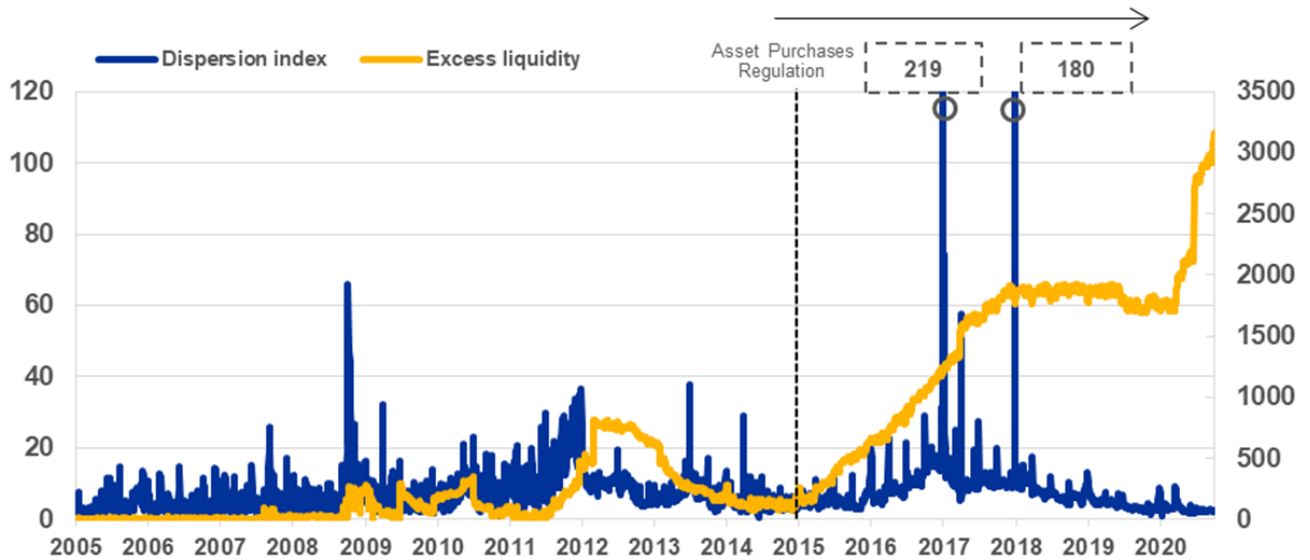


Chart 3

Cross-sectional dispersion of 1-day money market rates and excess liquidity, 2005-2020



Note: Dispersion index (in basis points, left-hand scale) and excess liquidity (in EUR billions, right-hand scale). The dashed line in 2015 marks the start of the ECB's Asset Purchase Programme and the phasing in of Basel III regulations such as the Liquidity Coverage Ratio and the Leverage Ratio. Source: Corradin et al. (2020) and ECB Statistical Data Warehouse.

Consistent with higher central bank liquidity provision supporting money market functioning in crisis times, additional provision of central bank liquidity over the course of 2020 helped keep the dispersion of 1-day money market rates at low levels during the COVID-19 pandemic. Additional liquidity was provided to banks through untargeted operations such as additional longer-term refinancing operations (LTROs) and the pandemic emergency longer-term refinancing operations (PELTROs) as well as through the targeted longer-term refinancing operations (TLTROs).

