Discussion of
Annette Vissing-Jorgensen's
"Balance Sheet Policy Above the ELB"

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Background and Motivation

- From QE to QT
- How much QT is desirable?
- Equivalently: What is the optimal supply of reserves, given autonomous factors?
- This paper's perspective: optimal supply of highly liquid/safe assets ("convenient assets")

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- From QE to QT
- How much QT is desirable?
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- This paper's perspective: optimal supply of highly liquid/safe assets ("convenient assets")
- Verdict (preview): nice paper, timely, and highly policy relevant

Demand for Convenient Assets

- Convenience value of reserves: $v_R(R)$
- Holding cost per unit of reserves: φ
- Demand for reserves

$$r - IOR = v'_R(R) - \varphi$$

The Market for Reserves
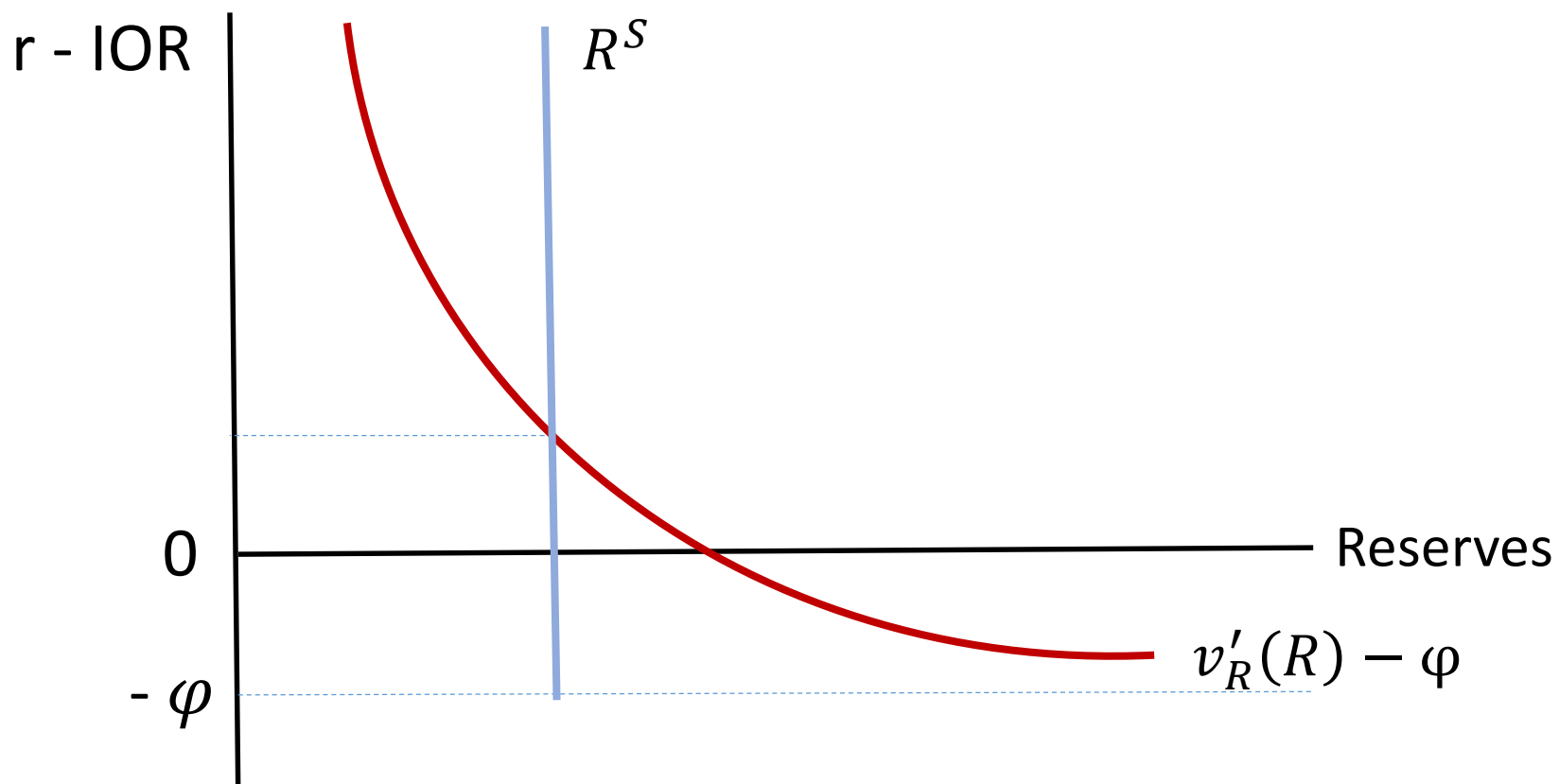
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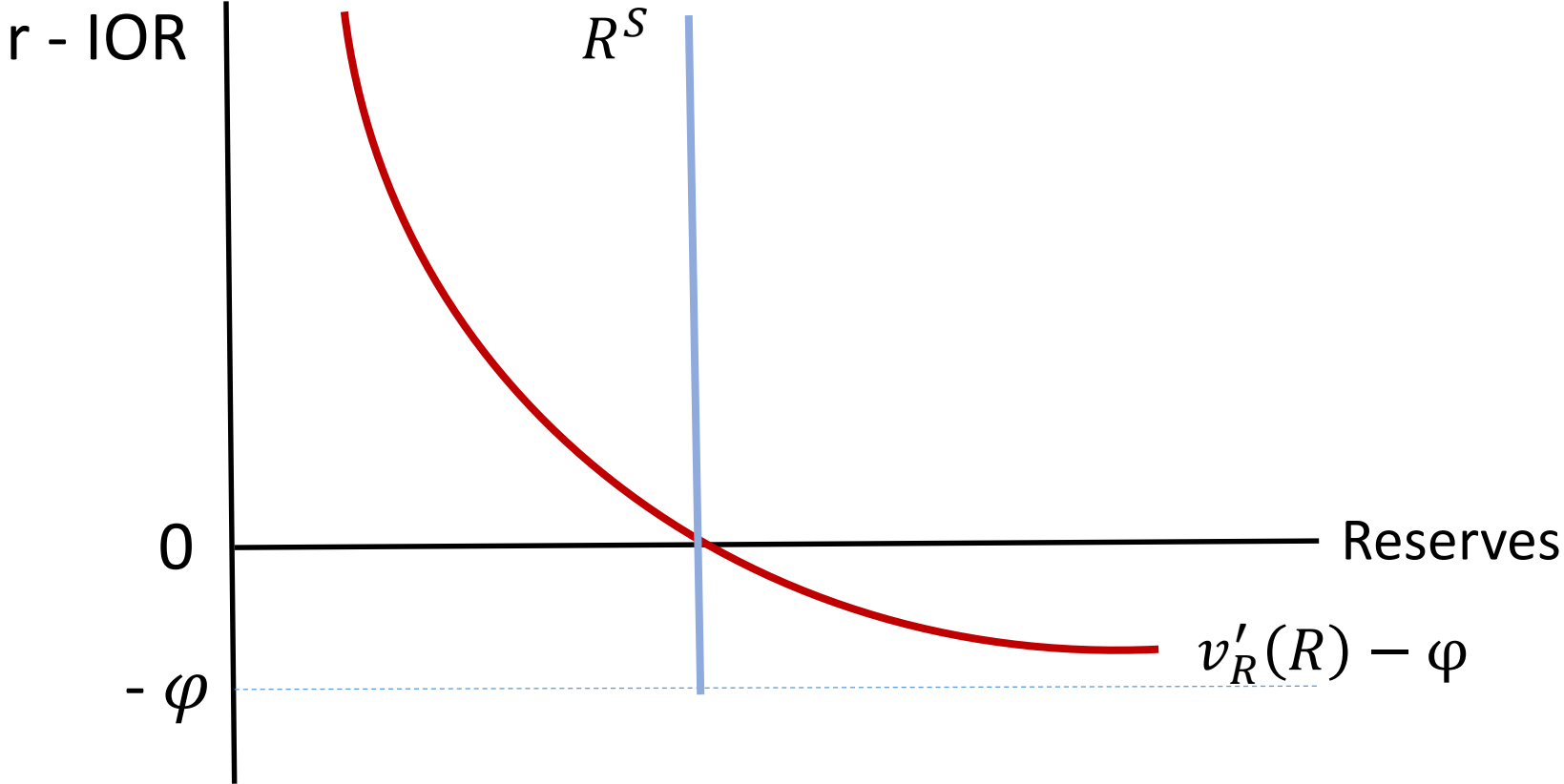- Monetary policy implementation: A separation result
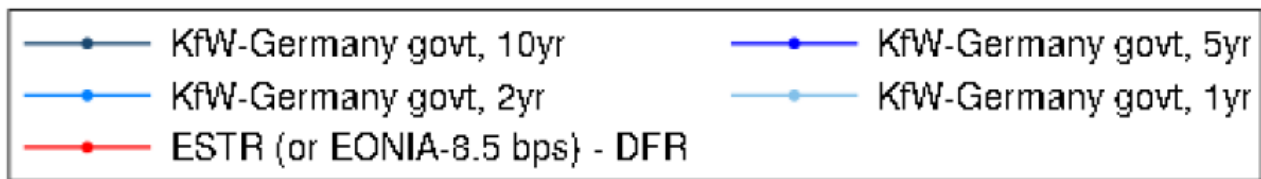
Optimal Reserve Policy (I)

