Bank of England

Rt Hon Mel Stride MP
Chair of the Treasury Committee
House of Commons
London
SW1A 0AA

Sir Jon Cunliffe
Deputy Governor, Financial Stability
Bank of England

18 October 2022

Dear Mel,

I am responding on behalf of the Bank in relation to your request on 11 October for further information on the Bank's expanded operations announced on 10 and 11 October.

I trust that you and the Committee will find the information in this letter of assistance in addressing your specific questions and providing further information on developments in the gilt market since my last letter dated 5 October. We stand ready to answer any further queries you may have.

The Bank's additional measures on 10 and 11 October

On 10 and 11 October, the Bank announced additional measures to restore market functioning in long-dated government bonds and reduce risks from contagion to credit conditions for UK households and businesses, in line with its financial stability objective. These measures were intended to enable liability-driven investment (LDI) funds to address risks to their resilience from volatility in the long-dated gilt market, and support an orderly end to the gilt market operation that was announced on 28 September.

These additional measures were implemented in the light of information the Bank received as we progressed with the operation and comprised increasing the maximum auction size, changes to liquidity facilities and purchases of index-linked gilts. I set out below the evolution of these additional measures.

Background to the Bank's additional measures

As I noted in my letter dated 5 October, the unprecedented repricing of long-term gilts required many LDI funds urgently to rebalance, either by selling gilts into an illiquid market, or by asking their defined benefit (DB) pension fund investors to raise funds to provide more capital, for example following the sale of other assets. Since 28 September the Bank, Prudential Regulation Authority (PRA), The Pensions Regulator (TPR) and the Financial Conduct Authority (FCA) have been in close contact with pension funds and LDI fund managers to monitor their progress in this rebalancing process. The Bank and PRA have closely coordinated with TPR and the FCA on these efforts, and engaged with the Central Bank of Ireland (CBOI), given that many LDI funds are located in Ireland.

The major LDI fund managers shared their plans for building more resilience with the authorities. Most of them requested their DB pension fund investors to provide more capital, which would allow them to deleverage without selling gilts. The timelines for this capital raising varied by fund, with pooled LDI funds – which have a large number of smaller investors – likely to take longer to raise capital than those DB pension funds that had LDI strategies in segregated accounts with an asset manager. In general, the LDI fund managers informed the Bank that if they could not raise enough capital from their DB pension fund investors, they would have to sell gilts to raise liquidity and deleverage. Many LDI funds reported that the greatest selling pressure was likely to come in the week of 10 October, because that is when they would have greater clarity from their DB pension fund investors on the amount of capital that could be raised and, consequently, what quantity of asset sales would be needed. The LDI fund managers' estimates of their planned asset sales were revised frequently because of the underlying volatility of the market, because their clients' intentions to maintain or revise hedges were changing (for segregated accounts), and as managers' plans changed to further raise capital buffers from their initial targets. However, the planned asset sales were large in aggregate and involved substantial quantities of index-linked gilts, a market which is smaller and less liquid than the conventional (nominal) gilt market.

Given that this meant that gilt sales were likely to be more concentrated in the final week of the operation, on Monday 10 October the Bank announced that it was prepared to increase the maximum size of the remaining five gilt purchase auctions above the prior level of up to £5 billion in each auction. The maximum auction size was set at up to £10 billion on 10 October, and was subsequently confirmed at that level each day thereafter.

The Bank was also informed that DB pension funds had holdings of sterling and international corporate bonds that they were considering using to raise liquidity to inject capital into LDI funds, either by selling the bonds or by borrowing against them. Corporate bond markets have been relatively stable in recent weeks. UK investment grade corporate bond spreads rose by less than 20 basis points from 27 September to 10 October (and have not risen much further since then). However, given uncertain liquidity conditions in that market, some LDI funds were concerned about their ability to raise liquidity in that way.

