

# Downside Risks to UK Inflation

By John Greenwood

## Overview

- UK inflation has been falling and – based on current monetary trends – is likely to fall even lower in late 2024 and in 2025, irrespective of the outcome of the general election on July 4<sup>th</sup>.
- Even before the election campaign, politicians on both sides of the ideological divide were attributing responsibility for the rise of inflation in 2021-22 or its fall in 2023-24 to a wide variety of non-monetary sources. In truth, inflation is created in one place alone: in Threadneedle Street by the monetary policy of the Bank of England.
- In March (IMM#34), I reviewed the major episodes of inflation in the UK since the 1970s using data tables. This time I have done a similar exercise using charts which demonstrate that all episodes of high inflation since the 1970s have been preceded by rapid money growth, and conversely every period of low inflation has been associated with low and stable money growth.
- **Section 1** focuses on the long-term perspective, tracing the changes in UK inflation over extended periods. **Section 2** considers the short-term perspective, focusing on the recent history of money growth and inflation during and after the pandemic.
- Following Governor Andrew Bailey's recent speech on the Bank of England's balance sheet, **Section 3** reviews the effects of the MPC's choice of continued, aggressive QT – and the implications for M4x money growth and UK inflation in the remainder of 2024 and 2025.
- **The conclusion** is that CPI inflation is likely to continue to fall in 2024 and 2025. As I wrote in March, there will be “*no second-round resurgence of inflation. If anything, the risks are on the downside – that is, prices are likely to fall well below the 2% inflation target in 2024 and into 2025.*”

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## Introduction

In recent weeks the central banks of Switzerland, Sweden, Canada and the eurozone have made the first cut in their key lending rates by 0.25% following the period of monetary tightening in 2022-23. In the cases of the Swedish Riksbank, the Bank of Canada and the ECB, the rate cuts – superficially easing moves – have been implemented even while these banks continue to reduce the size of their balance sheets –tightening moves. The tightening comes from run-offs or disposals of securities (known as quantitative tightening or QT) and/or winding down of lending programmes. In Canada, Governor Tiff Macklem explained the paradox by saying that the reduction of the Bank’s lending rate was not a move to an easing stance but a move to a less restrictive stance.

Which facet of policy will dominate in the months ahead – the rate cuts signalling monetary easing, or continued QT signalling persistent monetary tightening?

Figure 1 below shows how central banks can make errors in policy if they do not pay attention to the quantity of money. At the present stage of the cycle, the most likely error is that central banks will cut rates while broad money growth remains restrictive (circled). The key point is that what matters for spending and economic activity is not what happens to rates or to the central bank’s balance sheet but their combined impact on broad money – spending power – in the hands of the public.

**Figure 1. Mistakes Central Banks can Make by Relying on Interest Rates**

Central Bank:	Raises Rates	Lowers Rates	No Change in Rates
Expected Result	Demand for loans falls, credit growth declines. Money growth slows.	Demand for loans rises, credit growth increases. Money growth increases.	The economy maintains “steady state” growth with inflation unchanged.
The “Wrong” Result	Demand for loans is strong with market rates rising above policy rates. Money growth does <u>not</u> slow.	Demand for loans is weak with market rates falling below policy rates. Money growth does <u>not</u> increase.	Money growth slows or speeds up even with no change in the policy rate, due to market rates rising or falling.

Although it has not yet started to cut rates, it looks highly likely that the Bank of England will be in precisely this position – cutting rates while maintaining QT – later this year when it does start to cut Bank Rate. Before we examine the probable effects

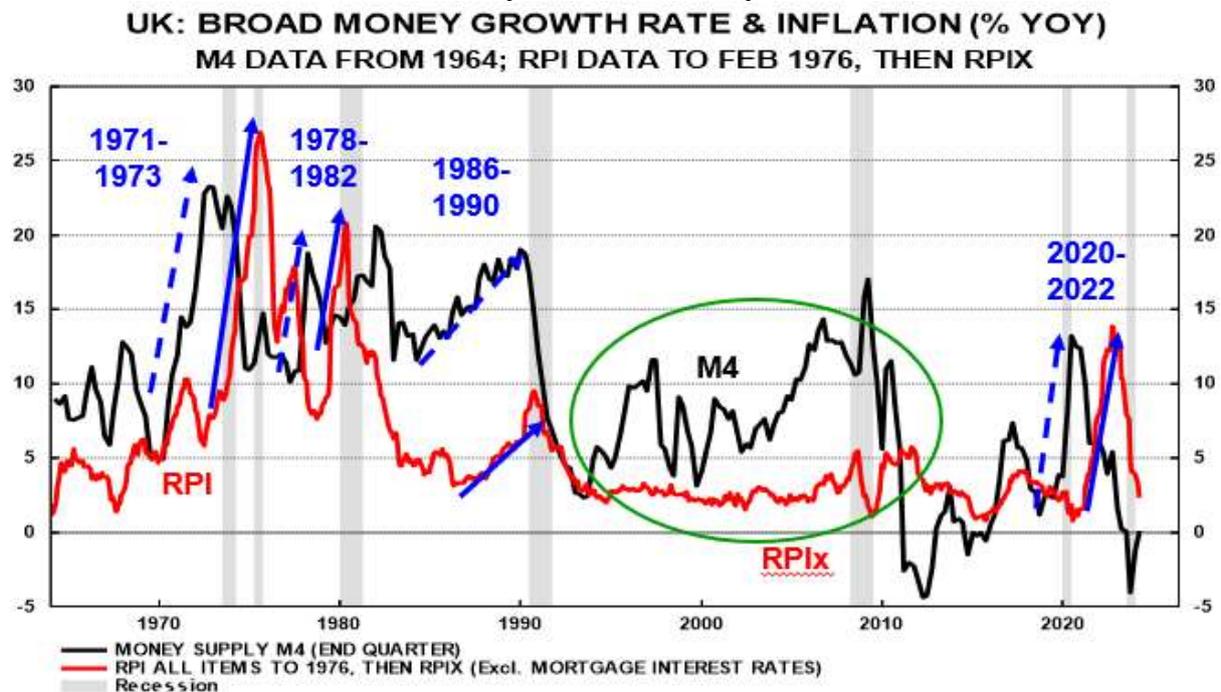
of such a policy mix, we need a long-term perspective on the relation between money growth and inflation in the UK.

