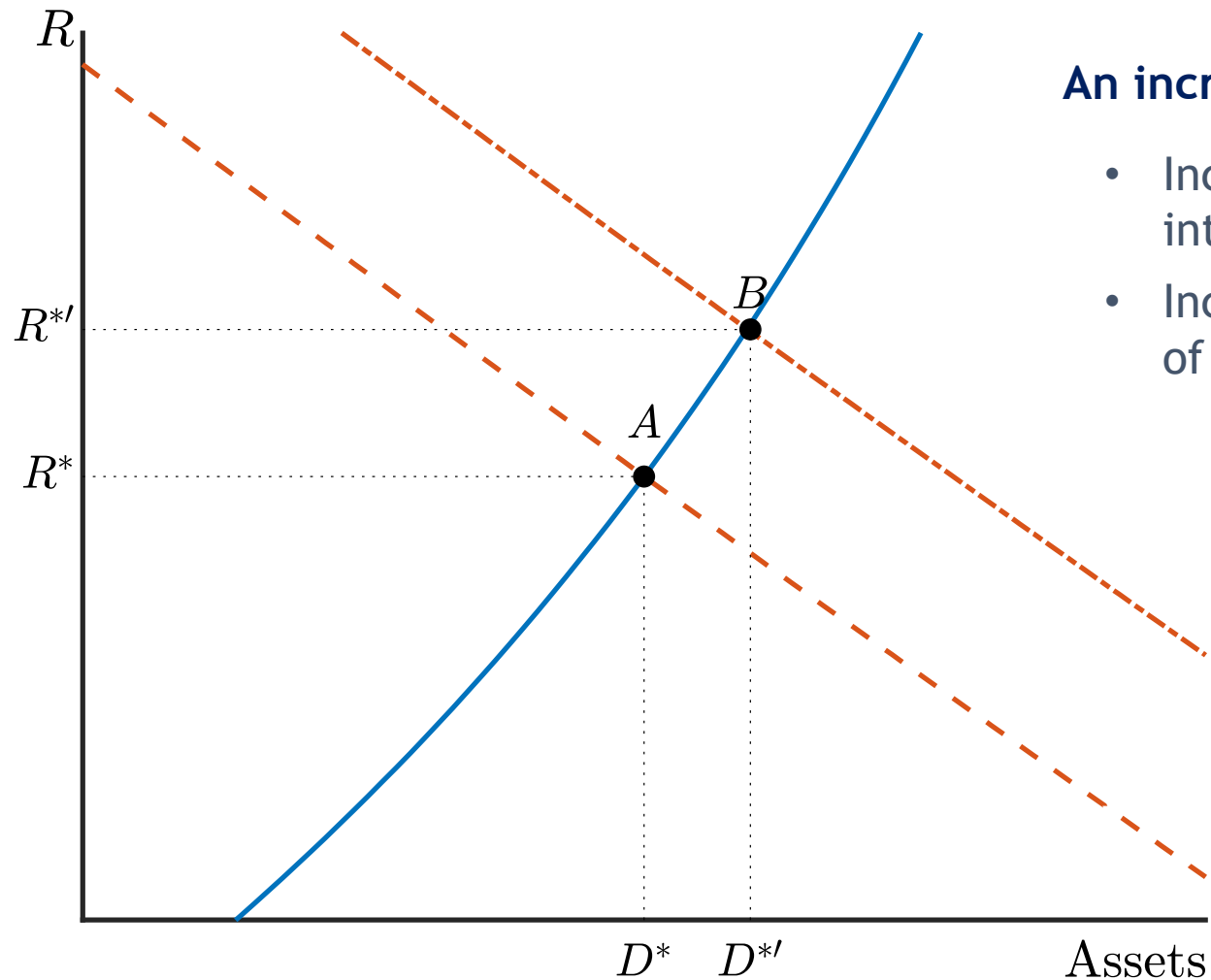


- Provide a framework to understand the behaviour of the neutral real interest rate ( $R^*$ ) that equilibrates asset markets in the long run
  - In order to inform policy makers
- Standard view of  $R^*$ : classical dichotomy (monetary policy cannot affect long-run variables)
  - **Is  $R^*$  truly exogenous to monetary policy?**

# The Baseline | Demand and Supply of Assets in a Standard Model



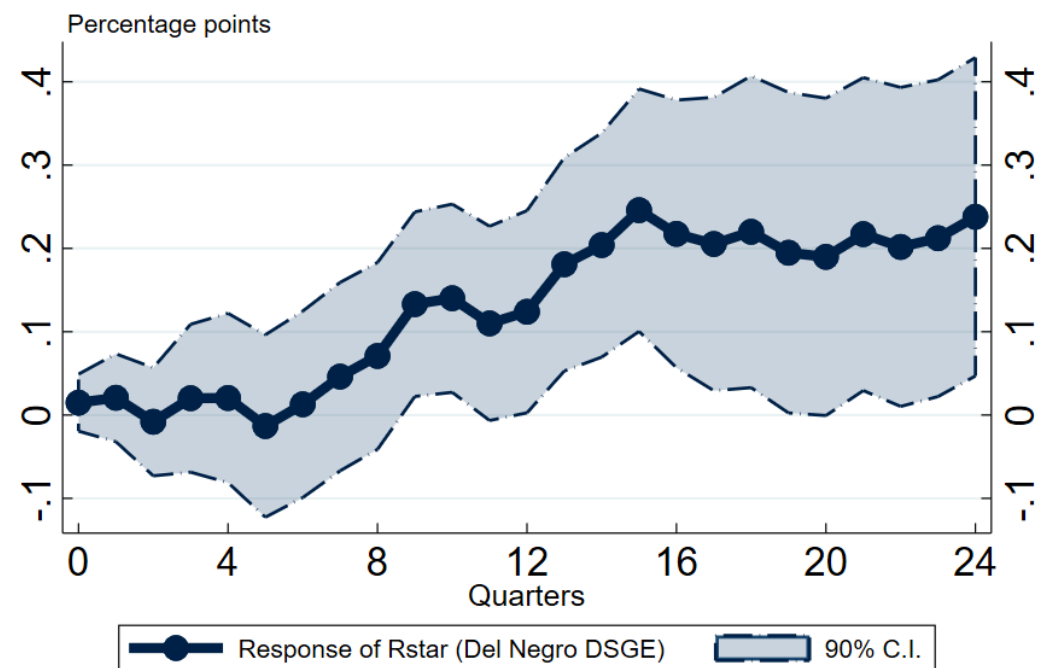
# The Baseline | Demand and Supply of Assets in a Standard Model



## An increase in the supply of assets

- Increases the equilibrium interest rate ( $R^*$  up)
- Increases equilibrium level of assets ( $D^*$  up)

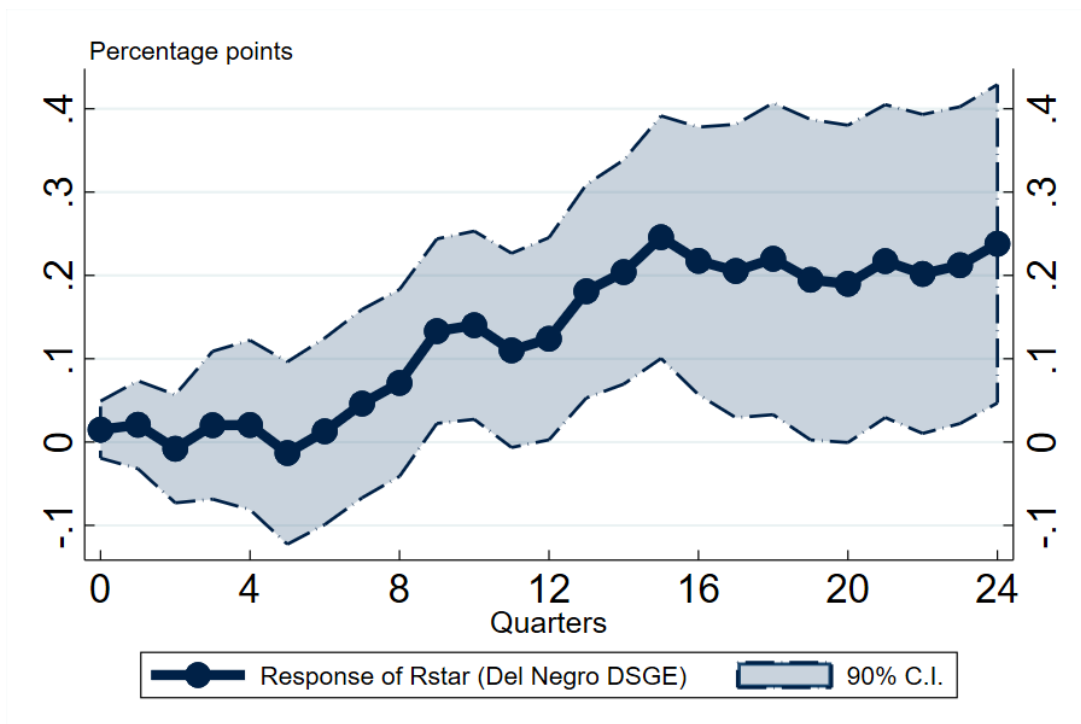
## In the Data | This Effect holds pre-2007



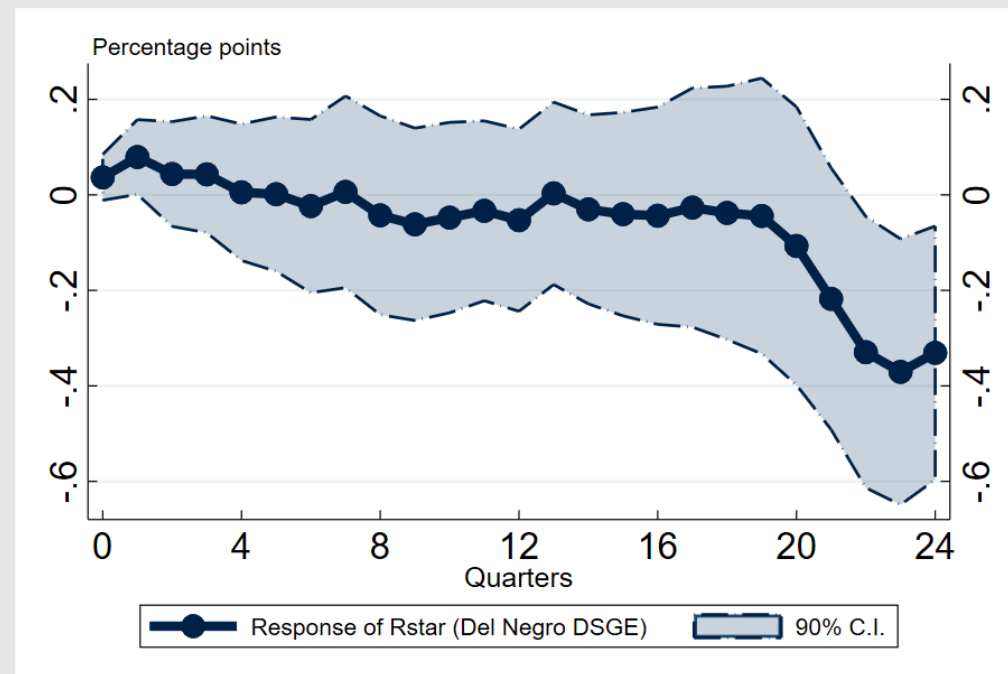
**Estimation sample 1997-2007:** a positive shock to corporate debt supply causes a **positive** and **persistent response of  $R^*$**

