Unintended Consequences of Holding Dollar Assets*

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* The views expressed in this presentation are those of the authors, and not necessarily those of the Bank of England or its committees.
Motivation

- Government bonds are often viewed as safe and liquid financial assets

- Traditionally large buying demand in stress periods → “flight to safety”

- However, unprecedented global sell-off of liquid & safe financial assets during COVID-19 crisis in March 2020 → “dash for cash”

- UK government bond (gilt) yields increased by more than 50 bps between March 10-18, accompanied by heavy selling of three investor groups:
  - i) DMO; ii) mutual funds; iii) insurers and pension funds (our focus)
Motivation
This Paper

• We examine trading behaviour and return patterns in the UK gilt market during COVID, focusing on USD holdings & FX hedging positions in ICPF sector
  • Most other studies focus on US treasury market, and particularly the role of dealer banks (Duffie 2020; He et al., 2021) and mutual funds (Huang et al., 2020; Ma et al., 2021)

• Our empirical setting offers two main advantages:
  1. We use granular, investor-level data on asset & derivative holdings, bond & repo transactions, and estimated variation margin (VM) demands
  2. We offer important insights for government bond markets in all non-US countries

➢ We reveal a novel mechanism through which the reserve currency status of the US dollar can have a large impact on non-US safe-asset yields
Data Sources

1. Supervisory data on asset and derivative holdings of UK insurers subject to the Solvency II Directive, on a quarterly basis
2. Transaction-level data on government bond trades from the MiFID II database, incl. counterparty identifiers
3. Transaction-level data on repo trades from the Sterling Money Market Database (SMMD), incl. counterparty identifiers
4. Estimated VM calls based on derivatives data from the EMIR Trade Repository Data, for ICPFs / mutual funds / hedge funds (based on methodology of Bardoscia et al., 2021)
UK insurers’ Asset Holdings

- UK insurers had total capital of approx. £2tn end-2019; ~£250bn invested in dollar assets
UK Insurers’ Derivatives Holdings

- Insurers hedge **50 cents** for every dollar of USD exposure (20 cents for other currencies)
VM Demands in March 2020

- USD appreciated >10% against sterling → sector faced VM calls of >£6bn on FX hedging positions from March 10-18 → in desperate need for cash

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• In the cross-section, VM calls predominantly affected insurers with above-average hedging positions ("Top USD Hedger")
Gilt Net Trading March 10-18
Gilt Liquidation & Price Effect

- In response to VM calls, ICPFs sold nearly £4bn of gilts during dash for cash
  - Effect most pronounced for VM calls on FX derivatives
  - ICPF follow liquidity pecking order and sell relatively liquid gilts
  - Asymmetric effect: ICPF sell gilts when having to pay VM, but don’t buy when receiving VM
  - ICPF also increased their gilt repo borrowing by around £2bn during dash for cash, again driven by VM calls on FX derivatives

- ICPF selling pressure contributed to the yield spike in the gilt market
  - A one sd increase in ICPF selling $\rightarrow$ 30bps increase in gilt yields during dash for cash (nearly 60% of total yield spike in this period)
  - Effect much more pronounced for longer-term gilts (>5Y)
A Global Phenomenon?

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Concluding Remarks & Policy Implications

• Novel mechanism through which reserve currency status of the US dollar can have large impact on non-US safe-asset yields
• Non-US institutions hold large amounts of USD assets, and hedge exposures by selling USD forward through FX derivatives
• US Dollar appreciates against other currencies in crisis periods → large margin calls on FX hedging positions
• Institutions sell domestic safe assets to meet margin calls → contributing to yield spikes & exacerbating crises in domestic markets
• Important policy implications:
  1. Enhance the sector’s liquidity preparedness, e.g. via increase in required cash holdings
  2. Make margin calls more predictable, e.g. via more transparent margin calculations

✓ Such measures may prevent similar liquidity drains in future downturns