

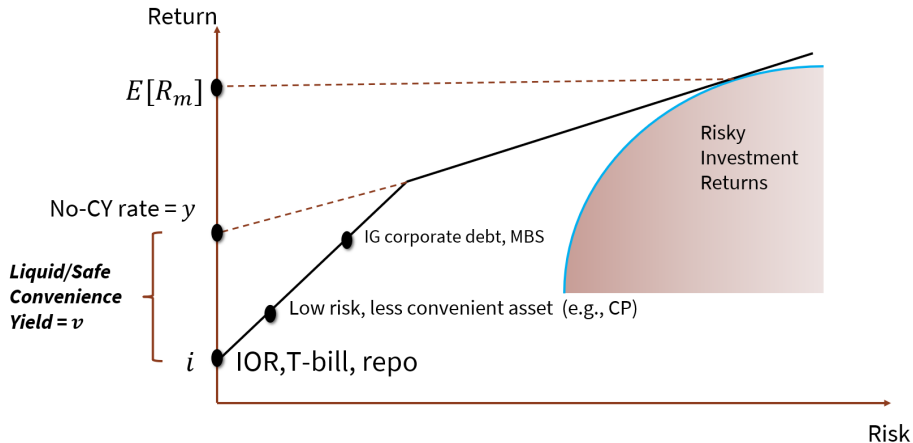
Disappearing Dollar Convenience?

Monetary Policy, Financial Markets, and Challenges Ahead: Celebrating the Centennial of the Central Bank of Chile

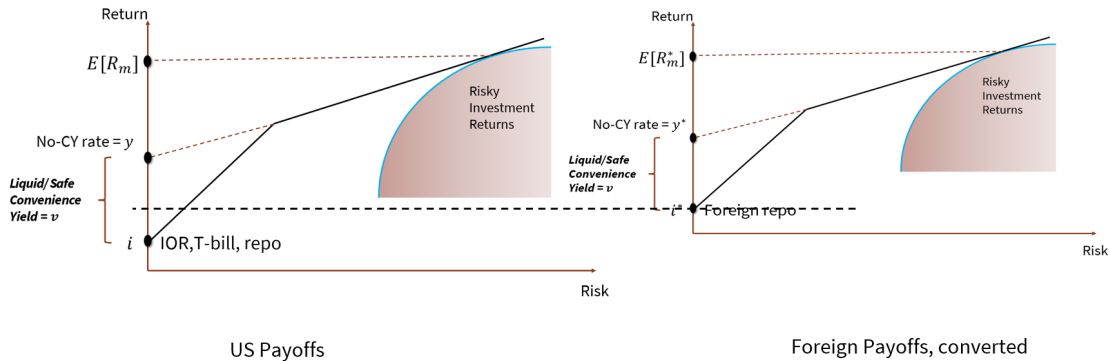
November 2025

Miguel Chumbo (Stanford GSB) and **Arvind Krishnamurthy** (Stanford GSB and NBER)

What is a “Convenience Yield”?



Convenience Yields, Across Currencies



Consider a one-period bond that provides liquidity/convenience services of v_t . Then,

$$i_t^{(1)} = y_t^{(1)} - v_t \quad (1)$$

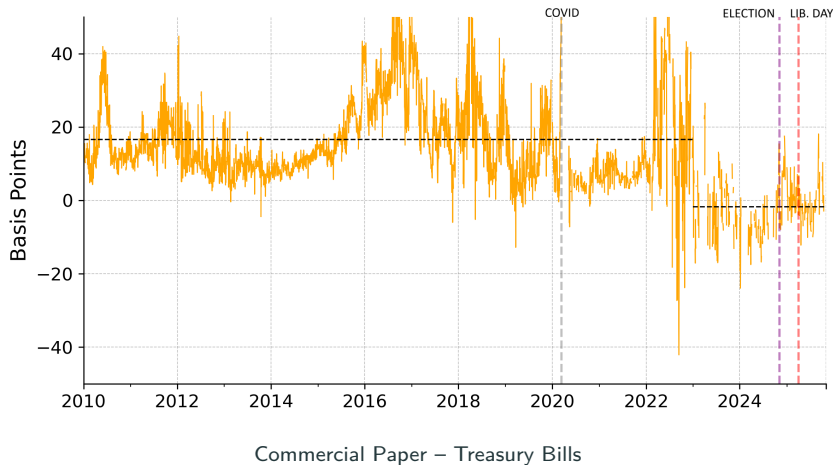
offers $\beta_t < 1$ fraction of convenience (i.e., $\beta_t v_t$) and has yield,

