

The March 2020 episode of market turmoil and lessons for future financial stability

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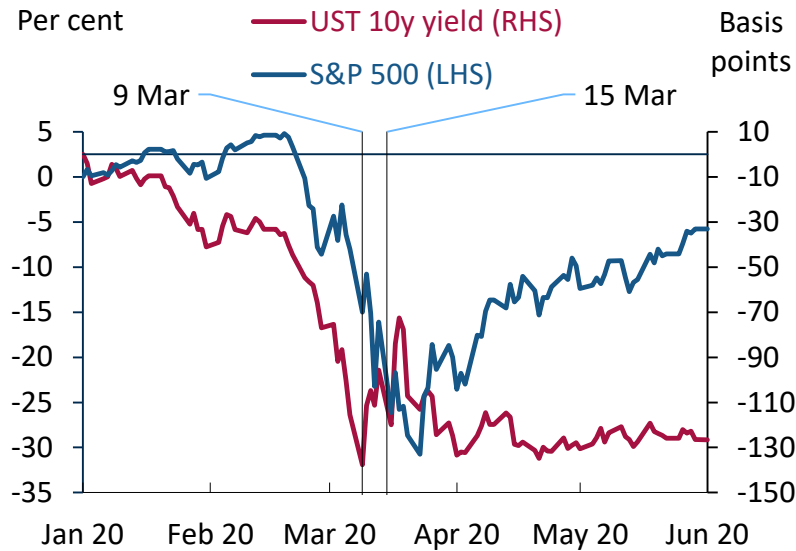
The views here are my own and not necessarily shared by the Bank of England's Financial Policy Committee. Thanks to Geoff Coppins, Lee Foulger and Bernat Gaul-Ricart for helpful conversations on these matters.

Outline

- Dislocations during March
 - Interlinkages across markets
 - Policy implications
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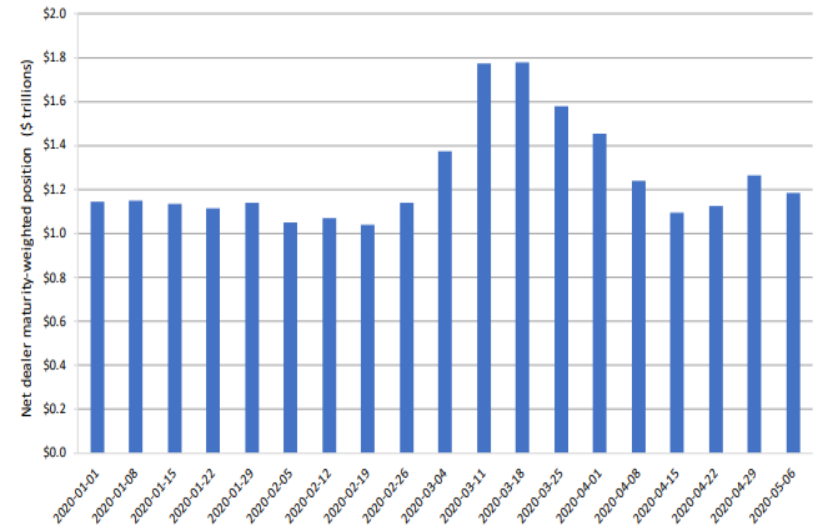
The speed and size of sales of US Treasuries challenged dealers' intermediation capacity...

US equity prices and bond yields



Sources: Bloomberg Finance L.P. and Bank calculations. Displayed as changes year to date.

