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Which r-star, public bonds or private investment?
Measurement and policy implications

Discussion

Adrian Penalver

Vienna, 7 December 2023

OUTLINE

• **Very rich paper.**

• **Three questions:**

    1.   Have central banks been mislead by using standard estimates of r*?

    2.   Is there a puzzle in real returns to private capital?

    3.   Do we have the wrong policy mix?

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OUTLINE

- **Very rich paper.**

- **Three questions:**

  1. Have central banks been mislead by using standard estimates of r*? No, I don't think so
  2. Is there a puzzle in real returns to private capital? Yes but where is it?
  3. Do we have the wrong policy mix? Maybe

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NATURAL RATE OF INTEREST

- **Have central banks been mislead by using standard estimates of r*?**
  - Practical answer:
    - Cross-check rather than front-line indicator
    - Only 1 chart out of 120 in the Monetary Policy Book
    - Policy in practice is much closer to the spirit of Orphanides and Williams
    - But r* is easier for narrative purposes

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NATURAL RATE OF INTEREST

- **Have central banks been mislead by using standard estimates of r*?**
  - Technical answer:
    - Long-term sovereign bonds do not enter r* Laubach and Williams style estimates
      - Fed funds rate in the US
      - OIS for Euro Area
    - Identification of r* comes only from real GDP and inflation
    - r* is not a return on an instrument but a benchmark
      - Model counterfactual with no non-structural shocks

ESTIMATE OF R* (REAL) IN THE EURO AREA USING BAYESIAN MODEL AVERAGING
## *(PERCENTAGE POINTS)*
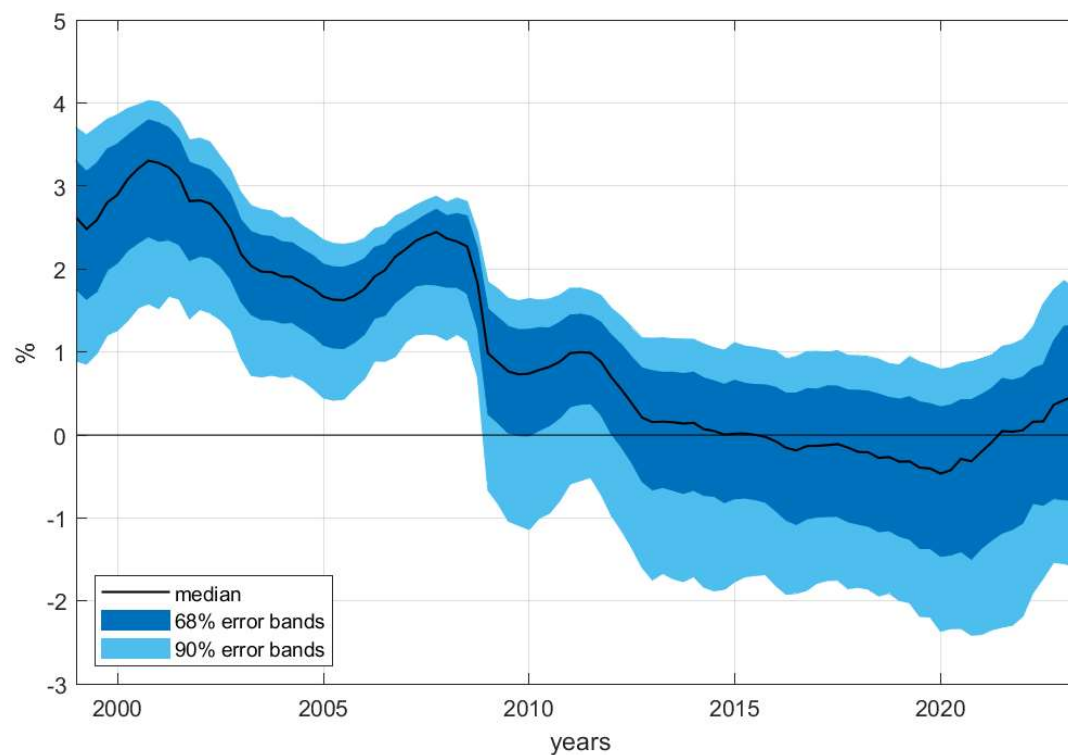
Note:. BMA-r* is the filtered estimate of the natural rate of interest in nominal terms. Weights are computed based on the posterior likelihood; see Diebold and Lopez (1996) for a review of the methodology. In order to obtain the nominal level of a neutral short-term rate, a convention is to add the ECB's 2 percentage points to the real r* estimate.
Source: Demfi calculations. Last observation: 2023.Q3