# In the Data | This Effect holds pre-2007

# ... but Switches Sign after 2008



**Estimation sample 1997-2007:** a positive shock to corporate debt supply causes a **positive** and persistent response of  $R^*$



**Estimation sample 2007-2019:** a positive shock to corporate debt supply causes a **negative** and persistent response of  $R^*$

# How Can We Rationalise This Puzzle?



## How Can We Rationalise This Puzzle?

Forthcoming paper:

***“Monopsony, Income Risk and  $R^*$  Multiplicity”***

By Federica Romei, Ambrogio Cesa-Bianchi, Sergio de Ferra,  
Andrea Ferrero, Alex Kohlhas, Michael McMahon and Giovanni Rosso

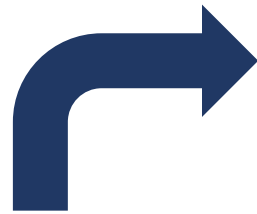
# The Mechanism | Issuance, Monopsony Power and Income Risk



 Firms issue more debt

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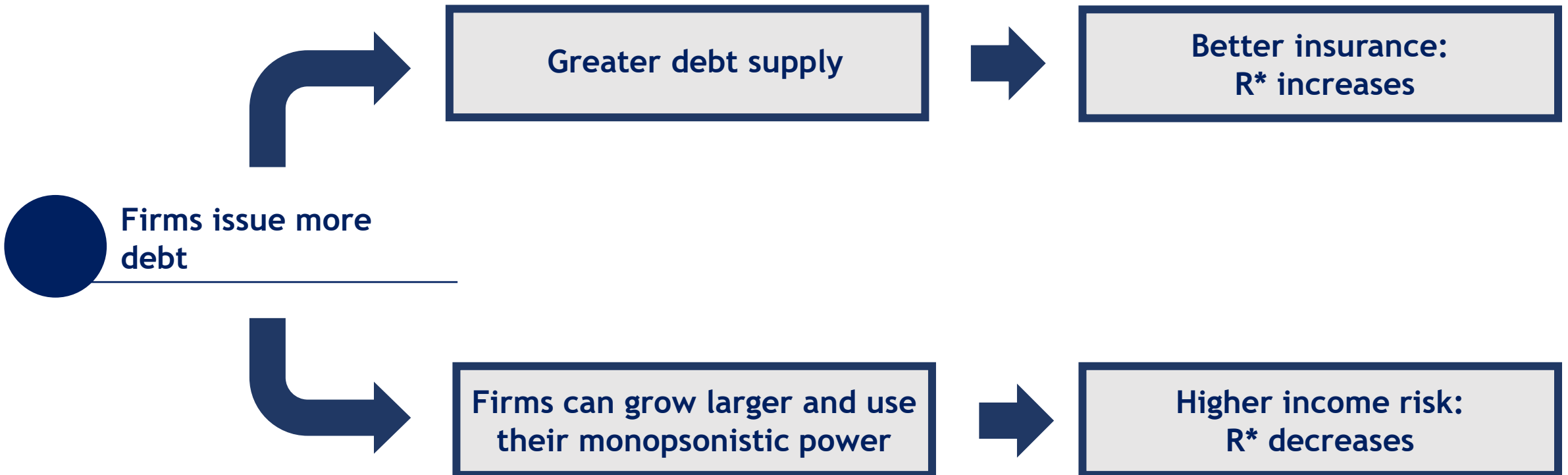
Greater debt supply



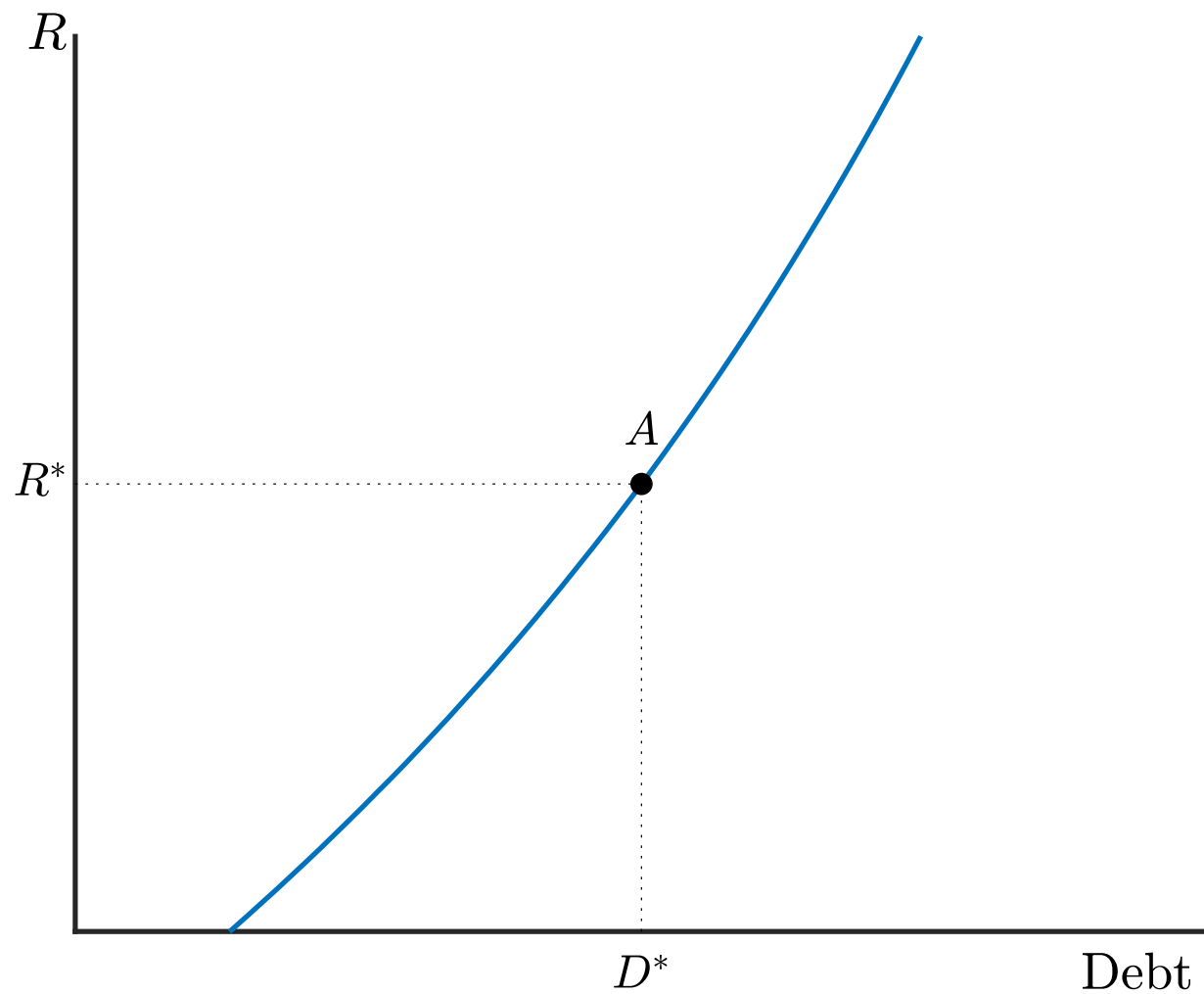
Better insurance:  
 $R^*$  increases

Firms issue more  
debt

# The Mechanism | Issuance, Monopsony Power and Income Risk



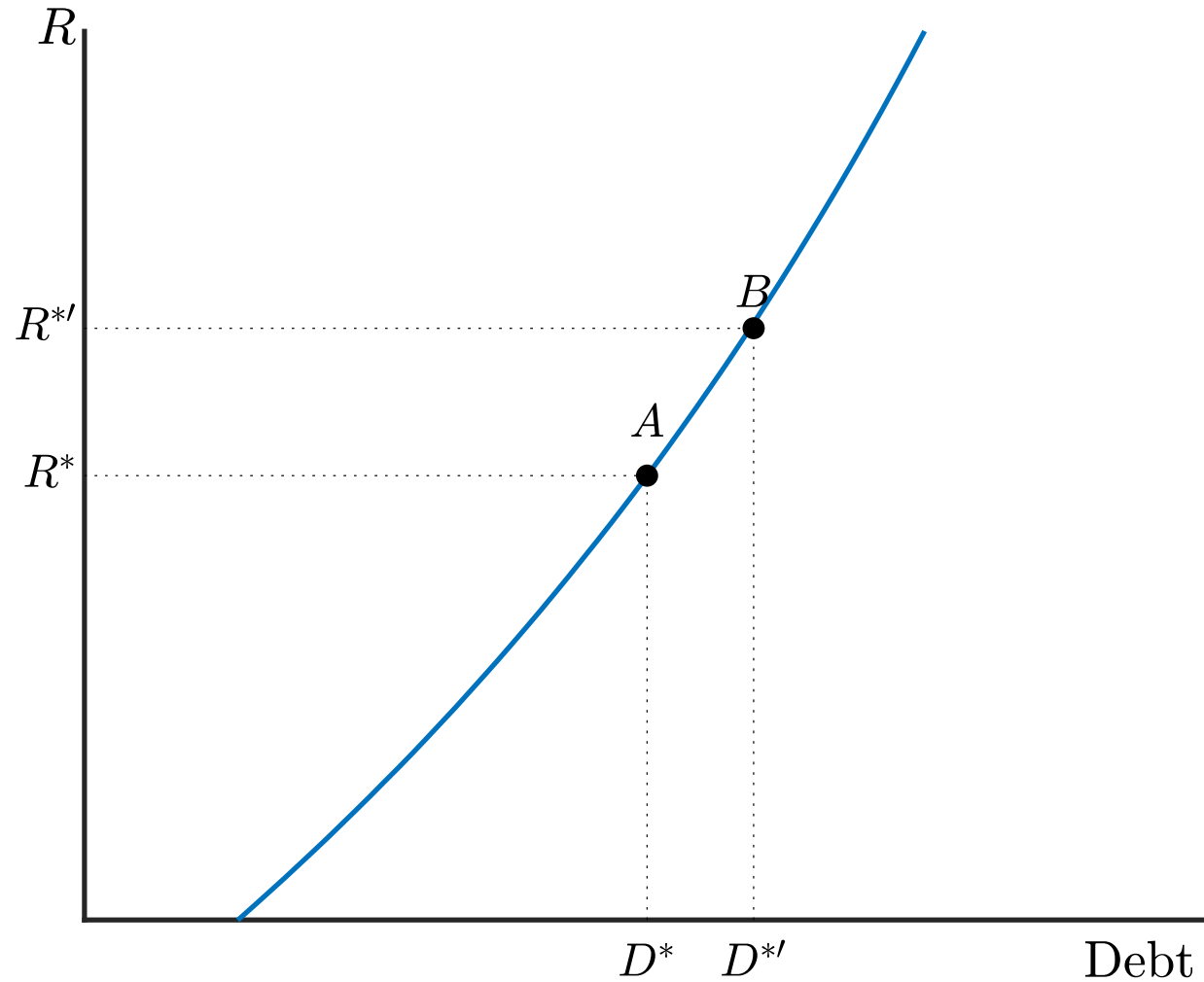
# The Mechanism | The Initial Equilibrium