- With reserves adjusted through purchases/sales of *inconvenient* assets (e.g. loans to banks)

$$v'_R(R) - \varphi = 0$$
$$\Rightarrow \ r = IOR$$

Optimal Reserve Supply with Inconvenient Assets

Optimal Reserve Policy (I)

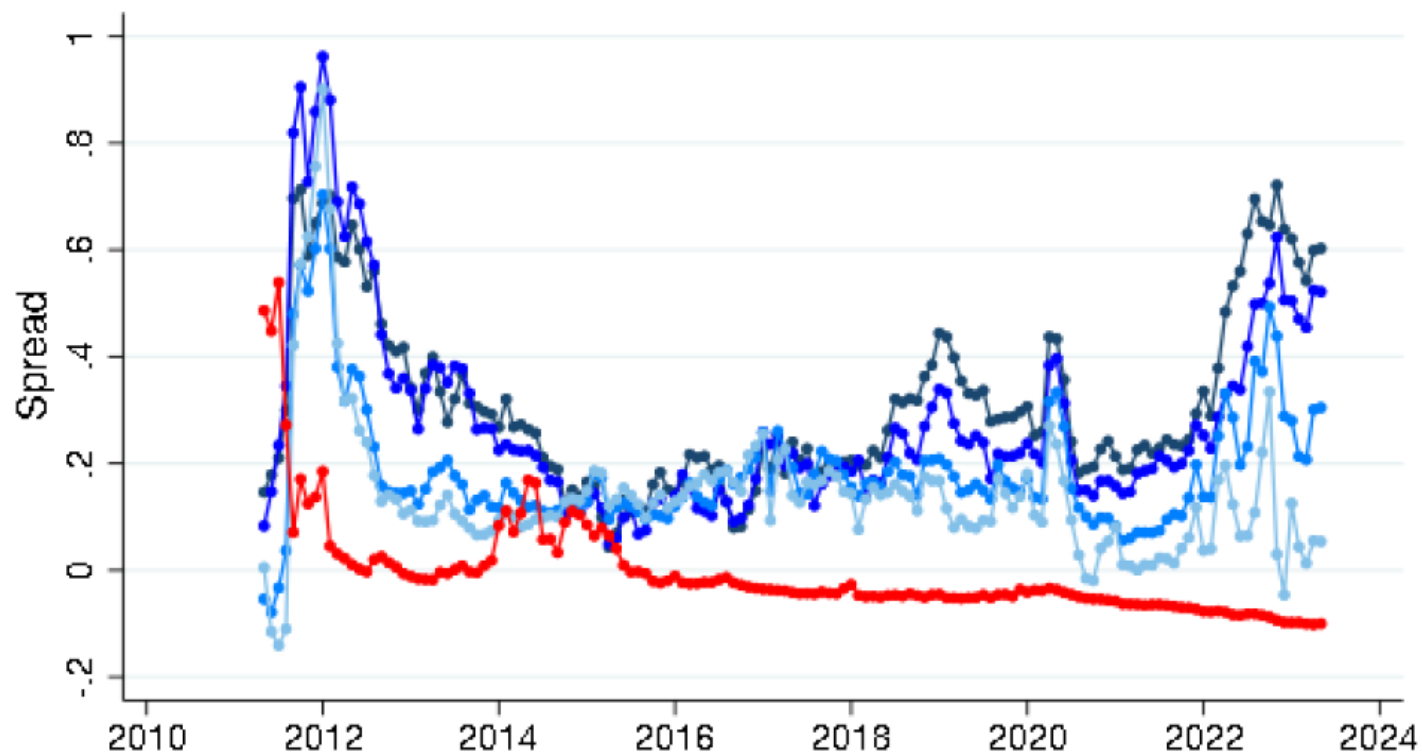- With reserves adjusted through purchases/sales of *inconvenient* assets (e.g. loans to banks)

$$v_R'(R) - \varphi = 0$$

$$\Rightarrow \ r = IOR$$

- Euro area: $r < IOR \Rightarrow$ oversupply of reserves

$$R^* = 1.7T < 4T = R$$

- *Prescription*: lower reserves, through reduced funding to banks.

Optimal Reserve Policy (II)

- Convenience value of "Treasuries" for a private investor: $v_B(B^p)$
- Demand for Treasuries:
$$r^L - r^T = v'_B(B^p)$$

Optimal Reserve Policy (II)

