Models of Central Banking and the Organisation of the Bank of England

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National Institute of Economic and Social Research

NIESR Policy Paper 38
Date: 21 November 2022

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Keywords

Central banking, monetary policy, financial stability, government debt management.

JEL classifications

E52, E58, E63, G28, H63.

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This paper was first published in November 2022

Abstract

In the quarter-century since the Bank of England Monetary Policy Committee was established, the various financial operations of the Bank of England and of the Government have become more inter-dependent, as a result of the financial crisis, quantitative easing, the response to Covid, and uncertainties about fiscal policy. The separation of decision making among the various bodies within the Bank of England – the Monetary Policy Committee, the Financial Policy Committee, and the executive management of the Bank - has become anomalous. In practice, important decisions involving very large financial risks have been made by the executive management of the Bank, at meetings whose minutes have not been published, and there has sometimes been a lack of transparency. This applies in particular to the decision after the global financial crisis to avoid taking credit risk as far as possible, and instead, through quantitative easing, to take enormous interest rate risks on the public sector's behalf. The paper advocates a radical simplification of the Bank of England's management structure in the interests of more efficient decision making and greater transparency.

Contents

Acknowledgements

This paper owes a great deal to the discussion at the NIESR symposium on 'The MPC at 25' held on 30th March 2022, to useful conversations with Jagjit Chadha, Richhild Moessner, Philip Turner, and Tim Young, and to an enlightening discussion of Australia's experience with yield curve control with Andrew Gaffney. They are exempt from blame for errors of fact or interpretation in the paper. Some of the ideas in the paper were discussed at the QE to QT Workshop at NIESR on 30th September 2022.

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Before the Global Financial Crisis

After the general decline of inflation in the 1980s, a new model of central banking emerged. The new model central bank was publicly owned, and its leading executives were appointed by the government, but it could act independently in managing monetary policy in pursuit of price stability. This model was embodied in the Bank of England Act 1998. The Bank of England at that time carried out a number of functions which were initially regarded as largely separate.

Monetary policy was the function that attracted the most attention. Its overriding objective was price stability, defined by an inflation target determined annually by the government. The main instrument was the level of short-term interest rates; intervention in foreign exchange markets was also allowed but rarely if ever used, floating exchange rates being the norm. The central bank determined short-term interest rates by supplying or withdrawing cash, in the form of deposits in the central bank, using primarily open-market operations in government security repos. Decisions about the desirable level of short-term interest rates were made by a Monetary Policy Committee (MPC), based on forecasts of inflation. These decisions were made independently of the government, which was told, not asked, about them (a Treasury representative attended the relevant meetings, but could not vote). The minutes of the meetings at which the decisions were made were published, so that the reasons for the decisions could be made clear.

The instructions issued to the trading staff of the Bank of England in order to implement a policy decision were simple and non-contingent. Indeed, 'trading' by central banks consisted largely of collecting bids and offers to buy and sell assets of specified kinds at pre-announced prices (foreign exchange market intervention and the management of international reserves were possible exceptions, but, as already noted, the former was largely eschewed). So, at least as regards monetary policy, the relationship between the central bank and market participants could be rather distant: the central bank informed the market, and everyone else, about its policy decisions, by electronic means; in making its policy decisions it took account of developments in financial markets. The MPC met on pre-scheduled occasions; unscheduled meetings held in response to financial market or other developments were very rare.

Financial stability was another central bank responsibility. It was not as clearly defined as monetary stability, and there were no precisely specified objectives analogous to inflation targets. However, the objectives clearly included the avoidance of financial crises, and the available policy instruments included the design of payment and settlement systems so as to prevent financial distress spreading through chains of failed payments. The objectives also included the management of crises if they occurred. The policy instruments available to the Bank of England for crisis management included the power to lend against good collateral, but they did not include the power to recapitalise insolvent or potentially insolvent banks or other financial companies, except in small amounts in cases thought nevertheless to be of systemic importance. Provision of equity capital in significant amounts required government action.

In the history of central banking, government debt management has been inseparable from monetary policy at times when the government's need for financing was very large. Above all, the notion of central bank independence was always among the first casualties of a major war. After the liberalisation of financial markets in the 1980s and 1990s and the recognition of the merits of fiscal prudence, and with the prospect of enduring peace, it became possible for governments to finance themselves without the close collaboration of their central banks.

Government debt management agencies were set up, separate from central banks, including in the U.K. Close co-ordination of monetary policy and debt management ceased to be necessary.

Relationships between bank supervision and central banking vary from country to country and are not transparent in every case. In the United States, the central bank is one among several supervisory agencies; in the euro area, the European Central Bank supervises the largest banks, but there are also national supervisory agencies: in Germany the supervisory agency is part of the government, but the central bank is also involved, and in France the central bank governor chairs the supervisory agency. In the United Kingdom, the central bank was responsible for banking supervision until 1998, and again from 2013.

The Global Financial Crisis and its Aftermath

The global financial crisis demonstrated that the earlier arrangements for maintaining financial stability had been inadequate. Commercial and investment banks, many of which were too big to fail, had been managed recklessly, despite official supervision. This had made the financial system unstable. The latent instability had not been much noticed by central banks or governments and had not been addressed. The Bank of England, concerned about the moral hazard of lending even to a bank which was thought to be solvent, failed to act as lender of last resort to Northern Rock until a panic had developed and turned into a bank run, thereby provoking general uncertainty about central banks' intentions.[1] It thus failed to protect financial stability.[2]

The bank rescues which followed the failure of Lehman Brothers in New York in September 2008 were unavoidable in the circumstances, but they created a moral hazard that could not be left unattended. The rules of banking had to change. There was perhaps a choice to be made between strengthening the private governance of banks by changing company law, and intensifying official supervision, which might be called public governance.[3] The choice, which in the United Kingdom was barely discussed in public, was for the latter.

The proposed new regulations (Basel 3), released in December 2009, incorporated higher minimum requirements for both capital and liquidity. In particular, a new minimum liquidity coverage ratio would require commercial banks to hold enough defined high quality liquid assets (HQLA) to enable them to survive a month in which they had no inflows and suffered maximum plausible outflows of cash. HQLA included both balances at central banks and government securities. The proposals turned into rules, with little modification. The banks

[1] The official press release of 14th September 2007 said that the Financial Services Authority 'judges that Northern Rock is solvent, exceeds its regulatory capital requirement and has a good quality loan book' (Bank of England 2007).
[2] Darling (2011, ch 1). James (2020, p 451) suggests that if the Bank of England had not been independent, 'it is conceivable that the Treasury might have handled the initial response to the global financial crisis in 2007 more skilfully than the Bank, and in particular pressed the Bank to undertake the extensive liquidity provision undertaken by both the Fed and the ECB.'
[3] Goodhart and Lastra (2020) put forward an interesting proposal for strengthening private governance: that banks and systemically-important financial institutions would have two classes of shareholders – outsiders, who would have limited liability and no influence on the running of the firm, and limited information about it, and insiders, who would have greater liability – perhaps unlimited – and both the information and the capacity to influence the running of the firm. This arrangement would align liability to power better than the standard limited liability shareholder model.

were required to achieve a minimum ratio of HQLA to maximum plausible outflows of 80 per cent by 1st October 2015 and 100 per cent by 1st January 2018.[4]

Monetary Policy During and After the Financial Crisis

Procedure

The Bank of England Monetary Policy Committee cut Bank rate from 5 per cent to 4½ per cent on 8th October 2008, at a special meeting after the Lehman failure, as part of an internationally co-ordinated interest rate reduction. It cut again, to 3 per cent on 6th November, and continued cutting in stages. It reached 1 per cent on 5th February 2009.[5]

Early in 2009, the Bank of England and the Treasury discussed the possibility of an asset purchase programme as an additional means of easing monetary policy, and on 19th January 2009, the Chancellor announced to Parliament a scheme for the Bank of England to buy privately-issued securities, and said that 'the Bank of England will ensure that the total amount of money in the economy does not increase.'[6] The latter statement meant that the asset purchases were to be financed by the issue of Treasury bills, or by other operations by the Debt Management Office. It is not clear from the MPC minutes whether the non-executive members of the MPC took part in the negotiation. The Bank of England Asset Purchase Facility Ltd (APF), a subsidiary company of the Bank of England which was set up for this purpose, bought about £1 billion of commercial paper in February – March 2009, financed by the issue of Treasury bills.[7] The Treasury agreed to indemnify the APF against financial losses; equally it was to benefit from profits. The Bank thus had 'no economic interest' in the APF.[8] Operations were to be subject to the Treasury's approval.