### **Section 1. Long-Term Perspective on UK Inflation**

The statistical relation between money growth and inflation is summarised in the famous equation of exchange,  $MV=PT$ , or in its “Cambridge” form,  $MV= PY$ , where Y refers to real GDP and P refers to an overall price index consistent with GDP (e.g., a GDP deflator). However, economists have struggled to obtain high correlations between the rates of change of money and the rates of change of prices. There are many reasons for this, but one of the most salient is that the impact on prices of changes in money growth depends not only on the **magnitude** of the increase in money but also on the **duration** of its increase. Using the analogy of a bathtub, the temperature of the water in the tub depends not only on temperature of the water flowing in but also on the how long the inflow has continued.

In addition, there are issues concerning the definition of money chosen, the varying lag between monetary changes and changes in inflation, and any institutional or regulatory changes that may have affected behaviour. Any or all of these may obscure the underlying relationship.

**Figure 2. Every Episode of Serious UK Inflation since the 1970s has been Preceded by Excess Money Growth.**



To deal with some of these problems, the approach taken here is to compare the average rates of change of money and prices during selected periods. Figure 2 shows a preliminary chart that plots the rates of change of M4 and the RPI (Retail Price Index) since 1964. Each episode of monetary acceleration is shown with a dashed blue arrow, and the subsequent increase in inflation is shown by a solid blue arrow.

Sterling M4 quarterly data is used in Figure 2 because it is the longest consistent series available. However, M4 is not an ideal series due to its inclusion of money held by financial institutions - money which would seldom ever be used for the purchase of final goods and services. As an illustration of this problem, consider the period between the early 1990s and 2010 (circled in green). These years witnessed the tech bubble in the late 1990s and the housing bubble in the early 2000s. Simultaneously, the UK saw explosive growth of shadow banking institutions. Their deposits in the banking system added materially to overall money in the economy as measured by M4, but their loans were almost entirely to other financial institutions – credit layering. A suitably corrected series (M4x) is not available until 1997.

Also, I have used the RPI (Retail Price Index) instead of the CPI to measure inflation because the CPI data is only available from 1988.

Breaking down the period from 1964 to the present into three sub-periods and using the best available data for each period, we obtain the relationships reported in Figures 3, 4, and 5. They all show the close, but not exact, relation between money growth and inflation.

