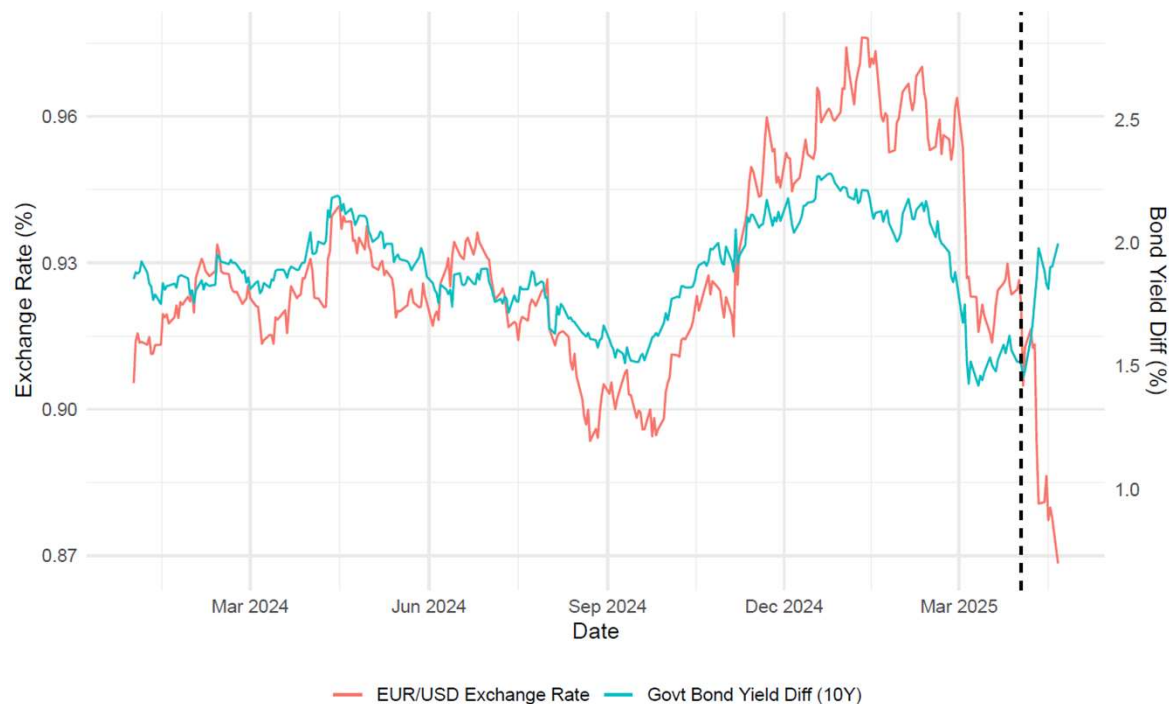# Dollar depreciation:

$$x_t = E_t[x_{t+10}] + \sum_{j=1} E_t[r_{t+j}^{US} - r_{t+j}^{EUR}]$$
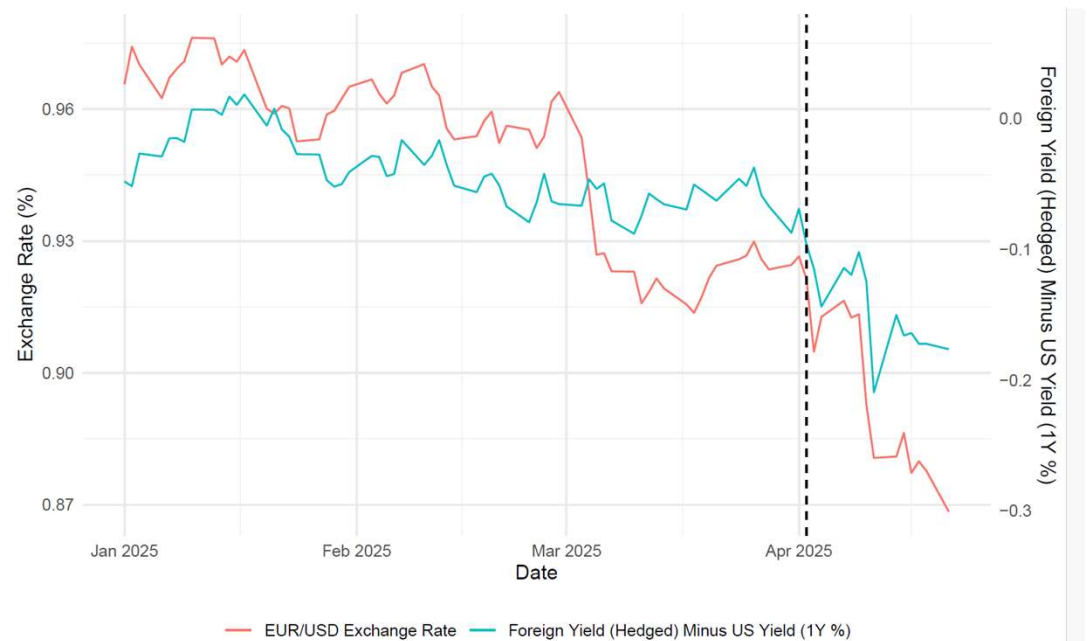
- April 1 to April 21:

  - Yield differential rose by 48 bps
    (similar for real yield diff – slide 6)

  - 10 X 48 = 4.8%

  - Dollar depreciated by 6.5%
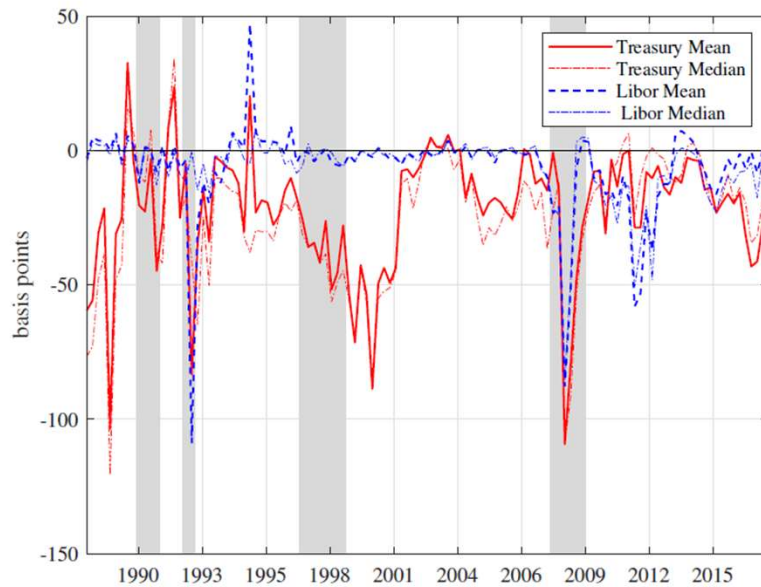
Foreign demand for safe dollars

- Dollar safe assets command a convenience yield

- Driven in large part by foreign demand for safe dollars

- Govt bond CIP basis is a barometer of foreign demand
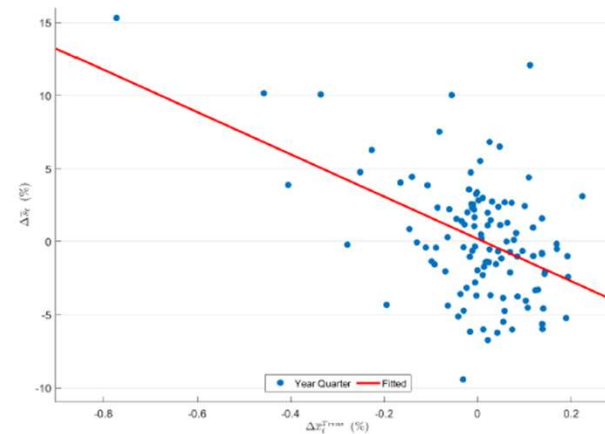
- Bund+FX hedge – Treasury

- Is negative now!