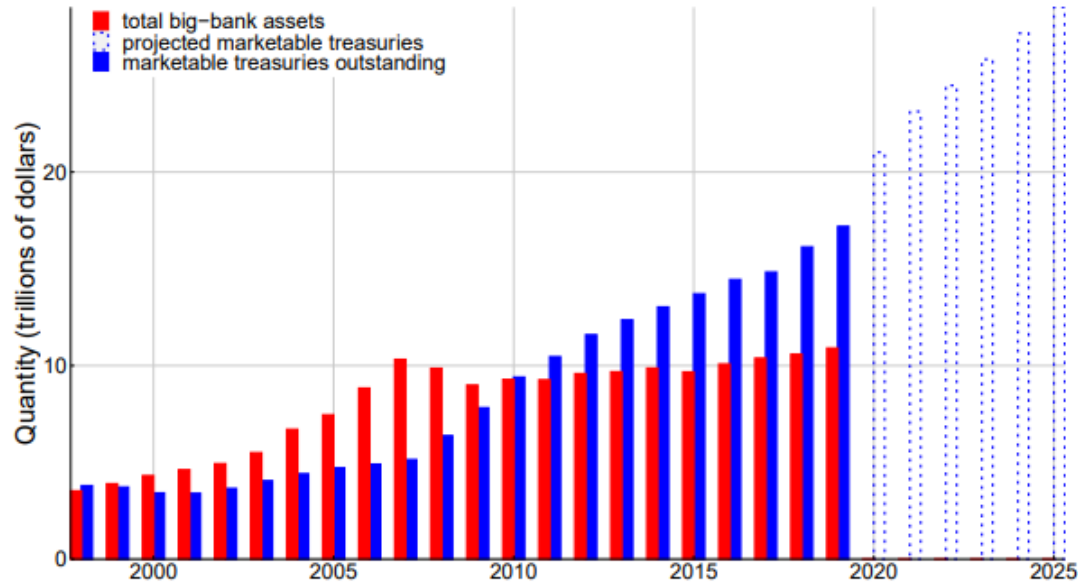
Primary dealer net inventories of US Treasuries



The aggregate net inventory (long minus short) of primary dealers, maturity weighted by multiplying the net position in dollars by the number of years to the centre of each reported maturity class, to roughly reflect the sensitivity of market values to changes in yields.

Source: Federal Reserve Bank of New York

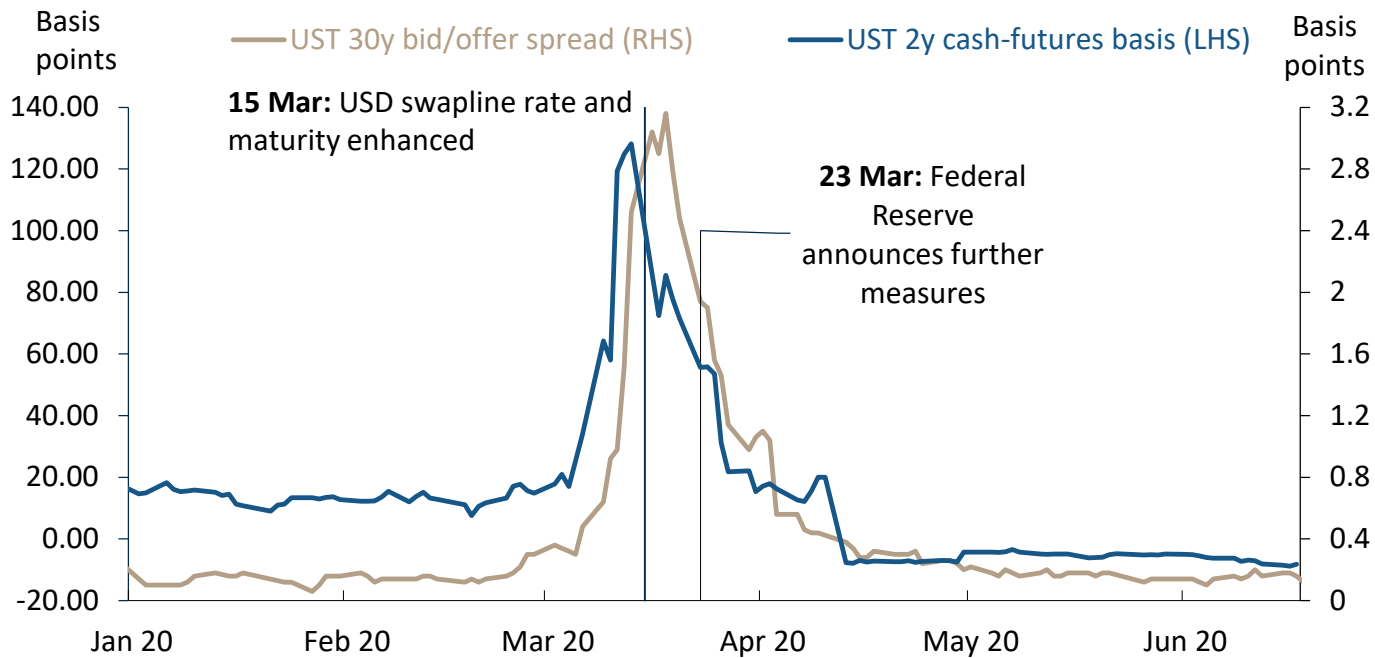
The stock of marketable Treasuries has grown significantly relative to dealer balance sheets