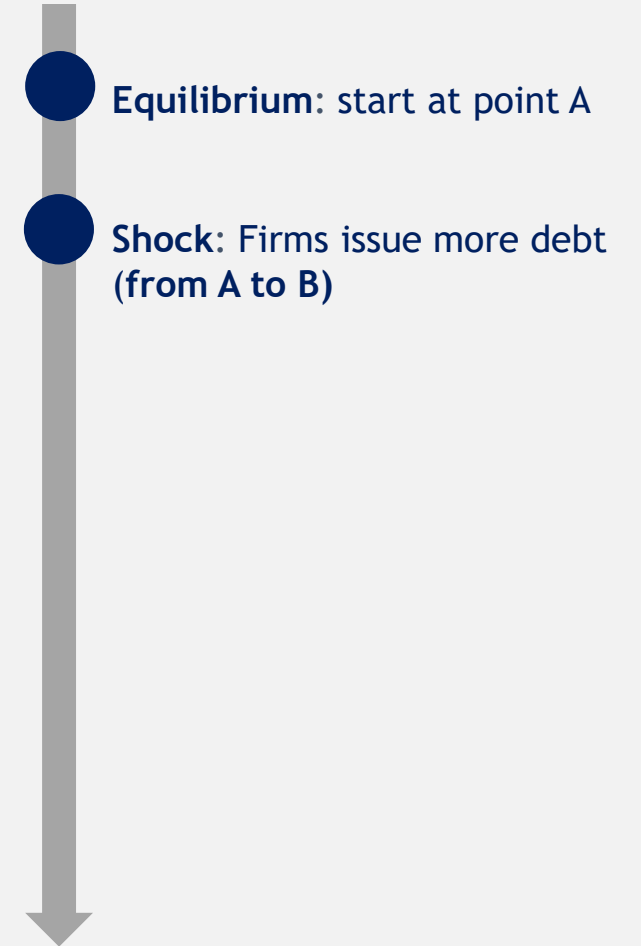
## Model Timeline



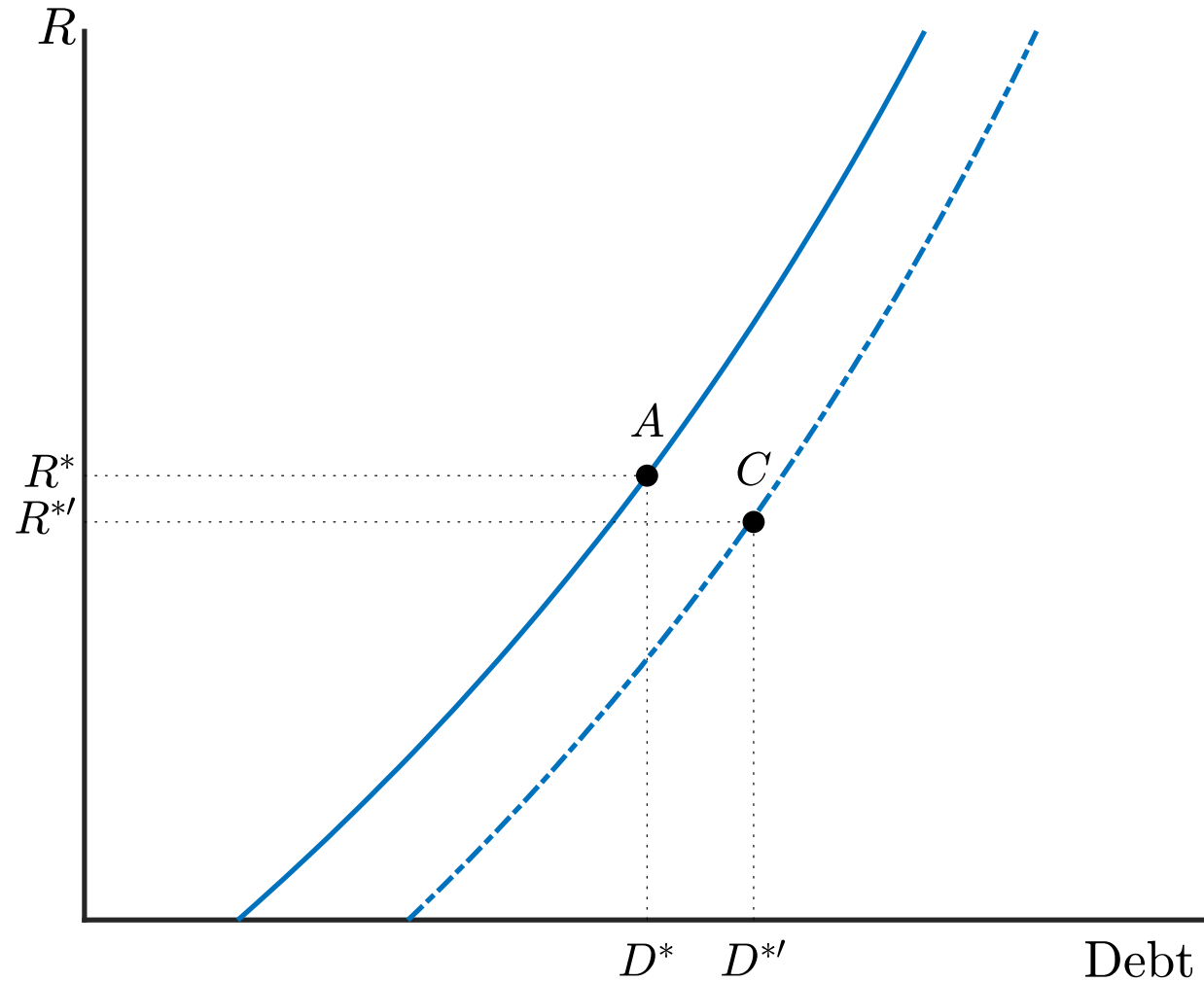
# The Mechanism | Firms Issue More Debt



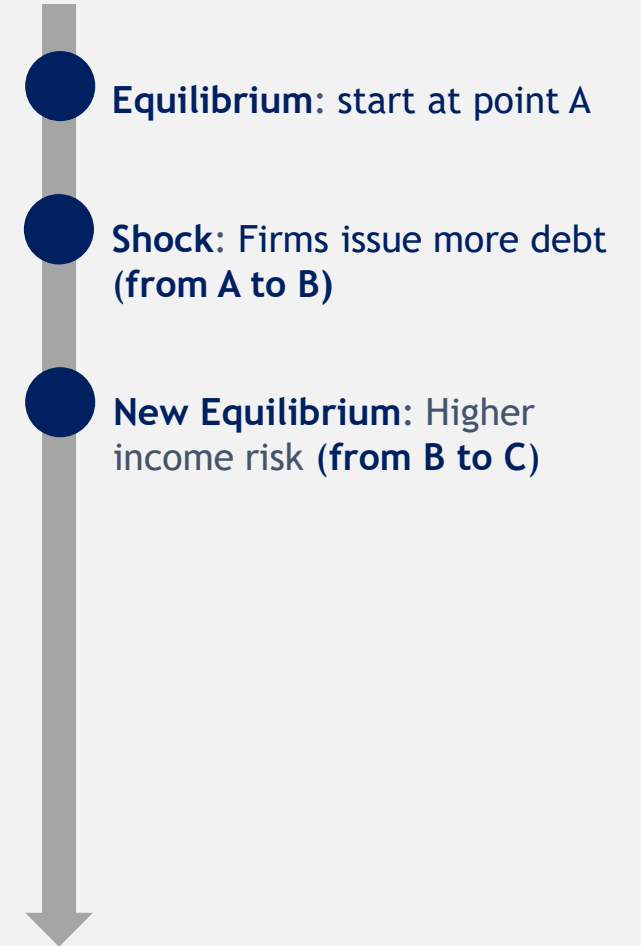
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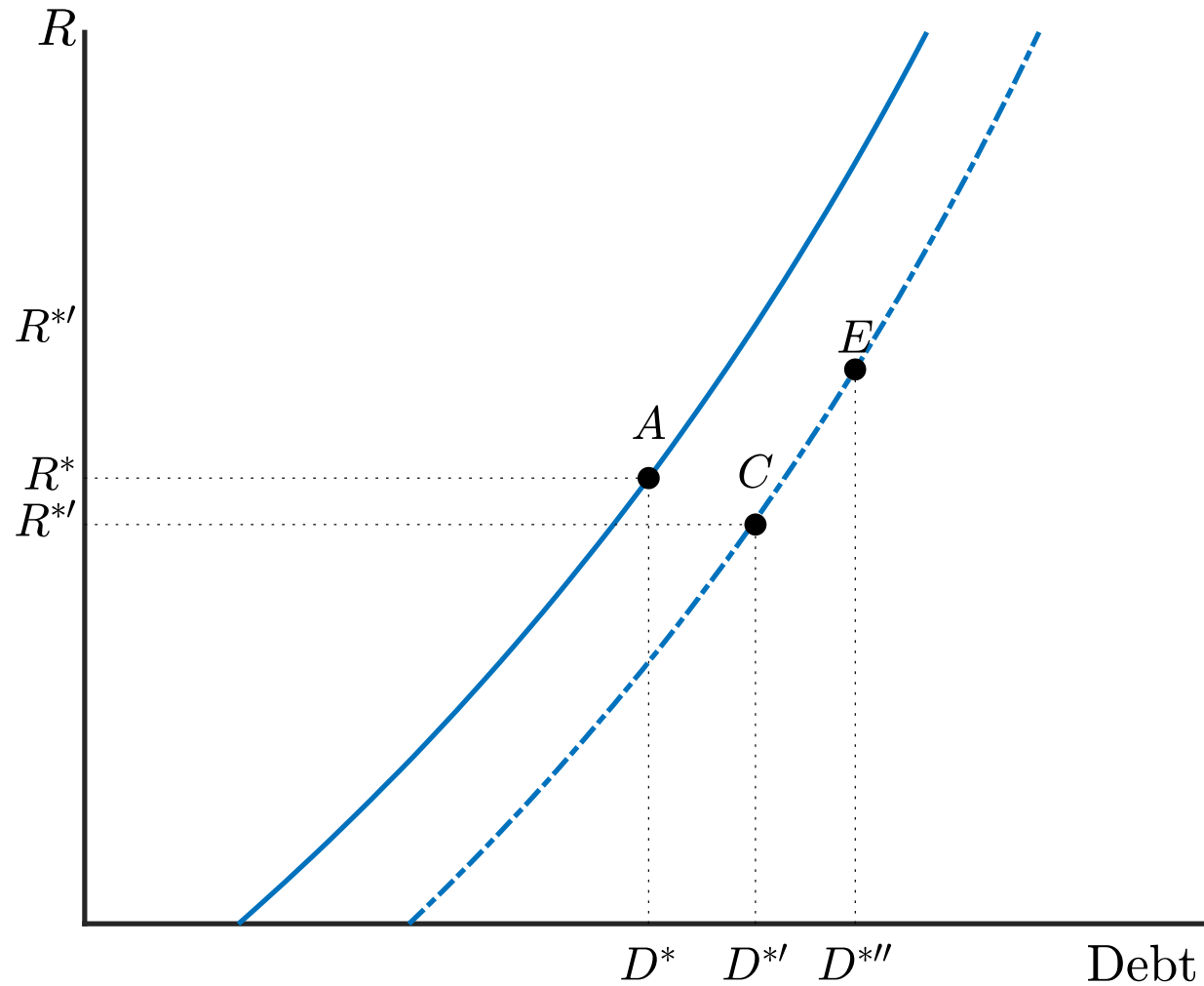
# The Mechanism | Income Risk Increases - Demand shifts