1988-2017 G10 pattern

Figure 1. U.S. LIBOR and Treasury Bases

Figure A.4. Scatter plot of changes in the log exchange rate, averaged over a quarter, against shocks to the quarterly average basis. Data is from 1988Q1 to 2017Q2. In red we plot the fitted regression line. The R^2 is 22.8% and the slope coefficient is -14.6 with a t-statistic of 5.8.

$$x_t = E_t[x_{t+10}] + \sum_{j=1} E_t[r^{US}_{t+j} - r^{EUR}_{t+j}] + \sum_{j=1} E_t[cy^{US}_{t+j}]$$

- $CY \approx CIP\ Basis\ X\ 10$

- (from Jiang, Krishnamurthy, Lustig, 2021)

- Basis ↓ 10.7 bps ➔ 107 bps decline in CY

- Is CY decline permanent or transitory …
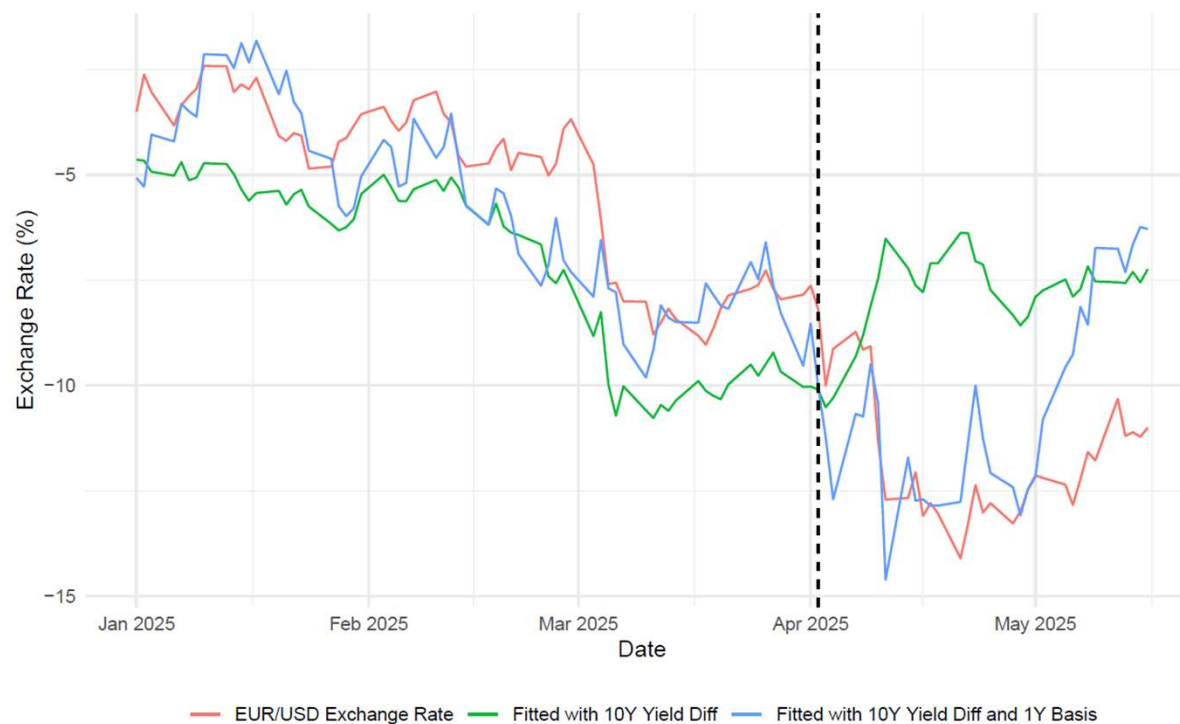
What if foreign reserve demand goes to zero?

- US exports liquidity services on safe bonds: $Q^{foreign} \times CY$
  - $\approx 0.5\, GDP \times 2\%$ historically
- In steady state:
$$Imports(x) - Exports\,(x) = Q^{foreign} \times CY$$
- If $Q^{foreign} \times CY$ goes to zero, dollar exchange rate (x) depreciates and US interest rates rise
  - Elasticity of trade balance to exchange rate
  - Elasticity of US interest rates to sale of Treasurys

See "Dollar Upheaval" note by Jiang, Krishnamurthy, Lustig, Richmond, Xu

Exchange rate and real yield differentals