Note: In blue are shown year-end total outstanding amounts of marketable Treasuries, 1998-2019 (data: FRED), with projections for 2020-2025 based on federal deficit projections made on April 13, 2020 by the [Committee for a Responsible Federal Budget](#). In red are shown the total assets of the holding companies of Goldman Sachs Group, Morgan Stanley, Merrill Lynch, Lehman Brothers, Bear Stearns, Bank of America, JP Morgan Chase, Citigroup, and Wells Fargo, from 10K disclosures.

Source: Duffie (2020) *Still the World's Safe Haven? Redesigning the U.S. Treasury Market After the COVID-19 Crisis*

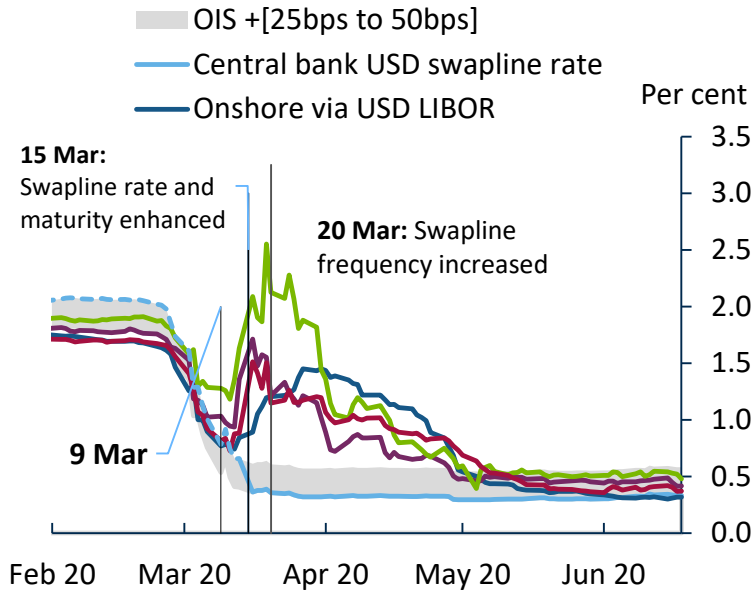
...and impaired UST market functioning, which only normalised after Fed action



Sources: Bloomberg Finance L.P., Eikon by Refinitiv, and Bank calculations
Note: The bid/offer spread is a 5-day moving average.
Latest observation: 18 Jun 2020 (27 May 2020 UST 10y cash-futures basis)

Funding costs in USD increased, and only fell back once the Fed introduced central bank swap lines

