Monetary Policy Implications of Market Marker of Last Resort Operations

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Thanks to the organizers for the opportunity to speak on this panel. I will focus my remarks on how central bank asset purchases that are motivated by financial stability concerns can have spillover implications for monetary policy. I will split the comments into three parts. I start with my explanation for why it might be appropriate to use asset purchases to achieve financial stability aims. Next, I review a pair of well-known interventions by the Federal Reserve and Bank of England that involve asset purchases. These examples are chosen to introduce some of the issues that purchase decisions create. I will close with a couple of recommendations for how to set up purchase facilities.

I. The Rationale for Financial Stability Motivated Asset Purchases

Going back to at least Bagehot (1873), it has been conventional wisdom that central banks should be willing to conduct lending operations to support the economy. Lending is no longer a limit on what central banks are willing to do. Since the global financial crisis, asset purchases have become an increasingly common part of the monetary policy toolkit. There is now a deep literature that explains the rationale for these purchases (Bernanke 2020) and evaluates the effects of both the purchases (Fabo et al 2021) and the sales when the policy is reversed (Du, Forbes, Luzzetti 2024).

Moreover, in the last few years, multiple central banks have bought securities citing a financial stability rationale.[2] The Federal Reserve purchases starting in March 2020 are reviewed below. At the same time the Bank of England, the Bank of Canada and the European Central Bank also initiated such purchases. In addition, at least 13 other emerging central banks also launched similar programs at the onset of the COVID pandemic (Arslan, Drehmann and Hofmann 2020). In most cases, central banks were buying government bonds but in some cases, mortgage securities or even corporate bonds were eligible for purchase.

While the broad concern with having orderly markets for government debt goes back to the founding of the Federal Reserve (Menand and Younger 2024), I see two distinct reasons for why purchases, and not just lending, can be justified. One rationale is that if government bond prices become dislocated, the problems spill over to the rest of the financial system because the yield curve for government bonds underpins all fixed-income pricing. For instance, in the United States, the Secured Overnight Financing Rate (SOFR) now underpins many private sector rates.

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[2] The line between a financial stability justification and monetary policy motivation for purchases even in 2008 was already a little blurry, see e.g. https://www.federalreserve.gov/newsevents/pressreleases/monetary20081125b.htm As shown by Garbade and Keane (2020) and Anson et al. (2019), however, there are also much older historical precedents of purchases being explained based on financial stability considerations.

The calculation of SOFR is built off of government repo rates, so that makes the pass-through of problems in the Treasury market to private rates almost immediate.

Of course, if the government bond rates simply reflect concerns about the fiscal responsibility of the government, then there is nothing the central bank can do to remedy that problem. Whether or not the central bank tries to assert a financial stability motive for any purchases, bond purchases will ultimately lead to inflation if they wind up merely monetizing the debt.

In contrast, if there are technical factors causing the dislocation, then there is every reason for the central bank to try to eliminate the mispricing. In this situation, it is quite possible that a lending facility will not be enough to reverse the problems (Hauser 2021). During the question and answer period, I would be glad to explain why I see no moral hazard in buying government securities to restore the normalcy of the safe yield curve in dysfunctional markets. By stabilizing the safe yield curve the central bank can allow the markets for private securities to resume functioning.

The more interesting and controversial case comes if the central banks opt to buy private securities, such as corporate bonds or commercial paper. The financial stability justification for doing so would be that there is a fire-sale that is depressing prices (Shleifer and Vishny 2010). For instance, if the natural buyers of these securities are distressed for other reasons, that can depress the private securities prices.

We care about the fire-sale because when secondary market prices for corporate securities are persistently depressed it becomes impossible for firms to issue new securities in the primary market; investors will only buy in the primary market if the expected returns are comparable to what they can get from buying existing securities. This is not just a hypothetical concern, during the first 3 weeks of March 2020 there were no high-yield bonds issued.

The threshold for making a determination that a large persistent fire-sale of private securities is underway will be high. There is some moral hazard risk to buying private securities, the central bank is likely risking taxpayer money in these transactions and drawing the line at which securities are eligible is also complicated. So there are good reasons why central banks have historically shied away from crossing this line and making these purchases. Any decision to do so would need to account for all the risks that would come with these purchases. Nonetheless, there is at least a logical case for considering purchases if a fire-sale is sufficiently crippling and that this is a distinct motivation from stabilizing the safe-yield curve.