**Figure 3. Inflation during the Two Oil Crises was a Result of Excess Money Growth.**

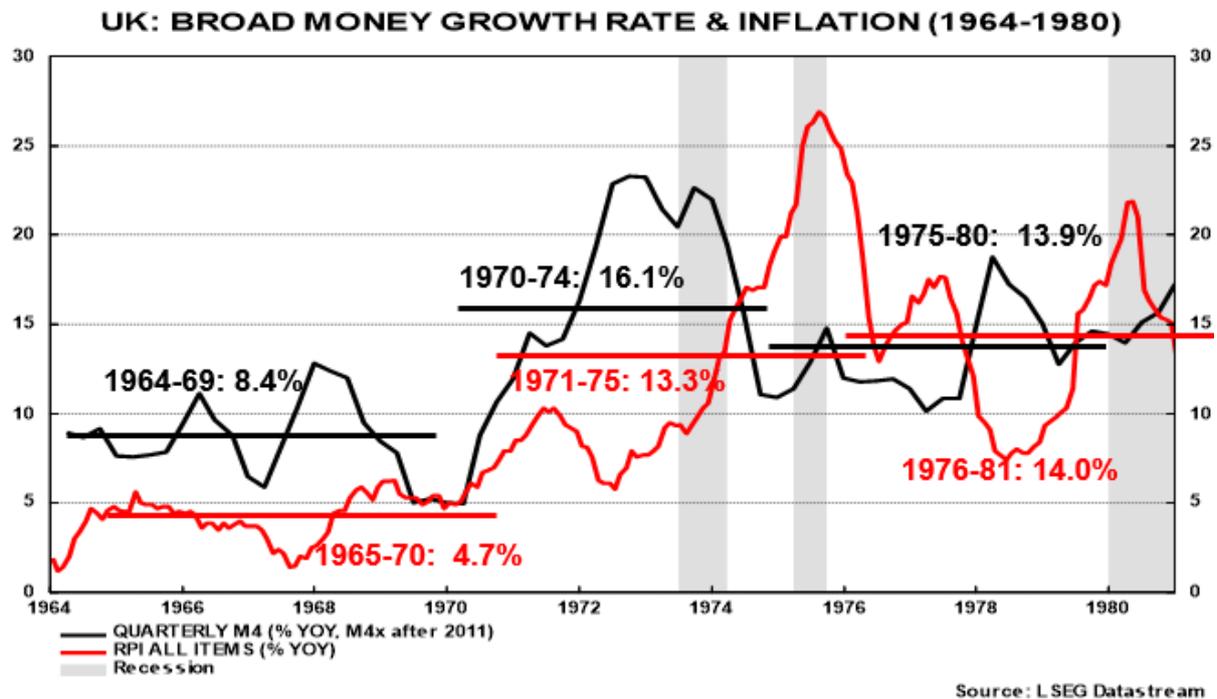


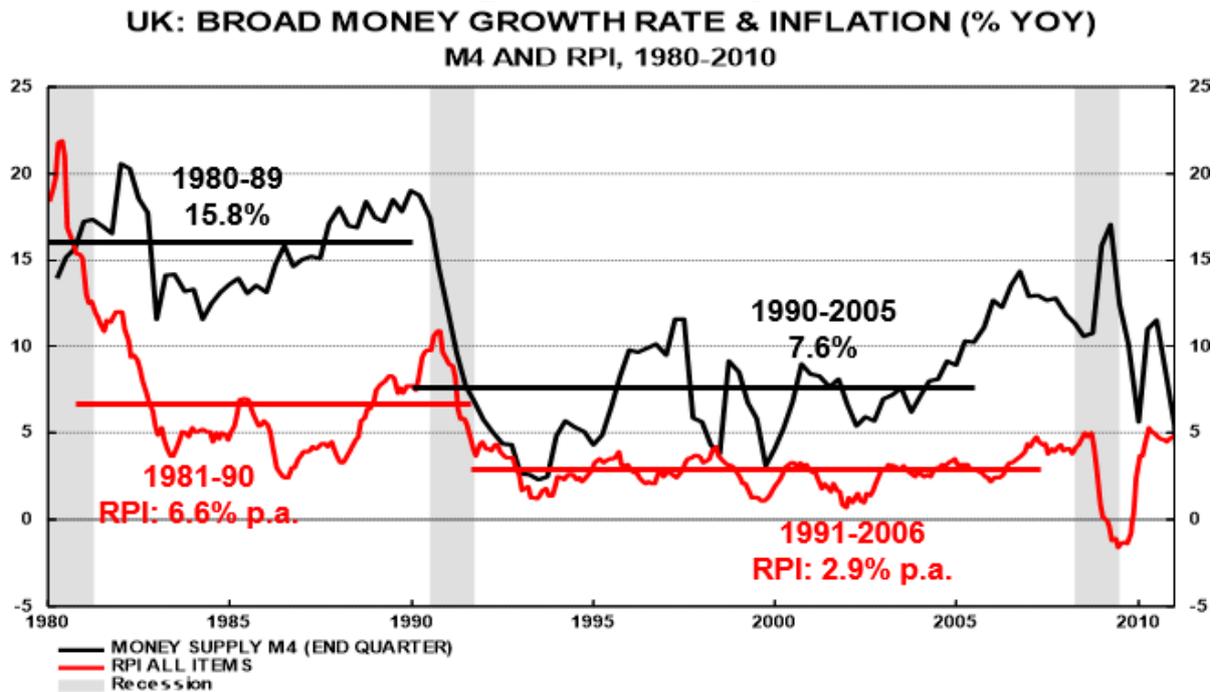
Figure 3 shows how in the first sub-period (1964-80) M4 growth almost doubled from an average of 8.4% p.a. in 1964-69 to an average of 16.1% p.a. in 1970-74, taking the inflation rate, as measured by the RPI, from an average of 4.7% in 1965-70 to 13.3% in 1971-75. It also shows that after the 1973-74 recession, M4 growth remained high, averaging 13.9% in 1975-80, with the result that inflation only declined temporarily in 1978. Inflation *increased* from an average of 13.3% in 1971-



75 to an average of 14.0% in 1976-81. (Note that inflation is measured starting and ending one year after the shift in M4 growth to allow for the minimum one-year lag between money growth and inflation.) The decade of the 1970s was therefore one of persistent double-digit inflation, not due to OPEC, but due to domestic monetary policy.

Moving to the second sub-period (from 1980 to the early 2000s), Figure 4 shows the dramatic improvement in monetary management in the 1990s. In the decade 1980-89 M4 growth had remained too high averaging 15.8% p.a. Monetary discipline was marred first by the extended legacy of wage increases left by the Callaghan government for trades unions and second by the misguided policy of Chancellor Lawson of requiring the pound to shadow the deutschemark.<sup>1</sup> Even so, thanks to market-friendly reforms introduced by the Thatcher government, real GDP growth accelerated and RPI inflation slowed to an average of 6.6%p.a. in 1981-90.

**Figure 4. The “Great Moderation” in the UK (1993-2007) Followed from the Slowing of Broad Money Growth**



The dramatic improvements came in the early 1990s when monetary growth (M4) took a distinct downward step, roughly halving from an average of 15.8% p.a. in 1980-89 to 7.6% p.a. in the years 1990-2005. Inflation, again measured by the RPI, declined from 6.6% p.a. in 1981-90 to 2.9% p.a. in 1991-2006.

