Monopsony, Income Risk and R* Multiplicity

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Any views expressed here are solely mine and so cannot be taken to represent those of the Bank of England or members of the Monetary Policy Committee, Financial Policy Committee or Prudential Regulation Committee.
• Provide a framework to understand the behaviour of the neutral real interest rate ($R^*$) that equilibrates asset markets in the long run
  
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• 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 diagram illustrates the demand and supply of assets in a standard model. The demand curve is represented by a solid blue line, and the supply curve is indicated by a dashed red line. The equilibrium point is marked as $A$, where the demand and supply curves intersect. The demand curve is labeled as $D^*$ on the x-axis, and the supply curve is labeled as $R^*$ on the y-axis.
An increase in the supply of assets

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

To robustness checks
How Can We Rationalise This Puzzle?
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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
Firms issue more debt
The Mechanism | Issuance, Monopsony Power and Income Risk

Firms issue more debt

Greater debt supply → Better insurance: \( R^* \) increases
The Mechanism | Issuance, Monopsony Power and Income Risk

Firms issue more debt

- Greater debt supply
- Firms can grow larger and use their monopsonistic power

Better insurance: $R^*$ increases

Higher income risk: $R^*$ decreases
The Mechanism | The Initial Equilibrium

Model Timeline

Equilibrium: start at point A

Graph showing the relationship between debt and interest rate with equilibrium point A.
The Mechanism | Firms Issue More Debt

Model Timeline

- Equilibrium: start at point A
- Shock: Firms issue more debt (from A to B)
The Mechanism | Income Risk Increases - Demand shifts

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)
The Mechanism | Repeat the Same Experiment

Model Timeline

- **Equilibrium**: start at point A
- **Shock**: Firms issue more debt (from A to B)
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- **Onwards**: iterating the same process produces point E etc
The Mechanism | Repeat the Same Experiment

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![Graph showing the mechanism and model timeline with points A, B, C, and E, and lines representing different equilibrium states.](image)
The Mechanism | A New Demand Curve

Model Timeline

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- **Points A, C, E** together identify the new demand curve
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Demand can become downward-sloping for some level of debt
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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 $R^*$
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  - Low monopsonistic power

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

Diagram showing the relationship between interest rate (R) and debt, with demand and supply curves labeled as follows:

- **Demand**: Solid blue line
- **Demand - QE**: Dashed blue line
- **Supply**: Dashed orange line

Key points:
- **A**: Initial equilibrium point
- **B**: Point after a change in policy
- **C**: Point after quantitative easing (QE)
In our framework, asset purchases may select the equilibrium with high consumption risk and low $R^*$.

“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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“With great poweR*, comes great R*esponsibility”
(Uncle Ben, Stan Lee, 1962)
Appendix | robustness of IRFs of R* to GIV
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• 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 1 Salary Costs, Size, and Leverage

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<tr>
<td>Assets x Leverage</td>
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<td>-0.02***</td>
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<td></td>
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</tr>
</tbody>
</table>

**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