Given this, on Monday 10 October the Bank also launched a Temporary Expanded Collateral Repo Facility (TECRF) which would run beyond the end of the Bank's gilt market operations. Under the TECRF, the Bank temporarily expanded the already wide range of collateral accepted in its regular lending facilities to include non-financial corporate bonds of credit quality broadly equivalent to credit ratings of Baa3/BBB- or above. The TECRF was aimed at enabling banks to ease liquidity pressures facing clients that hold lower quality corporate bonds, through liquidity insurance operations. The facility will remain open on a daily basis until Thursday 10 November 2022, which should enable LDI funds to access sufficient liquidity for a long enough period to facilitate their necessary rebalancing. In addition, as in normal times, the Bank said it would stand ready through its weekly Indexed Long Term Repo (ILTR) operations to support further easing of liquidity pressures. This permanent facility provides additional liquidity to banks, backed by the full range of the Bank's usual eligible collateral, including index-linked gilts, and so can be used to provide further support to their lending to LDI counterparties. Banks also have access to liquidity insurance from the existing Discount Window Facility (DWF) and a weekly US Dollar repo facility.

The Bank had first been made aware of difficulties in the index-linked gilt market around the time of its 28 September announcement. However, it was unclear at that point whether the LDI funds could complete their necessary rebalancing by raising capital and selling conventional gilts rather than index-linked gilts, including through the Bank's conventional gilt purchase operations. As a policy matter, the Bank has never previously purchased index-linked gilts in its monetary policy operations. This is because, historically, there was a concern that, given the low levels of illiquidity in the index-linked market, purchases by the Bank could compound pressures faced by pension funds. My colleague Sir Dave Ramsden noted these points,[1] alongside the concern that buying index-linked gilts could crowd out a key tool for managing inflation risk. As such, the Bank had no prior operational capacity to make such purchases and preparing to do so required significant operational changes, which Bank staff began working on as a contingency before later starting the purchases.

Before the market opened on the morning of Tuesday 11 October, the Bank announced it would widen the scope of its daily gilt market purchases to include index-linked gilts. The announcement also stated that the Bank continued to stand ready to purchase up

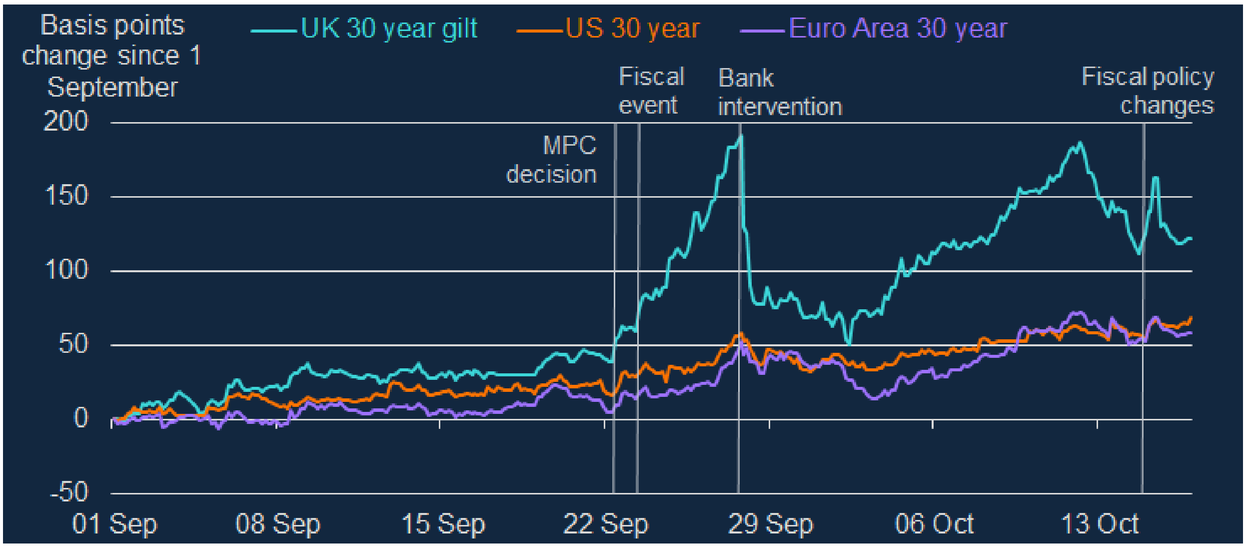
[1] See a previous speech: **'The monetary policy toolbox in the UK'**

to £10 billion of gilts each day, of which from that point up to £5 billion would be allocated to long-dated conventional gilts and up to £5 billion to index-linked gilts of a residual maturity of three years and above. All of the gilts that the Bank has purchased via these operations are held in the Asset Purchase Facility (APF). As part of its index-linked gilt purchases, the Bank used a specific pricing mechanism to ensure that the backstop nature of the scheme was delivered. The Bank set a minimum yield for its purchases, which was equivalent to real yields at close of business on 10 October. The Bank would not purchase any index-linked gilts at real yields below those levels. This mechanism was needed in the index-linked gilt auctions given the illiquidity in that market and so the absence of a reliable market price on which the Bank could base its purchases.