The MPC was invited at its February meeting to endorse a greatly-modified asset purchase programme, and to ask for the Treasury's agreement to introduce it. In the modified version, government securities were eligible for purchase, as well as privately-issued ones, and the assets would be paid for by crediting the reserve balances of the commercial banks, rather than Treasury bill issues. The Chancellor consented to the modifications.[9]

At its March 2009 meeting, the MPC agreed that it needed to ease policy further. It debated whether ½ per cent was the lowest Bank rate level that it could sustain without affecting the profitability, and hence the lending capacity, of banks and building societies, which were in some cases contractually obliged to pass on Bank rate cuts to their borrowing customers. Moreover, it was concerned that a sustained period of very low interest rates could impair the functioning of money markets. It cut Bank rate to ½ per cent, and, wishing to ease monetary

[4] Basel Committee on Banking Supervision (2009).
[5] In 2007, Martin Feldstein criticised the Federal Reserve, and by implication other central banks also, for failing to cut interest rates promptly when credit markets were drying up (Feldstein 2007).
[6] Hansard, vol 486 part 15, cols 483 - 486, 19th January 2009.
[7] Source: Bank of England interactive database, variable YWWB98O.
[8] Bean (2009). The indemnity is described in the Asset Purchase Facility Annual Reports (e.g. Bank of England 2021).
[9] Bank of England (2009a, paragraph 39), Darling (2009).

policy by more than that, agreed to an initial purchase of up to £75 billion of assets on the modified basis. [10]

The minutes record that 'The Committee noted that, in so far as purchases of private sector assets fell short of the £75 billion target, the Bank of England would buy gilts to fulfil the overall quantity of purchases.'[11] The use of the word 'noted' implies that this decision was taken not by the MPC but by the Bank executives. In practice, nearly all of the Bank's bond purchases thereafter were of government securities. Thus the asset purchase scheme that was implemented was very different from the one that the Chancellor had described to Parliament in January. It appeared that the executive managers of the Bank preferred government securities to privately-issued ones: for example Deputy Governor Charles Bean appeared averse to taking credit risk on to the public sector's balance sheet, deeming it to be 'more akin to a fiscal operation.' The doctrine that central banks should confine their assets to government securities was promoted by the late Marvin Goodfriend, on essentially the same grounds: buying private securities would constitute an act of fiscal policy, for which a central bank lacked the necessary legitimacy. [12]

Accordingly, in implementing its successive programmes of QE over the ensuing dozen years, the Bank of England bought very large amounts of government securities. In doing so, it took enormous amounts of interest rate risk onto the public sector's balance sheet, which were quantified in the APF's published annual reports. Decisions as to which maturities of gilts should be purchased had a large effect on the amount of interest rate risk, but the MPC's discussion of these decisions was limited in scope and unrelated to financial risk. The minutes of the March 2009 meeting record that:

> 'The Committee noted that these asset purchases would be most effective if they were purchased from the domestic non-bank financial sector rather than the banks. Domestic non-bank institutions were likely to use some of the proceeds from asset sales to buy other assets. The Committee noted that this preference for buying assets from institutions other than banks meant that the Bank would focus its purchases on medium and long maturities, because short-maturity gilts were more likely to be held by banks and overseas central banks. The Bank would also avoid the purchase of very long maturity gilts, given the structure of supply and demand in those markets, and in particular the demand from some institutions such as pension funds to hold those instruments to hedge their liabilities.'[13]

From August 2009, when the MPC decided on a further £50 billion of asset purchases, the Bank did start buying the longest maturity gilts. This appears to have been something the MPC was told rather than asked about: 'The Committee noted that the increase in the scale of its asset purchase programme required an increase in the range of maturities of government debt that the Bank was willing to acquire to include all conventional gilts with a minimum residual maturity of greater than three years.'[14]

In October 2011, when it decided on a new round of QE, the MPC agreed that purchases would be 'spread evenly across residual maturities over three years.'[15] The word 'evenly' could

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[10] Bank of England (2009b, paragraphs 27, 44 and 45).
[11] Bank of England (2009b, paragraph 45).
[12] Bean (2009), Goodfriend (2011).
[13] Bank of England (2009b, paragraph 42).
[14] Bank of England (2009c, paragraph 35).
[15] Bank of England (2011, paragraph 36).

be interpreted in several ways – e.g., as meaning an equal amount maturing in each year after the third year, or an equal percentage of the amount of gilts outstanding in each year after the third year. The lack of precision in the minutes suggests that there was a lack of precision in the discussion. In practice, the purchases were distributed in equal amounts, by purchase value, across three pre-specified maturity brackets: 3 – 10 years, 10 – 25 years, and over 25 years. Index-linked gilts were not included in the purchases. The brackets were changed in February 2012, to 3 – 7 years, 7 – 15 years, and over 15 years. This implied a shortening of the average maturity of purchases. The MPC minutes for February 2012 record no discussion of the change, though it was announced on the day of the meeting. [16]

QE supplemented other schemes to stimulate bank credit, such as government provision of loan insurance and credit guarantees. The Special Liquidity Scheme (SLS), which the Bank had introduced in April 2008 on the urging of the Chancellor of the Exchequer, offered banks the opportunity to swap commercial assets for Treasury bills. Under the scheme, Treasury bills would be loaned to banks against the collateral of commercial loans: the final drawdown date was originally set at 21st October 2008, but was extended to 30th January 2009 in the turmoil following the Lehman failure. The Treasury indemnified the Bank of England against any losses. At the peak, £185 billion of Treasury bills were lent. All the loans were repaid by early 2012. [17]

The MPC appears to have been kept at some distance from the Bank's crisis management measures. Some of its members were not even told of the emergency liquidity assistance provided to Halifax Bank of Scotland and the Royal Bank of Scotland at the time when it occurred in 2008. The decision to exclude the MPC from decision-making about crisis management seems to have been based on clause 2(1) of the Bank of England Act 1998, according to which the court of directors shall manage the Bank's affairs, other than the formulation of monetary policy. The MPC is responsible for 'formulating monetary policy.'[18] In excluding the MPC from crisis management, the Bank of England's executives embraced a narrow interpretation of the phrase 'formulating monetary policy.' There is a stark contrast in this respect between the MPC and the Federal Open Market Committee of the Federal Reserve, which had a central role in managing the crisis of 2008.

Some MPC members appear to have challenged the Bank's interpretation of their role. The minutes of the June 2012 meeting record that:

> 'Some members suggested further consideration of whether bank liquidity requirements might in effect be operating to increase the demand for reserves, offsetting to some extent the impact on the economy of the Bank's increased supply of reserves as a result of the MPC's asset purchase programme... Some members expressed a wish for the MPC to consider additional policy tools.'[19]

At the same meeting, '…the Governor informed the Committee that initial discussions were underway with the Treasury on possible measures to ease banks' funding costs and enhance their ability to lend.'[20] Shortly afterwards, the Funding For Lending scheme was announced, which enabled banks to borrow liquid Treasury bills, with both the price and the quantity

[16] Mc Laren, Banerjee and Latto (2014) record the change of maturity brackets.
[17] Bank of England (2008, paragraph 2), Darling (2011, p 94), John, Roberts and Weeken (2012).
[18] Plenderleith (2012, paragraph 225).
[19] Bank of England (2012, paragraphs 28 and 31). The challenge may have been inspired by the actions of the European Central Bank, which had provided nearly €1 trillion in three-year loans to banks in the euro area in early 2012.
[20] Bank of England (2012, paragraph 31).

provided linked to individual banks' performance in lending to the U.K. real economy. Peak usage was £69 billion (at the end of 2015). The activation of the Extended Collateral Term Repo Facility was also announced, and the MPC's minutes carefully recorded each month that the Committee had been consulted on the terms of the preceding month's ECTR auction.[21] Moreover the MPC was consulted about, and recorded as having 'supported', the extension of Funding For Lending announced in April 2013.[22] The language reporting the decision in August 2016 to establish the Term Funding Scheme was ambiguous as to the authority for decisions about lending schemes: the minutes of the meeting said that '…the MPC considered the establishment of a Term Funding Scheme (TFS) that would provide funding for banks at interest rates close to Bank Rate', and called it a 'monetary policy measure'.[23]

The extent of the MPC's authority must have remained contentious, because a new document was agreed and published in 2017 (and revised in June 2018): known as a 'concordat', it sets out the demarcation of responsibilities between the MPC and the Bank of England's executive management. It limits the MPC's scope for action tortuously but severely:

> … 'the MPC has decision-making authority, at the margin, in respect of the deployment of all instruments and facilities that are varied over time with the primary intention of affecting overall monetary conditions in order to achieve the inflation target. At the present juncture [June 2018], that includes variations in Bank Rate, the volume of asset purchases financed by the issue of bank reserves and foreign exchange intervention. In the event that some key parameters of the SMF [Sterling Monetary Framework] are varied with the primary intent of affecting monetary conditions, then their control will pass to the MPC. The MPC will also approve the selection of schemes and structures primarily designed to deliver monetary policy aims…'[24]

In other words, in deciding what to do, the MPC can choose only from a menu selected for it by the Bank's executive management.[25] It follows that those who accuse the Bank of over-reliance on the particular form of QE that was chosen should direct their criticisms more than proportionately at the executive members of the MPC, and less so at the others.[26]

The effectiveness of the quantitative easing programme as conceived by the Bank of England's executive management, mainly confined to purchases of gilts, depended on the co-operation of the Debt Management Office: the Chancellor concurred in his letter to the Governor of 3rd March 2009 when he wrote 'I recognise the importance of ensuring that debt management policy is consistent with the aims of monetary policy.'[27] This statement was to have momentous consequences.