II. A Pair of Case Studies.

How do purchase programs work in practice? Let me describe two well-studied cases that will help identify some of the policy challenges going forward.

Consider first the decisions taken by the Federal Reserve's Federal Open Market Committee (FOMC) in March 2020 at the onset of the Covid pandemic. Starting around the 9th of March 2020 many different parties in the financial system found themselves needing to make payments or experiencing rapid withdrawals. This episode has come to be known as the "dash for cash" (see Bank of England, 2020). The result was exceptionally large sales of US Treasury securities and a commensurately big movement in Treasury prices (with the ten-year Treasury nominal yield rising by 64 basis points between the 9th and 18th of March). The Federal Reserve responded with an unprecedented expansion of its asset purchases, buying more than $1 trillion of Treasury securities during the month of March (see Vissing Jorgensen 2021 for a daily analysis of the early part of the program).

The more relevant consideration for this discussion is how the purchases and the narrative around them evolved as the initial stresses subsided. The particular passages from the FOMC post-meeting statements related to the asset purchases over the next six months are presented in Table 1. The italicized text in bold highlights what I view as the key passages. At the initial unscheduled meeting on March 15 the FOMC slashed interest rates to the effective lower bound. It also announced that the additional asset purchases were being undertaken to support "the smooth functioning of markets" to assure "the smooth flow of credit to businesses and households." The statement only set floors on the size of purchases, so commitment could be viewed as open-ended. There was no definition offered for how to tell when the smooth functioning of markets would be deemed to have been restored.

When it next clarified plans regarding additional asset purchases, at another unscheduled meeting on March 23, the initial rationale was amended. The statement shifted to saying that purchases would continue in "the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions and the economy." Thus, almost immediately, the financial stability rationale and monetary policy objectives were intermingled.

At the next scheduled FOMC meeting, on April 29, the committee's language changed again. At this point, the asset purchases were justified in part because they helped in "fostering" the effective transmission of monetary policy to broader financial conditions. The switch suggests that the purchases were now viewed as an important factor for ensuring the success of monetary policy in meeting its objectives. This language was repeated at the next two regularly scheduled FOMC meetings in June and July. Starting in June, the description of the expected increase in holdings was shifted to be "at least at the current pace".

The final important change in language comes at the September 2020 FOMC meeting. Here the language was modified to say the increase in the balance sheet was now in part needed to help "foster accommodative financial conditions."

The initial purchases were undoubtedly merited on financial stability grounds, I believe that justification was long gone by the summer. Ultimately, the asset purchases continued until March of 2022. I suspect at least some members of the FOMC look back and question whether an earlier end might have been prudent. So one motivation for my recommendations in the next section, is whether any institutional reforms might be considered based on this episode.

As a point of contrast, consider the alternative approach followed by the Bank of England during the gilt market stress in the fall of 2022.[3] In brief, this episode started on the 23rd of September

[3] For a more detailed analysis of the episode see Breeden 2022 and Alexander et al 2023.

when the U.K. Chancellor of the Exchequer gave a speech outlining a "mini-budget" that was proposed by Liz Truss's new government. Dubbed "the fiscal event" by Jon Cunliffe (Deputy Governor of the Bank of England), the budget was not accompanied by the customary independent analysis of the gap between spending and taxes promises that were being described. Markets reacted badly to the proposal that appeared to imply a huge unfunded set of commitments. Over the next three trading days long-term bond yields rose by 130 basis points, a move three times larger than any prior change in such a short period.

The path for real and nominal yields are shown in Figure 1. If these moves were a reflection of concerns over debt monetization, one would have expected the gap between the nominal and real yields to open up to reflect a change in expected inflation. The fact that real yields were moving more than nominal was one hint that the simple interpretation was incorrect. The US long-term yields is included as a point of contrast and to show how erratically the UK rates were moving.