$$y_t^{(1,\beta)} = y_t^{(1)} - \beta_t v_t, \quad (2)$$

so that,

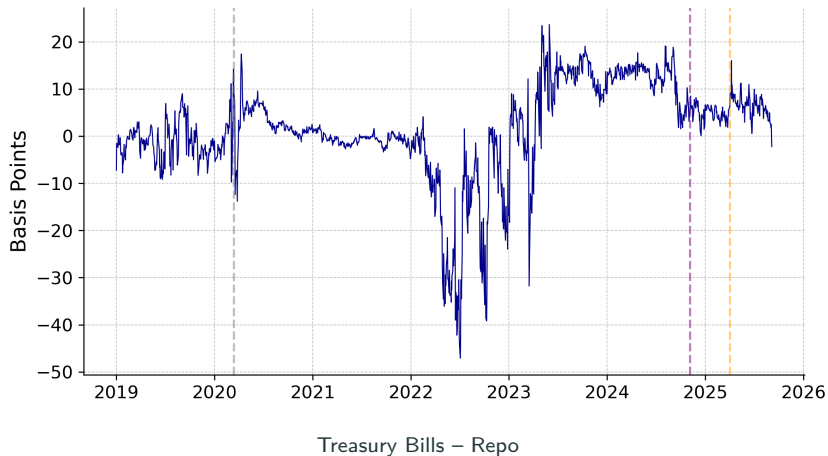
$$S_t^{(1,\beta)} = y_t^{(1,\beta)} - i_t^{(1)} = (1 - \beta_t)v_t. \quad (3)$$

Short-term, 90 day, $S_t^{(1,CP-Tbills)} = (\beta_t^{Tbills} - \beta_t^{CP})v_t$



Either v_t declined, or β^{Tbills} fell to β^{CP} by 2023

Short-term, 90 day, $S_t^{(1,CP-Tbills)} = (\beta_t^{Tbills} - \beta_t^{repo})v_t$



β^{Tbills} fell relative β^{repo} in 2023

- Long-term Treasury bond is used by banks as collateral to create short-term repo securities
- Repo carries a convenience yield v_t
- Long-term Treasury bond prices in v_t (“collateral premium”)

τ -period Treasury, including dealer balance sheet costs γ_t and $\beta_t^{Treas} < 1$ of collateral:

$$y_t^{(\tau, Treas)} = \frac{1}{\tau} \sum_{j=0}^{\tau-1} \mathbb{E}_t[\underbrace{y_{t+j}^{(1)}}_{Exp. Hypothesis} - \underbrace{\beta_{t+j}^{Treas} v_{t+j}}_{Conv. Yield} + \underbrace{\gamma_{t+j}}_{Costs}] + \underbrace{\frac{1}{\tau} \sum_{j=0}^{\tau-1} \mathbb{E}_t[\mu_{t+j}^{(\tau-j)} - y_{t+j}^{(1)}]}_{Term Premium} \quad (4)$$

τ -period Treasury:

$$y_t^{(\tau, Treas)} = \frac{1}{\tau} \sum_{j=0}^{\tau-1} \mathbb{E}_t[y_{t+j}^{(1)} - \beta_{t+j}^{Treas} v_{t+j} + \gamma_{t+j}] + \underbrace{\frac{1}{\tau} \sum_{j=0}^{\tau-1} \mathbb{E}_t[\mu_{t+j}^{(\tau-j)} - y_{t+j}^{(1)}]}_{\text{Term Premium}} \quad (5)$$

τ -period non-convenience bond:

- BBB corporate bonds are not collateral
- BBB bond + credit default swap to strip out default risk component of pricing

$$y_t^{(\tau)} = \underbrace{\frac{1}{\tau} \sum_{j=0}^{\tau-1} E_t[y_{t+j}^{(1)}]}_{\text{Expectations Hypothesis}} + \underbrace{\frac{1}{\tau} \sum_{j=0}^{\tau-1} E_t[\mu_{t+j}^{(\tau-j)} - y_{t+j}^{(1)}]}_{\text{Term Premium}} \quad (6)$$

$$S_t^{\tau, CorpTreas} = \frac{1}{\tau} \sum_{j=0}^{\tau-1} E_t[\beta_{t+j}^{Treas} v_{t+j} - \gamma_{t+j}] \quad (7)$$