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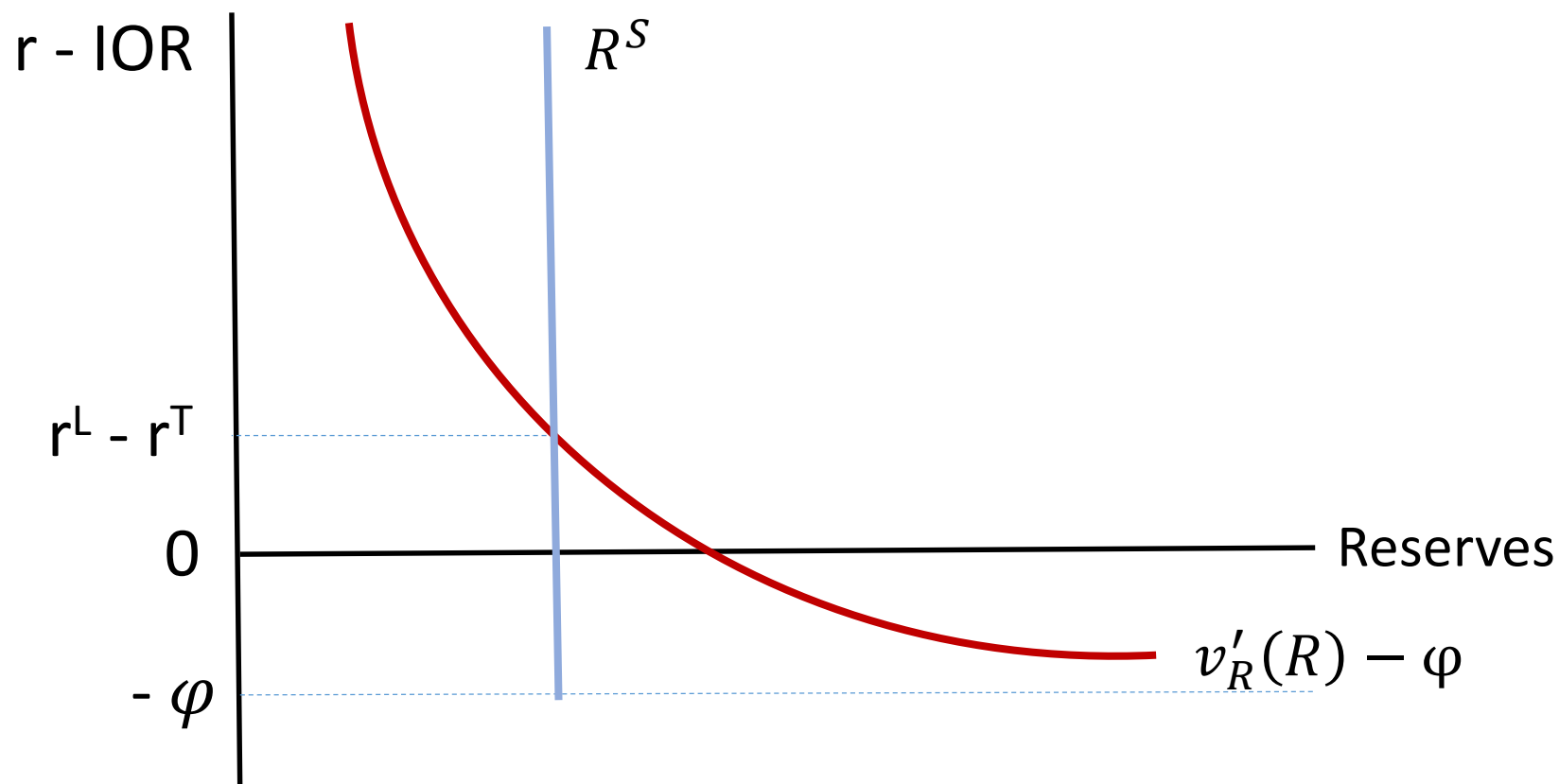- Demand for Treasuries:

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- With reserves adjusted through purchases/sales of *convenient* assets (e.g. highly liquid/safe bovernment bonds) $\Rightarrow$ policy trade-off, since $B^p = B - (R + A)$

$$v_R'(R) - \varphi = v_B'(B^p)$$

$$\Rightarrow r - IOR = r^L - r^T$$

Optimal Reserve Supply with Convenient Assets

KfW-Germany govt, 10yr	KfW-Germany govt, 5yr
KfW-Germany govt, 2yr	KfW-Germany govt, 1yr
ESTR (or EONIA-8.5 bps) - DFR	

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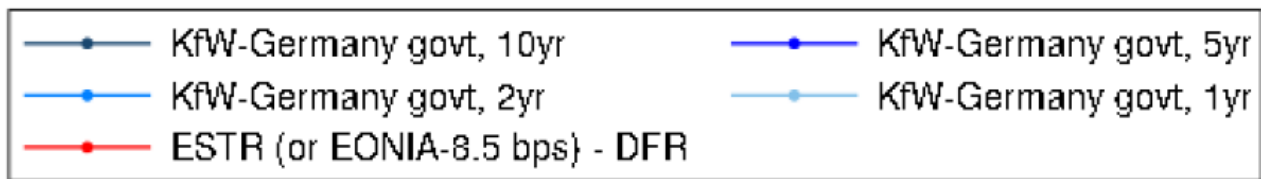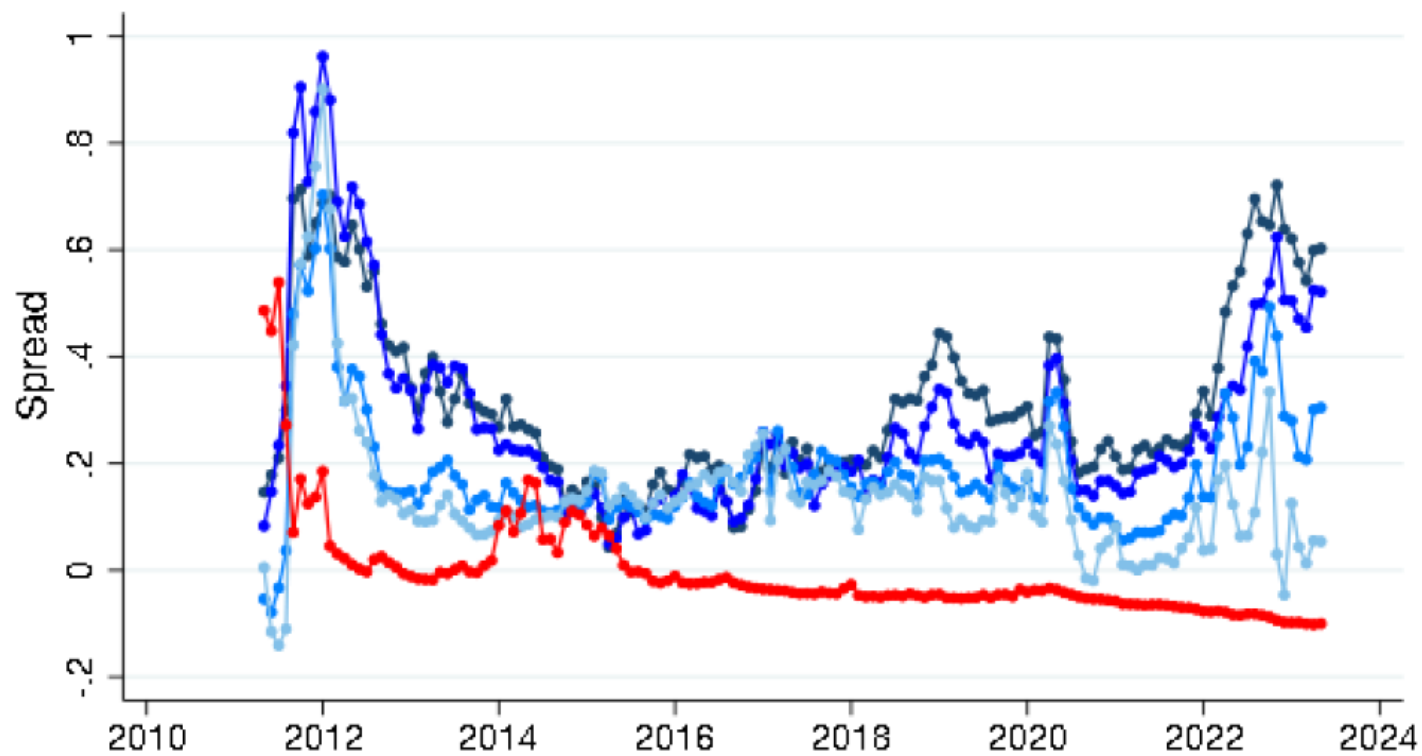- Demand for Treasuries:
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$$v_R'(R) - \varphi = v_B'(B^p)$$