By the second trading day after the fiscal event, financial market commentary was focusing on the impact that rising rates would have on certain special purpose vehicles, known as liability-driven investment (LDI) funds, that U.K. pension funds had established to meet defined contribution obligations.[4] The LDIs owned roughly £1 trillion in long-term bonds and were financed with some cash that was provided by the sponsoring pension fund and by using repurchase agreements to cover the rest of the funding. The spike in interest rates led to large losses in the value of LDI assets and also reduced the value of the collateral that they were using in the repurchase agreements. This was leading the LDIs to sell the bonds into falling markets.

Thus, on the 28th of September the Bank of England, acting on the recommendation of its Financial Policy Committee, announced a temporary program to purchase gilts in an attempt to stabilize the market. The program was to last for 13 days with the Bank prepared to buy up to £5 billion per day. The program length and buying limit was set based on estimates of how long it would take the LDIs to obtain funding support from the sponsors and by estimates of the sales that might occur in the intervening period. Initially, only nominal bonds were eligible, but on October 11 eligibility was extended to include indexed linked bonds (aka "linkers"). Figure 2 shows the daily purchases during the life of the program.

The program ended on time and proved to be successful in buying time for the LDIs to arrange for additional funding. Ultimately the Bank purchased £19.3 billion of bonds, of which £7.2 billion were linkers. Rates also reversed their path, though the decline began when the government reversed its budget plans.

While this first part of the LDI saga has been often reported on, less attention has been paid to the second part when the purchased securities were sold. That phase started on November 10 when the Bank released its plan to unwind the purchases.[5] There were three important principles that the Bank announced in its plans. First, the sales had to be timely enough so as to honor the promise that the purchase program was temporary. If the securities were indefinitely retained,

[4] See for instance https://www.ft.com/content/4e6b89a3-a63e-49df-8a04-0488b69e84f5 (accessed August 7, 2024)
[5] See https://www.bankofengland.co.uk/news/2022/november/boe-demand-led-approach-to-unwind-recent-financial-stability-gilt-purchases (accessed August 7, 2024)

that could create confusion about why these purchases were different than the ones undertaken to meet monetary policy objectives. Second, the sales were to be conducted in an orderly manner. This meant that the sales should be structured so as to avoid triggering any renewed market dysfunction. Third, to support both these objectives, the timing of the sales would be "demand driven". This meant the pace and size the sales would depend on whether bids that were submitted were strong or weak. The Bank indicated it would use discretion in deciding on sales, with a general principle that "only bids that are deemed attractive relative to prevailing market levels will be accepted."

Remarkably, as shown in Figure 2, the sales were completed over 12 working days (spanning 4 weeks that included a two week respite for the Christmas holidays). The amounts sold varied between zero and £5.5 billion. The Bank also reported a profit of about £3.8 billion on the sales. The question of whether profits should be a necessary condition for judging the success of a program is worth debating.

III. Suggestions for Codifying Market Maker of Last Resort Facilities

The short-lived market turmoil in early August 2024 was not (ex-post) sufficiently disruptive to spur any central banks to announce a new purchase program. The speed of the events, however, serve as a reminder that instability and market dysfunction can appear quickly with little warning. Thus, I expect that sometime in the near future a major central bank will decide it needs to embark on a purchase program. With that in mind, I offer a couple of high-level suggestions about how to set up purchase facilities.

My first recommendation is that the internal central bank processes for deciding when to commence and cease purchases should be clarified. In the case of the UK, where a formal Financial Policy Committee (FPC) exists, the existing arrangements seem adequate. Obviously, the group responsible for financial stability should have a say in when to commence a program.[6]

For many other central banks, including the Federal Reserve and ECB, there is not a formal FPC equivalent. Nevertheless, one could approximate the structure without needing any legislation to proceed. In particular, the leadership of the central bank could create a purchase facilities committee (PFC). PFC membership should definitely include some of the people who participate in monetary policy decisions.

PFC membership should not, however, be limited to only monetary policymakers. Two other types of specialist members should be included. At least one member should be the person who oversees the central bank's market operations, for example in the U.S. the manager of the system open market account (and perhaps the deputy manager too). Virtually every central bank also has a division that monitors financial stability. The leader of the financial stability area (and possibly a deputy) should also be members of the PFC.