Market developments following my previous letter

Following my letter dated 5 October, global financial markets have remained volatile. But there has been a particular increase in volatility in UK markets and a large flow of UK-specific news. For example, on 5 October, the credit rating agency Fitch lowered the outlook for the UK's sovereign rating from 'stable' to 'negative', which followed S&P downgrading the UK's outlook on 30 September. On 10 October, the Chancellor announced that the OBR would publish its economic and fiscal forecast on 31 October, earlier than previously planned. On 14 October, Jeremy Hunt was appointed Chancellor, and the government announced a cancellation of its previously planned corporation tax cut. On 17 October, the new Chancellor made a statement on the Medium-Term Fiscal Plan, announcing the reversal of a number of measures that had been in the Growth Plan, and an April 2023 review of the government's Energy Price Guarantee. The five largest daily moves in the 30 year inflation-linked gilt, in data that dates back to 2000, have all been since the 23 September. Bid-ask spreads for UK gilts – a measure of liquidity – have reached levels higher than during the March 2020 'dash for cash' and the global financial crisis. The market has also been responding to the Bank's additional measures. A detailed description of the market moves since my letter dated 5 October is set out in the attached **Annex**.

Figure 1: Cumulative change in nominal government bond yields since 1 September



‘Fiscal policy changes’ denotes cancellation of planned corporation tax cut. Source: Bloomberg, Bank calculations

The financial stability motivation for the Bank’s additional measures

As outlined in my previous letter dated 5 October, the intervention on 28 September was designed to prevent self-reinforcing falls in asset prices. Those falls would have resulted in ‘fire sale’ dynamics and increasingly severe disruption to core gilt market functioning, which in turn would have been expected to lead to an excessive and sudden tightening of financing conditions for the real economy. The Bank acted to restore core market functioning and reduce the risk of self-reinforcing ‘fire sale’ dynamics. This reduced a material risk to financial stability and contagion to credit conditions for UK households and businesses, in line with its statutory financial stability objective.

The purpose of the 28 September announcement was to remove the liquidity premium associated with the potential for run dynamics and so give the affected LDI funds sufficient time to put their positions on a sustainable footing, increasing their resilience to future stresses. As mentioned above, Bank and FCA staff subsequently worked closely with the LDI fund managers to monitor the progress of their LDI funds in ensuring they were on track to achieve that. In light of growing intelligence on the likely size of their gilt sales in the final days of the programme, as well as deterioration in the functioning of the market for indexed-linked gilts, the Bank introduced a set of additional measures to further increase gilt market liquidity and ensure orderly market conditions, as set out above.

The risk of self-reinforcing ‘fire sale’ dynamics was most pressing in the more illiquid index-linked segment of the gilt market. This would have spilled over into the nominal gilt market, given close links between pricing, trading strategies and investors in the index-linked and nominal markets. For example, dealers and other market participants tend to sell gilts or gilt futures to hedge the interest rate risk on their purchases of inflation-linked gilts, thus resulting in selling pressure in nominal gilt markets. Since the start of October long-dated real and nominal yields tended to move in tandem on most days. And on 10 October, 30 year real yields rose by around 60 basis points in the day and 30 year nominal yields rose by around 30 basis points, with market contacts reporting that the behaviour of nominal yields had been to a large extent driven by dynamics in the inflation-linked market. The announcement on the morning of Tuesday 11 October was therefore designed to temporarily absorb selling of index-linked gilts in excess of market intermediation capacity, which would have spilled over to the conventional market.

Operational impact of the Bank's additional measures

Carrying out operations in the gilt market is a core function of the Bank that contributes towards delivering on its monetary and financial stability objectives. Given the shift in activity towards market-based finance and non-bank financial institutions (NBFI) over the past decade, it has become apparent that the traditional ways that firms would get access to liquidity in a stress have been challenged and that new tools are required. The private sector needs to provide better liquidity insurance to deal with this and the Bank also needs to develop new tools. The Bank and the Financial Policy Committee (FPC) have been at the forefront of a programme of international work on these new tools. They have contributed to the debate through publications and speeches[2] as well as through work in international fora[3] as part of a broader strategy to increase the resilience of NBFI.