The post-mortem which followed the crisis affected the Bank of England in two other important ways. First, it concluded that the function of banking supervision should be returned to the Bank of England, from which it had been removed in 1998.

Second, it concluded that a macro-prudential policy was needed. A Financial Policy Committee was accordingly set up in 2013: it 'identifies, monitors and takes action to remove or reduce

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[21] On the Funding For Lending scheme, see Churm, Radia, Leake, Srinivasan and Whisker (2012).
[22] Bank of England (2013, paragraph 26).
[23] Bank of England (2016, paragraph 31).
[24] Bank of England (2018a)
[25] It should be noted that the Bank's executive management is not a body defined in statute.
[26] House of Lords Economic Affairs Committee (2021).
[27] Darling (2009).

systemic risks with a view to protecting and enhancing the resilience of the UK financial system. The FPC also has a secondary objective to support the economic policy of the Government.'[28] It has two sets of powers – powers of direction and power of recommendation. It can direct regulators to take action on a number of specific policy tools, and can make recommendations to anyone to reduce risks to financial stability. Thus it can determine the general level of banks' minimum capital ratios (as opposed to the minimum ratios required of individual banks, which was a matter for bank supervisors), and how they might be varied through time; and it can make rules about such things as loan-to-value ratios of mortgages.

Just as the Bank's executive management reached a 'concordat' with the MPC, so it also reached one with the FPC, which similarly confines the FPC to having the right to be informed about, and comment on, the design and operation of the Bank's liquidity insurance facilities, and to be consulted on liquidity insurance operations, if necessary at short notice. The FPC cannot make its own proposals for the design of market-maker of last resort operations intended to support market liquidity.[29]

Substance

This section sets out an interpretation of monetary developments and monetary policy after the financial crisis. It is no doubt contentious. My reason for rehearsing it is that the MPC, had they shared it, would have been unable to decide for themselves how to act on it.

The dominant feature of financial markets in the aftermath of the financial crisis was a global scramble for safe and liquid assets.[30] Commercial banks, other financial and non-financial companies, and central banks themselves all participated in it.

Commercial banks in aggregate had held meagre liquid assets before the financial crisis. The proposal for a minimum liquidity coverage ratio was published by the Basel Committee for Banking Supervision in December 2009.[31] Many commercial banks began from a position of having far lower liquid asset ratios than they would need for regulatory purposes, and their access to wholesale deposits was impaired. They needed to accumulate liquid assets quickly.[32] By December 2015, the scramble had ended: the Bank of England said that 'Most of the largest UK firms have reported that they already meet the full end-point 100 per cent requirement', and at the end of January 2016, the aggregate LCR of UK banks was 117.57 per cent.[33]

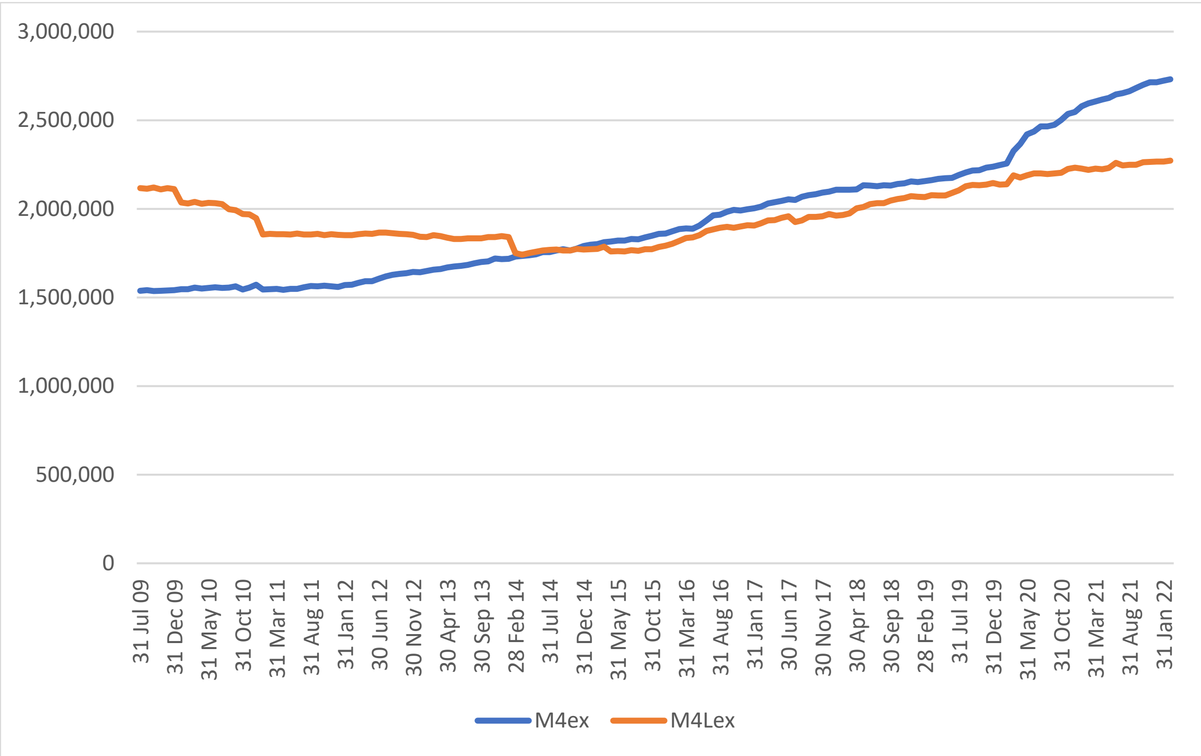
The need for banks to build up their liquidity coverage ratios helps to explain why bank credit contracted by 17.7 per cent between the end of July 2009 and the end of March 2014 while

[28] From Bank of England website: https://www.bankofengland.co.uk/financial-stability . The FPC was established under the Bank of England Act 1998 through amendments made in the Financial Services Act 2012.
[29] 'The FPC and the Bank's liquidity insurance operations', updated June 2018.
[30] Allen and Moessner (2012).
[31] Basel Committee on Banking Supervision (2009).
[32] Lloyds Banking Group estimated its LCR at the end of 2010 at 71 per cent (Lloyds Banking Group, '2010 results: news release', p 23.) Other domestic banks do not appear to have reported their LCRs as at that date. For UK banks as a whole, the ratio of reserve balances in the Bank of England plus government securities to deposits increased from 7.3 per cent at the end of 2010 to 13.8 per cent at the end of 2015 (source: Bank of England, author's calculations). This suggests that Lloyds' LCR at the end of 2010 was above average.
[33] Bank of England (2015, pp 40 – 46, and 2018c, chart B5).

deposits grew. In 2015, when the banks were close to securing the liquidity they needed, credit accelerated sharply, though it grew more slowly than bank deposits (Figure 1).

It is true that liquidity requirements were not the only factor behind the contraction of credit between 2010 and 2014: commercial banks were also under regulatory pressure to build up capital ratios. Nonetheless, banks' need to meet the liquidity coverage ratio requirement must have been an important factor retarding credit growth in the period up to 2015.

Figure 1: M4 excluding deposits of intermediate financial companies, and M4 lending excluding lending to intermediate financial companies (£ millions, seasonally adjusted).



Source: Bank of England. Deposits of, and lending to, intermediate financial companies are excluded from the general measures of money and credit because they were thought by the Bank of England to bear little relation to developments in the economy at large.

The Basel 3 liquidity coverage requirement required banks to hold liquid assets against loan commitments and back-up credit facilities provided to clients, as well as against liabilities. Such facilities accordingly became more expensive and many financial and non-financial corporate clients preferred to hold liquid assets themselves. Accordingly, they too joined in the scramble for liquid assets. And financial companies, pressed by regulators to use clearing houses to settle market transactions, needed to hold additional reserves of high-quality liquid assets to protect themselves against the risk of increases in market price volatility leading to surges in demand from the clearing houses for additional high-quality collateral against their risk positions.