There are three distinct reasons why this kind of structure for the PFC is superior to a situation where purchase decisions would be decided solely by the group that sets monetary policy. First,

[6] The situation even in the UK is complicated since the Bank of England and not the FPC is responsible for the balance sheet actions, but the necessary cooperation on front is manageable.

it will improve the analytic discussions to be unambiguous in recognizing the purchase decisions are aimed at stability. The presence of the specialists will reinforce the idea that the purchase criteria are different than monetary policy purchase decisions. The fact that LDI purchases occurred just as the Bank of England was about to begin unwinding its monetary policy portfolio shows why this can be valuable. New PFCs may face a similar situation and having a different set of people making the call to commence a program will be helpful. The specialists are also going to be focused on explaining why a facility needs to continue to operate and pushing discussions about when a reversal can begin.

The second reason for this favoring this PFC structure is that it simplifies external communications. Nearly every media account of the initiation of the LDI purchases noted that they were being undertaken as a result of an FPC recommendation. That allowed the Bank to clearly explain that this was not a monetary policy decision. I doubt this kind of separation is possible, if the purchase decisions are made by the exact same group of people who are making monetary policy decisions.

Finally, the existence of a PFC will help with accountability in any ex-post evaluations of any operations. If a purchase program goes badly, the blame should be placed on the PFC and any recommendations about how to avoid future mistakes can be aimed at reforming PFC processes. I realize that because some of the monetary policymakers will be involved, the central bank cannot deflect all blame onto the PFC to absolve the central bank from any responsibility. Nonetheless, segmentation should at least partially shield the integrity of the monetary policy process.

The other suggestion is that after the PFC is formed it should quickly begin a public consultation on how the purchase facility will be structured. There are a myriad of details that need to be worked out, including the range of counterparties who can participate, the range of assets that are eligible, pricing rules and quantity limits, to name just a few. Buiter et al (2023) offer some good principles that could be used to start this discussion, and different jurisdictions will have different constraints on the governance of the central bank balance sheet and what can and cannot be purchased. In the interest of time, I cannot go into these issues today.

Starting the discussions now, during peacetime, of what will surely be a complex set of issues is very important. Monetary policymakers routinely preach the importance of getting the public to understand their reaction function. The same principle applies with respect to the use of financial stability tools. If market participants know that a facility will be available and understand how it will operate, that information alone may help promote stability and reduce the need to activate the tool. Though conversations about a private securities facility could double-edged because they could encourage more risk-taking. So what is going to be said ought to be thought through in advance.

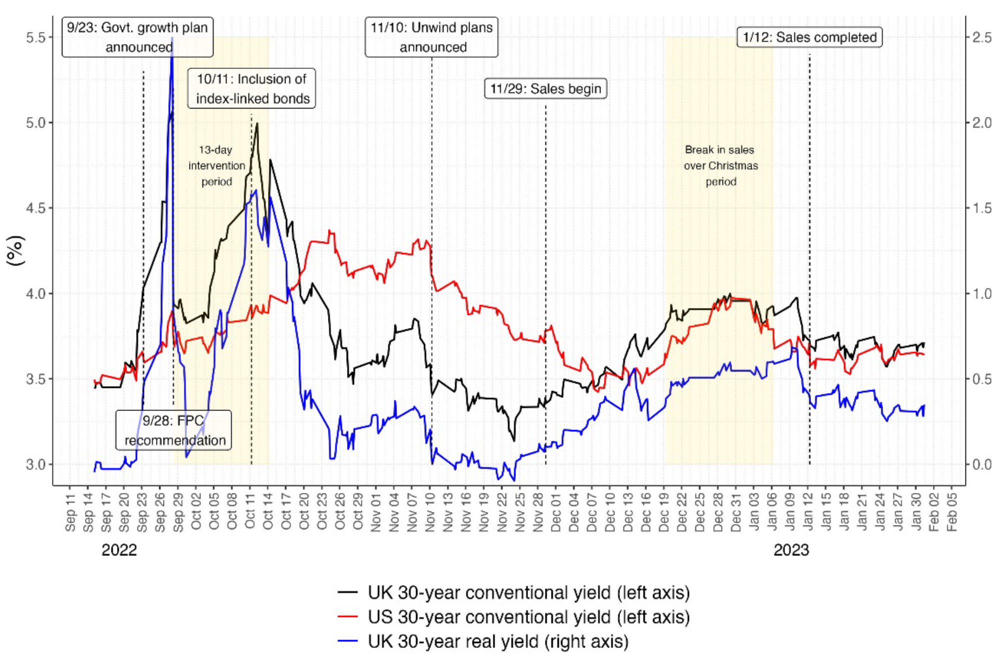
Thanks for listening and I would be glad to continue this discussion either during the question and answer period or bilaterally.