OUTPUT GAP FROM OUR BMA ESTIMATES
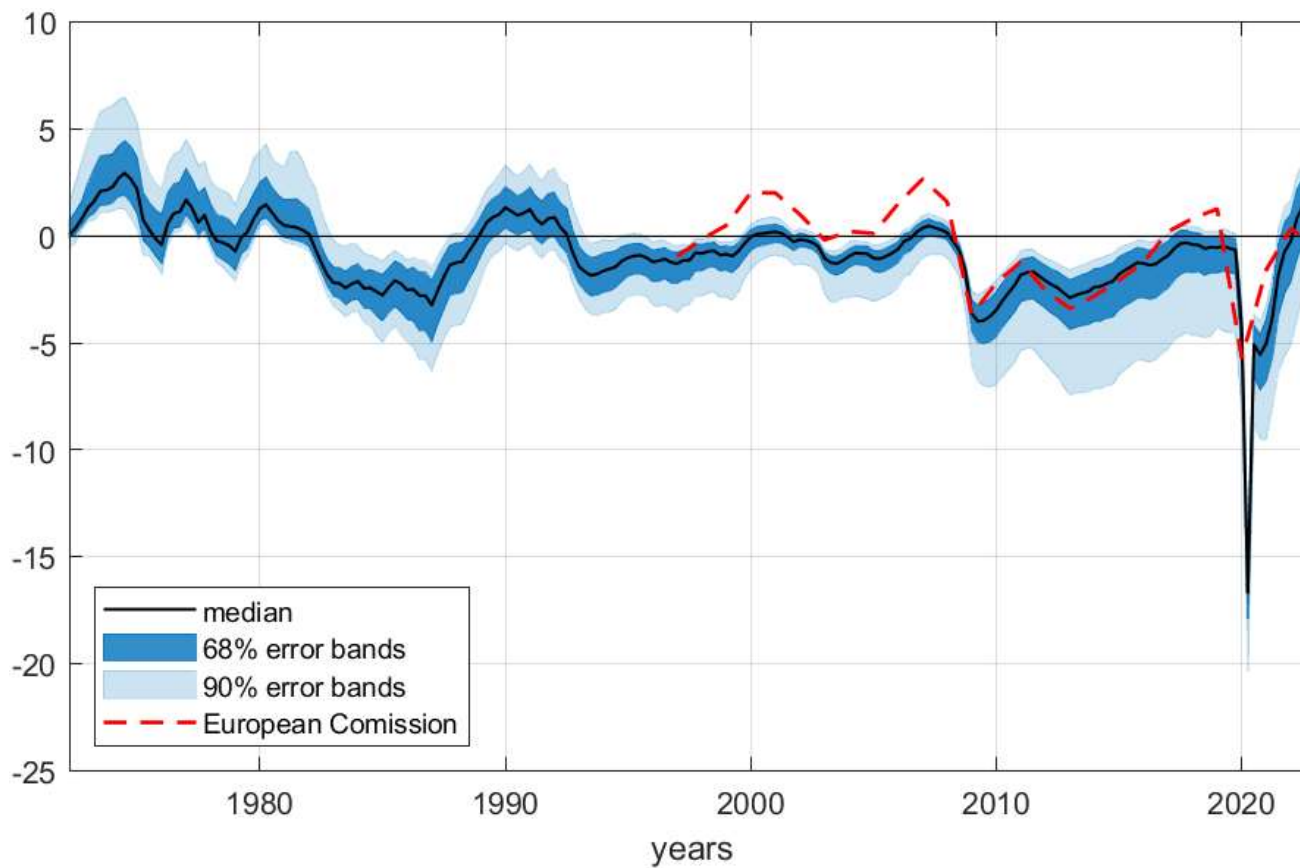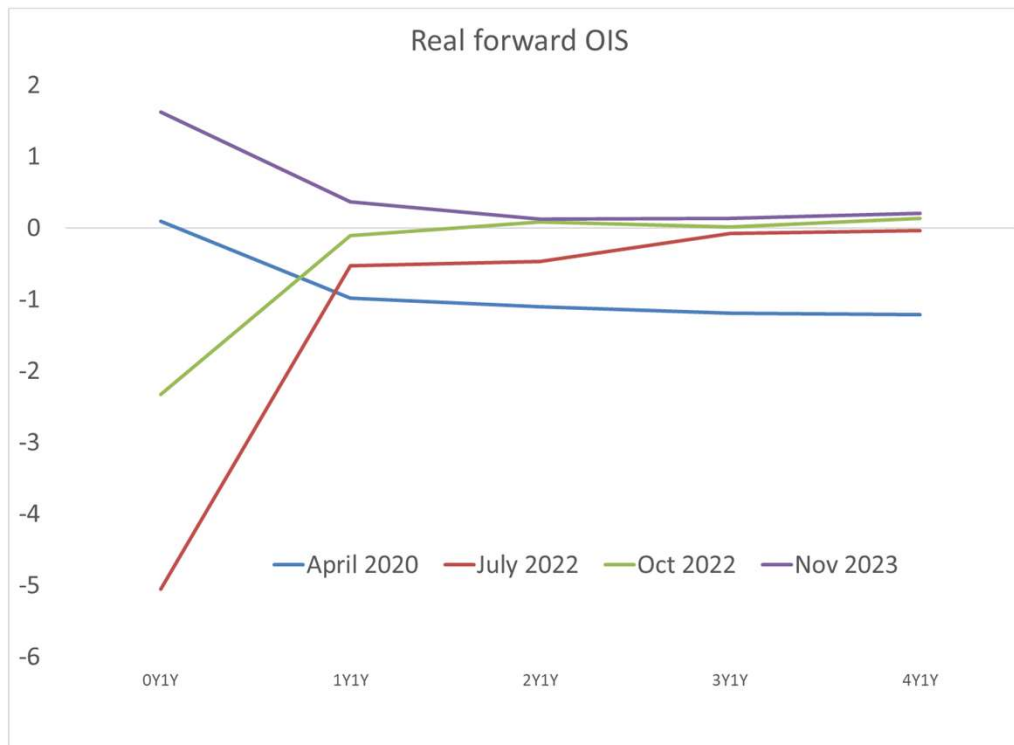