Long-term Spread, Repo Swap

τ -period non-convenience bond:

$$y_t^{(\tau)} = \underbrace{\frac{1}{\tau} \sum_{j=0}^{\tau-1} E_t[y_{t+j}^{(1)}]}_{\text{Expectations Hypothesis}} + \underbrace{\frac{1}{\tau} \sum_{j=0}^{\tau-1} E_t[\mu_{t+j}^{(\tau-j)} - y_{t+j}^{(1)}]}_{\text{Term Premium}} \quad (8)$$

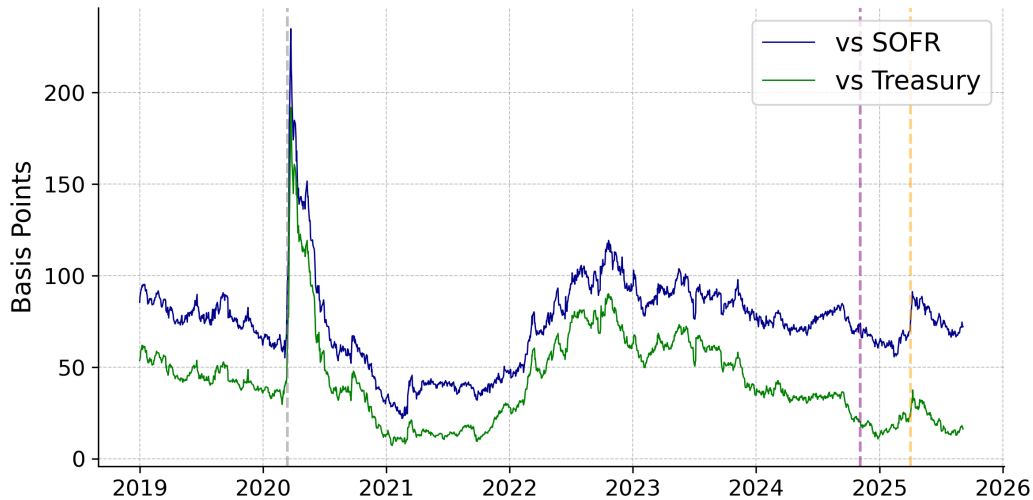
Fixed rate on τ -period dollar repo (SOFR) interest rate swap:

$$i_t^{(\tau)} = \frac{1}{\tau} \sum_{j=0}^{\tau-1} E_t[i_{t+j}^{(1)}] + \underbrace{\frac{1}{\tau} \sum_{j=0}^{\tau-1} E_t[\mu_{t+j}^{(\tau-j)} - y_{t+j}^{(1)}]}_{\text{Term Premium}}. \quad (9)$$

Note: swaps have no balance sheet costs and setting $\beta = 1$:

$$S_t^{\tau, \text{CorpSOFR}} = \frac{1}{\tau} \sum_{j=0}^{\tau-1} E_t[v_{t+j}]. \quad (10)$$

Long-term Spreads

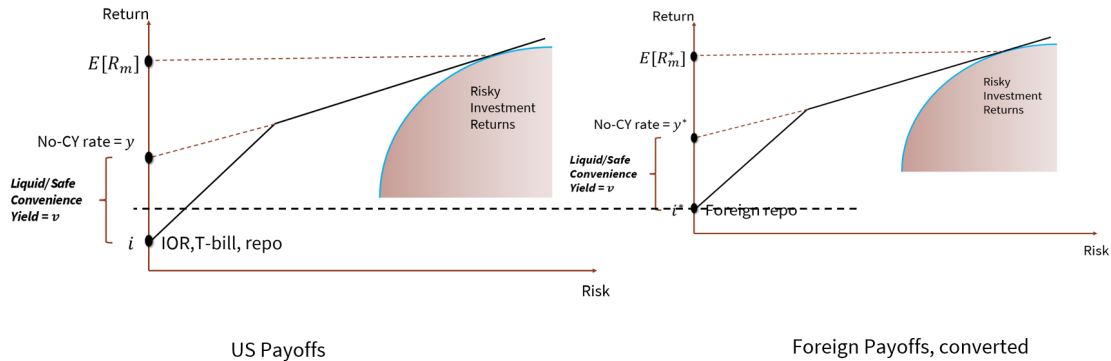


1. The β (convenience fraction) of Treasuries, both long and short, has fallen
2. Short-term spread moves tell us clearly that dollar repo is the new dollar safe asset
3. Long-term SOFR spread moves tells us that the convenience attached to repo, ($\sim 90bps$) is stable over last 5 years and expected to persist at current levels

1. The β (convenience fraction) of Treasurys, both long and short, has fallen
2. Short-term spread moves tell us clearly that dollar repo is the new dollar safe asset
3. Long-term SOFR spread moves tells us that the convenience attached to repo, ($\sim 90bps$) is stable over last 5 years and expected to persist at current levels

Point (3) is somewhat surprising given the deficits and the large increase in the stock of Treasurys. It has declined since 2015.