$$\Rightarrow r - IOR = r^L - r^T$$

- Euro area (using Bunds data): $r^L - r^T > r - IOR$

$$R^* < 1.7T < 4T = R$$

- *Prescription*: lower reserves ($\uparrow r$), through sales of government bonds ($\uparrow r^T$), up to the point where $r - IOR = r^L - r^T$

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- *Prescription*: lower reserves ($\uparrow r$), through sales of government bonds ($\uparrow r^T$), up to the point where $r - IOR = r^L - r^T$
- Why is ECB reserve policy so far from optimal?

    $\Rightarrow$ Legacy of the binding ELB episode

Some Implications for ECB Policy

- Optimal vs actual reserve policy: A Paradox?
- Corridor vs floor system
- Optimal portfolio management
- How to implement QT
- Endogeneity of the Supply of Treasuries (B)

Optimal vs Actual Reserve Policy: A Paradox?

- Up to 2008
    - reserves adjusted through purchases of inconvenient assets (MRO)
    - optimal policy: $r = IOR$
    - actual policy: $r > IOR$
        $\Rightarrow$ suboptimally low reserves

- 2008-2014
    - reserves adjusted through purchases of inconvenient assets (MRO)
    - optimal policy $r = IOR$
    - actual policy $r \lesssim IOR$