There had been a global surge of demand for dollar-denominated liquid assets during the financial crisis, which had been relieved only by the prompt and courageous action of the Federal Reserve in creating an extensive network of swap lines and lending large amounts of dollars to foreign central banks to enable the latter to relieve shortages of dollars in their own territories. Many of those foreign central banks, and their governments, realised that their own dollar reserves would have been insufficient to meet the demand had the Fed not ridden to the rescue, and, fearing that in a future crisis the Fed might not help them, they too joined the scramble as they embarked on programmes of accumulating liquid reserves.[34]

Quantitative easing, in the form of central bank purchases of government securities, did little to alleviate the effects of the scramble for liquidity. Both reserve balances at central banks and government securities counted as high quality liquid assets for bank regulatory purposes and exchanging one for the other did not alter the total of HQLA. By contrast, the Special Liquidity Scheme did much more alleviate the effects of the scramble, because it provided HQLA in the form of Treasury bills in exchange for commercial assets. However, the SLS ended in 2012, while the scramble was still in progress. The MPC was not involved in the decisions, first to introduce the SLS in 2008 and, second, not to extend the duration of the scheme beyond 2012, even though the SLS was highly relevant for the objectives of monetary policy.

On this analysis, a policy which aimed at ensuring a fuller supply of HQLA would have been better adapted to the needs of the economic situation in 2010 – 2015 than was quantitative easing. Such a policy might have included prolonging the SLS.

Monetary Policy During and After the Coronavirus Pandemic

Procedure

The first financial manifestation of the coronavirus pandemic was a large global wave of sales of government securities in March 2020, after it had become clear that the pandemic would lead to widespread lockdowns and economic dislocation, and to enlarged government deficits. In the United Kingdom, the gilt-edged market weakened sharply on 18th March, when the recorded 20-year yield rose from 1.05 per cent to 1.36 per cent, and ceased to function on the 19th after a gilt auction. The Debt Management Office feared that it would be unable to sell as many gilts as it needed to without extraordinary support.[35]

The Bank of England Monetary Policy Committee held an emergency meeting that same day. The minutes record that it was convened ‘to consider the response of monetary policy to the economic shock from Covid-19’, but it is clear from a subsequent interview with the Chief Executive Officer of the DMO in *The Times* that the immediate trigger was the breakdown in the gilt market.[36] The MPC decided on its first quantitative easing operation of 2020: it resolved to buy £200 billion of gilts. Its stated objective was to ‘improve the functioning of the gilt market and help to counteract a tightening of monetary and financial conditions that would put at risk the MPC’s objectives’.[37] It later characterised the pursuit of the first of these

[34] Allen and Moessner (2010), Allen (2013, ch 13.4).
[35] Aldrick (2020).
[36] Bank of England (2020a, paragraph 1), Aldrick (2020).
[37] Bank of England (2020 a and b). That day, 18th March, was the third day of Andrew Bailey’s term of office as Governor of the Bank of England. Truly a baptism of fire.

objectives as acting as market maker of last resort.[38] Other central banks, notably the Federal Reserve and the European Central Bank, also undertook further QE.

Substance

The functioning of the gilt market was restored by the presence of the Bank of England as a large and regular buyer. Later, the MPC decided on further tranches of QE amounting to another £250 billion. This took the total since 2009 to £895 billion: £875 billion of gilts and £20 billion of privately-issued securities. The programme was completed in December 2021.

The MPC did not, however, make its objectives clear. Specifically, it did not explain in what sense it intended to 'improve the functioning of the gilt market', or what it intended to achieve as a market maker of last resort. The functions of market makers are to facilitate trading by quoting bid and offer prices, and to achieve price discovery by matching bids and offers over time. Market makers buy and sell, but the Bank of England bought and bought. The only possible interpretation of its actions was that notwithstanding its assertions, it did not act as a market maker at all, in any meaningful sense. It pursued a loose form of yield curve control, in which it did not announce its objectives for bond yields, but nevertheless suppressed the market forces that would otherwise have caused yields to rise.[39] It clearly did not need to stimulate monetary growth, as it had done in 2009 – 2012 when the banking system had been contracting: by 2020 commercial banks had ample liquid assets, and monetary growth accelerated sharply in 2020 – 2021 (Figure 1): it reached 15 per cent in the year to the end of February 2021.[40]

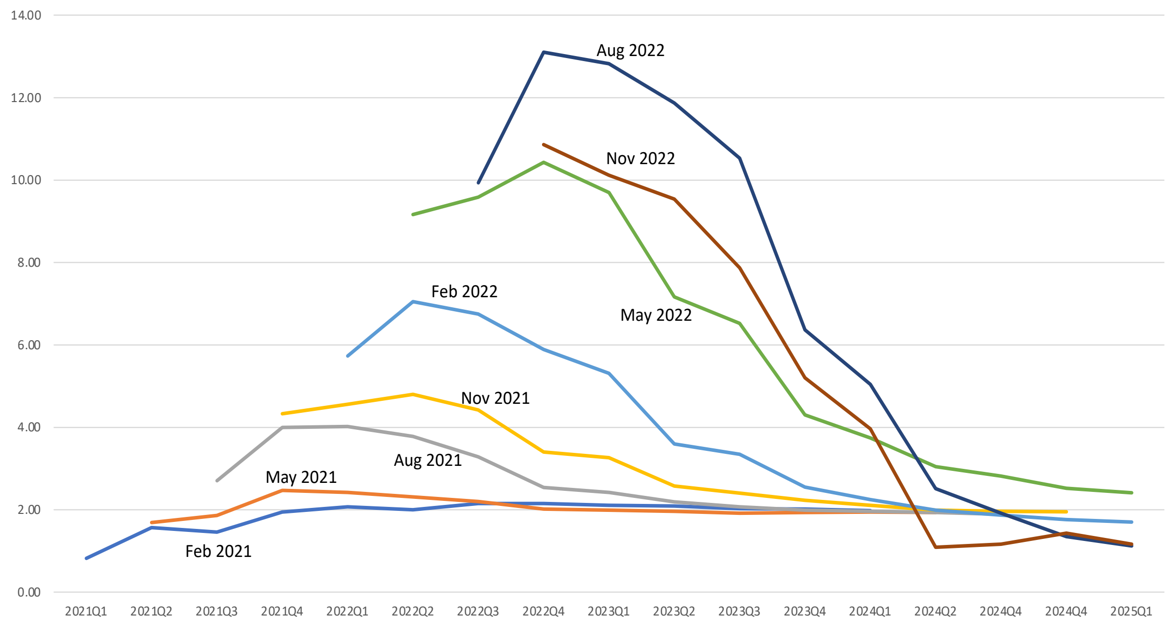
The gilt purchases undertaken in successive QE programmes had a very large effect on the maturity structure of the government debt. The £875 billion of gilts that the Bank of England had bought from the market by the end of 2021 were replaced by reserve balances of the commercial banks, on which interest is paid at Bank rate. The interest is the responsibility of the Treasury, under the terms of the indemnity that it provided to the Bank. The effective shortening of the maturity structure of government debt greatly increased the Treasury's exposure to fluctuations in short-term interest rates and seriously aggravated risks to the sustainability of the public finances at a time of rising interest rates.[41] It is very surprising that the Treasury agreed to requests from the MPC to indemnify the Bank for such large amounts of QE.

Some commentators accused the MPC of conniving in a covert policy of inflating away government debt. It is true that inflation rose sharply after the spring of 2021. But the MPC did not foresee it: their forecasting was very poor and the forecasts of inflation in the year 2022 had to be progressively revised upwards (Figure 2). And it is inconceivable that the new

[38] See for example Hauser (2021).
[39] It did a disservice by describing the episode as a 'dash for cash', thus overlooking the possibility that the main issue in the minds of the sellers of bonds was that the prevailing level of yields was unsustainably low.
[40] The Bank of Japan has openly embraced yield curve control (Bank of Japan 2016). The Reserve Bank of Australia also embraced it in March 2020, but gave it up in November 2021 (Lucas and Wright 2022). At the beginning of 2020, U.K. commercial banks held about 1.5 times the minimum amount of HQLA required by the Liquidity Coverage Ratio Requirement (Bank of England 2020c p 46). 'Monetary growth' relates to M4 excluding the deposits of intermediate financial companies. Source: Bank of England.
[41] Office for Budget Responsibility (2021, ch 4). See also Deutsche Bundesbank (2021) for a perspective from another country.

Governor, during what was his first week in office, would or could have induced the other eight members of the MPC to set aside their statutory price stability objective and to pursue a different, undeclared, objective. There is no reason to doubt the MPC's integrity.