International Liquidity

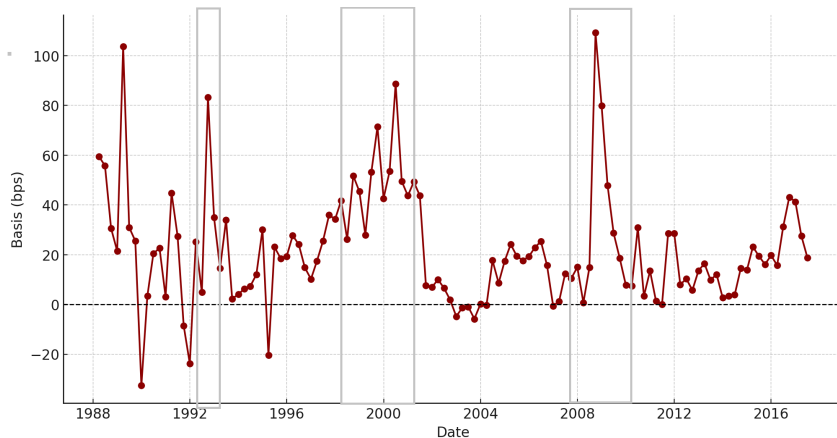


- $i_t^{(1)}$ is dollar safe rate (repo), $\beta^{1,\$} = 1$
- $i_t^{(1)*}$ is foreign safe rate (Euro STR), $\beta^{1,*} = 1$
- Forward premium: $\rho_t^{(1)} = \log F_t^{(1)} - \log X_t^{(1)}$

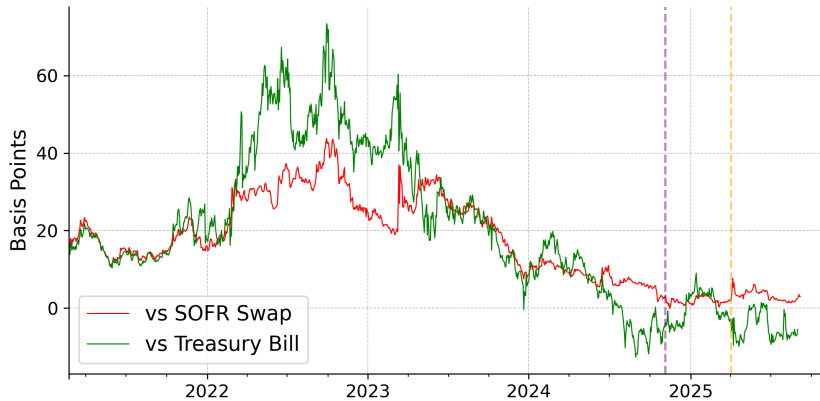
Swap foreign into dollars and construct spread relative to dollars:

$$S_t^{x\text{ccy},\text{safe}} = \left(i_t^{(1)*} + \rho_t^{(1)} \right) - i_t^{(1)}$$

1 year government bond spreads, $S_t^{xccc, G10 - Treas}$

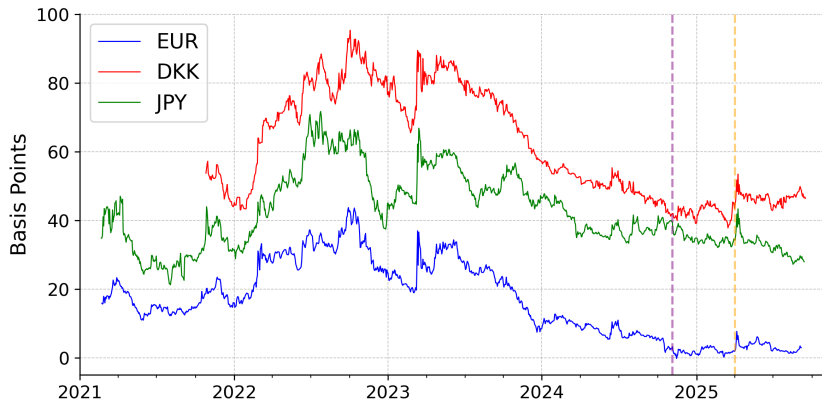


G10 (average) vs Treasury, from Jiang, Krishnamurthy, Lustig (2021)