- Post-2015
    - reserves adjusted through purchases of convenient assets (government debt)
    - optimal policy: $r - IOR = r^L - r^T > 0$
    - actual policy: $r \lesssim IOR$
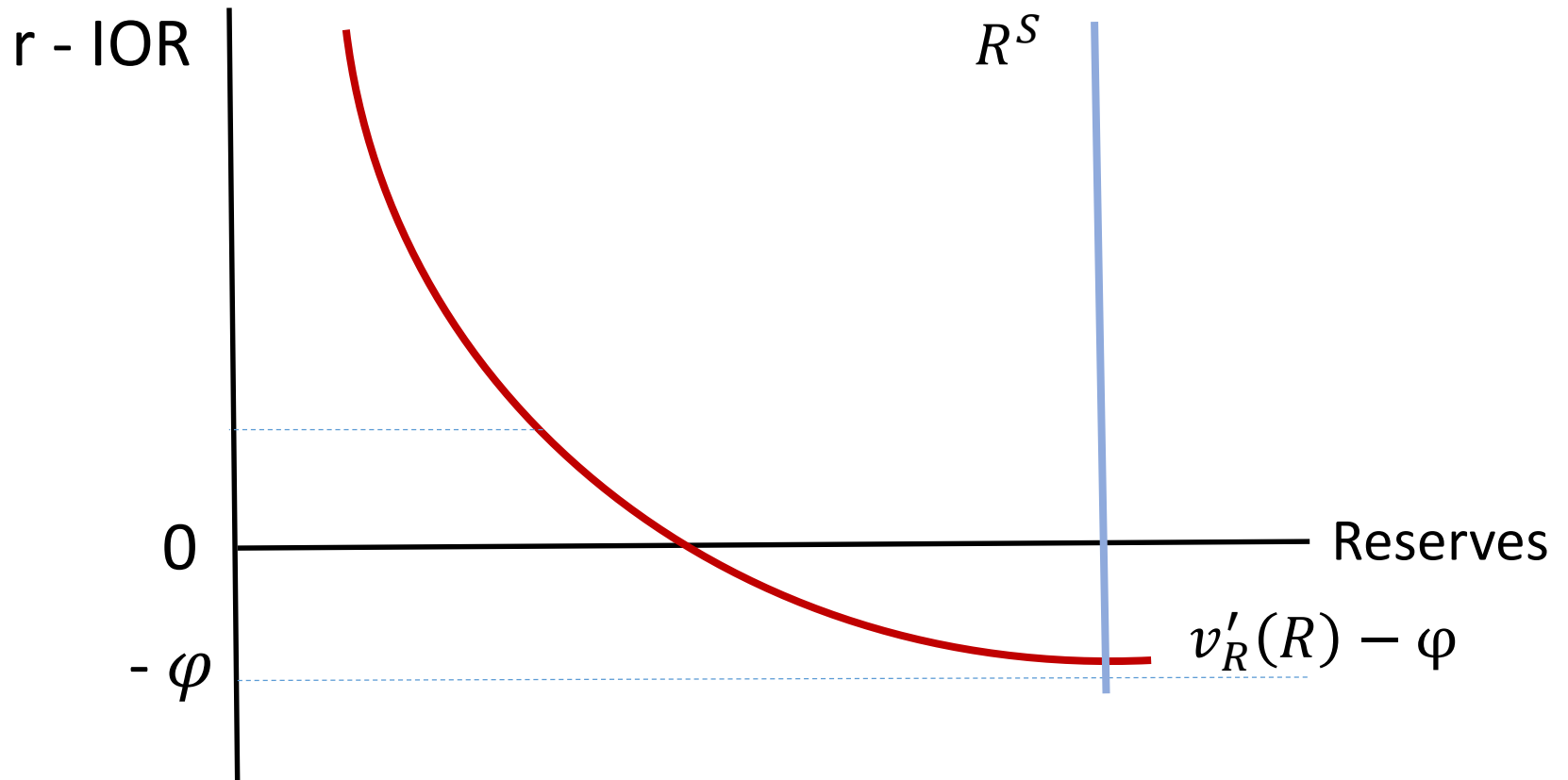 $\Rightarrow$ oversupply of reserves

Figure 5. The ECB's Policy Interest Rates and the Overnight Money Market Rate, 1999–2018[a]