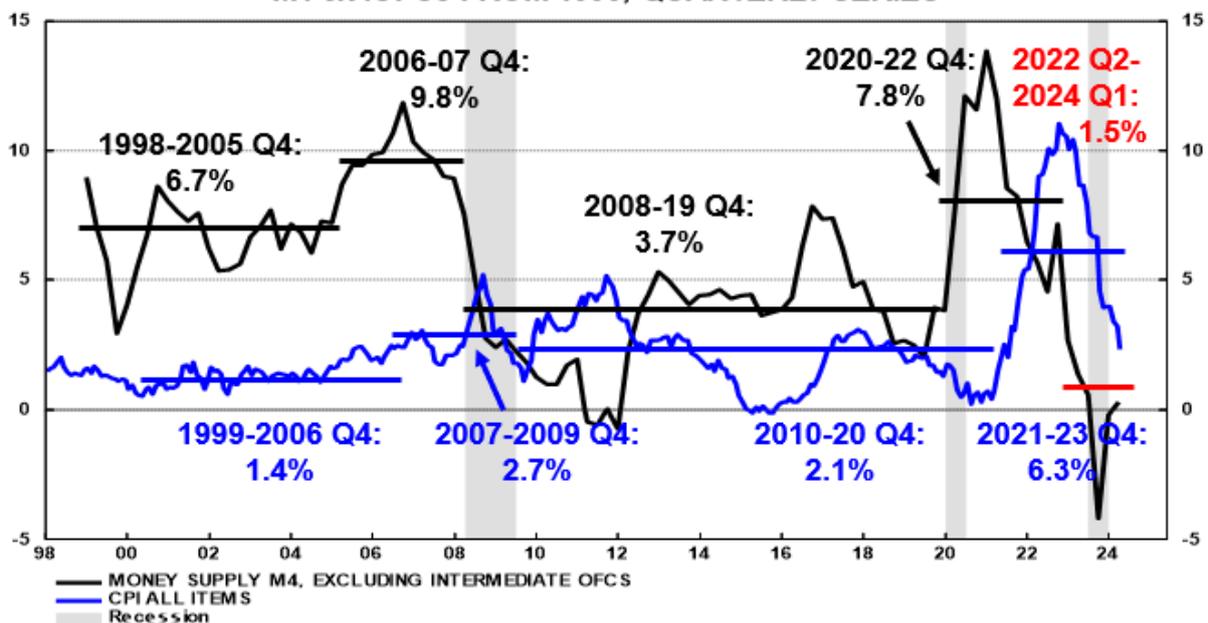
Indeed, this period and the subsequent years up to the Global Financial Crisis in 2008-09 marked such a remarkable improvement in monetary performance that

<sup>1</sup> It is also the case that M4 probably exaggerated the true rate of growth of money in the hands of households and non-financial companies due to the inclusion of funds held by intermediary financial institutions. Average annual values for the two sides of the equation of exchange ( $\Delta M + \Delta V = \Delta Y + \Delta P$ ) in this period were:  $15.8\% - 4.9\% = 10.9\%$  (1981-88) and  $6.3\% + 3.6\% = 9.9\%$  (1982-89). Allowing for lags in effect and differences between the RPI and GDP deflator, this is a reasonable approximation.

they have been called the “Great Moderation” – moderation of inflation and moderation of volatility in the growth rate of real GDP.

As Figure 5 shows, the third sub-period, from the early 2000s until the start of the Covid pandemic in 2020, can be viewed as an extension of the Great Moderation. In this period, we can monitor monetary performance with better data: M4x (or M4 excluding balances held by “intermediate other financial companies”) shown in black and the CPI shown in blue.

**Figure 5. Post-Covid Inflation Followed a Surge in Broad Money Growth.**  
**UK: BROAD MONEY GROWTH RATE & INFLATION (% YOY)**  
**M4 ex IOFCs FROM 1998, QUARTERLY SERIES**



Aside from a brief upswing in M4x growth from an average of 6.7% in 1998-2005 to an average of 9.8% in 2006-07, M4x growth was subdued until the start of 2020, averaging 3.7% p.a. in 2008-19. These generally moderate rates of growth of M4x translated into near-target inflation rates of 1.4% p.a. in 1999-2006, 2.7% p.a. in 2007-09, and 2.1% p.a. in 2010-20, the upturn in 2007-09 being due to the brief acceleration of M4x in 2006-07.

Unfortunately for UK consumers, the onset of Covid in March 2020 prompted the adoption of QE and rapid money creation by the Bank of England, pushing M4x growth to a peak of 15% in February 2021, three times the appropriate growth rate. For the three years 2020-2022 the M4x growth rate averaged 7.8% p.a. (Figure 5), or almost double the appropriate rate for hitting the 2% inflation target. The result was that CPI inflation surged to an average of 6.3% in the years 2021-2023.

The conclusion from these extended average periods of broad money growth since 1964 is that they tend to have a strong influence on the average rate of inflation in matching periods starting and ending one year later. The outlook for future inflation will therefore depend heavily on the rate of M4x growth over the past year or two.