Sample period: 1972.Q2-2023.Q1

NATURAL RATE OF INTEREST

- **Have central banks been mislead by using standard estimates of r*?**
    - Policy answer:
        - Estimates of r* seem to have performed remarkably well.
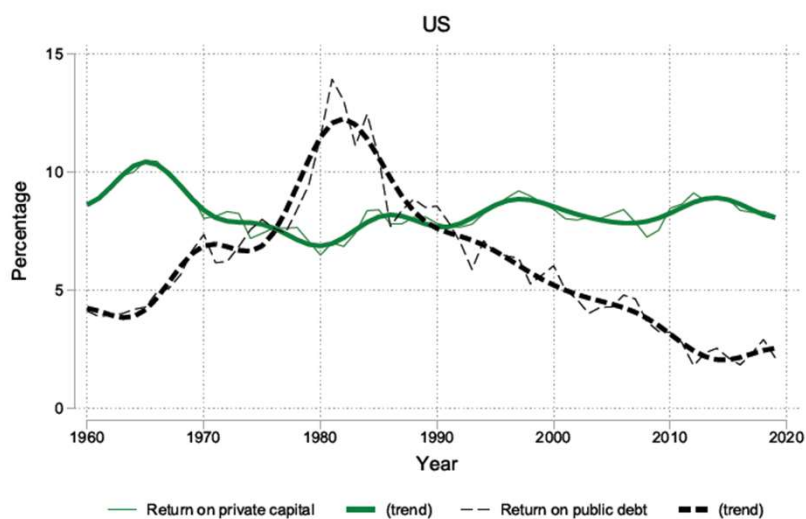   - (Much better than I would have thought.)

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REAL CONVERGENCE INTEREST RATE