## Model Timeline



# The Mechanism | Repeat the Same Experiment

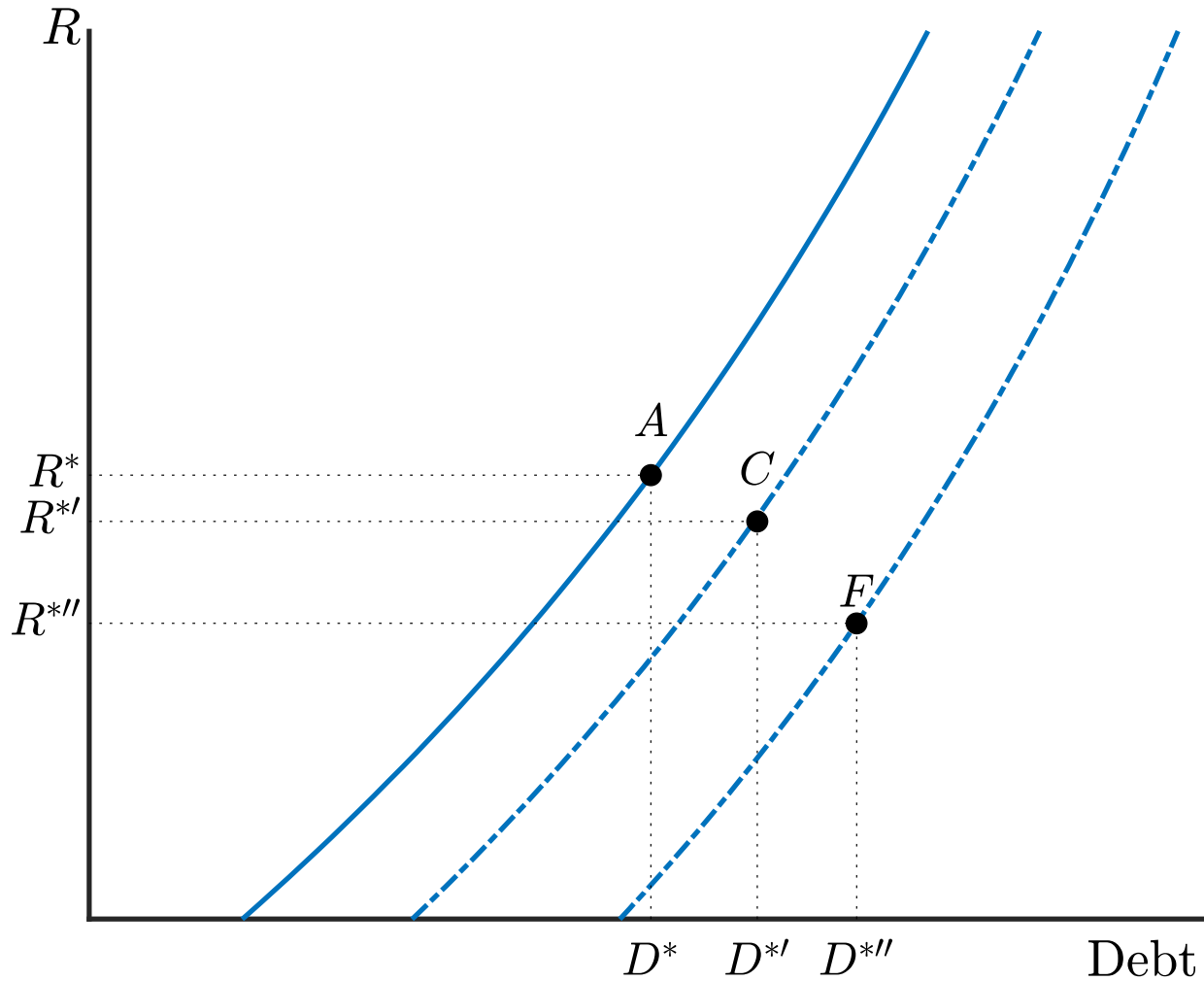


## Model Timeline

- 
- Equilibrium: start at point A
  - Shock: Firms issue more debt (from A to B)
  - New Equilibrium: Higher income risk (from B to C)
  - Onwards: iterating the same process produces point E etc