As in other areas of the Bank's work that respond to stressed events, the operations announced on 28 September and 10 and 11 October required urgent work at pace to design facilities that were tailored to the situation and the risks at hand. The Bank's market operations function called on resources from other parts of the Bank in order to mount operations quickly. This followed a similar model to the Covid Corporate Financing Facility (CCFF) example. The decisions to purchase index-linked gilts and to accept additional corporate bond collateral were particularly challenging to deliver given that these asset classes have not featured in other Bank operations in recent years.

Bank governance in relation to the additional measures

In my letter dated 5 October I outlined the governance arrangements in relation to the Bank's gilt market operation. The subsequent changes to its operations, including the widening of operations to include index-linked gilts (announced on 11 October), were made in accordance with those same arrangements. The decisions were taken by the Bank's Executive, as one would expect for an operation of this kind. The FPC and MPC

[2] For example, see **The role of non-bank financial intermediaries in the 'dash for cash' in sterling markets** and **Why central banks need new tools for dealing with market dysfunction**.
[3] See **Market dysfunction and central bank tools**.

were kept informed of developments and the Bank's proposed actions during this time. The FPC had already publicly noted the risks to UK financial stability from dysfunction in the gilt market. It had recommended that action be taken, and welcomed the Bank's plans for temporary and targeted purchases in the gilt market on financial stability grounds at an urgent pace. As the operation was fully indemnified by HM Treasury, there was also coordination with HM Treasury officials ahead of the announced changes to the Bank's operations.

The Bank's Court of Directors were also engaged in advance on the launch of gilt market operation via its Transactions Committee. This is a sub-committee of Court whose role is to advise the Governor about any transaction which is not in the ordinary course of the Bank's business and where it is not practical (for example, because of short notice) to take the matter to Court.[4] Given the speed with which the Bank had to act, and the fact that this was the first time the Bank had purchased gilts as part of a financial stability operation, the Governor convened the Committee. The Transactions Committee was briefed and consulted in advance of the announcements, including on the fact that the Bank's gilt market operations had been indemnified by HM Treasury, and advised the Governor that it supported the Bank's proposed operations in relation to the gilt market.

Beyond the Bank's gilt purchases

The Bank's final gilt purchases as part of its financial stability operations took place on Friday 14 October, as planned. This was consistent with the Bank's intention to intervene in a temporary and targeted way. On Monday 17 October the Bank confirmed that the operations had ended and that they had enabled a significant increase in the resilience of the LDI sector. The Bank is continuing to monitor developments in conventional and index-linked gilt markets this week, including through conversations with LDI fund managers and other market participants, as part of the Bank's regular market monitoring.

Even though the Bank's gilt purchase auctions have stopped, the Bank is continuing to make available liquidity facilities to support LDI funds that may be continuing to face liquidity pressures, for example because of delays in raising capital from investors. The TECRF will allow banks to raise 30-day liquidity until 10 November. The Bank also stands ready to provide additional liquidity through its regular and permanent ILTR operations each Tuesday, which accept the full range of the Bank's usual eligible collateral, including index-linked gilts. Banks also have access to liquidity from the DWF and a weekly US Dollar repo supported by international swap lines. In addition, the Bank announced a new

[4] See paragraph 10 and Annex D of **Governance of the Bank of England including Matters Reserved to Court | Bank of England**

permanent Short-Term Repo facility on 4 August, which has been in operation since 6 October and provides further liquidity each Thursday.

The Bank's operations were intended to mitigate a specific financial stability risk in the long-dated gilt market and remove a liquidity premium caused by the risk of run dynamics, giving LDI funds time to rebalance. Many of them have taken action to put their positions on a more sustainable footing to ensure that they are better prepared for future stresses. In aggregate, market intelligence suggests that LDI funds have raised tens of billion pounds in capital and made many billion pounds of gilt sales, both of which will reduce their leverage. The Bank’s 13 days of gilt market operations increased liquidity in the market and supported this necessary adjustment. We know that the majority of the Bank’s gilt purchases were from LDI managers. As a result of these actions, LDI funds have reported to the Bank that they have enough capital to withstand much larger increases in yields than before. It is however likely that selling behaviour would be triggered before this resilience was used up and before net asset values fell to zero. Taken as a whole, LDI funds are now significantly better prepared to manage shocks of this nature in the future. As such, the risk of LDI fund behaviour triggering ‘fire sale’ dynamics in the gilt market and self-reinforcing falls in gilt prices has been significantly reduced.