Real forward OIS

Legend: April 2020 — July 2022 — Oct 2022 — Nov 2023

X-axis: 0Y1Y, 1Y1Y, 2Y1Y, 3Y1Y, 4Y1Y
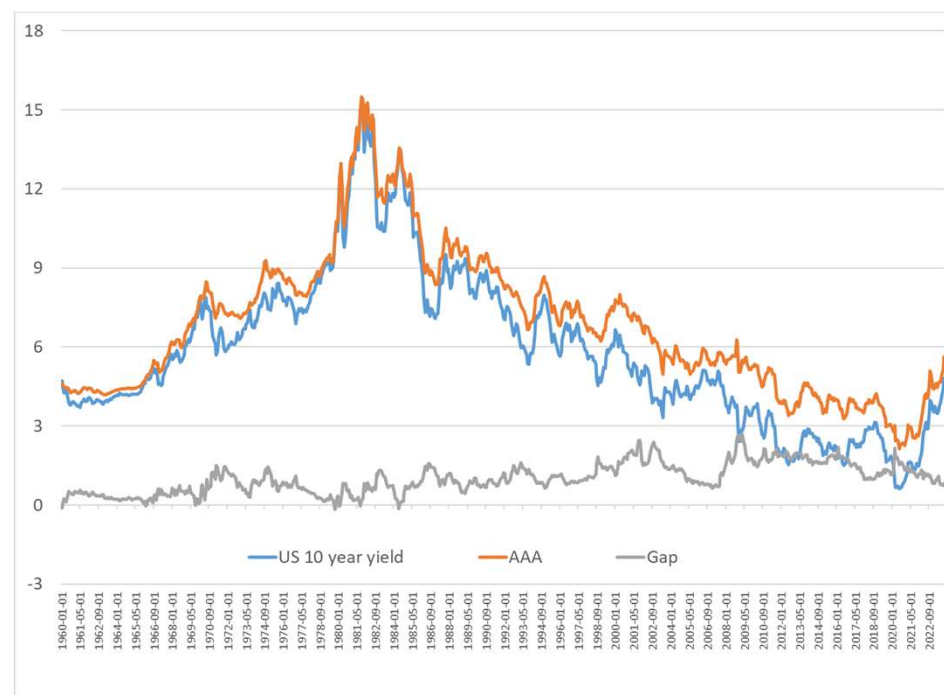
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Is there a puzzle in real returns to private capital?

YES

Figure 2: US returns on private capital versus government bonds

Fall in HLW for US between early 80s and last 5 years = 3.5%
- 0.9% = 2.6%
Increase in gap = 1.2% - 0.6% = 0.6%
Cf Figure 15

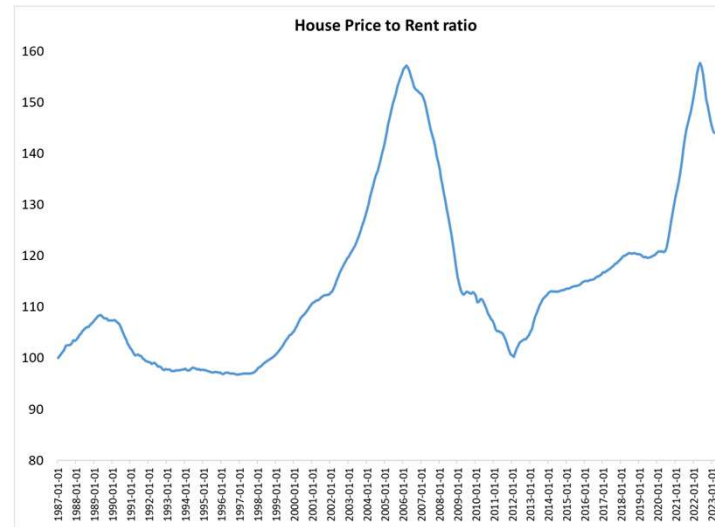## Is there a puzzle in real returns to private capital?

YES

CPI Rent of Primary Residence in US City

Case-Shiller US National Home Price Index

Proxy for direction of change of rental return

Similar general upward trend as P/E ratio

House Price to Rent ratio

S&P 500 Price-Earnings Ratio
1947-2017

Robert Shiller   Mother Jones

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Is there a puzzle in real returns to private capital?

YES

- Need model/analysis which reconciles trends in market returns and stability in National Accounting returns
- Q values? – ratio of market value to replacement cost
- Perpetual inventory method appropriate?
- How would National Accounting value Airbus?

Policy mix?

MAYBE

- Reducing financial frictions certainly first best
  - Completing capital markets union
  - Easier cross-border enforcement of contracts in EA
  - But what if the highest rates of return are elsewhere?
- But if this was easy to do it would have been done already

- QE in EA included corporate bonds (to try to lower m directly)

- If structural reforms are ruled out and monetary policy at the ZLB, then what?
  - Model calls for higher actual inflation relative to expected inflation
  - Inverse of the logic of forward guidance and Strategic Reviews (get expected inflation up to raise current inflation).
  - How to achieve this?
  - More fiscal policy still seems the most promising option (but difficult to readjust)

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