Figure 2 Bank of England mean inflation forecasts, February 2021 – August 2022 (%pa)



Source: Bank of England Monetary Policy Reports, February 2021 – November 2022.

The inflation forecast failures, particularly post-February 2022, can partly be attributed to bad luck. Nobody could reasonably have been expected to foresee the Russian invasion of Ukraine and its consequences. However the MPC underestimated the risk that inflation would surge when pent-up demand was released after the pandemic after a long period of ultra-expansionary monetary policy, including a very large money-financed budget deficit. The failure was not confined to the Bank of England: other leading central banks made the same mistake. It raises serious and difficult questions about the role of the large number of economists employed in central banks, and the way in which they are organised. The questions are very important for the organisation of central banks, but answering them is beyond the scope of this paper.[42]

Planning the Unwinding of QE

There are good reasons for unwinding QE – in other words, for undertaking quantitative tightening, or QT. One is that the drastic shortening of the maturity of government debt has heightened the risks to the sustainability of the public finances, as noted above. The longer the APF remains in existence, the longer the heightened risks persist. Another reason relates to democratic accountability. The control of public spending depends on the Treasury, which is

[42] Turner's (2021) comments on 'house views' and their durability are pertinent.

directly answerable to Parliament, being in a position to authorise all spending decisions. Asset purchases by the Bank of England are, in a sense, public spending decisions, because the public finances ultimately bear the risks that they carry, but not being subject to Treasury authorisation, they are an exception to the general rule. The exception is tolerable if the Bank's balance sheet is small, but it becomes increasingly less so as the Bank's balance sheet grows.[43]

Nevertheless, the Bank of England did not begin QT until 2022. In August 2021 the MPC outlined its intentions. It said it intended to cease reinvesting the proceeds of gilts maturing in its portfolio as soon as Bank rate reached 0.5 per cent, and that it 'envisages considering beginning the process of actively selling assets only once Bank Rate has risen to at least 1 per cent.'[44] Bank rate reached 0.5 per cent in February 2022 and the Bank accordingly ceased reinvestments.

In January 2022, after the QE programme had been completed, the Bank's gilt portfolio had a long average maturity (13 years) and a half-life of about eight years (these are much longer than the comparable figures for the Federal Reserve's QE portfolio). If it were concluded that the new equilibrium level of banks' reserve balances was, say, £300 billion, and if it had been decided to get reserve balances down from their present level of £950 billion passively, by not reinvesting the proceeds of maturing assets, the process would have taken 28 years: it would have been completed in 2050.

The Bank therefore needed to design and execute a policy of active sales. The language of the MPC's August 2021 statement about active sales was extremely cautious and conveyed no sense of urgency. Its statement in May 2022, when Bank rate rose to 1 per cent, that it would now 'consider beginning' active sales, and reaffirming 'that the decision to commence sales will depend on economic circumstances including market conditions at the time, and that sales would be expected to be conducted in a gradual and predictable manner so as not to disrupt the functioning of financial markets' was worthy of *'Yes, Minister.'* Nevertheless in August 2022, the Bank did produce a plan, for implementation subject to the final approval of the MPC at its September meeting and to 'economic and market conditions being judged appropriate.'[45] The Bank said it aimed to reduce the gilt holdings in APF by about £80 billion in the first year of the programme; after deducting forthcoming redemption receipts, this would involve active sales of £10 billion per quarter. The schedule of auctions for each quarter was to be announced two weeks before the beginning of the quarter, and the Bank reserved the right to amend the schedule in the light of market conditions.[46]

[43] Allen (2017).
[44] Bank of England (2021b, box A).
[45] Bank of England (2022a). The author previously proposed an operation to reduce the quantity of banks' reserve balances quickly (Allen 2021, Allen, Chadha and Turner 2021). Briefly, the Bank would swap a large proportion of its gilt holdings with the DMO for an equivalent portfolio of short-medium dated gilts which the commercial banks would be willing to hold in their high-quality liquid asset portfolios. There would then be a very large-scale operation in which the new gilts were sold to the commercial banks in exchange for a large reduction in their reserve balances. A large amount of QT would be done in a single operation. This would be akin to the operation conducted in November 1951 to mop up the excess bank liquidity which was the legacy of the second world war and the post-war cheap money policy. That operation was conceived, planned and executed in less than a month (Howson 1993, pp 310 - 315, Allen 2014, pp 21 - 31). It is not clear that it would have been open to the MPC to consider a proposal of this kind. The Bank's plan is entirely different.
[46] The schedule for the fourth quarter of 2022 was announced on 20th October (Bank of England 2022f).

The reasons for the Bank of England's hesitancy in setting about QT are not fully clear.[47] The Bank may have a general objection to the idea of its own operations being used to pursue a fiscal policy objective, namely the sustainability of the public finances, rather than the purely monetary objective of price stability. Such an objection would be misconceived, for several reasons. First, QE affected both the sustainability of the public finances and the future rate of inflation. Only a half-blind policy takes account of one effect but not the other. Fiscal and monetary policy are unavoidably entangled because of QE. Second, if the public finances became unsustainable, inflation could become inevitable, regardless of monetary policy (fiscal dominance).[48] Sustainable public finances are therefore a necessary part of a price stability policy, and it is the MPC's duty to avoid destabilising them. Third, apart from any of its other objectives, the Bank of England is banker to the government, and as such it is obliged not to act in a manner contrary to the government's financial interests.

The implementation of QE required minimal co-ordination between the Bank of England and the DMO. The DMO held auctions to sell gilts, and the Bank of England held reverse auctions to buy them. A small army of commercial dealers made a healthy living buying from the DMO and selling to the Bank of England.[49] There was not much strain on the infrastructure of the market, and in particular on the capacity of the market-makers to hold inventories of gilts. It would be rash to assume that QT – quantitative tightening – can likewise be implemented without any inter-agency co-ordination. Whereas QE had the effect of reducing the need for market makers to hold inventories of gilts after sales auctions, QT increases it.

In March 2020, the market makers' capacity was overwhelmed by a surge of sales of government bonds by investors. The same kind of thing happened in September 2022. In the next few years, after the end of QE and the advent of QT, not just in the United Kingdom but also in other countries which have used QE, similar pressures are very likely to occur.

Inadequate market making capacity in gilts is by no means a new problem in the United Kingdom: indeed it was chronic between the early years of the second world war and 1986, when it was relieved by the revolution in the structure of the London Stock Exchange known as the Big Bang, which attracted much more capital into market making. It was the Big Bang that made it possible to separate government debt management from monetary policy, and thus enabled the Treasury to set up its own Debt Management Office in 1998 and remove the debt management function from the Bank of England.[50] In the period up to 1986, last resort market making was discreetly institutionalised: gilt tenders were underwritten by the Bank of England Issue Department, and there were secret arrangements under which the Bank of England would buy specified amounts of gilts from the market makers if prices fell by more than a predetermined amount during the trading day.[51] The prices at which the tenders were underwritten plainly had some significance for monetary policy, and conditions in the gilt-edged market often influenced decisions about short-term interest rates.

[47] The fiscal event of September 2022 and its aftermath were, however, good reasons for postponing the unwinding of QE for a short period.
[48] Sargent and Wallace (1981), Allen, Chadha and Turner (2021).
[49] Breedon and Turner (2016).
[50] Allen (2019).
[51] Allen (2019, pp 158 – 164).

The 'Fiscal Event' of September 2022

Procedure.

The inception of QT through active sales was delayed by political events in September 2022. Prime Minister Liz Truss, who took office on 6th September, had been elected leader of the Conservative party, and thus Prime Minister, by advocating energy subsidies and tax cuts. These were announced by the new Chancellor of the Exchequer Kwasi Kwarteng on Friday 23rd September: the announcement was accompanied by the upward revision of the Debt Management Office's gross gilt sales objective for the financial year 2022/2023 from the £131.5 billion that had been announced in April to £193.9 billion. Including the active sales that the Bank of England planned as part of its gradual reversal of quantitative easing, gross official sales were planned to increase from roughly £10 billion a month in the first half of the financial year to roughly £25 billion in the second half. The announcement was not however accompanied by a new economic forecast from the Office for Budget Responsibility, which would normally have included forecasts of the budget balance and the debt/GDP ratio.