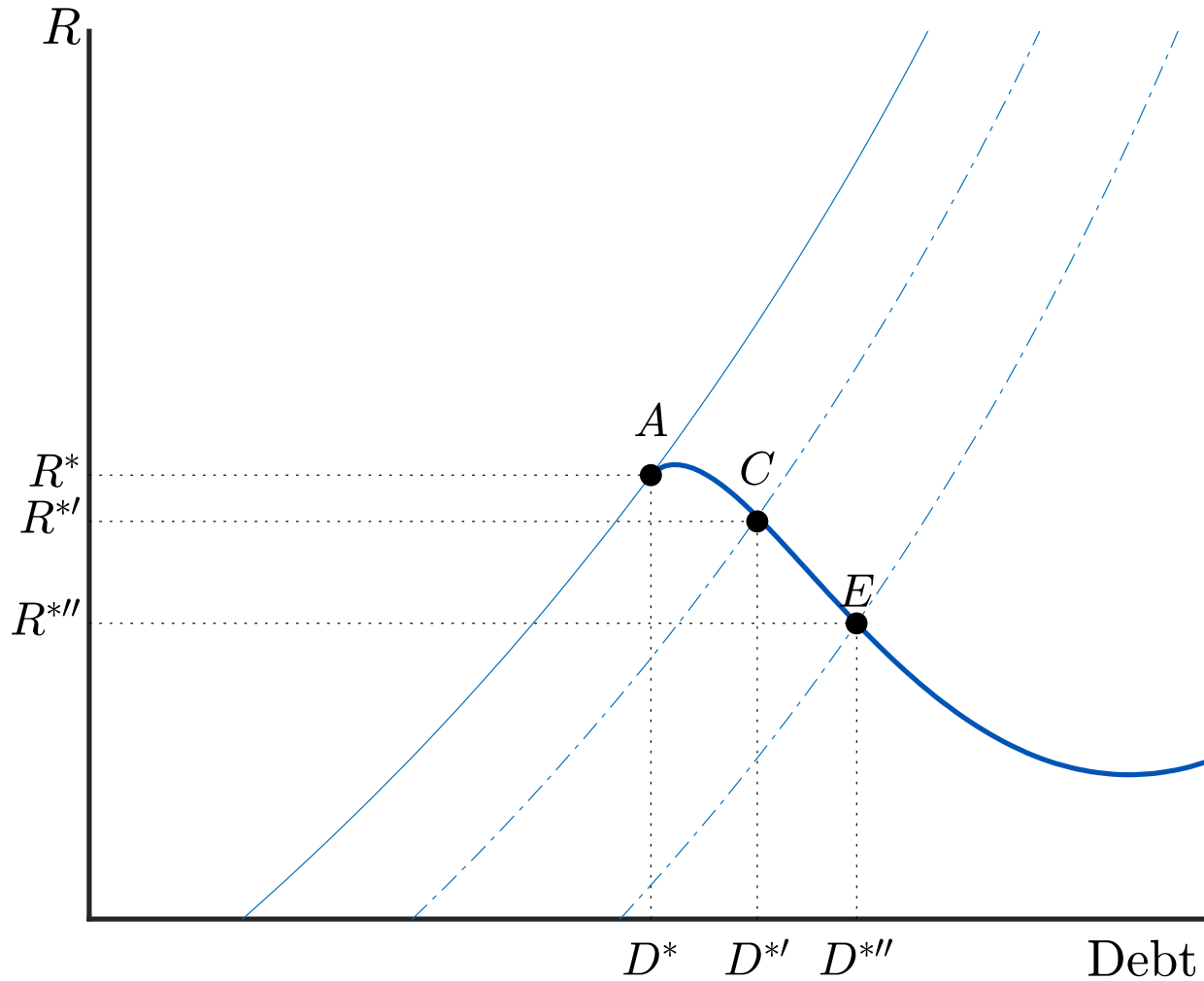
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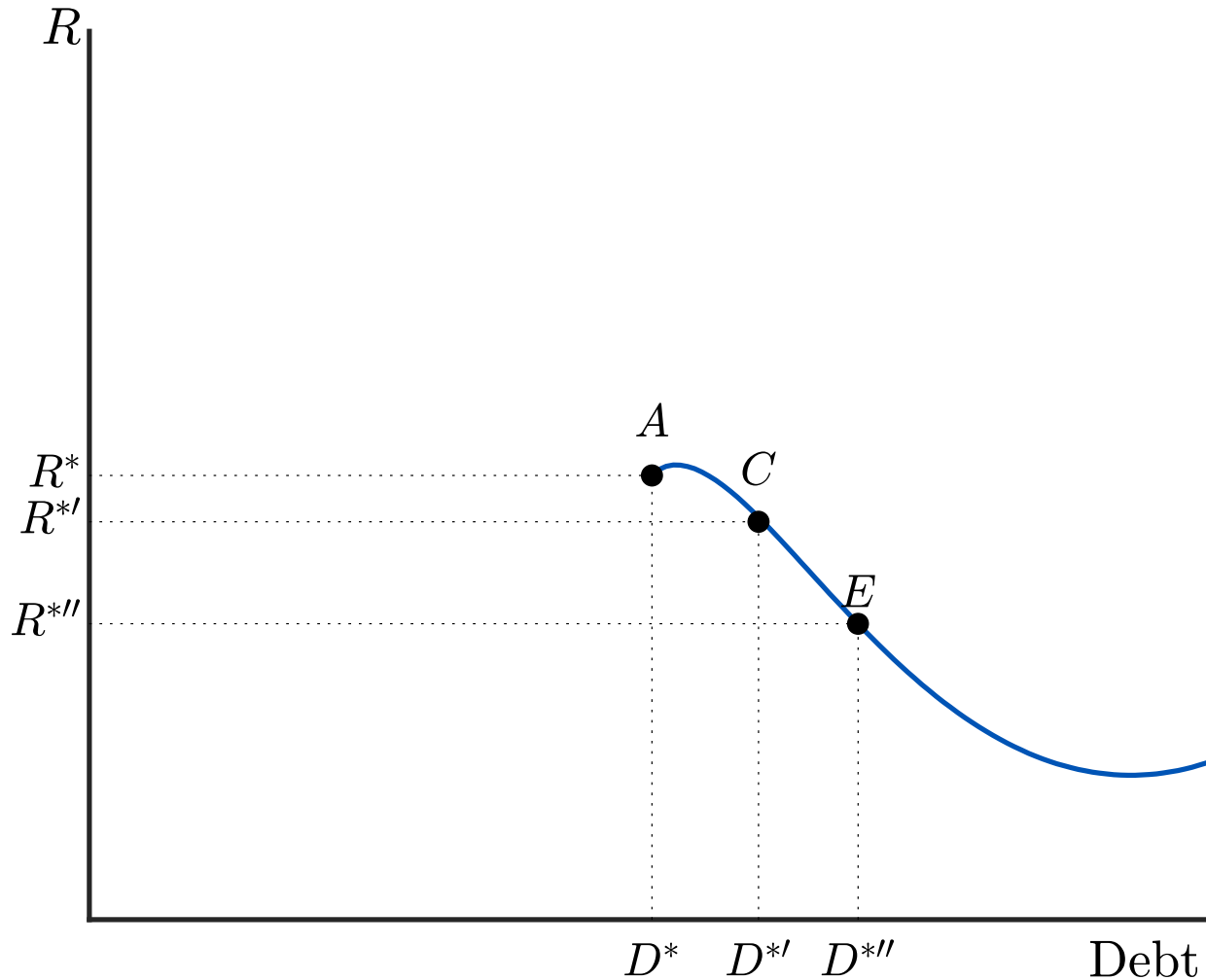
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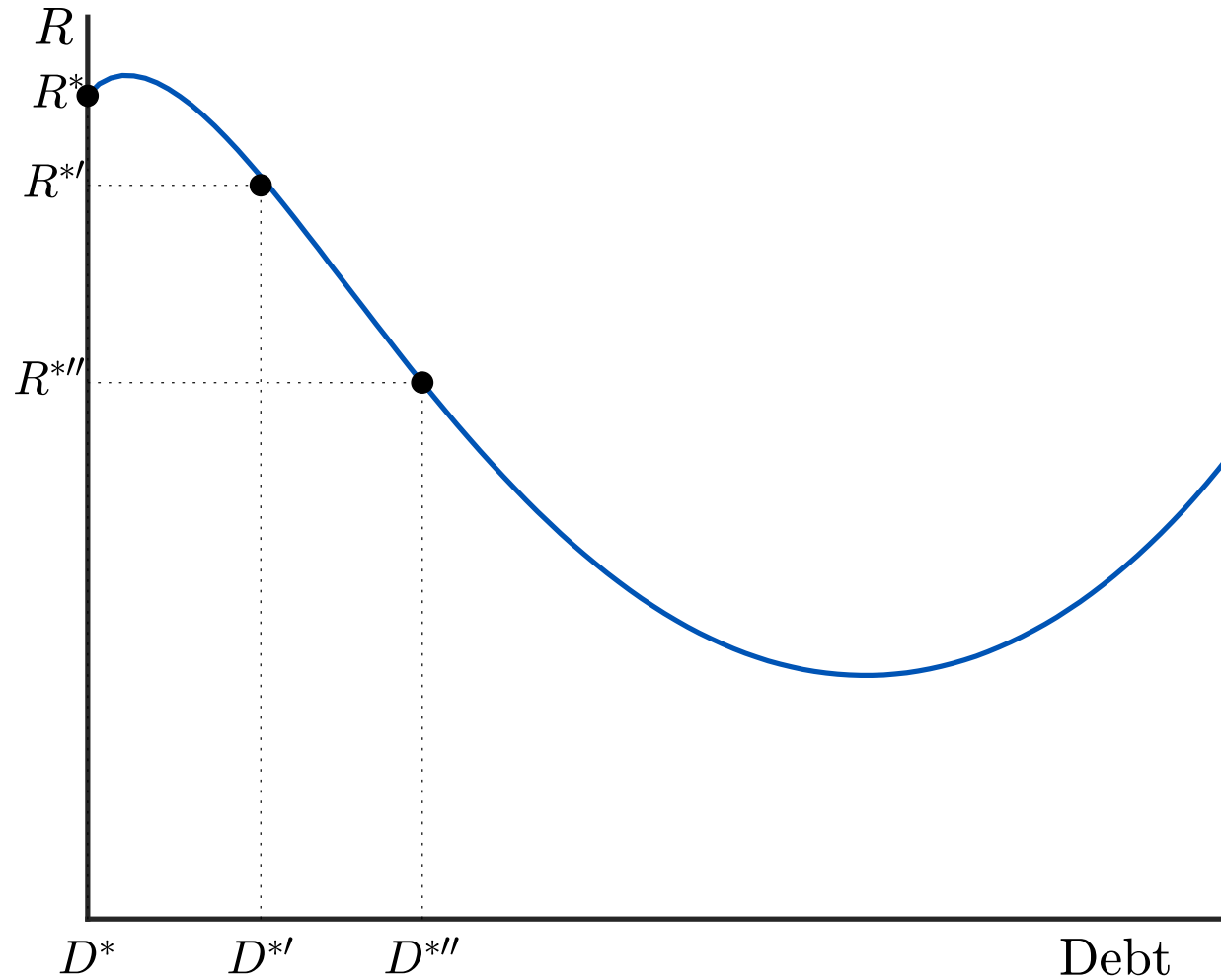
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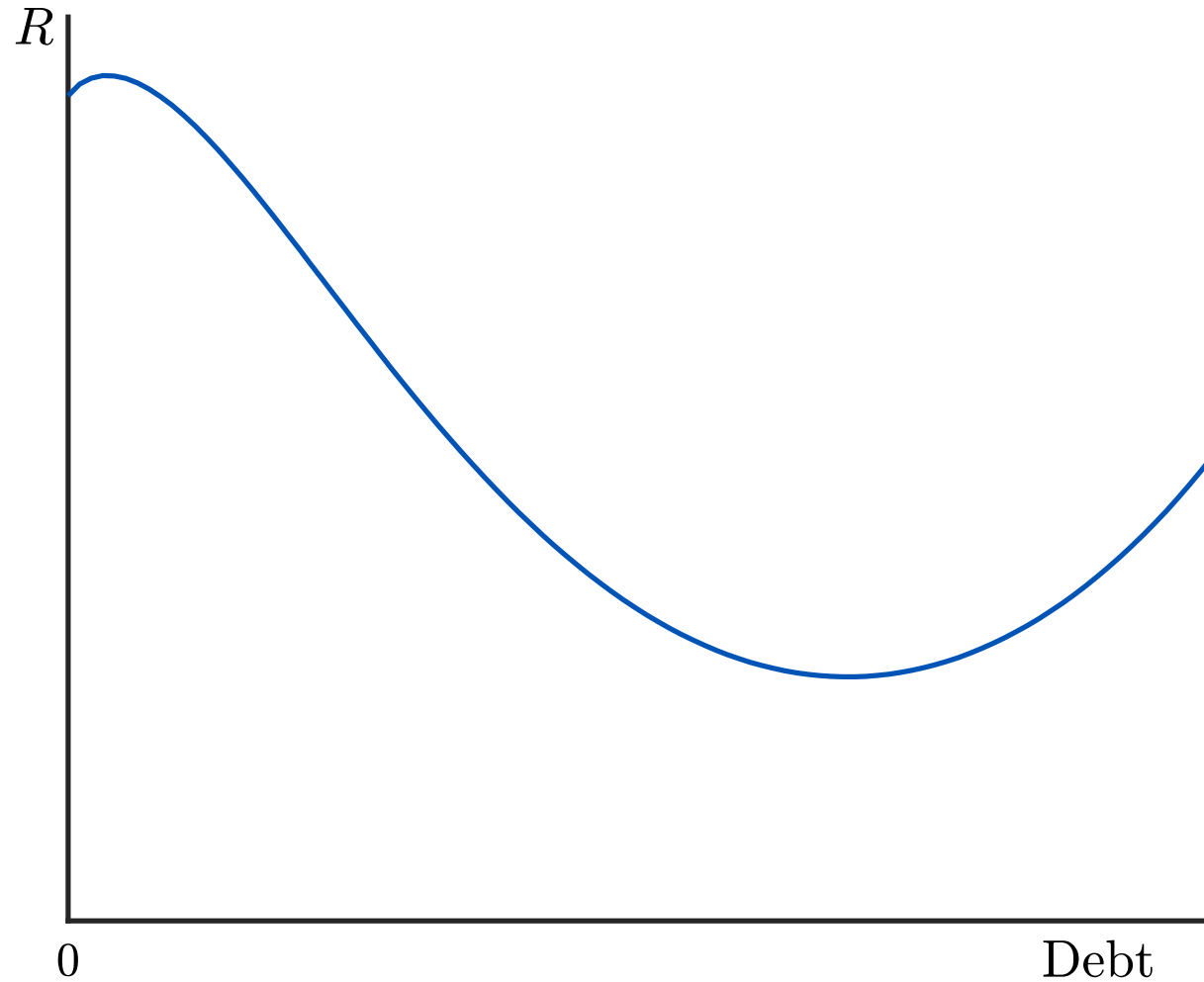
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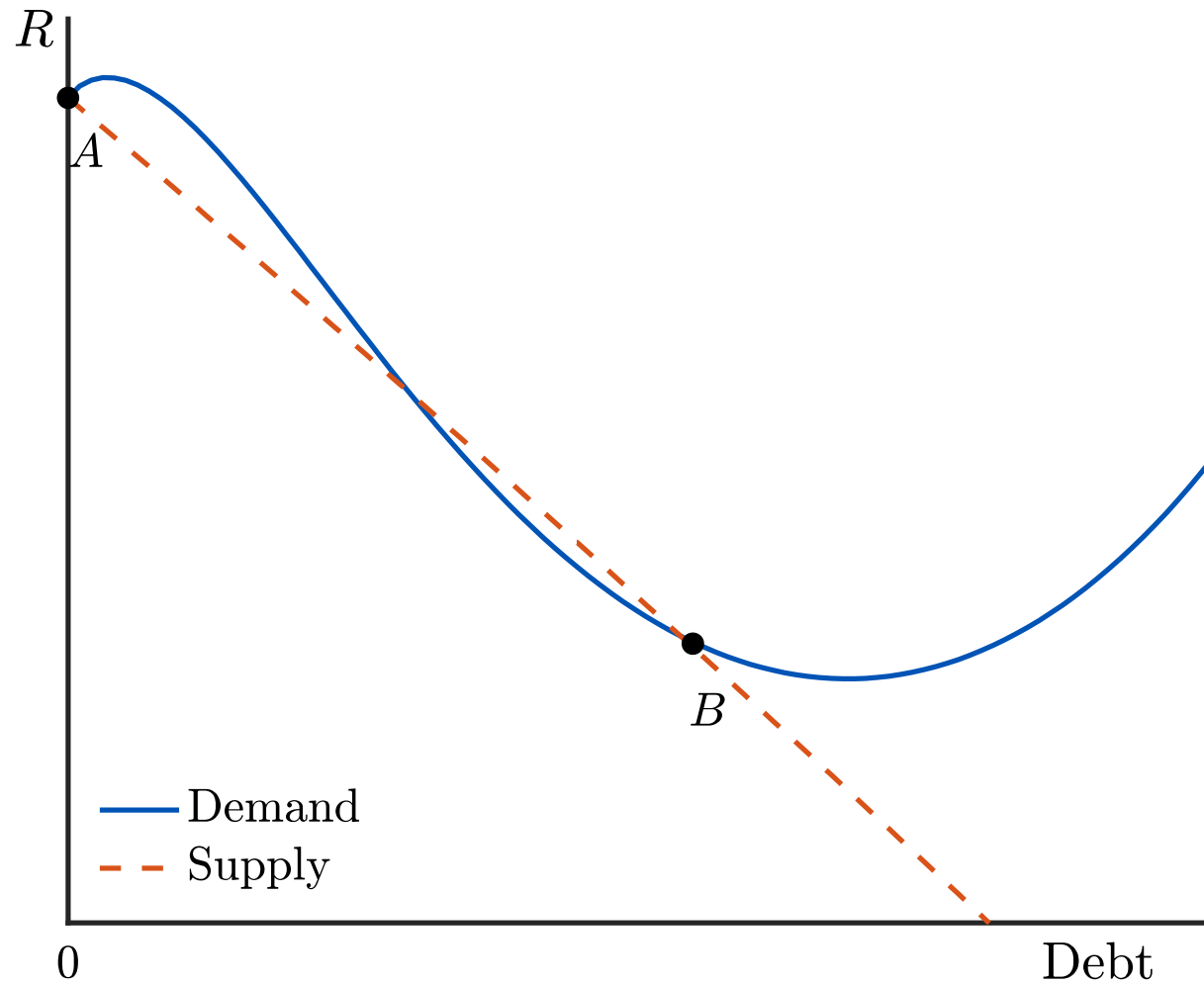
Demand can become downward-sloping for some level of debt