Financial markets may remain volatile in the coming weeks. However, as the FPC has stated, financial stability is not the same as market stability or the avoidance of any disruption to financial markets. The operation was not intended to prevent markets from making the necessary adjustment to changes in the fundamental determinants of gilt prices – including the government’s changes to fiscal policy – which is a necessary part of gilt market functioning. Providing time for LDI funds to rebalance reduced the risk of ‘fire sale’ dynamics, which would have led to severe dysfunction in core markets. Looking forward, the increased resilience of LDI funds should reduce the likelihood of any further adjustments to changes in fundamentals being amplified in a similar way.

Vulnerabilities in non-bank financial institutions (NBFI)

The FPC has previously identified underlying vulnerabilities across the system of market-based finance, a number of which were exposed in the ‘dash for cash’ episode in March 2020.[5] The work to date has deepened international authorities’ common understanding of the vulnerabilities in NBFI and has taken steps towards developing policy proposals to address vulnerabilities, in particular for money market funds. It is crucial that this work results in effective policy outcomes to improve the resilience of NBFIs globally to sharp reductions in asset prices and liquidity. Absent such an increase in resilience, the financial stability risks associated with core market dysfunction could resurface in other

[5] See **The role of non-bank financial intermediaries in the ‘dash for cash’ in sterling markets**

ways or in other parts of the financial system. The FSB is due to report to the G20 on progress made in 2022.

The recent episode in the gilt market underlines the broad necessity of the ongoing work both domestically and internationally to make progress on the regulation and monitoring of the NBFI sector. With that in mind, the Bank and the FPC will continue to strongly support and engage with the important programme of domestic and international work to understand and, where necessary, address the vulnerabilities in NBFI.

On the specific vulnerabilities relating to LDIs, as highlighted in my letter dated 5 October, and Andrew Bailey's letter to Lord Bridges and Lord Hollick on 7 October[6], the Bank has worked closely with other regulators – including TPR and the FCA (who regulate schemes funds and LDI managers respectively) – to enhance understanding of financial stability risks that relate to pension funds. Others have also previously noted the possible impact of rising interest rates on LDI strategies.[7] The FPC conducted an assessment of the risks from leverage in the NBFI system in 2018, and highlighted the need to monitor risks associated with the use of leverage by LDI funds. Following that assessment, the findings were discussed with TPR, and the Bank assisted TPR in surveying defined-benefit pension funds' use of leverage in 2019. The Bank continued to work with TPR, alongside FCA, to enhance the monitoring of potential losses generated by NBFI leverage. As noted above, the Bank and FPC also conducted extensive work to understand the role of pension funds in the March 2020 'dash for cash'. The Bank informed TPR of how pension funds had fared and the implications for further work to improve pension fund liquidity risk management.

Although the PRA regulates bank counterparties of LDI funds, the Bank does not directly regulate pension schemes, LDI managers, or LDI funds. Pension schemes and LDI managers are regulated by TPR and the FCA respectively. LDI funds themselves are typically based outside the UK. The Bank will work with TPR and the FCA on the lessons to be learned from this episode.[8] While it might not be reasonable to expect market participants to insure against all extreme market outcomes, it is important that appropriate levels of resilience are ensured.

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[6] See **Letter to Lord Bridges and Lord Hollick Oct 2022**

[7] For example, as reported by Lord Simon Wolfson in recent press articles, Next plc reported to the Bank's agents in 2017 that they were concerned that higher interest rates could lead to liquidity issues for LDI funds that may lead to forced sales of a range of assets. The Next plc contact said that they thought the risk was relatively low.

[8] Link to TPR letter to Parliament.

The Bank and the FPC will continue to monitor market conditions, channels through which vulnerabilities could amplify future market stresses, and domestic and international progress towards reforms in the NBFI sector.

We stand ready to answer any further queries you may have in relation to this work, including at the hearing currently scheduled to take place on Wednesday 19 October.