The announcement led to a surge of offers in the gilt market, and a weakening of the exchange rate. Quoted yields for 30-year gilts rose by well over 100 basis points between Thursday 22nd and Wednesday 28th September. Many of the gilt offers came from defined-benefit pension funds, which had resorted to so-called Liability Driven Investment strategies (LDI) in order to mitigate the effect of the shortage of long gilts and very low gilt yields on the balance between the discounted present values of their assets and liabilities. LDI strategies were varied, but they generally included the use of derivatives, mainly interest rate swaps. Although the net worth of a defined-benefit pension fund generally increases when bond yields rise, because the discount rate used to value future liabilities rises, the LDI funds, which are separate entities from the pension funds whose liabilities they hedge, are set up so as to lose net worth when bond yields rise, so as to provide a hedge. As gilt yields increased after the mini-budget, many LDI funds were presented with margin calls which they could meet only by selling assets: hence the offering of gilts.[52]

The Bank of England Financial Policy Committee held an unscheduled meeting on 28th September at which it noted the 'risk to UK financial stability from dysfunction in the gilt market', and 'recommended that action be taken to address it and welcomed the Bank's plan for temporary and targeted purchases in the gilt market on financial stability grounds at an urgent pace.'[53] The use of the word 'dysfunction' implies that the gilt-edged market makers were unable to absorb the gilts that investors wished to sell, and in a letter to the Chairman of the House of Commons Treasury Committee, Bank of England Deputy Governor Sir Jon Cunliffe noted that 'liquidity remained very poor'. The Bank was warned on the afternoon of Tuesday 27th September that if yields remained at their current quoted levels, 'multiple LDI funds were likely to fall into negative net asset value' and would need to begin winding up the following morning. The gilts that those funds had posted as collateral for derivative trades with banks were likely to be sold, 'driving a potentially self-reinforcing spiral and threatening severe disruption of core funding markets and consequent widespread financial instability.'[54]

[52] Cunliffe (2022) provides a fuller and very clear explanation.
[53] Bank of England (2022e).
[54] Cunliffe (2022).

Accordingly, the Bank of England announced a programme of temporary purchases of long-dated gilts, for a maximum of £5 billion a day for 13 days beginning 28th September.[55] This amount was based on market intelligence that investors might want to sell £50 billion of long gilts in a short space of time, compared with average daily trading of £12 billion. On the day of the announcement, quoted long gilt yields fell by more than 100 bp.[56] By Friday 7th October, however, the Bank had bought only £5 billion of gilts out of a possible maximum of £40 billion, and it increased the daily maximum for the final week of the programme to £10 billion; as from 11th October, it included index-linked gilts in the programme.[57] These purchases of gilts, which totalled £19.3 billion, were intended to be temporary, and the Bank of England announced on 10th November that they would be reversed from 29th November 2022 by means of sales made in response to bids from the market. The Financial Policy Committee welcomed plans for 'timely but orderly' unwinding.[58]

The Monetary Policy Committee was informed of the issues in the gilt market and briefed in advance of the purchase operation, but not asked for its opinion. Likewise, it was informed of the unwinding plan, and 'agreed that the sales would not affect its ability to conduct monetary policy.'[59]

However, 'in line with the Bank's governance, the Bank's Executive took the necessary decisions on the planning, design and implementation of the operation'.[60] It is surprising that the FPC and the MPC did not participate. The details of the design of operations of this kind can have very important implications for monetary policy and financial stability: for example, the decisions about the maturities of the gilts that would be bought in the QE programme had a large effect on the financial riskiness of the programme, and on the time it will take to unwind it, even if they were not adequately discussed by the MPC. The FPC and the MPC have legitimate interests in the details of these matters. And although the minutes of meetings of the FPC and the MPC are published, that is not the case with the meetings of the Bank's Executive, so that the reasons for the decisions need not be disclosed.[61]

The technique of selling gilts by responding to bids from the market represents a step away from the predictability of pre-announced auctions at which all the bonds on offer were to be sold. Some such change was inevitable, in the light of limited market liquidity. Of course, the technique of responding to bids could be employed just as well in selling gilts in QT operations as in reversing the temporary purchases of September-October 2022, even though it departs from the principle of predictability that the MPC has repeatedly embraced in its statements about QT.[62] However, the willingness of the Bank of England to sell gilts in this way has the capacity to affect the DMO's regular auctions, and it is therefore curious that the Bank's announcement on unwinding its temporary purchases failed to include any reference to government debt management or to the DMO.[63]

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[55] Bank of England (2022b).
[56] Cunliffe (2022).
[57] Bank of England (2022c and d).
[58] Bank of England (2022g).
[59] Bank of England (2022 b and g).
[60] Cunliffe (2022).
[61] It should be added that Sir Jon Cunliffe's letter to the Chairman of the House of Commons Treasury Committee provides a very clear account of what was done, and why (Cunliffe 2022).
[62] Bank of England (2021b, Box A).
[63] Bank of England (2022g).

Substance.

At the time of writing (11th November 2022), 30-year yields are well below the levels quoted while the purchasing programme was in operation, partly because of the radical change in fiscal policy that was announced after the collapse in gilt prices and the need for emergency support.

The temporary purchase programme may be judged a major success, in that it prevented a serious episode of financial instability. The Bank of England was aware of the problems that the rise in yields had caused for the pension industry and reacted to them promptly and decisively. Had it not done so, there would have been serious financial distress in the pension industry, arising from illiquidity rather than insolvency. Moreover it is unlikely that the DMO would have been able to maintain its sales programme, and there would have been a risk that the government would have resorted to monetary financing – fiscal dominance of monetary policy.

It is, therefore, not convincing to say that the emergency purchases had nothing to do with monetary policy. Not only did they reduce the risk of fiscal dominance of monetary policy, but they also enlarged the APF's asset portfolio, even if only temporarily. And they are likely to have a more lasting effect on the maturity of the government's debt, because the purchases were all of long-dated gilts, while the active sales planned for 2022 – 2023, which were previously intended to include all maturities, are now to be confined to shorts and mediums (Bank of England 2022f). Shortening of debt maturities represents an alteration of monetary policy.[64]

The Bank set reserve prices for its purchases: an undisclosed 'reserve spread' was

> 'used to calculate a yield for each bond below which the Bank will not make purchases. The reserve spread is set as a spread (in basis points) to the market mid yield at the end of each auction.'[65]

Thus, over the entirety of the programme of temporary purchases, £8.4 billion of offers were rejected. There was a certain logical circularity in the procedure: the market in long gilts existed, in the size that was required, only by virtue of the fact that the emergency purchases were taking place, and the market mid yield would therefore not have existed had there been no emergency purchases. So, in fact, the Bank of England was setting the level of long gilt yields, even though it did not acknowledge it. This, too, may be regarded as an act of monetary policy.

It might become necessary to institutionalise last resort market making in the future, and it would be highly desirable to have a contingency plan for doing so. The fact that the Bank of England staff had to work overnight on 27th September 2022 suggests that no plan was ready then. Formulating a plan would require close collaboration between the Bank of England and the DMO. For example, there would need to be understandings with the DMO about which agency was to be responsible for determining the prices at which gilt auctions were to be underwritten, if underwriting proved necessary. And if market conditions suggested that it

[64] Tobin (1963).
[65] Bank of England (2022c).

might be desirable to cancel auctions, it would obviously be necessary for the DMO and the Bank of England to make consistent decisions.

Financial Risk

As noted above, the Bank of England was averse to accepting credit risk exposures, but took on very large interest rate exposures through its gilt purchases between 2009 and 2021. As at 20th October 2022, according to the author's calculations, the APF had made lifetime losses of £67 billion, and the change in the market valuation of its remaining assets at that date that would have arisen from a 1 basis point increase in market interest rates (DV01) was £548 million. The Bank of England Independent Evaluation Office, which was commissioned in 2019 to review the implementation of QE, noted that 'Although indemnified, the Bank risk manages the APF on behalf of HMT[reasury].'[66] It is, however, hard to see what effect this risk management activity had on the behaviour of the Bank of England executive management, the MPC or the Treasury as regards the interest rate risk in the APF.

Obviously, in any evaluation, the financial costs and risks of QE should in principle be set against its macro-economic benefits, if they could be calculated. However, the evaluation should in principle also consider the costs and benefits of possible alternative policies.

Conclusions

The model of central banking which the United Kingdom adopted in 1997 worked well until the global financial crisis. Since then, the lines of demarcation between monetary policy, financial stability and government debt management have become seriously blurred, and it has worked less well.