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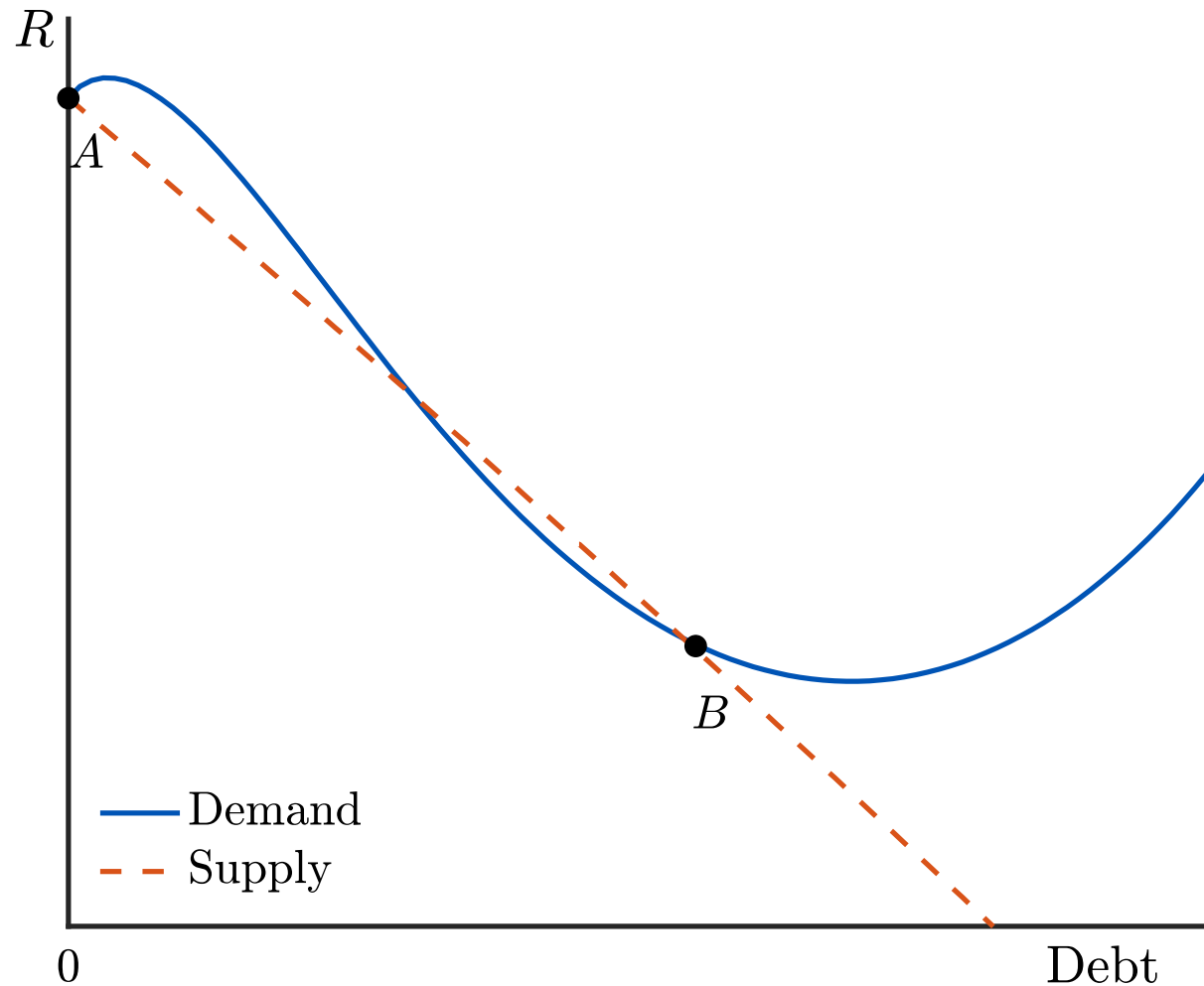


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# The Model | Demand and Supply - Multiple (Stable) Equilibria



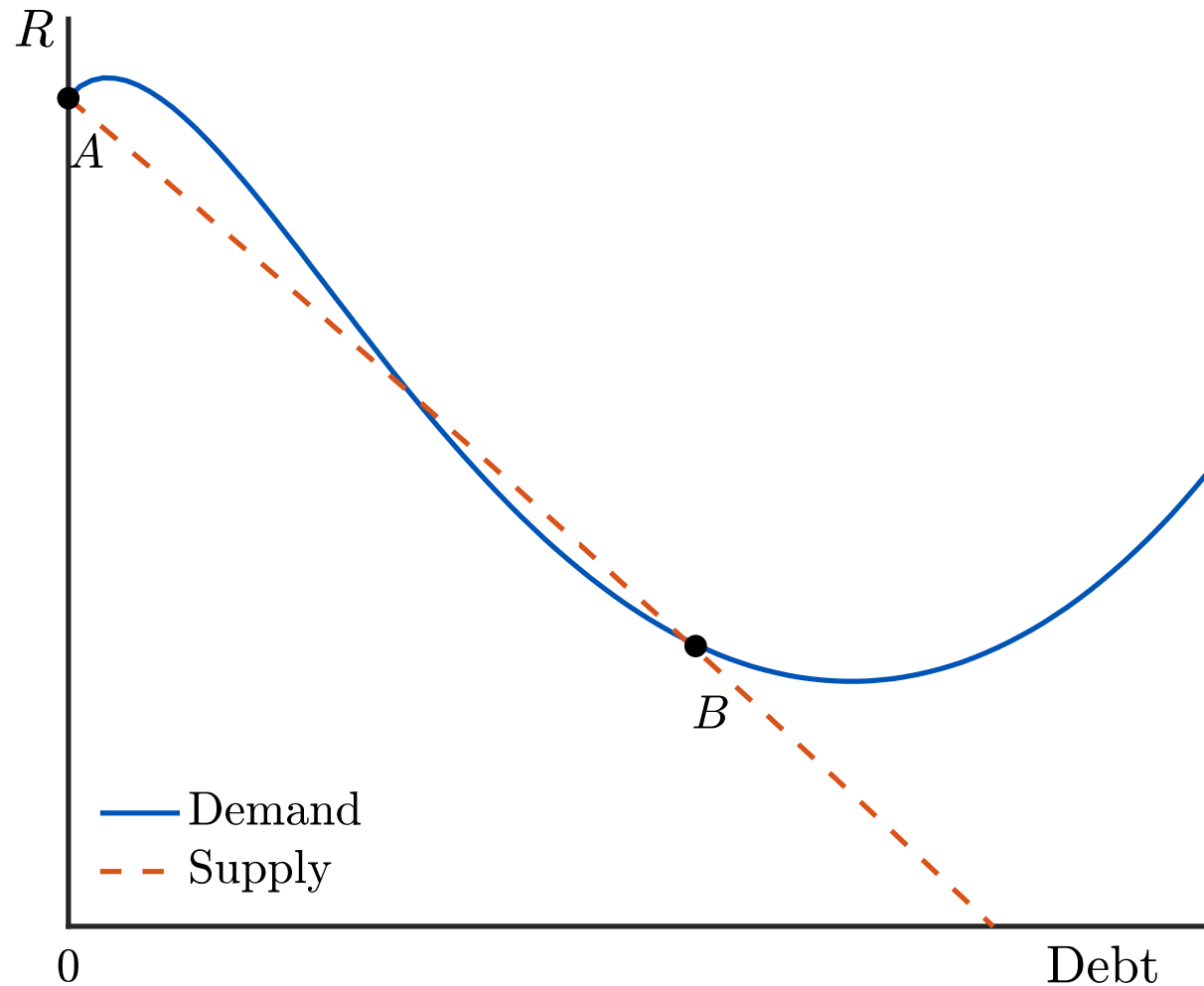
# The Model | Demand and Supply - Multiple (Stable) Equilibria



## Multiple equilibria may emerge

- **Point A (pre-2007):**
  - High  $R^*$
  - Low consumption risk
  - Low monopsonistic power

# The Model | Demand and Supply - Multiple (Stable) Equilibria

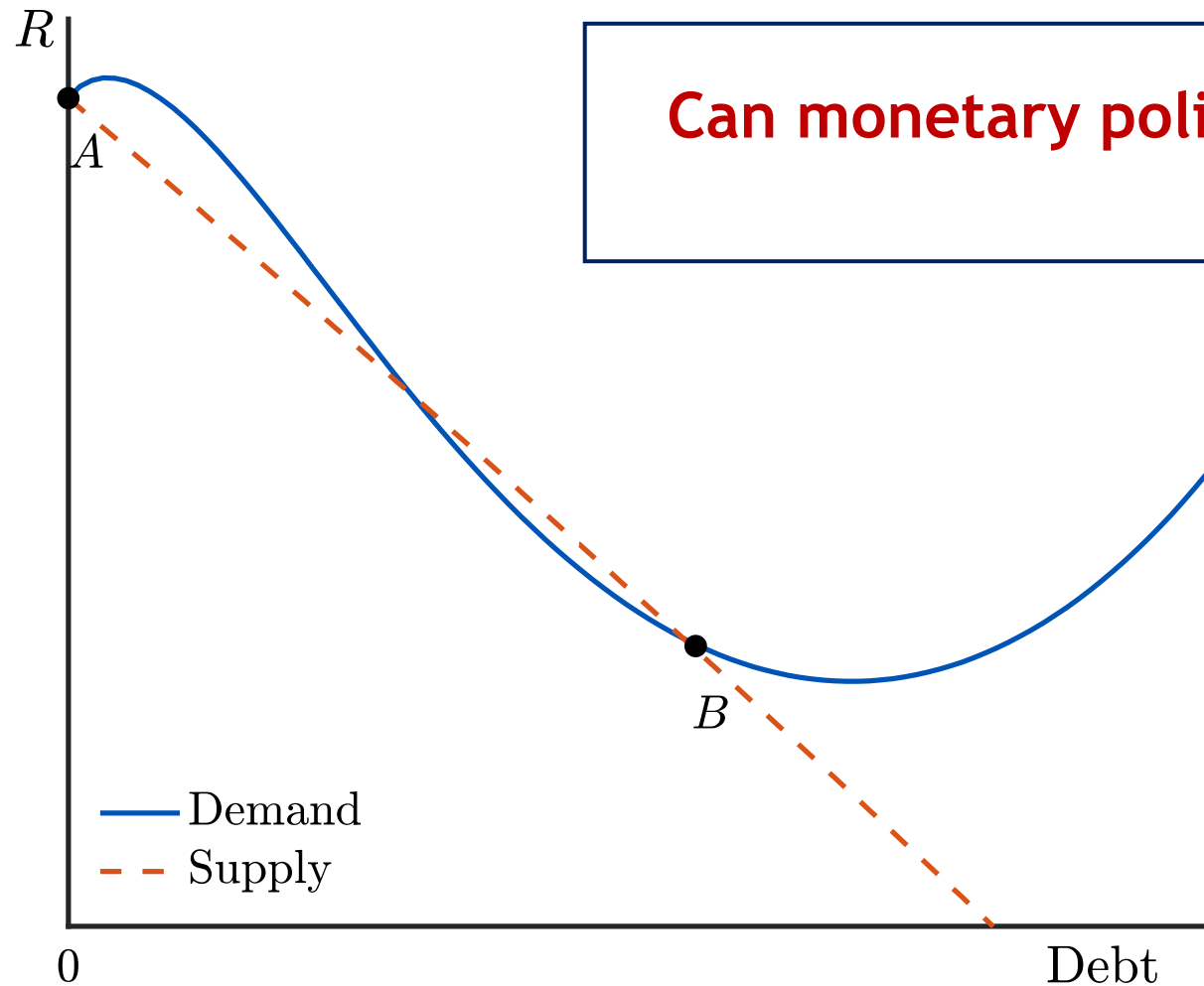


## Multiple equilibria may emerge

- Point A (pre-2007):
  - High  $R^*$
  - Low consumption risk
  - Low monopsonistic power
- Point B (post-2008):
  - Low  $R^*$
  - High consumption risk
  - High monopsonistic power