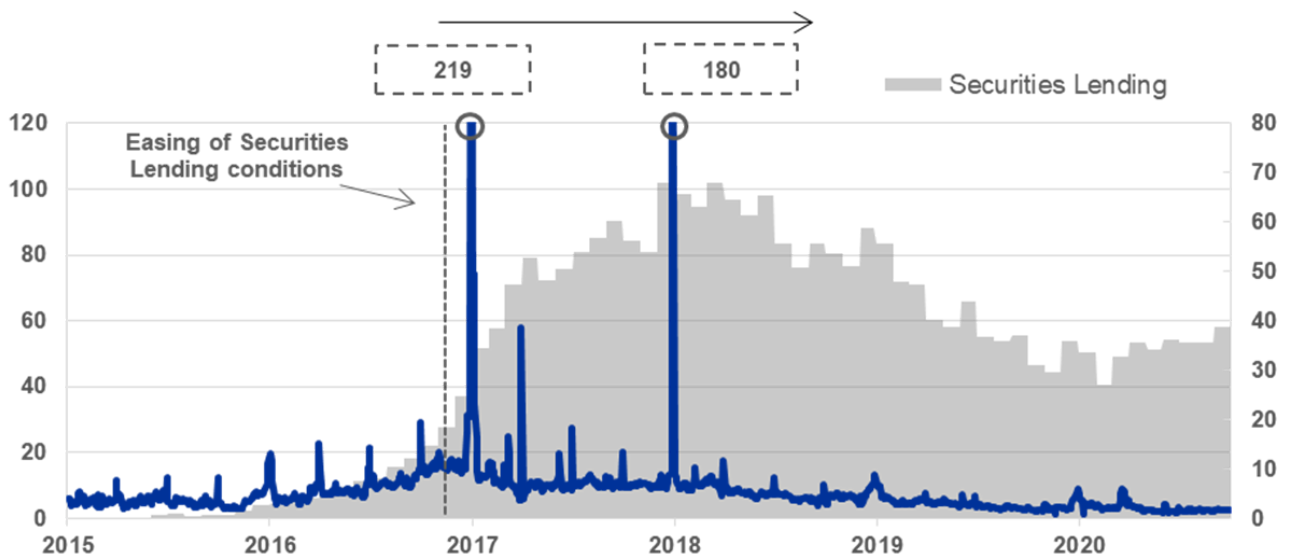
During 2015-2016, our results indicate an increase in the money market rate dispersion index, without an accompanying increase in financial market stress (Chart 2) and while excess liquidity levels were high, primarily driven by the Eurosystem's Public Sector Purchase Programme (Chart 3). Central bank asset purchases withdraw government bond collateral from the financial system and government bonds are the main type of collateral used in secured money markets. The evidence is suggestive of central bank asset purchases inducing

scarcity effects in some money market segments (see Arrata, Nguyen, Rahmouni-Rousseau and Vari, 2019; Brand, Ferrante and Hubert, 2019; Corradin and Maddaloni, 2020).

The dispersion decreased again after the easing of the terms of the Securities Lending Programme in December 2016 (Chart 4). Established by the Eurosystem in 2015 with the launch of the Public Sector Purchase Programme, the goal of the Securities Lending Programme was to lend specific bonds temporarily to market operators in order to reduce the cost of acquiring good quality collateral. The Securities Lending Programme was initially only sparsely used. Only when the Eurosystem introduced the cash-collateral option which allowed accepting cash - not only bonds - in return for lending bonds, did securities lending increase. Additional analysis indeed indicates that from December 2016 onwards, securities lending volumes were negatively related to the dispersion index, suggesting that the Securities Lending Programme helped alleviate the scarcity effects (see also Jank and Moench, 2018).

Chart 4

Cross-sectional dispersion of 1-day money market rates and securities lending, 2015-2020