The separation of governance within the Bank of England between monetary policy (MPC), financial stability policy (FPC), prudential supervision (PRA) and financial market operations (Bank executive) was established in the wake of the Bank of England Act 1998 and the financial crisis. Considerable efforts have been made to co-ordinate the various functions, but co-ordination has evidently proved difficult to manage in practice, as the need for 'concordats' between the executive management and the MPC and FPC, respectively, shows.[67]

Worse, there are reasons to think that the organisational structure of the Bank of England, which treats the design of financial market operations as something separate from monetary policy and financial stability, has obstructed holistic debate on how to address the problems that the Bank has faced and is likely to face. The analysis of post-crisis monetary policy in section 3b above is, as noted, no doubt contentious. But even those who disagree with it might reasonably wonder why the MPC would not have been able to act on its own authority in accordance with it if had considered it necessary, or why the MPC could not make, or even influence, decisions on the SLS, for example. And, as noted above, last resort market making in the gilt market is of legitimate interest to the MPC, the FPC and the executive management of the Bank, as well as the DMO. As things stand, however, it is only the executive management of the Bank that could make a proposal for the Bank of England to act as market maker of last

[66] Bank of England Independent Evaluation Office (2021, p.9).
[67] Kohn (2017) describes instances of co-ordination which are not described in this paper.

resort, and design any such operation (though, of course, the DMO could take on the function on its own initiative).

The governance structure of the Bank of England, established in 1997 and later embellished, now looks Byzantine. The rigid separation of monetary policy, managed by the Bank, from government debt management, managed by the Treasury and its executive agency the Debt Management Office, is outdated. James Tobin showed that monetary policy and government debt should be regarded as inseparable; it was however possible to maintain a separation in practice when the government had very little short-term debt, but that is no longer the case.[68] Within the Bank of England, power appears to have been increasingly concentrated on the executive management.

The results of the dispersal of objectives among multiple committees and multiple agencies, with in some cases little co-ordination, have included gaps in responsibility and poor decision-making: for example nobody appears to have been seriously concerned about the build-up of the exposure of the public finances to interest rate risk.[69] Indeed, from 2012, the unrealised profits of the APF were transferred as they accrued to the Treasury, leaving no cash reserve against possible future losses.[70]

Until very recently, the FPC and the MPC have had the luxury of being able to plan their meeting timetables in advance: emergency meetings have been rare. It is likely that in future, decisions affecting monetary policy will sometimes have to be made when market conditions demand it, and not necessarily when a meeting is scheduled. If the MPC is not ready to meet more often, or is not asked to do so, if necessary at short notice, it will cede more authority over policy to the executive managers of the Bank of England.

Further concentration of power on the executive management of the Bank of England would be harmful in three ways: it would mean that potentially useful contributions to policy debates from non-executive members of the MPC and FPC would be lost or overlooked, it would deter capable people from wishing to join those committees, and it would mean a further loss of transparency as more policy decisions were taken at meetings whose minutes were not published.[71]

Radical simplification of the structure is urgently needed. A new model Bank of England might feature:

a. A single executive board, responsible for monetary policy, financial stability and financial market operations, as well as for the internal management of the Bank of England. It should include members drawn from outside as well as inside the Bank of England's existing staff, just as the MPC and FPC do now.[72] It would be responsible for managing the financial risks taken by the Bank, including risks against which the Bank is indemnified by the Treasury, as well as for achieving its monetary and financial stability policy objectives. The executive board would need to be able to meet at short notice. The minutes of discussions relating to matters other than internal management would be published.

[68] Tobin (1963, p 212)
[69] Office for Budget Responsibility (2021).
[70] Osborne (2012).
[71] It should be added that Sir John Cunliffe's letter to the House of Commons Treasury Committee provides a full and clear explanation of the post-fiscal event operation (Cunliffe 2022).
[72] The proposed structure has some features in common with that of the Sveriges Riksbank.

b. A banking supervision board, which could be the same as the current board of the Prudential Regulatory Authority.

c. A permanent arrangement for liaison and negotiation with the Treasury and the Debt Management Office about market operations involving government securities and the Exchange Equalisation Account.

None of this would infringe on the independence of the Bank of England. It would simply

recognise the fact that the operations of the Bank of England in pursuit of either of its two main responsibilities - monetary policy and financial stability - affect both its ability to meet the other responsibility, and the Treasury's ability to meet its public finance responsibilities. Resolute determination to ignore that fact for several years has had seriously adverse consequences, and is itself a threat to the Bank's independence.

Nor would it require any change in the statutory objectives of the Bank of England. The statutory objective of price stability, and the inflation targets which the Treasury has set since 1997, have been an element of much-needed stability in a sometimes volatile financial environment. Changing the statutory objectives of the Bank of England would destabilise the economy, for no lasting benefit. What should be at issue, and needs to be addressed, is the organisation of the Bank of England, and its relationship with the Treasury.

References

Aldrick, P. (2020), 'The day the financial world stood still', and 'Bank of England rode to government's rescue as gilt markets froze', interview with Sir Robert Stheeman, *The Times*, 30th April 2020.

Allen, W.A. (2013), International liquidity and the financial crisis, Cambridge University Press.

Allen, W.A. (2014), Monetary policy and financial repression in Britain, 1951 – 1959, Palgrave Macmillan.

Allen, W.A. (2017), 'Quantitative easing and the independence of the Bank of England', National Institute Economic Review, no 241, pp R65 – R69.

Allen, W.A. (2019), The Bank of England and the government debt: operations in the gilt-edged market, 1928 – 1972, Cambridge University Press.

Allen, W.A. (2020), 'Moving back towards market-based government finance', 12th May, NIESR Policy Paper 018, available at https://www.niesr.ac.uk/wp-content/uploads/2021/10/William-Allen-NIESR-Policy-Paper-18-Moving-Back-Towards-Market-Based-Government-Finance-4.pdf .

Allen, W.A. (2021), 'Managing the fiscal risk of higher interest rates' NIESR Policy Paper 025, 26th March, available at https://www.niesr.ac.uk/publications/managing-fiscal-risk-higher-interest-rates?type=policy-papers .

Allen, W.A. and R. Moessner (2010), 'Options for meeting the demand for international liquidity during financial crises', Bank for International Settlements Quarterly Review, September, pp 51 – 61, available at https://www.bis.org/publ/qtrpdf/r_qt1009.htm .

Allen, W.A. and R. Moessner (2012), 'The international propagation of the financial crisis of 2008 and a comparison with 1931', Financial History Review, vol 19 no 2, pp 123 – 147.

Allen, W.A., J.S. Chadha and P. Turner (2021), 'Quantitative tightening: protecting monetary policy from fiscal encroachment', NIESR policy paper 27, 28thJuly, available at https://www.niesr.ac.uk/publications/quantitative-tightening-protecting-monetary-policy-fiscal-encroachment?type=policy-papers .

Bank of England (2008), Minutes of Monetary Policy Committee meeting, May, available at https://www.bankofengland.co.uk/minutes/2008/monetary-policy-committee-may-2008 .

Bank of England (2009a), Minutes of Monetary Policy Committee meeting, February, available at https://www.bankofengland.co.uk/minutes/2009/monetary-policy-committee-february-2009 .

Bank of England (2009b), Minutes of Monetary Policy Committee meeting, March, available at https://www.bankofengland.co.uk/minutes/2009/monetary-policy-committee-march-2009 .

Bank of England (2009c), Minutes of Monetary Policy Committee meeting, August, available at https://www.bankofengland.co.uk/minutes/2009/monetary-policy-committee-august-2009 .

Bank of England (2011), Minutes of Monetary Policy Committee meeting, October, available at https://www.bankofengland.co.uk/minutes/2011/monetary-policy-committee-october-2011 .

Bank of England (2012), Minutes of Monetary Policy Committee meeting, June, available at https://www.bankofengland.co.uk/minutes/2012/monetary-policy-committee-june-2012 .

Bank of England (2013), Minutes of Monetary Policy Committee meeting, May, available at https://www.bankofengland.co.uk/minutes/2013/monetary-policy-committee-may-2013

Bank of England (2015), Financial stability report, December, available at https://www.bankofengland.co.uk/financial-stability-report/2015/december-2015

Bank of England (2016), Minutes of Monetary Policy Committee meeting, August, available at https://www.bankofengland.co.uk/monetary-policy-summary-and-minutes/2016/mpc-august-2016

Bank of England (2018a), 'The MPC and the Bank's Sterling Monetary Framework', updated June 2018, available at https://www.bankofengland.co.uk/-/media/boe/files/about/mpc/the-mpc-and-the-banks-sterling-monetary-framework.pdf

Bank of England (2018b), 'The FPC and the Bank's liquidity insurance operations', updated June 2018, available at https://www.bankofengland.co.uk/-/media/boe/files/about/fpc/the-fpc-and-the-banks-liquidity-insurance-operations.pdf?la=en&hash=0A9E50265B41ADDE22A7EBFDEC5AE99EAEBF0403

Bank of England (2018c), Financial stability report, June, available at https://www.bankofengland.co.uk/financial-stability-report/2018/june-2018 .