Onshore and offshore rates for 3m dollar funding

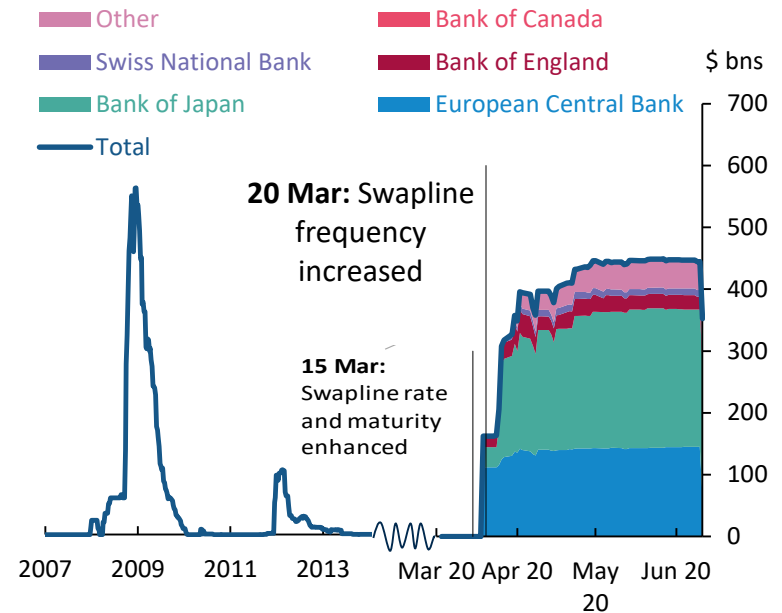


Sources: Bloomberg Finance L.P. and Bank calculations

Note: Offshore funding calculations use FX swaps referencing 3 month Libor. The dotted light blue line indicates that prior to the 15 March 2020, swap lines were only offered at a 1-week, not 3 month, maturity.

Latest observation: 18 June 2020

Dollar swaps outstanding

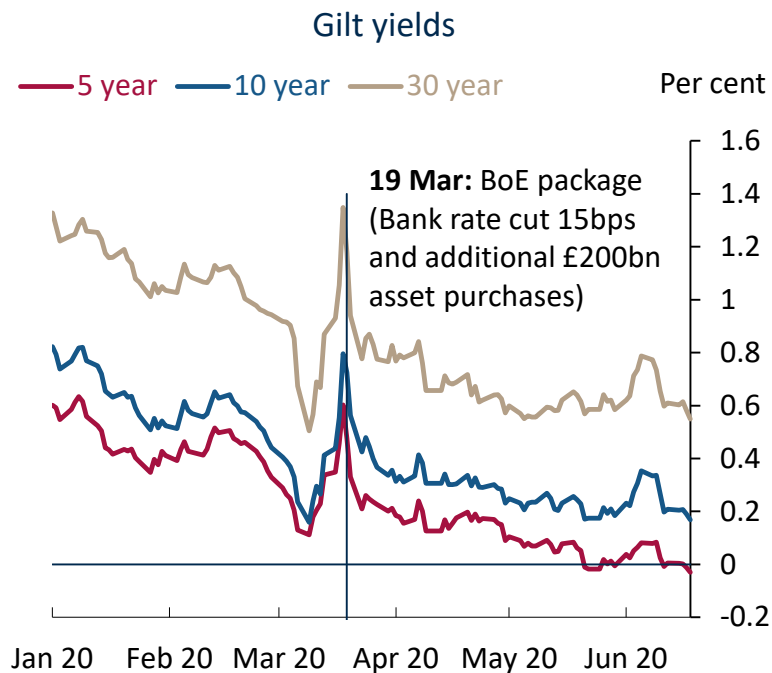


Sources: Bloomberg Finance L.P. , Federal Reserve and Bank calculations

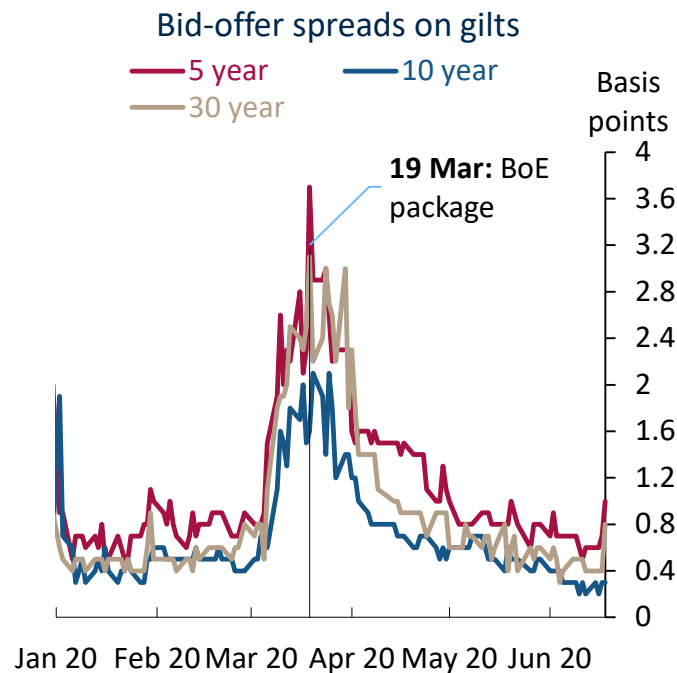
Note: Other includes the Reserve Bank of Australia, the Banco Central do Brasil, the Danmarks Nationalbank, the Bank of Korea, the Banco de Mexico, the Norges Bank, the Reserve Bank of New Zealand, the Monetary Authority of Singapore, and the Sveriges Riksbank.