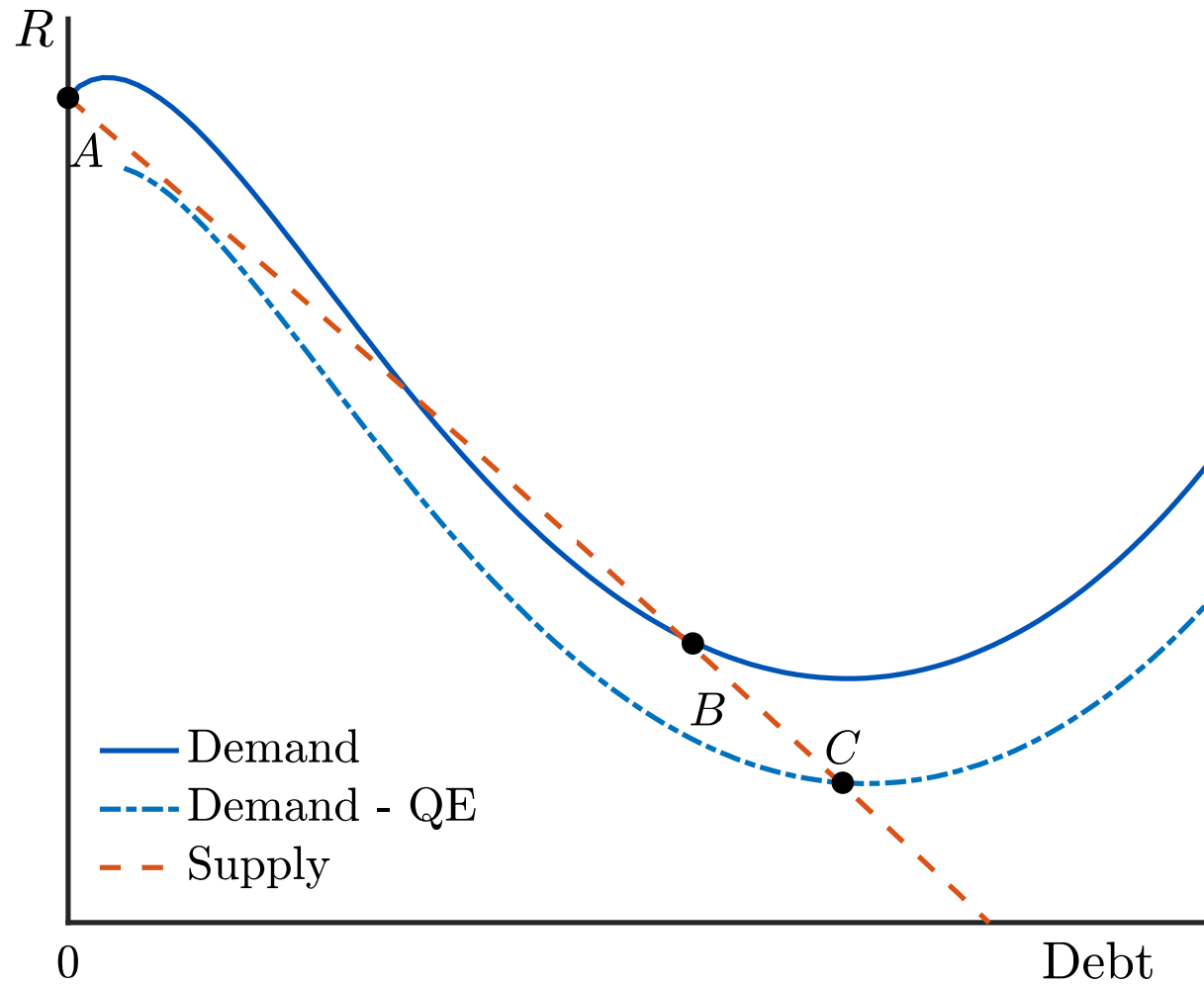
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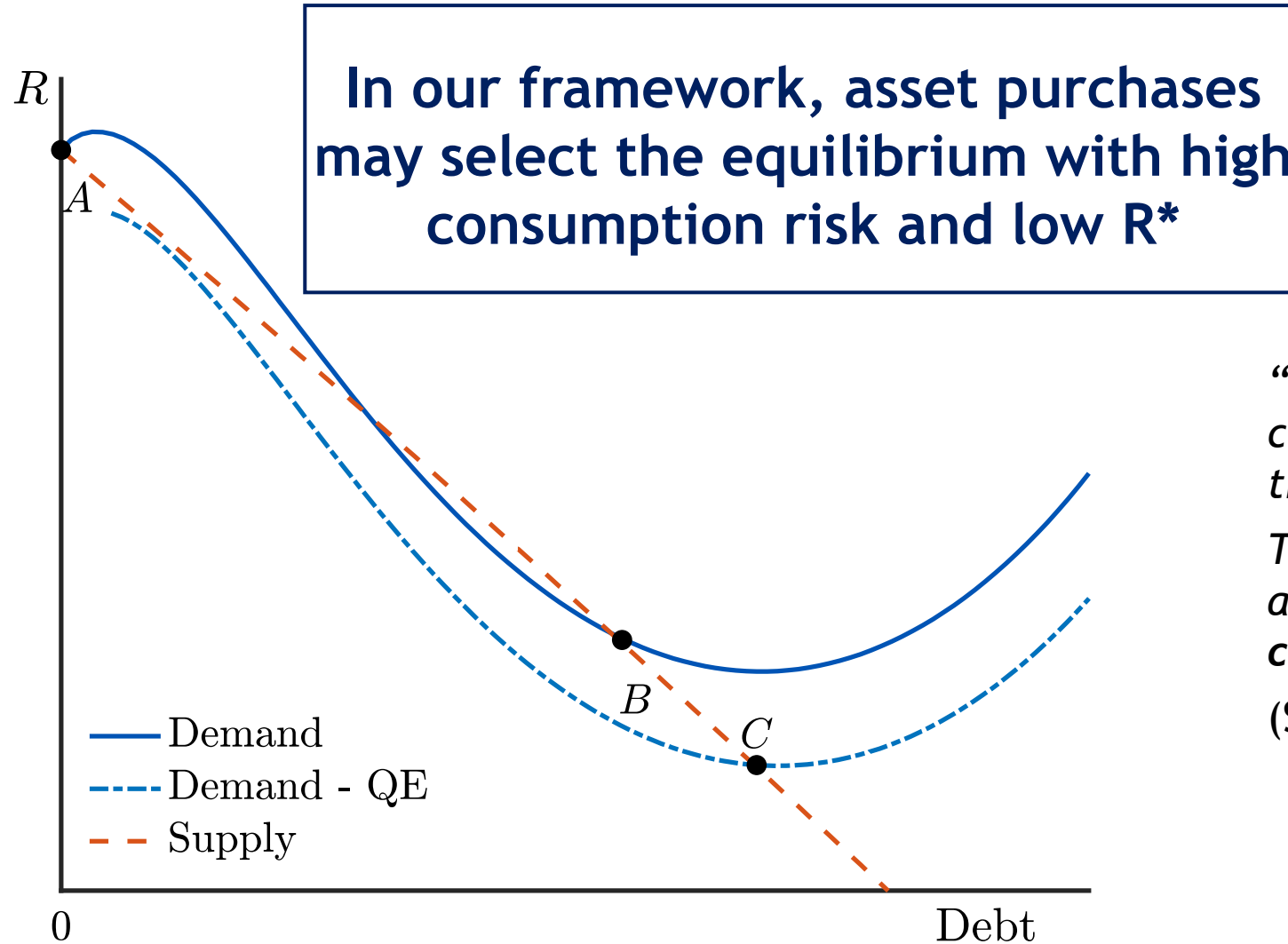


**Can monetary policy select between A and B?**

- Low consumption risk
- Low monopsonistic power
- Point B (post-2008):
  - Low  $R^*$
  - High consumption risk
  - High monopsonistic power

# Policy | Asset Purchase Programmes





*“Even if asset purchases have clearly quantifiable benefits, they also come with side effects. These may be difficult to assess, as they can materialise with considerable delay.”*

(Schnabel, 2024)

## Conclusions | Policy Can Affect Long-Run Equilibria



- It may be **difficult** to predict future  $R^*$  **independently** of the path of monetary policy
- Our framework features multiple equilibria (Benhabib, Schmitt-Grohé and Uribe, 2001) and **breaks the classical dichotomy** (Benigno and Fornaro, 2018, Jordà, Singh and Taylor, 2024, Ferrari and Queirós, 2024, ....)