## **Section 2. Near-Term Perspective on UK Inflation.**

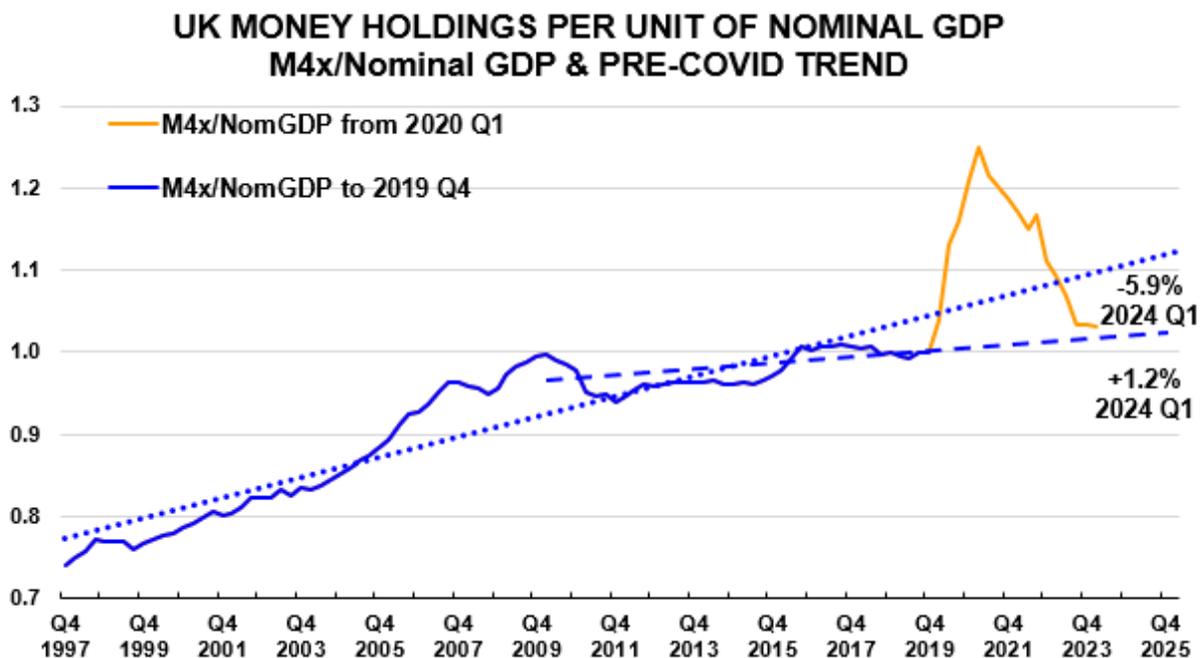
Turning from past episodes to the present, UK M4x money growth was negative – declining on a year-on-year basis – between July 2023 and February 2024, with the lowest figure being -4.2% year-on-year in September. However, since March 2024, the growth rate has turned marginally positive, reaching +0.6% year-on-year in April. Between 2022 Q2 and 2024 Q1 the average growth rate has been just 1.5% (in red in Figure 5), far below what is needed to hit the 2% inflation target.

The sudden downturn in UK money growth is a direct result of (1) the Bank of England’s steep increases in Bank rate between December 2021 and August 2023, raising Bank rate to 5.25%, and (2) the adoption of an aggressive QT policy, shrinking the Bank of England’s balance sheet by £100 billion in the year October 2023 to September 2024. The latter has the effect of reducing deposit funds of the private sector by a matching amount. If continued, the very low rate of monetary growth surely points to a further substantial fall in the inflation rate over the next year or two.

What will matter for inflation in the remainder of 2024 and 2025 is (a) how much excess money remains in the system from 2020 onwards, (b) the recent average growth rate of M4x, and (c) how long M4x growth remains below the appropriate or “golden” growth rate needed to hit the 2% inflation target.

On (a), Figure 6 shows the ratio of M4x to nominal spending or GDP since 1997 as a blue solid line. The data from 2020 Q1, the start of the pandemic, is shown in yellow. Two extrapolated trend lines are shown: one based on 1997-2019 (the dotted line) and one based on 2010-19 (the dashed line). The rationale for the first is that it uses

**Figure 6. UK’s Excess money has been used up**



all the M4x data available, while the shorter version takes into account the slower real GDP growth rate since the GFC, which would also imply money holdings growing at a slower trend rate.

The dotted trend line suggests that all the excess money from the Covid surge has already been used up, with money holdings now 5.9% *below* trend, while the second, dashed trend line suggests that the money holdings are converging to their post-2010 trend with just 1.2% excess balances still available. My preference is for the latter estimate, which in turn leads to the view that the driving force behind inflation is almost eliminated.

On (b), the recent average money growth rate, as indicated by the red line in Figure 5, has been too low to maintain the 2% inflation target. However, the 1.5% M4x growth rate has only been in place for 22 months, the shortest selected period in the chart. If M4x were to accelerate significantly in the months ahead it is possible that, taken with the run-off of the excess money balances from 2020-22, it could have only a minor impact on final prices.

What are the forces that will determine (c), the growth of broad money going forward? The three primary drivers of M4x growth will be a continuing high Bank rate, low loan growth, and another year of QT (from October 2024 to September 2025). Together these will likely generate a growth rate of M4x during the remainder of 2024 and into 2025 that will be below the “golden” or appropriate rate for 2% inflation. In sum we should expect a very low, sub-target inflation rate to persist in 2024-25.