Table 1 FOMC Statements Regarding Asset Purchases

Date	Excerpts from FOMC Statements explaining purchase rational
Unscheduled Meeting March 15, 2020	***To support the smooth functioning of markets*** for Treasury securities and agency mortgage-backed securities ***that are central to the flow of credit to households and businesses,*** over coming months…..
Unscheduled Meeting March 23, 2020	The Federal Reserve will continue to purchase Treasury securities and agency mortgage-backed securities in the amounts ***needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions.***
Regularly Scheduled Meeting April 29, 2020	… in the amounts needed to ***support smooth market functioning, thereby fostering effective transmission of monetary policy to broader financial conditions.***
Regularly Scheduled Meeting September 16, 2020	In addition, over coming months the Federal Reserve will increase its holdings of Treasury securities and agency mortgage-backed securities at least at the current pace to ***sustain smooth market functioning and help foster accommodative financial conditions***, thereby supporting the flow of credit to households and businesses.

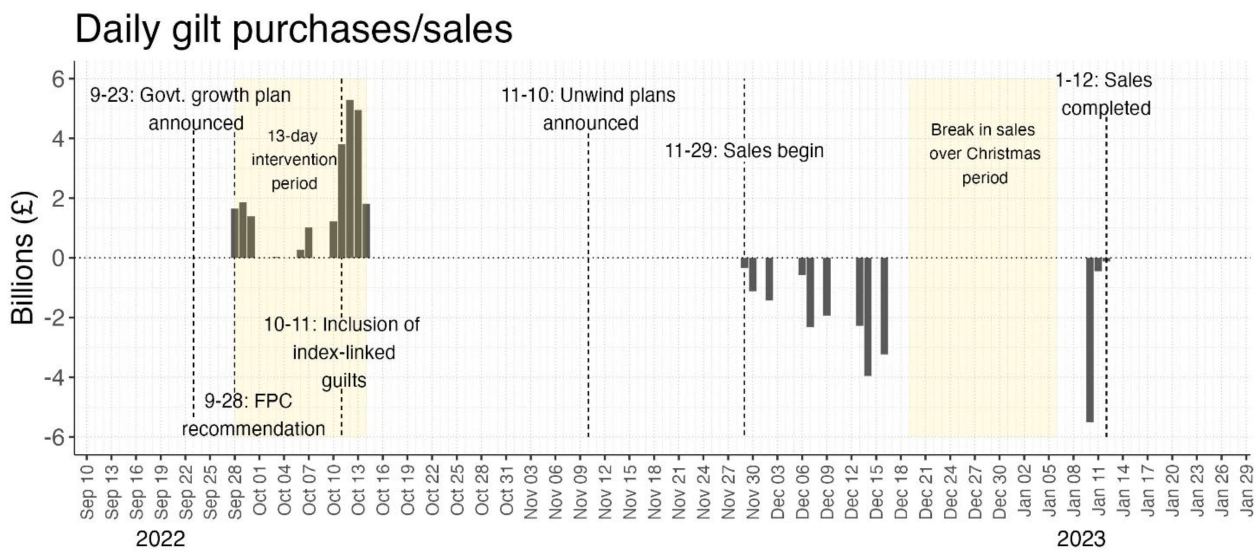
Source: FOMC

Figure 1 Interest Rates During the LDI Episode



Source: Bloomberg

Figure 2: Bank of England Actions During the LDI Episode



Source: Bank of England

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