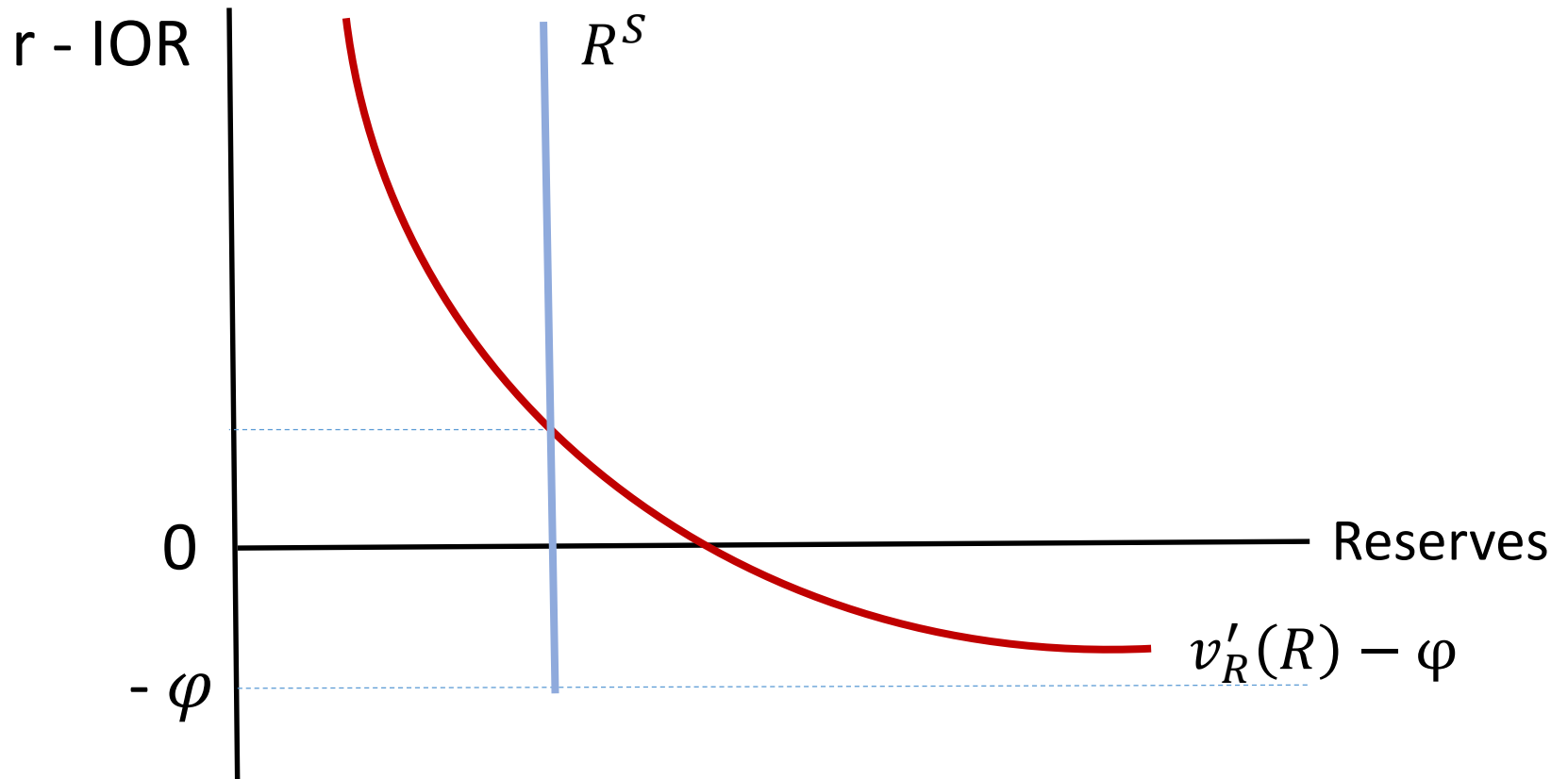Percent per year

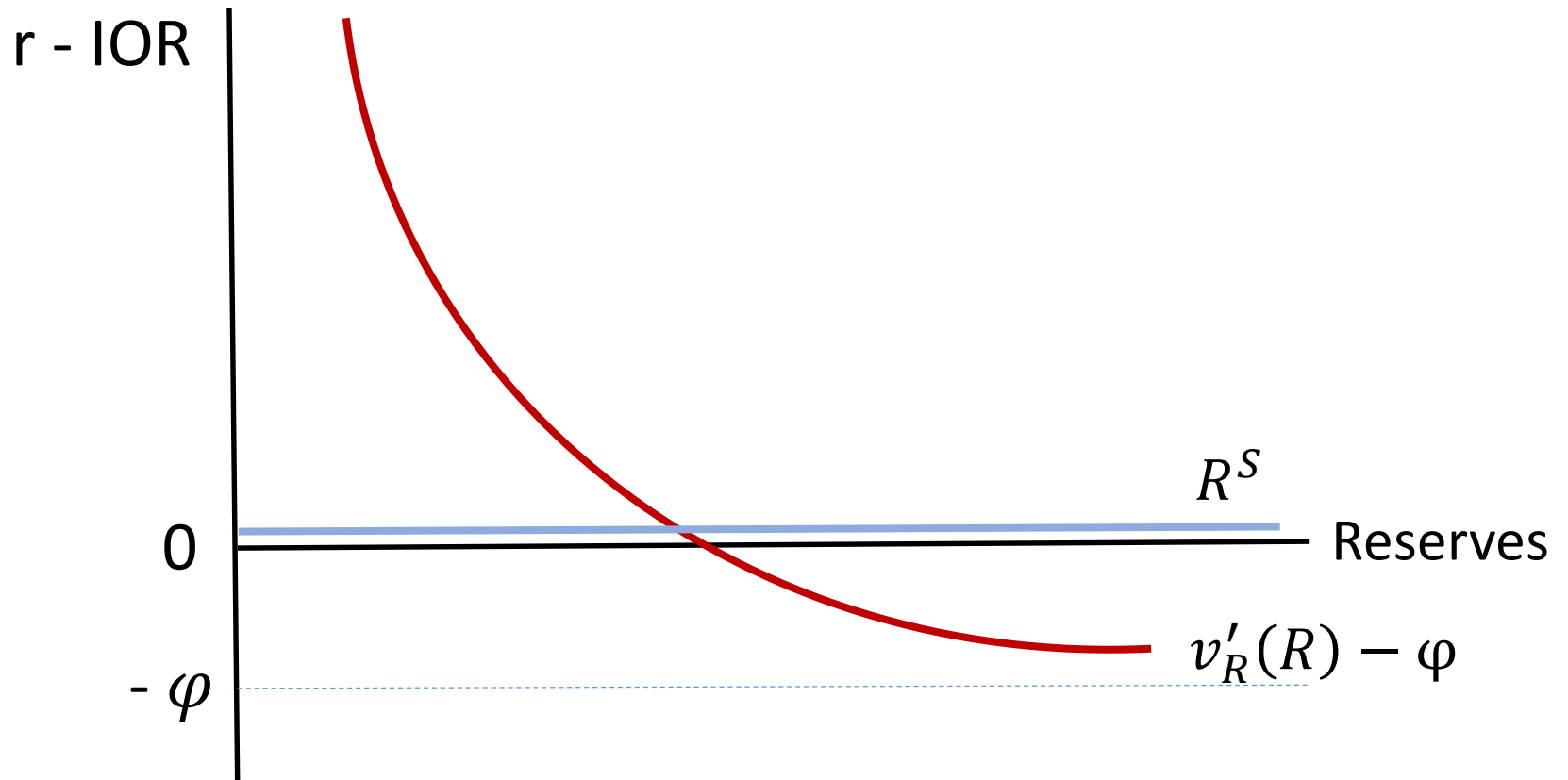Hartmann