Bank of England (2020a), Minutes of the special Bank of England Monetary Policy Committee meeting on 19th March 2020 and the Monetary Policy Committee meeting ending on 25th March 2020', available at https://www.bankofengland.co.uk/monetary-policy-summary-and-minutes/2020/march-2020.

Bank of England (2020b), 'APF: additional gilt purchases', 19 March, available at https://www.bankofengland.co.uk/markets/market-notices/2020/apf-asset-purchases-and-tfsme-march-2020 .

Bank of England (2020c), Financial stability report, August, available at https://www.bankofengland.co.uk/report/2020/monetary-policy-report-financial-stability-report-august-2020

Bank of England (2021a), Bank of England Asset Purchase Facility Fund Limited Annual Report and Accounts 1 March 2020 – 28 February 2021, available at https://www.bankofengland.co.uk/asset-purchase-facility/2021/2020-21

Bank of England (2021b), Monetary Policy Report, August, available at https://www.bankofengland.co.uk/monetary-policy-report/2021/august-2021

Bank of England (2022a), 'Asset purchase facility: gilt sales – provisional market notice 4 August 2022', available at https://www.bankofengland.co.uk/markets/market-notices/2022/august/asset-purchase-facility-gilt-sales-provisional-market-notice-4-august-2022 .

Bank of England (2022b), 'Bank of England announces gilt market operation', 28th October, available at https://www.bankofengland.co.uk/news/2022/september/bank-of-england-announces-gilt-market-operation .

Bank of England (2022c), 'Gilt market operations – market notice 10 October 2022', available at https://www.bankofengland.co.uk/markets/market-notices/2022/october/gilt-market-operations-market-notice-10-october-2022.

Bank of England (2022d), 'Bank of England widens gilt purchase operations to include index-linked gilts', 11th October, available at https://www.bankofengland.co.uk/news/2022/october/boe-widens-gilt-purchase-operations-to-include-index-linked-gilts .

Bank of England (2022e), 'Financial policy summary and record', 12th October, available at https://www.bankofengland.co.uk/financial-policy-summary-and-record/2022/october-2022.

Bank of England (2022f), 'Asset purchase facility: gilt sales – market notice 20 October 2022', available at https://www.bankofengland.co.uk/markets/market-notices/2022/october/gilt-market-operations-market-notice-10-october-2022.

Bank of England (2022g), 'Bank of England sets out plans for a demand-led approach to unwind recent financial stability gilt purchases in a timely but orderly way', 10th November 2022, available at https://www.bankofengland.co.uk/news/2022/november/boe-demand-led-approach-to-unwind-recent-financial-stability-gilt-purchases.

Bank of England Independent Evaluation Office (2021), IEO evaluation of the Bank of England's approach to quantitative easing, available at https://www.bankofengland.co.uk/independent-evaluation-office/ieo-report-january-2021/ieo-evaluation-of-the-bank-of-englands-approach-to-quantitative-easing .

Bank of Japan (2016) 'New framework for strengthening monetary easing: "quantitative and qualitative monetary easing with yield curve control", 21st September, available at https://www.boj.or.jp/en/mopo/outline/qqe.htm/ .

Basel Committee on Banking Supervision (2009), 'Consultative document: International framework for liquidity risk measurement, standards and monitoring', December, available at https://www.bis.org/publ/bcbs165.htm .

Bean, C. (2009), 'Quantitative easing: an interim report', speech given at the London Society of Chartered Accountants Annual Lunch, London, 13th October, available at https://www.bankofengland.co.uk/speech/2009/quantitative-easing-and-interim-report .

Breedon, F. and P. Turner (2016), 'On the transactions costs of quantitative easing', BIS working paper no 571, available at https://www.bis.org/publ/work571.htm .

Churm, R., A. Radia, J. Leake, S. Srinivasan and R. Whisker (2012), 'The Funding for Lending Scheme', Bank of England Quarterly Bulletin, pp 306 – 320, available at https://www.bankofengland.co.uk/quarterly-bulletin/2012/q4/the-funding-for-lending-scheme .

Cunliffe, Sir J. (2022), letter to Mel Stride, M.P, chairman of the House of Commons Treasury Committee, 5th October, available at https://committees.parliament.uk/committee/158/treasury-committee/publications/3/correspondence/ .

Darling, A. (2009), letter to Governor of the Bank of England, 3rd March, available at https://www.bankofengland.co.uk/letter/2009/apf-letter-march-2009.

Darling, A. (2011), Back from the brink: 1,000 days at number 11, Atlantic Books, London.

Debt Management Office (2022), 'Revision to the DMO financing remit 2022-23', available at https://www.dmo.gov.uk/responsibilities/financing-remit/full-details/ .

Deutsche Bundesbank (2021), 'Government finances: central bank bond purchases increase sensitivity to interest rate changes', Monthly Review, June, available at https://www.bundesbank.de/resource/blob/869132/3334c76b68c8f8a08675f238e50f211c/mL/2021-06-staatsfinanzen-data.pdf.

Feldstein, M. (2007), 'Concluding remarks' at the Federal Reserve Bank of Kansas City Jackson Hole Economic Policy Symposium, available at https://www.kansascityfed.org/research/jackson-hole-economic-symposium/housing-housing-finance-and-monetary-policy/ .

Goodfriend, M. (2011), 'Central banking in the credit turmoil: An assessment of Federal Reserve practice', Journal of Monetary Economics, vol 58 no 1, pp 1 – 12.

Goodhart, C.A.E. and R.M. Lastra (2020), 'Equity finance: matching liability to power', Journal of Financial Regulation, vol 6, pp 1 – 40.

H.M. Treasury, Bank of England and Financial Services Authority (2007), 'News release: liquidity support facility for Northern Rock plc', 14th September, available at https://www.bankofengland.co.uk/news/2007/september/liquidity-support-facility-for-northern-rock-plc

Hauser, A. (2021), 'From lender of last resort to market maker of last resort via the dash for cash: why central banks need new tools for dealing with market dysfunction', speech at Reuters, London, 7th January, available at https://www.bankofengland.co.uk/speech/2021/january/andrew-hauser-speech-at-thomson-reuters-newsmaker .

House of Lords Economic Affairs Committee (2021), Quantitative easing: a dangerous addiction?, 1st report of Session 2021-2, available at https://committees.parliament.uk/publications/6725/documents/71894/default/ .

Howson, S.K. (1993), British monetary policy 1945 – 1951, Oxford University Press.

James, H. (2020), Making a modern central bank: the Bank of England 1979 – 2003, Cambridge University Press.

John, S., M. Roberts and O. Weeken (2012), 'The Bank of England's Special Liquidity Scheme', Bank of England Quarterly Bulletin, available at https://www.bankofengland.co.uk/quarterly-bulletin/2012/q1/the-bank-of-englands-special-liquidity-scheme

Kohn, D. L. (2017), 'Co-operation and co-ordination across policy domains', speech at joint Financial Stability Institute and Bank for International Settlements conference on supervisory policy implementation in the current macro-financial environment, Basel, 19th September, available at https://www.bankofengland.co.uk/speech/2017/cooperation-and-coordination-across-policy-domains

Lucca, D. O. and J. H. Wright, 'The narrow channel of quantitative easing: evidence from YCC down under', Federal Reserve Bank of New York Staff Reports no 1013, April, available at https://www.newyorkfed.org/research/staff_reports/sr1013 .

McLaren, N., R. Banerjee and D Latto (2014), 'Using changes in auction maturity sectors to help identify the impact of QE on gilt yields', Economic Journal, vol 124, pp 453 – 479.

Office for Budget Responsibility (2021), Fiscal Risks Report, London, available at https://obr.uk/frr/fiscal-risks-report-july-2021/ .

Osborne, G. (2012) letter to Governor of the Bank of England, 9th November 2012, available at https://www.bankofengland.co.uk/-/media/boe/files/letter/2012/chancellor-letter-091112.pdf.

Plenderleith, I. (2012), 'Review of the Bank of England's provision of emergency liquidity assistance in 2008 – 09', presented to the Court of the Bank of England, October 2012, available at https://www.bankofengland.co.uk/-/media/boe/files/news/2012/november/the-provision-of-emergency-liquidity-assistance-in-2008-9 .

Sargent, T. J. and N. Wallace (1981), 'Some unpleasant monetarist arithmetic', Federal Reserve Bank of Minneapolis Quarterly Review, Fall.

Tobin, J. (1963), 'An essay on principles of debt management' in Commission on Money and Credit, Fiscal and debt management policies, Prentice-Hall, Englewood Cliffs, N.J.

Turner, P. (2021), The new monetary policy revolution: advice and dissent, NIESR Occasional Paper LX, available at https://www.niesr.ac.uk/publications/new-monetary-policy-revolution-advice-and-dissent?type=occasional-papers .