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Overview of the paper and my remarks

- This paper – **Global financial cycle** is in part a **global dollar cycle**, due to the **safe asset demand channel**.

- My remarks – Balance sheet capacity of financial intermediaries also drives the global dollar cycle post-GFC – **financial intermediation channel**.

**Figure 1**: Supply and demand for global dollar funding

- **Outline**
  1. Treasury and Libor CIP deviations
  2. CIP deviations and financial intermediary capacity
  3. Challenges for monetary policy
1) Treasury and Libor CIP deviations

- Covered interest rate parity (CIP): The dollar interest rate in the cash market equals the implied dollar interest rate from the FX swap market.

- Libor basis (specialness of USD funding):

  \[ x_t^{Libor} = y_t^{Libor,¥} - (y_t^{Libor,¥} - \rho_t^{¥ → ¥}) \]

  where \( \rho_t^{¥ → ¥} \equiv f_t^{¥/¥} - s_t^{¥/¥} \) denotes the FX forward premium.

- Treasury basis (specialness of U.S. Treasurys):

  \[ x_t^{Treas} = y_t^{Treas,¥} - (y_t^{Treas,¥} - \rho_t^{¥ → ¥}) \]

- Decomposition of the Treasury basis:

  \[ x_t^{Treas} = x_t^{Libor} + ss_t^{¥ → ¥} \]

  where \( ss_t^{¥ → ¥} \equiv (y_t^{Treas,¥} - r_t^{Libor,¥}) - (y_t^{Treas,¥} - r_t^{Libor,¥}) \), or Treasury-swap spread differential between the US and Japan.
1) Libor basis and the dollar exchange rate

- Libor CIP deviations appear post-GFC.

![Graph showing 3M Libor basis with basis points on the y-axis and years from 2000 to 2018 on the x-axis. The graph includes multiple currencies like AUD, CAD, CHF, DKK, EUR, GBP, JPY, NOK, NZD, and SEK, with basis points deviations from 2000 to 2018. Source: Du, Tepper and Verdelhan (2018).]

- Stronger dollar, wider Libor CIP deviations post-GFC.

![Graph showing Libor basis and the dollar exchange rate with basis points on the y-axis and years from 2000 to 2018 on the x-axis. The graph includes a line representing the FRB Broad dollar index (lhs) and another line representing the G10 average 5Y Libor basis (rhs). Source: Avdjiev, Du, Koch and Shin (2019).]
1) Treasury and Libor basis comparison

- **Pre-GFC**: Treasury basis is non-zero, whereas Libor basis is zero.
- **Post-GFC**: Both bases are non-zero and correlated with the dollar.

Source: Data based on Du, Im and Schreger (2018)
2) CIP deviations and intermediary capacity

- CIP deviations reflect not only global dollar asset demand, but also financial intermediary capacity.
  - Balance sheet constraints of financial intermediaries limit the size and exposure that can be taken to narrow CIP deviations.
  - CIP deviations as an “intermediation fee” earned by financial intermediaries to intermediate global dollar funding.
- CIP deviations are highly correlated with the first principal component of other arbitrage bases, including
  - (1) bond-CDS basis, (2) CDX-CDS basis, (3) 30Y Treasury-swap spread, (4) Libor tenor basis, and (5) US Treasury futures implied repo rate over OIS.

![Graph showing correlation between CIP deviations and first principal component of other arbitrage bases](source: Data based on Du, Hebert and Huber (2019))
2) Constraint on the size of bank balance sheets

- Key regulatory ratios (e.g. the Basel III leverage ratio) are based on the quarter-end snapshot of bank balance sheets in many non-U.S. jurisdictions.
- Non-U.S. banks deleverage on quarter-ends, resulting in quarter-end spikes in CIP deviations.

Quarter-end dynamics of CIP deviations

Source: Du, Tepper and Verdelhan (2018)

Unsecured Funding Outstanding

Triparty Repo Outstanding

Source: Anderson, Du and Schlusche (2019) based on FR2420, DTCC CP, FRBNY Triparty repo
2) Constraint on the composition of bank balance sheets

- For example, limited reallocations of reserve balances across central banks on quarter-ends among U.S. GSIBs.

3) Challenges for monetary policy

- External transmission of monetary policy is more complex post-GFC.
  - Fed sets the Fed funds rate, which then passes through into other dollar interest rates in the cash market.
  - However, offshore dollar funding conditions are generally tighter due to persistent CIP deviations.
  - How much tighter depends on the interaction between financial intermediary capacity and dollar asset demand.

![Direct and implied dollar funding costs](chart)

Source: Bloomberg and author’s calculations
Summary and additional implications

- Global dollar cycle: Stronger dollar and wider CIP deviations, driven by two complimentary channels.
  - **Safe asset demand channel**: fluctuations in the “convenience yield” of dollar safe assets.
  - **Financial intermediation channel**: fluctuations in the “intermediation fee” required by financial intermediaries to intermediate global dollar funding.

- The dollar cycle also has broad macro implications:
  - Cross-border bank and portfolio flows (e.g. Bruno and Shin (2014), Avdjiev, Du, Koch and Shin (2019), Lilley, Maggiori, Neiman and Schreger (2019))
  - Trade and firm investments (e.g. Bruno, Kim and Shin (2018), Avdjiev, Bruno, Koch and Shin (2019))
  - Corporate issuance strategy (e.g. Liao (2019))
  - U.S. credit conditions (e.g. Niepmann and Schmidt-Eisenlohr (2018))
  - Dominant currency (e.g. Gopinath and Stein (2018))

- Arvind and Hanno have written an excellent paper on this very important topic. It will surely have significant impacts.