### **Section 3. The Bank of England’s Plans for Balance Sheet Contraction.**

Given that the Bank of England does not see managing broad money growth as part of its direct responsibility, how does the Bank of England influence money growth?

There are two main channels of influence: (1) through adjusting interest rates which in turn affect the amount of loans that commercial banks create, or customers are willing to borrow, and (2) through central bank purchases of securities from non-banks (QE) which in turn creates new deposits (money) for the sellers of those securities. The first is indirect; the second is direct.

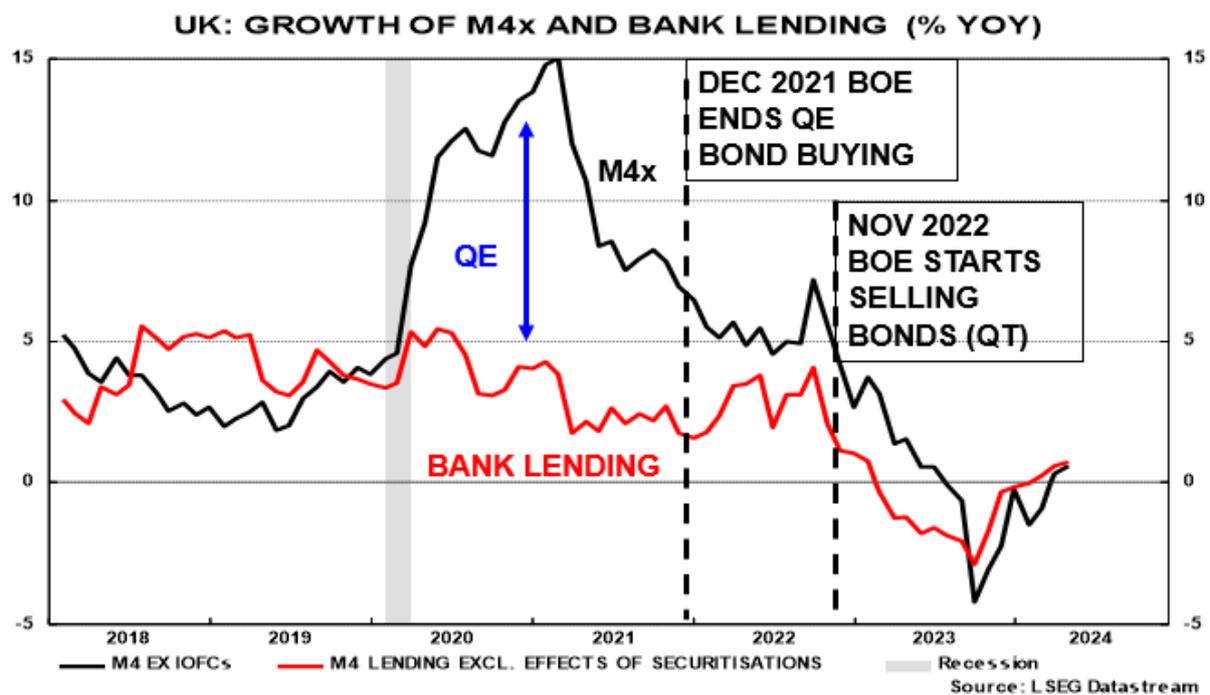
When a commercial bank makes a loan (1), the borrower’s deposit account is credited with new money corresponding to the size of the loan. In general, the money thus created remains circulating in the economy until the loan is repaid, whereupon one would expect the bank to replace the repaid loan with a new one.

Since loans are the main counterpart of deposits, and loans are also the primary driver of deposit growth, we can examine the rate of growth of bank loans for rough guidance on the rate of growth of bank deposits and hence broad money growth.

With short-term interest rates and gilt yields currently at their highest levels since 2008, loan growth has - not surprisingly - fallen since the start of 2023.

Going forward, the recent fall in the CPI inflation rate to 2.3% year-on-year in April means that interest rates are now positive in real terms, so unless the Bank of England cuts rates by significant amounts, we should not expect loan growth to pick up much. Consequently, the pace of money growth created by means of commercial bank loans is likely to remain at a low ebb. This is illustrated by the low rate of bank lending growth shown in Figure 7.

**Figure 7. The Contribution of Bank Lending to M4x Growth Likely to Stay Low**



The other channel (2) through which the Bank of England influences broad money growth is much more direct but is currently operating to **reduce** the quantity of money, not increase it – that is, the Bank is doing QT instead of QE.