Latest observation: 11 Jun 2020

A similar dynamic was seen in the UK gilt market, which also became impaired, and normalised after the BoE's QE...



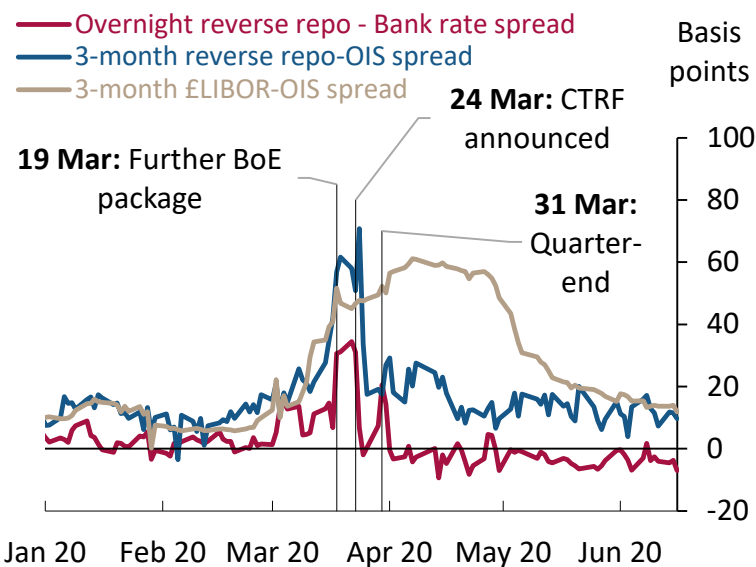
Source: Bloomberg Finance L.P., TradeWeb and Bank calculations
Latest observation: 18 June 2020



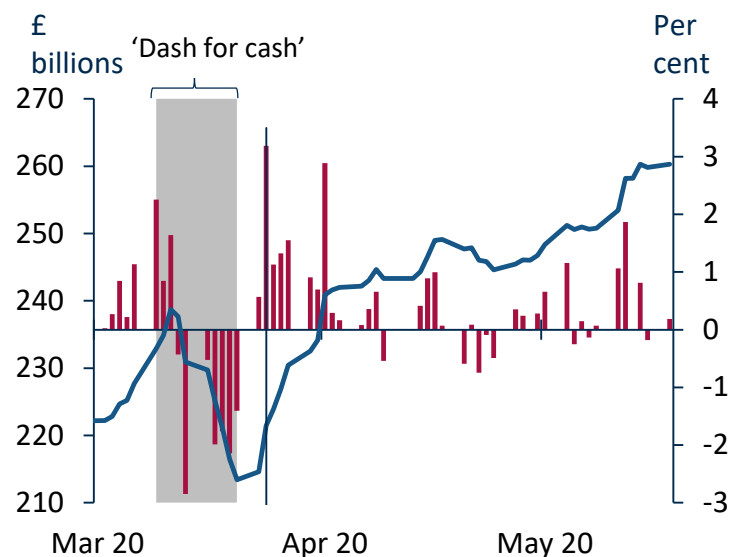
Source: Eikon by Refinitiv
Data up to: 18 June 2020

...and in sterling money markets, which became stressed and only stabilised when the BoE launched QE and liquidity support