and Smets (2018)
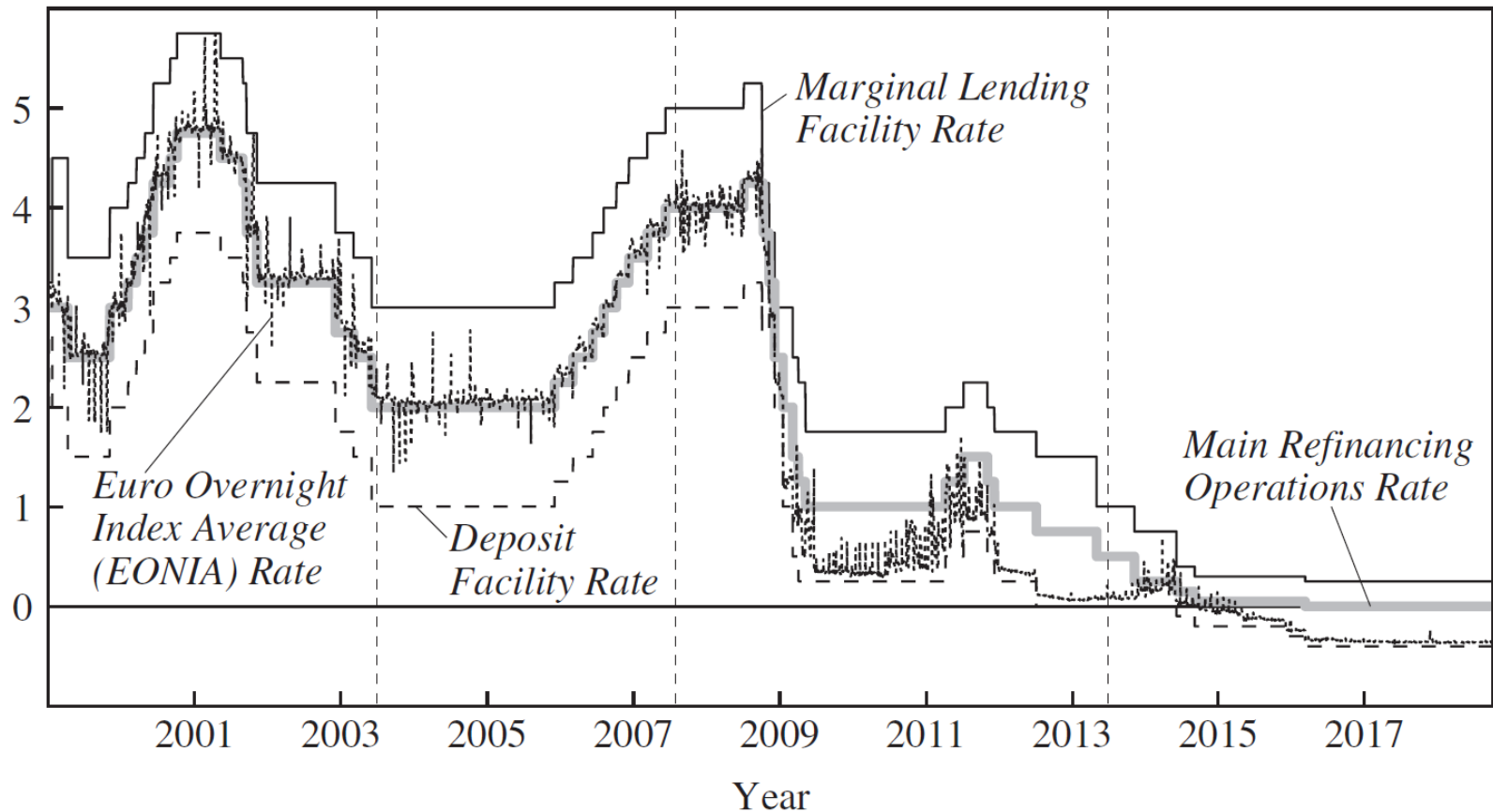
Corridor or Floor System?