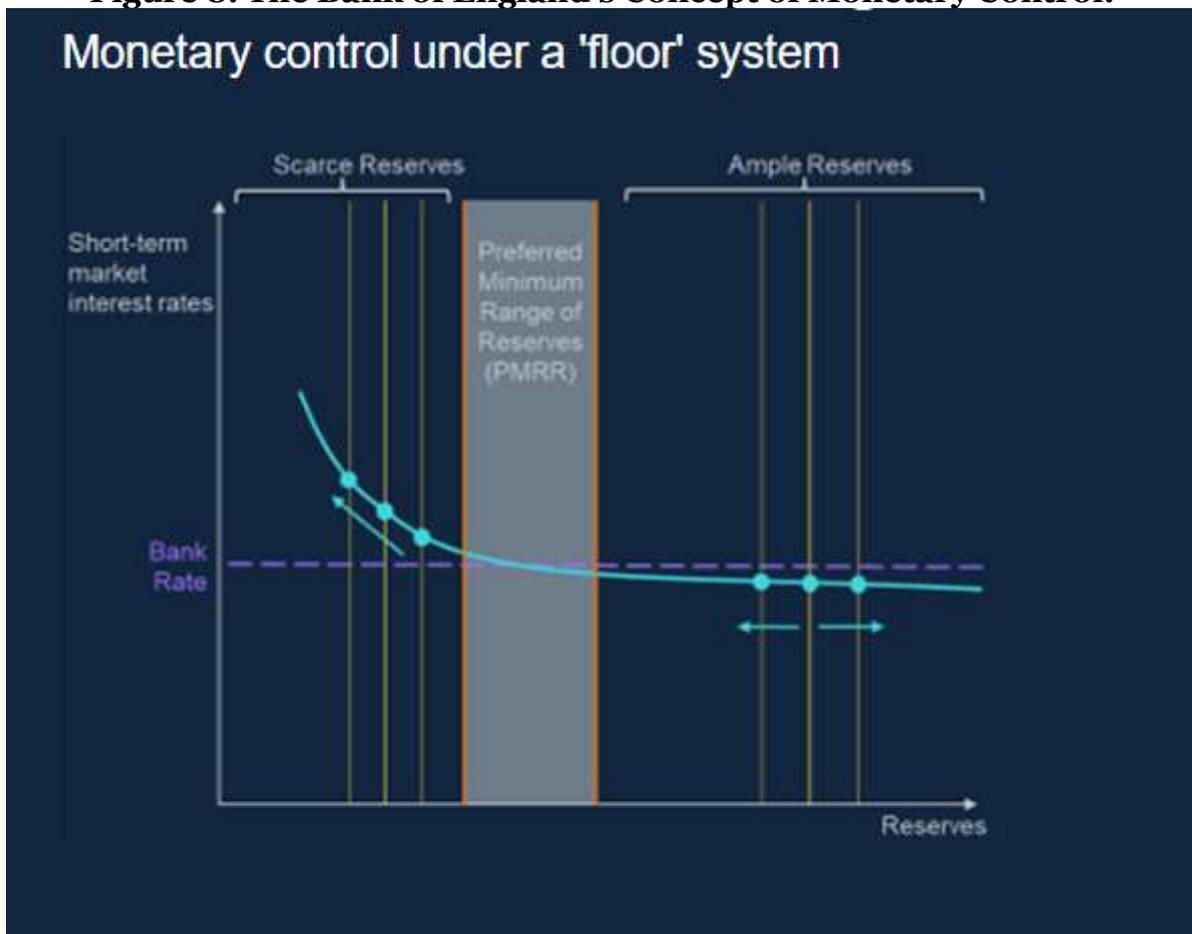
When the Bank of England allows securities on its balance sheet to mature - or if it disposes of them by sale – the deposits held by the private sector in the banking system tend to decline. In the case of maturing securities, the government will replace them with new issues that must be bought by the private sector. In the case of gilt sales by the Bank, the gilt-edged securities previously held by the Bank must now be purchased by private sector entities, implying a decline in privately held deposit (or money) balances.

Currently the Bank of England is engaging in operations designed to shrink its balance sheet. The question facing the Bank of England's policymakers over the next year or two is how much can they shrink the balance sheet without precipitating a liquidity crunch? The Governor, Andrew Bailey, provided a partial answer to that question in a lecture at the LSE on May 21<sup>st</sup>.



The theoretical framework is shared with that developed in the US by Federal Reserve economists and others, though the terminology differs slightly. Since the Fed and Bank of England concepts of monetary control focus on maintaining tight limits on the fluctuation of short-term interest rates, the Bank will seek to manage banks' reserve balances so that their overall quantity lies somewhere between "ample" reserves (where the rate is set by what the central bank pays on reserve balances) and "scarce" reserves (where bank borrowing and lending of reserves sets the market rate). The Bank has named this intermediate zone the "Preferred Minimum Range of Reserves" (PMRR) – see Figure 8.