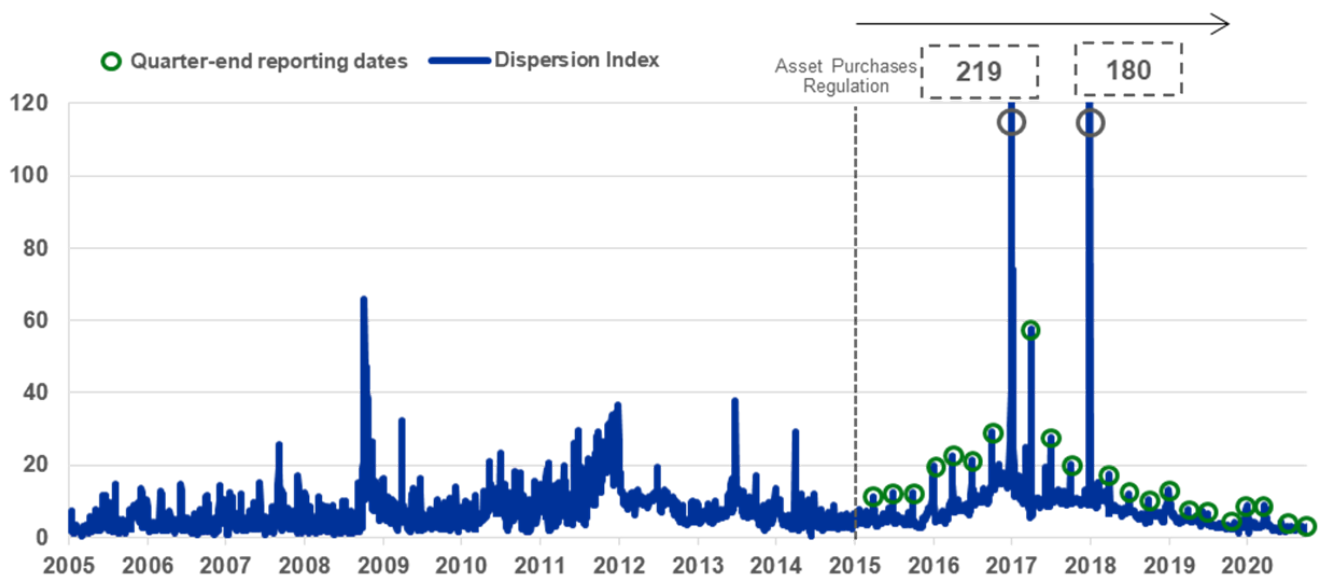
Note: Dispersion index (in basis points, left-hand scale) and securities lending (in EUR billions, right-hand scale). Source: Corradin et al. (2020) and ECB Statistical Data Warehouse.

Interactions between money markets and new Basel III regulations

We further study how new Basel III regulations, such as the Leverage Ratio (LR) and the Liquidity Coverage Ratio (LCR), affected money market activity. These regulations started being phased in (in the case of the LCR) or publicly reported (in the case of the LR) as of 2015 (Chart 5). We document that the LR requirement led to reduced borrowing, higher rates and increased dispersion in money market rates at quarter-ends, i.e. at the time when leverage ratios are reported to the regulators. We do not find evidence of month-end effects, suggesting that LCR requirements – which are reported by banks at the end of the month – have not had a significant effect on euro area money markets so far. This may be due to the large Eurosystem balance sheet size, which ensured an ample supply of central bank liquidity, facilitating the fulfilment of liquidity requirements.

Chart 5

Cross-sectional dispersion of 1-day money market rates and regulation, 2005-2020



Note: Dispersion index (in basis points) constructed using EONIA, DE, FR, IT and ES general collateral and special repo rates, volume-weighted. The dashed line in 2015 marks the start of the ECB's Asset Purchase Programme and the phasing in of Basel III regulations such as the Liquidity Coverage Ratio and the Leverage Ratio. Sources: Corradin et al. (2020) following Duffie and Krishnamurthy (2016).


Concluding remarks

Several takeaways emerge from our analysis. First, looking back over the past 15 years, our analysis documents that euro area money market conditions tended to worsen if financial stress increased, or if central bank asset purchases induced scarcity effects while the Securities Lending Programme was not sufficiently active.


Second, with regard to the impact of Basel III regulations, we document that the Leverage Ratio regulation impacted money markets at quarter-ends due to “window-dressing” effects, reducing volumes and rates, and raising money market rate dispersion. We did not find evidence that liquidity requirements affected money markets significantly so far. This may be due to the large Eurosystem balance sheet size, which facilitated the fulfilment of liquidity requirements through the ample supply of central bank liquidity.


Going forward, money market developments should be monitored, as factors interacting with money market conditions may change. One factor in particular deserves attention: non-banks becoming important participants in money markets. Unlike banks, these participants may not have access to operations with the central bank. This has a bearing on the formation of some money market rates, like the euro short-term rate (€STR) which reflects the euro unsecured overnight borrowing costs of banks located in the euro area. Were the transmission of monetary policy across money market rates to worsen, with potentially widening dispersion driven by non-banks, this could have implications for monetary policy implementation in the future.

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1. This article was written by Stefano Corradin (Principal Economist, Directorate General Research, Financial Research Division), Marie Hoerova (Adviser, Directorate General Research, Monetary Policy Research Division) and Glenn Schepens (Senior Economist, Directorate General Research, Financial Research Division). The authors gratefully acknowledge the comments of Alexander Popov and Louise Sagar. The article is based on ECB Working Paper 2483 “Money Markets, central bank

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