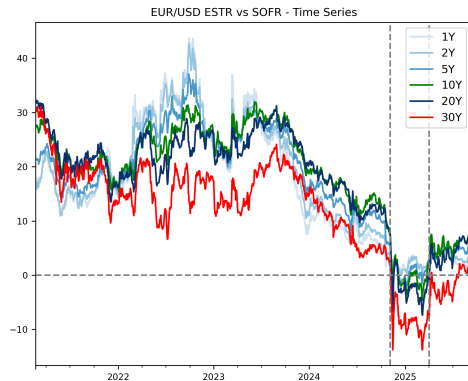
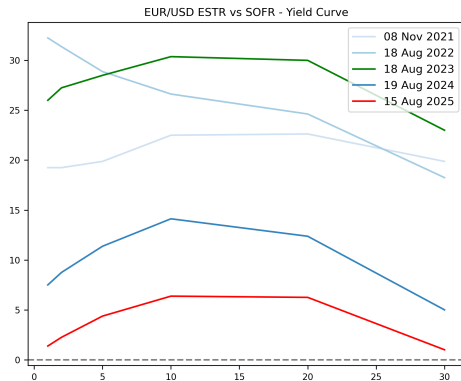
Euro STR (safe interbank rate) versus Treasury, and repo

1 year Foreign to US SOFR, $S_t^{x\text{ccy}, \text{Foreign} - \text{USSOFR}}$



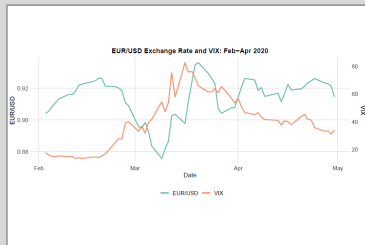
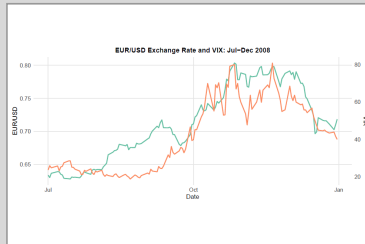
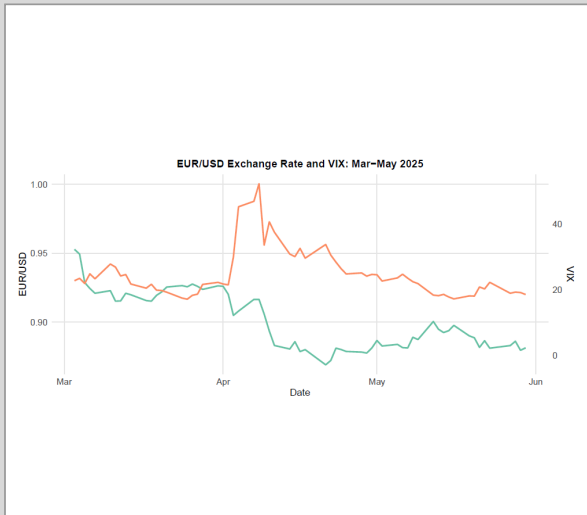
Foreign safe versus US repo

Term structure, $S_t^{xccy, Foreign - USSOFR}$



Euro safe versus US repo, by maturity ... [expectations hypothesis logic]

Flight to dollar? Liberation day



- 1 U.S. liquidity demand have reorganized around repo as the dollar safe asset, and valuations at “normal” levels
- 2 The richness of dollar short-term safe assets relative to Euro safe assets has fallen over the last 5 years to near zero over the last 6 months.
- 3 Also fallen relative to other currency safe assets, but less so
- 4 Pricing from the term-structure of basis swaps (downward slope) indicates that the markets had anticipated some of this occurrence, although the realized fall has been larger than the term-structure-based expectation.
- 5 Dollar depreciated after April 2 – not appreciated; flight from dollar and Treasurys

- 1 U.S. liquidity demand have reorganized around repo as the dollar safe asset, and valuations at “normal” levels
- 2 The richness of dollar short-term safe assets relative to Euro safe assets has fallen over the last 5 years to near zero over the last 6 months.
- 3 Also fallen relative to other currency safe assets, but less so
- 4 Pricing from the term-structure of basis swaps (downward slope) indicates that the markets had anticipated some of this occurrence, although the realized fall has been larger than the term-structure-based expectation.
- 5 Dollar depreciated after April 2 – not appreciated; flight from dollar and Treasurys

Asset price metrics indicate erosion of international role of dollar safe assets. Quantities move slower.