Sterling money market spreads



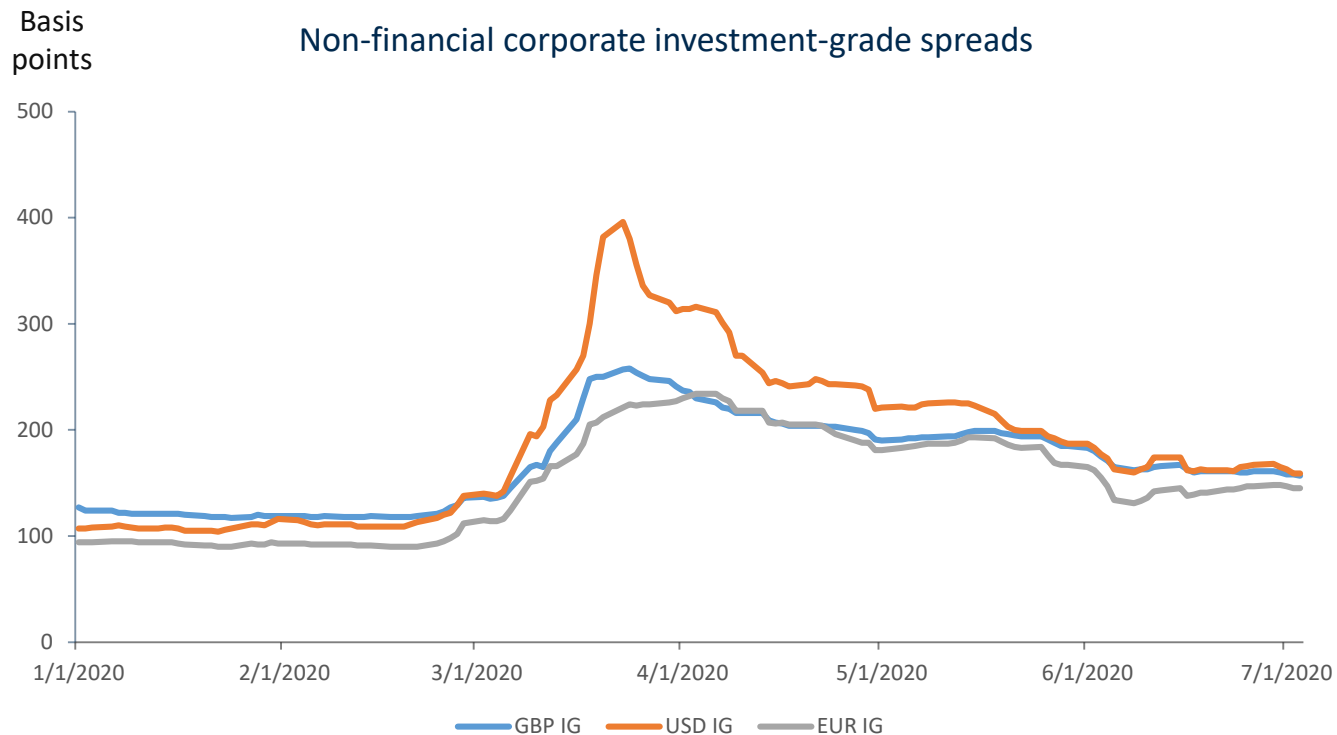
MMF outflows and assets



Source: Bank of England Sterling Money Market data collection and Bank calculations.
 Notes: The overnight reverse repo rate is for cleared DBV (Delivery by Value) transactions. The 3-month reverse repo rate uses only transactions estimated to be non-nettable (under leverage ratio rules). Both rates are volume-weighted and are stated from the perspective of dealers.
 Last observation: 18 June 2020

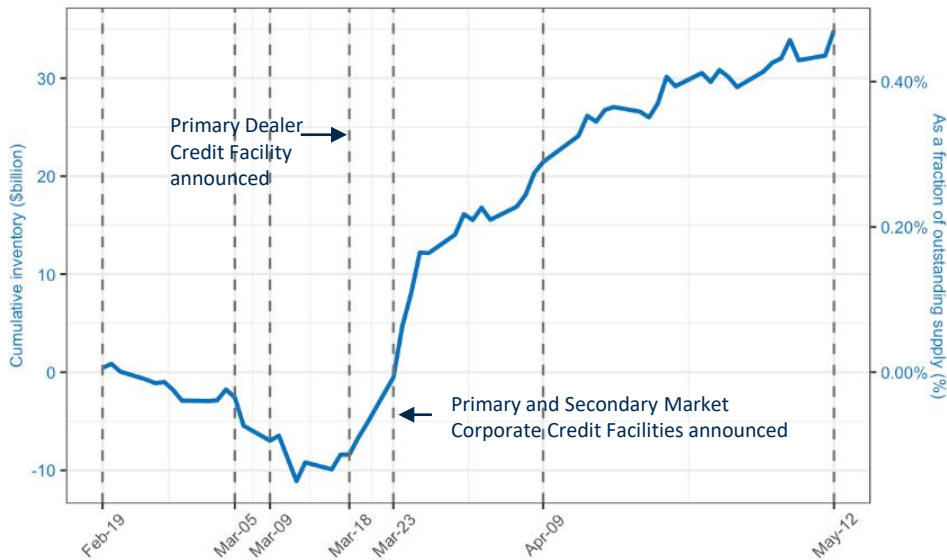
Sources: Crane Data LLC and Bank calculations

During the market stress in March, 'flight to safety' movements widened the spread between IG bonds and government bonds...