Yours sincerely,

Sir Jon Cunliffe
Deputy Governor, Financial Stability

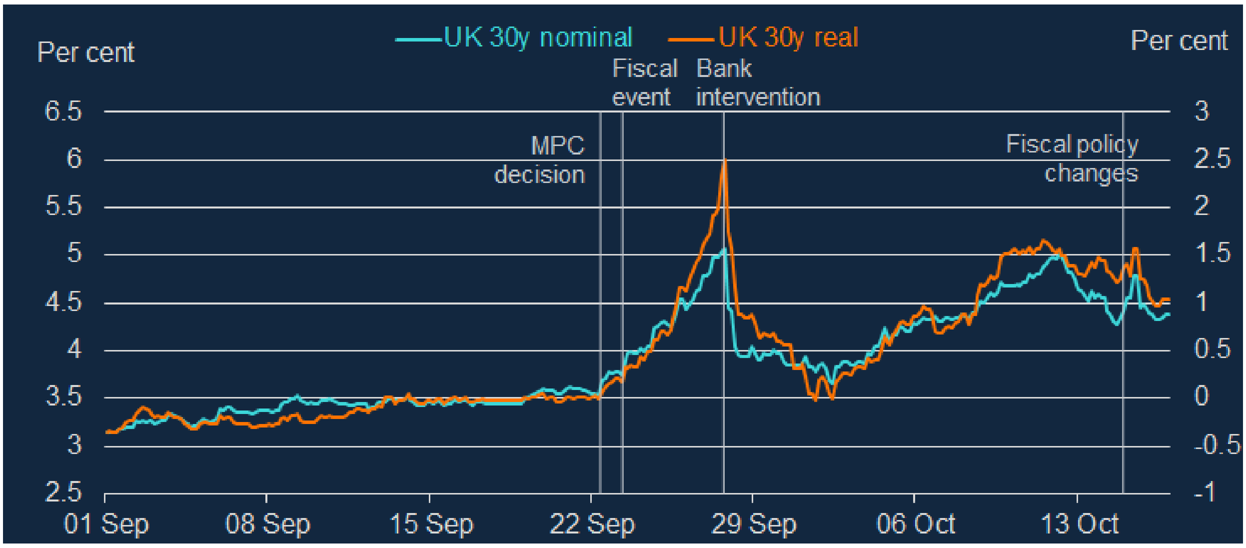
Annex – Developments in financial markets since previous letter dated 5 October

On Thursday 6 October, the day after my previous letter, gilt yields rose materially relative to other international government bonds. There was significant volatility in both real and nominal gilt yields and erratic moves in implied breakeven inflation rates. The US Dollar rose against most other currencies.

On Friday 7 October there was only a modest rise in gilt yields by the end of the day, but continued significant volatility during the day, particularly for index-linked gilts. Nominal gilt yields were less volatile than index-linked gilt yields and accordingly breakeven inflation rates were once again erratic, moving within a large 23 basis point intra-day range at the 30 year maturity, with much of that coming in the afternoon.

On Monday 10 October, in line with its financial stability objective, the Bank announced the additional measures described above. That morning there was a significant increase in gilt yields – by a larger amount than for other international government bonds – amidst reports of LDI funds and other investors selling or attempting to sell gilts, as shown in **Figure 1** above. The rise in gilt yields was most pronounced for inflation-linked bonds which were not eligible for sale in the Bank's auctions. The Bank received reports of heavy selling of index-linked gilts in the market, which led 30 year real yields (the return on index-linked gilts) to rise 63 basis points on 10 October, as shown in **Figure 2**.