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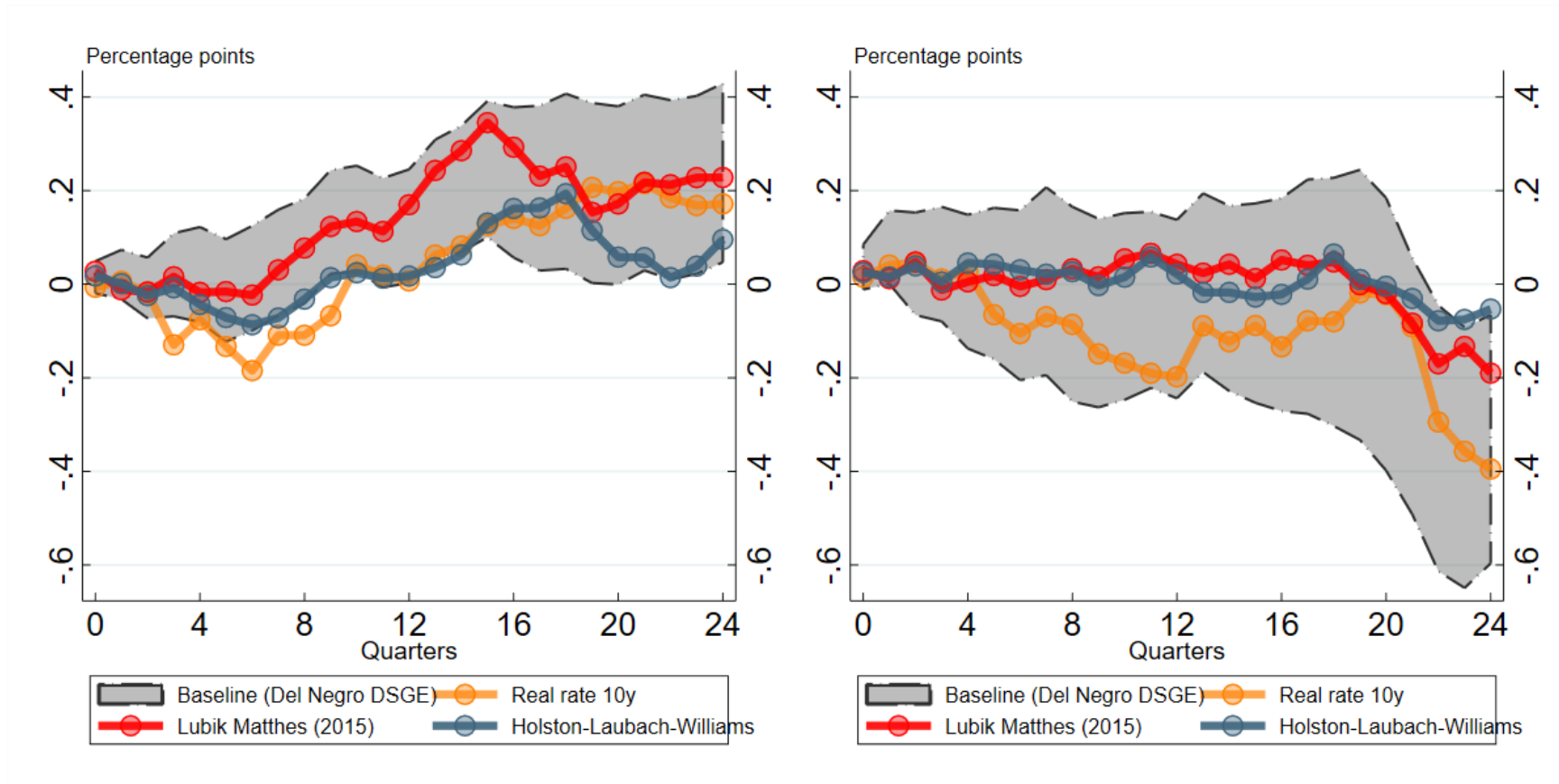


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***“With great power $R^*$ , comes great  $R^*$  responsibility”***

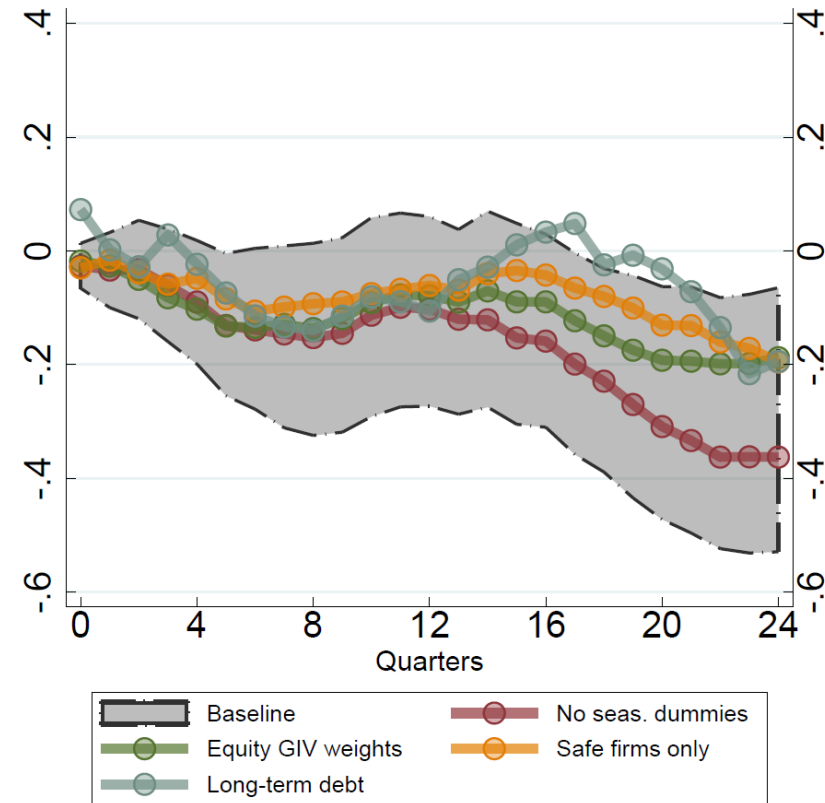
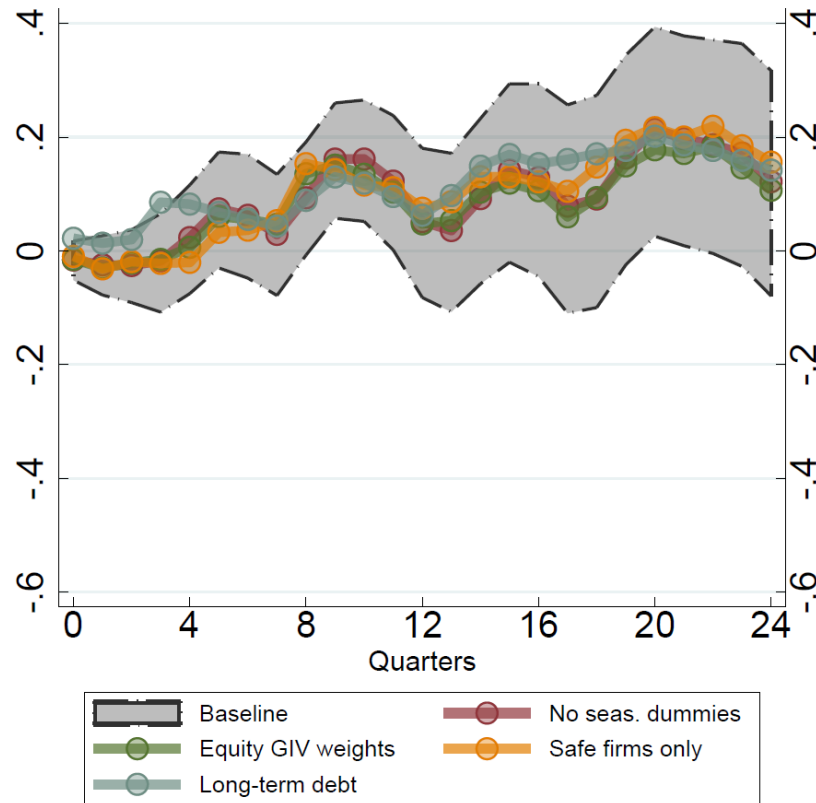
*(Uncle Ben, Stan Lee, 1962)*

# Appendix | robustness of IRFs of $R^*$ to GIV

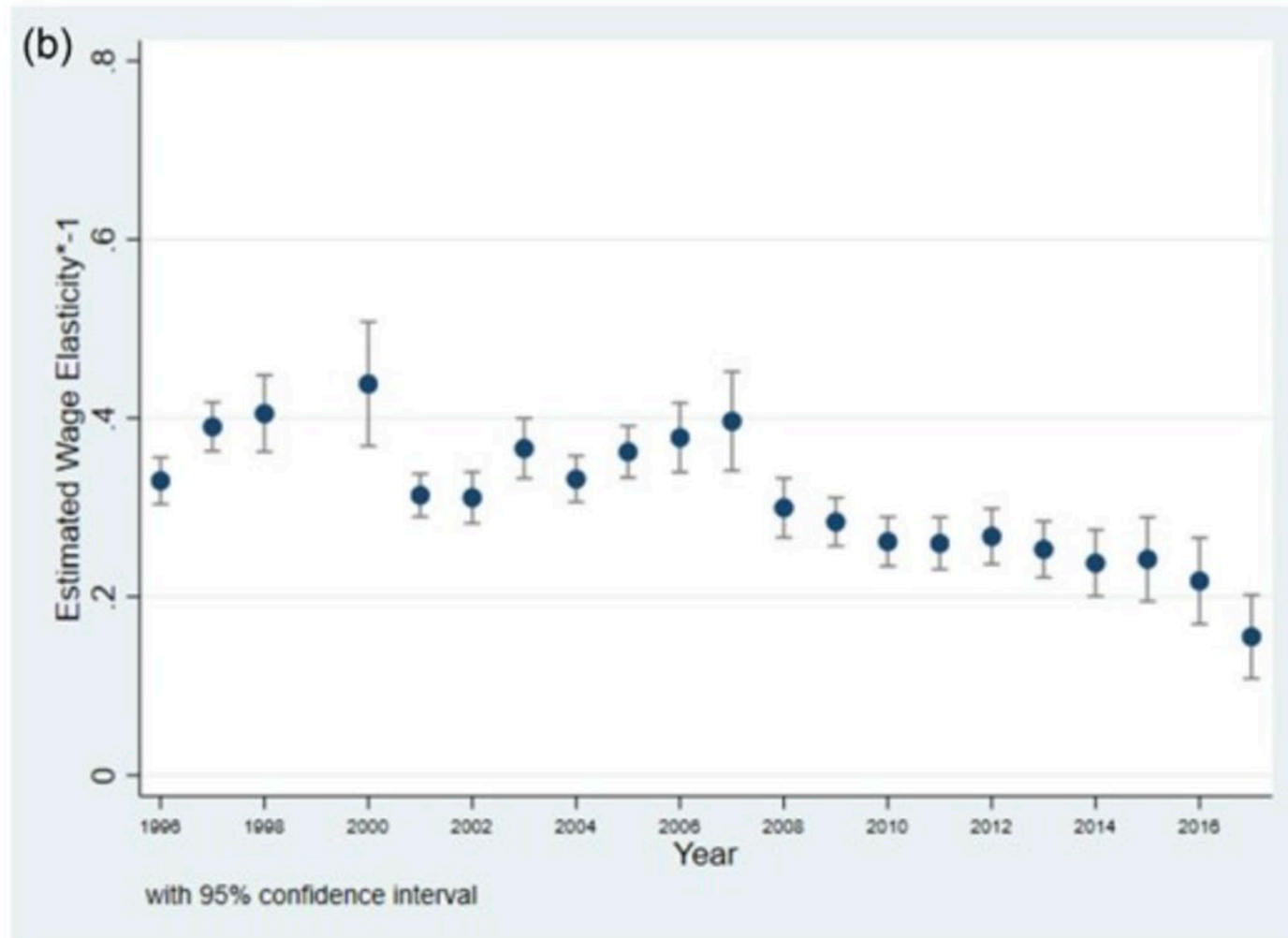




# Appendix | robustness of IRFs of $R^*$ to GIV



# Appendix | Monopsony



# Appendix | Salaries and Leverage

- For given size, salary costs are negatively associated with leverage

$$Salary_{it} = \alpha_i + \alpha_{sct} + \beta Assets_{it} + \gamma (Assets_{it} \times Leverage_{it}) + \Gamma Z_{it} + u_{it}$$

**Table I** SALARY COSTS, SIZE, AND LEVERAGE

	(1)	(2)	(3)	(4)
Assets	0.47*** (0.02)	0.49*** (0.02)	0.58*** (0.02)	0.56*** (0.02)
Assets × Leverage			-0.03*** (0.00)	-0.02*** (0.00)
Observations	263125	262867	263125	262867
R <sup>2</sup>	0.534	0.894	0.544	0.896
Firm FE	no	yes	no	yes
Sector FE	yes	no	yes	no

NOTE. Robust standard errors (clustered two-way, at the year and firm level) are reported in parentheses, with (0.00) indicating a value lower than 0.005. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Coefficients corresponding to the constant, fixed effects, and controls (log number of employees and log leverage) are not reported.



# Appendix Leverage