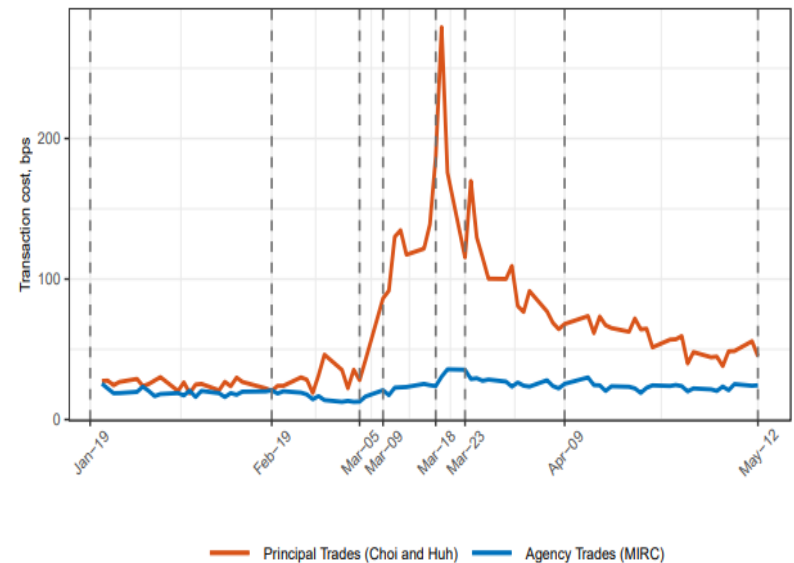
...and dealers stopped absorbing US corporate bonds, and shed some of their inventory, leading to higher trading costs

Cumulative inventory change (USD billions) in the dealer sector and as a fraction of total supply



Source: Corporate Bond Liquidity During the COVID-19 Crisis ([Kargar et al](#))

Transaction costs in the US corporate bond market





Interlinkages across markets

What were the market interlinkages in March's 'dash for cash'?

Large margin calls on derivatives forced funds and insurers to raise cash through **repo** or **bond sales**...

...and **withdrawals from money market funds and other open-ended funds** added selling pressure to **asset markets and money markets**.

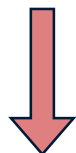


Bond liquidation



The usual **stabilisers in government bond markets did not work** as leveraged investors were forced to sell, and dealers became overwhelmed by selling pressure.

Bond market illiquidity spreads to funding markets



As bond prices fell and became volatile, it became **difficult and expensive to repo**...



Funding illiquidity puts pressure on bond markets

...which **forced more of the investors trying to raise cash to sell bonds**.



Policy implications

What could be the policy implications of March's 'dash for cash'?

- If central banks step in during stress to backstop financial markets, is greater resilience in markets need (via regulation or market reform)? Which markets should be covered?
 - How should the financial system best adapt to a world where markets may not be able to rely on dealers to maintain levels of liquidity at all times and other intermediaries are involved in market making?
 - If even sovereign bonds can become illiquid, what does that mean for banks' liquidity regulation?
 - Do we need to change MMMF regulation to ensure that MMMFs retain cash like properties even in stress?
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Further reading

Further reading on March's 'dash for cash'

- BoE – [Interim Financial Stability Report](#) May 2020
 - Jon Cunliffe, Deputy Governor, Financial Stability, BoE –
 - [“Financial System Resilience: Lessons from a real stress”](#)
 - Andrew Hauser, Executive Director, Markets, BoE
 - [“Seven Moments in Spring: Covid-19, financial markets and the Bank of England’s balance sheet operations”](#)
 - BIS – [Annual Economic Report 2020](#)
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