Figure 2: Cumulative change in nominal and real gilt yields since 1 September



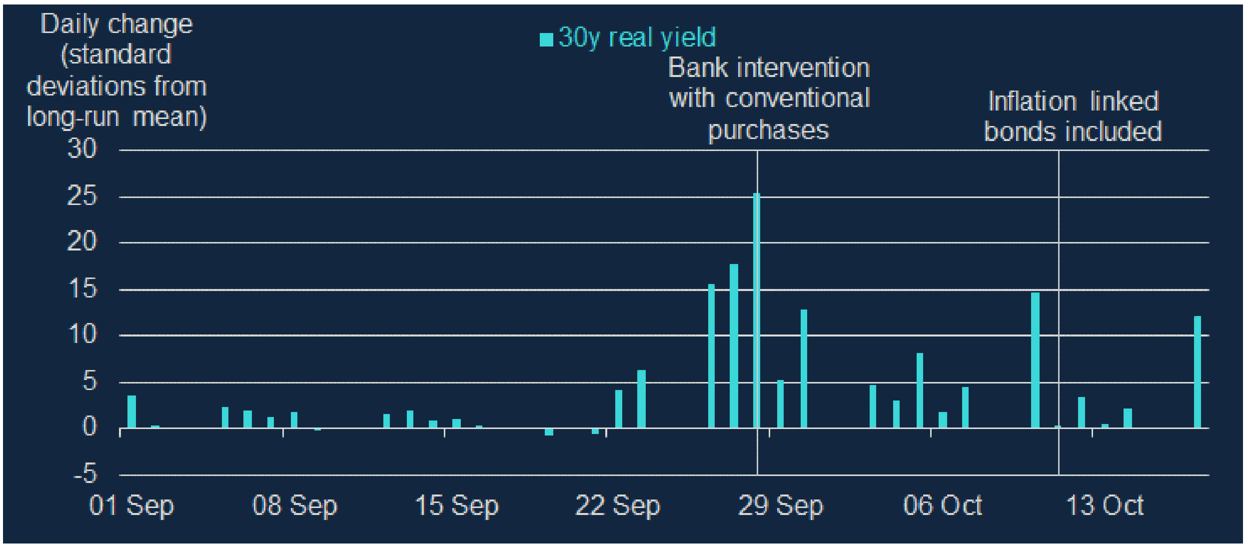
'Fiscal policy changes' denotes cancellation of planned corporation tax cut on 14 October.

Source: Bloomberg, Bank calculations

Market moves after the Tuesday 11 October announcement and throughout the day – including after the Bank's first index-linked gilt auctions – were more muted than the day before. The inaugural inflation-linked gilt market auction led to the Bank purchasing £1.9

billion of index-linked gilts of the £2.4 billion offered. **Figure 3** shows that volatility in the inflation-linked gilt market was lower on Tuesday, and trading conditions were smoother than the preceding day. After the UK markets had closed on Tuesday, the Governor spoke at a public event in the US. He reiterated that the gilt market operations would end on Friday 14 October.

Figure 3: Daily changes in 30 year real gilt yields since 1 September



Source: Bloomberg, Bank calculations

On the morning of Wednesday 12 October, the Bank published a statement re-confirming that the temporary gilt market operations would end on 14 October. After rising initially in the morning, nominal and real gilt yields fell through both of Wednesday afternoon's auctions. However, the Bank's contacts continued to describe UK rates trading conditions as very difficult and liquidity was stretched. Gilt futures order books remained very thin and gilt bid-offer spreads remained elevated across all maturities.

On Thursday 13 October, gilt yields fell and there was significant volatility amidst unconfirmed press reports that UK government officials were working on changes to government fiscal policy. US CPI inflation data released at 1:30pm was higher than markets expected. The 30 year nominal gilt yield closed the day around 26 basis points lower, whilst 30 year real yields rose around 5 basis points. 30 year nominal and real yields closed a few basis points lower than at the end of trading on Monday.

Friday 14 October marked the Bank's final gilt market operations. Over the course of the operations, the Bank purchased a total of £12.1 billion of conventional gilts and £7.2 billion of index-linked gilts. The fall in gilt yields that had begun on Thursday continued on Friday morning. There was continued focus on political developments and prospects for changes to government fiscal policy. In the middle of the day the 30 year nominal yield had fallen to a level around 70 basis points lower than its highest point that week (on 12 October). The Prime Minister appointed a new Chancellor and held a press conference that afternoon, which came with the confirmation of the cancellation of a planned corporation tax cut. The fall in yields sharply reversed later that day and yields closed higher than the day before.

Yesterday (Monday 17 October) saw the announcement of further significant changes to government fiscal policy, as well as confirmation that the Bank's gilt purchase operations had ended. GBP rose against all other currencies, with the trade-weighted GBP index around 1.4% higher than the day before by market close. Nominal and real gilt yields fall sharply. Compared to 22 September, this leaves 30 year gilt yields 60 basis points higher, which compares to 35 basis points for the US and 42 basis points for Germany.