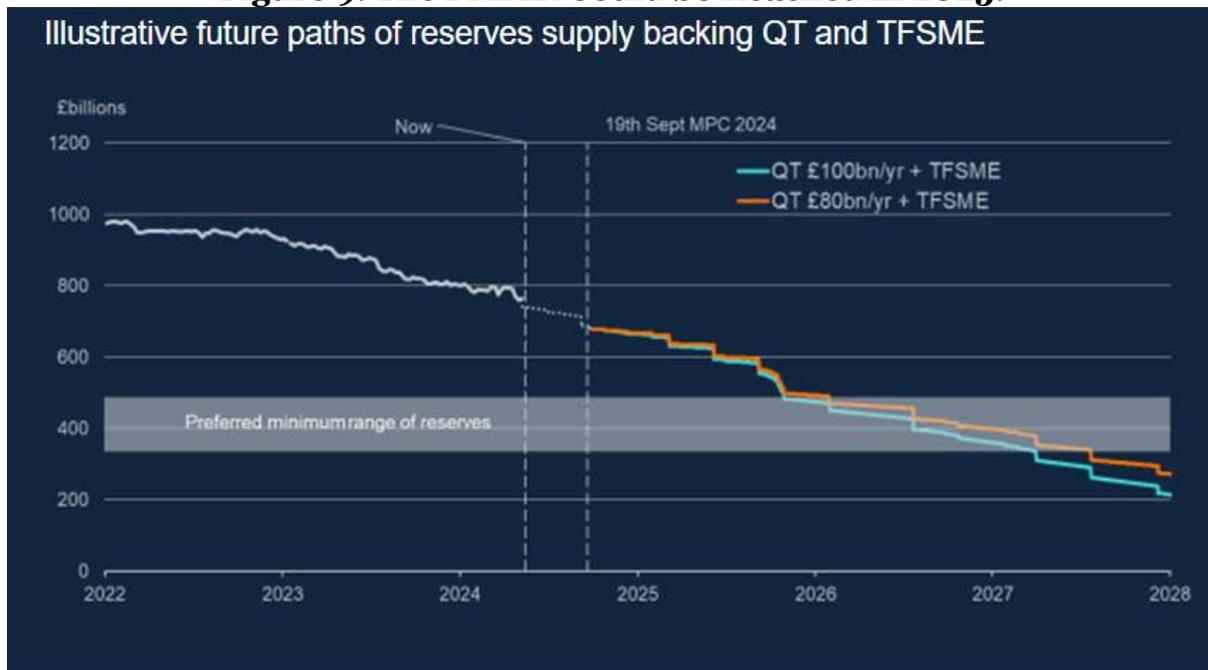
**Figure 8. The Bank of England's Concept of Monetary Control.**



Source: Bank of England.

To minimise the risk that rates may spike upwards, the Bank of England has, like the Fed, set up (1) a standing repo facility called the STR (for Short-Term Repo) and (2) an Indexed Long-Term Repo (ILTR). These will enable banks to borrow against gilt or other collateral placed with the central bank. To ensure the machinery is oiled and running smoothly, the Bank is encouraging banks to use these borrowing windows: "The Bank is open for business and our facilities should be used as a way for counterparties to access reserves as necessary."

**Figure 9. The PMMR Could be Reached in 2025.**



Source: Bank of England.

I mentioned above (p. 7) that the Bank was currently reducing the size of the gilt holdings on its balance sheet by £100 billion over the year October 2023 to September 2024 (up from £80 billion in the preceding year). In addition, the Bank has been reducing the size of the Term Funding for Small and Medium Enterprises (TFSME). In his lecture, Governor Bailey provided a chart of projected reserve volumes in the light of these reductions (Figure 9 above), which suggests that the volume of reserves could decline to the Bank's estimate of the PMMR in 2025.

To establish exactly where the PMMR lies, the Bank will be relying, as the New York Fed does, on surveys of banks as well as on activity at the STR window and spreads in the short-term money markets. These plans are consistent with those of the Fed.

The problem, however, is that all of this is being planned without any reference to the appropriate rate of money growth. In an environment where total government debt is static or rising, disposals of government debt by the central bank must be taken up by the private sector, in turn implying a corresponding shrinkage of broad money. Expressed the other way around, in order to be sure that broad money does not decline under QT, the commercial banks need to be creating loans at a rate that will offset the contractionary effect of QT. Currently, however, there is no indication that the Bank is paying any attention to a monetary growth criterion.

#### **4. Conclusion**

My conclusion is that, given the Bank's determination to shrink its balance sheet at such a rapid rate (£80-100 billion p.a.), there will be a strong bias towards a very low rate of money growth in the UK over the next year or two. This will generate conditions similar to the environment after the GFC when money growth was only



enabled by considerable injections of money by the Bank of England doing QE, replacing the effect of commercial bank lending in the creation of deposits or money. The future looks not only disinflationary, but possibly deflationary.

### **Summary and Investment Conclusions**

- UK inflation has been falling and – based on current monetary trends – is likely to fall even lower in late 2024 and in 2025, irrespective of the outcome of the general election on July 4<sup>th</sup>.
- Even before the election campaign, politicians on both sides of the ideological divide were attributing responsibility for the rise of inflation in 2021-22 or its fall in 2023-24 to a wide variety of non-monetary sources such as supply chain problems and the war in Ukraine which pushed energy and food prices higher. In truth, UK inflation is created in one place alone: in Threadneedle Street by the monetary policy of the Bank of England.
- In **Section 1**, I showed that the long-term changes in UK inflation over extended periods resulted from sustained shifts in the rate of broad monetary growth.
- **Section 2** considered the short-term perspective, focusing on the recent history of money growth and inflation during and after the pandemic. Money growth is now too low for a strong recovery and threatens a period of sub-target inflation.
- **Section 3** relied on Governor Andrew Bailey’s LSE lecture setting out the Bank’s plans for shrinking its balance sheet by continued, aggressive QT. These plans imply very low growth of M4x money growth and a correspondingly low UK inflation rate in the remainder of 2024 and 2025.
- **The economic conclusion** is that CPI inflation is likely to continue to fall in 2024 and 2025. As I wrote in March, there will be “*no second-round resurgence of inflation. If anything, the risks are on the downside – that is, prices are likely to fall well below the 2% inflation target in 2024 and into 2025.*”
- The investment implications are that bond yields should start to decline as inflation fears dissipate. However, the returns on risk assets such as equities and real estate will be held down by low nominal GDP growth.

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