Reserve Supply: The Floor System (IOR=r+ φ)

Reserve Supply: The Corridor System

Reserve Supply: Demand-driven Floor System

Optimal Portfolio Management

- Distinctive feature of ECB bond holdings: risk heterogeneity
- Given the total value of portfolio, what should be the allocation across different jurisdictions?
- This paper's implication: equalize convenience yields across issuers and maturities ⇒ for any given maturity, equalize *risk-adjusted* yields (i.e. sell bonds with the lowest risk-adjusted yields)
- Different from "closing spreads"!
- Caveat: Political/legal constraints

How to Implement QT

- Starting point: portfolio with convenient yield differentials, and
  $r - IOR < r^L - r^T$
- Keep lowering reserves by selling bonds with the highest convenience yields, up to the point where $r - IOR = r^L - r^T$
- Implication: For any given maturity, sell bonds with lowest risk-adjusted yields
- Caveat: Political/legal constraints

On the Endogeneity of the Supply of Treasuries

- This paper's framework: total supply of Treasuries (B) taken as given by the central bank
- But the fiscal authority may also internalize the impact of its supply of safe assets on investors' convenience (and on the interest rate it pays)
- If Treasuries are also held by foreigners as a convenient asset, they may be undersupplied, keeping its yield low (Choi-Kirpalani-Perez 2022)
- More generally: need to account for the interaction between fiscal authority and central bank

Concluding Remarks

- Very nice paper
- Highly policy relevant
- Timely
- Focus on one factor: optimal supply of convenient assets
- It may be overshadowed by other considerations...but it should probably not be ignored