Research on CNH FX Swap and Cross-currency Swaps

Structural Difference

- CCS resembles FX swap but with interest payments and uses spot rate for end-of-term principal amount
- FX swap ties to interest rate differentials (indirect link with money market rates)
  CCS usually is quoted in reference rates directly (SOFR/TONA/HIBOR/7d Repo/LPR/SHIBOR…)
- CCS Tenors are more than 1 year (mid-/long-term rates) and swaps are under one year

- XVA (X-value adjustments)
  - CCS: Credit-VA for unsecured creditor (positive EV) // DVA
    $F = V - \mathrm{CVA} + \mathrm{DVA}$
  - FX Swap: Funding-VA (FVA) // Margin-VA (MVA)
  - GSIBs: Capital-VA (KVA)

Remarkable Event

- Argentina sold CNH from PBoC CCS for USD for liquidity; raises CNH depreciation concerns (2015)
- No Central Bank Liquidity Swap between PBoC and Fed due to political reasons

Difference 1 – Purpose: Trade Facilitation (Central Bank CCS); Political Bargaining Power

- CBLS allows central banks to satisfy foreign currency demand from financial institutions without using foreign-exchange reserve (reduce market panics, credit risks)
- PBoC signed CBLS with 40+ countries, promoting the RMB internationalization and bilateral trades
  (Less likely to see shortage of CNH so less funding risks, more likely to trade.)
- Research showed CNH-CBLS boosts bilateral trade growth in EM markets[1]

Difference 2 – Demands

- CCS: Long-term funding and risk management
  Panda bond issuers receive CCS to convert CNY into FCY (foreign currency)
  Other investors obtain synthetic CNY funding by borrowing FCY debt and paying CCS.

[1] 《人民币货币互换协议，谁最终获益？》(张策、何青、唐博文，2020 年 12 月)