Finance for the Future[1]

Is Mervyn King right that quantitative easing caused inflation?

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on behalf of Finance for the Future

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1. Background

There have been widespread reports that Mervyn King, the former Governor of the Bank of England is now deeply critical of Andrew Bailey, his current successor in office. King's claims appear to be threefold.

First, he is suggesting that the Bank of England was far too willing to use quantitative easing during the COVID crisis, with it in effect funding government expenditure during this period.

Second, he says that this willingness to create new money during this period has now led to the current inflation crisis.

Third, it is King's suggestion that the Bank of England realised this far too late, and therefore reacted too slowly to the onset of the current inflationary period, failing to increase interest rates at the time when King suggests that this was required. Quite when that was is not clear, but it was definitely before they acted.

Add this all together, and what King is really saying is that if you print money you get inflation[3]. Unsurprisingly, this simple notion which has long been beloved by right wing

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[3] Kings claims can be found here https://news.sky.com/story/cost-of-living-bank-of-england-shares-responsibility-for-crisis-former-governor-says-12617190. The most detailed discussion of what King actually said

politicians has now won support and amplification by those politicians and media friendly to their cause. The obvious question to ask in that case is whether King is right?

Note: some of the technical terms that are used in the paper that follows are explained in more depth in the appendix to it.

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2. Was the Bank of England too generous with Covid during the Covid era?[4]

Dealing with the Covid pandemic cost the UK government around £425 billion[5]. It so happens that between March 2020 and the end of September 2021 the Bank of England bought almost that same value of government bonds, creating new money through the quantitative easing process. That new money was what funded government deficits during this period. As a result, neither taxpayers or financial markets paid for Covid. The Bank of England did.

This needs to be put in context. What we know is that in the spring of 2020 the Bank of England agreed that in the face of a looming crisis that they would fund the UK government to keep it going, come what may. We know that is true. The Financial Times reported it[6]. They noted in April 2020 that the Bank of England had agreed to directly fund the

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in the Sky interview is here https://moneyweek.com/economy/uk-economy/603604/quantitative-easing-too-much-of-a-good-thing. Other coverage is at https://www.theguardian.com/business/live/2022/may/20/retail-sales-inflation-consumer-confidence-thg-ftse-economics-business-live; https://www.independent.co.uk/business/central-banks-drove-inflation-by-printing-money-says-former-bank-boss-king-b2083627.html; https://www.spectator.co.uk/article/mervyn-king-needless-money-printing-fuelled-inflation and https://www.euronews.com/next/2022/05/20/britain-boe-king

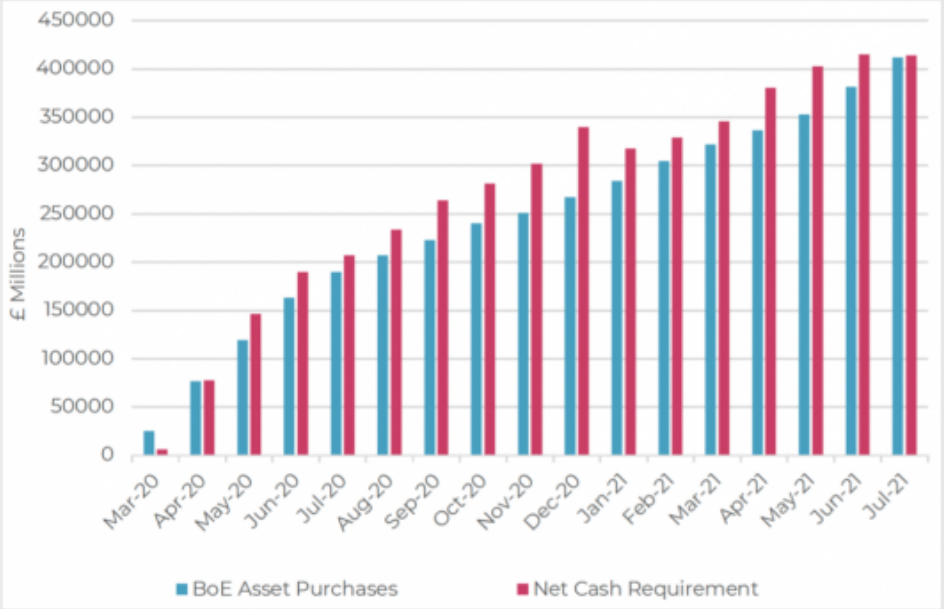
[4] The arguments noted here are elaborated further at https://www.taxresearch.org.uk/Blog/2022/02/06/reversing-qe-could-be-a-recipe-for-economic-disaster/

[5] The national debt in February 2020 was, according to thew Office for National Statistics, £1,784 billion. In December 2021, when quantitative easing ended, it was £2,207 billion, an increase of £423 billion. Bank of England data shows that quantitative easing funding increased by £400 billion over the same period. It was only in the last quarter of 2021 that the relationship between increasing binational debt and quantitative easing that had existed for eighteen months was broken. See https://www.bankofengland.co.uk/asset-purchase-facility/2021/2021-q3 and https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/bulletins/publicsectorfinances/march2022

[6] https://www.ft.com/content/664c575b-0f54-44e5-ab78-2fd30ef213cb

government. And this is what they did throughout 2020 and 2021. This chart from the New Economics Foundation shows what happened[7]:

Figure 11: Bank of England asset purchases track the government's borrowing needs
Net cash requirement (exc PS Banks) (PSNCR exc): £m CPNSA and BoE asset; Purchases total allocation (nominal £mn), both cumulative, March 2020-July 2021.



Source: ONS and BoE, authors' calculations updated from Giles and Stubbington (2020)

What is clear is that every time the government spent money in excess of tax receipts that supposedly then required the issue of debt to balance the books the Bank of England used the QE mechanism to purchase an almost equivalent amount of debt from the financial markets[8], with very small lags between the two. As the New Economics Foundation chart shows, these transactions almost exactly matched each other, and new base money was created as a result[9].

The net effect was that the government hardly issued any new real debt over this period. In March 2020 according to the Debt Management Office of HM Treasury the market value of government debt in issue was £2,219bn and 23.4% was owned by the government. In September 2021 the market value of all gilts was £2,589bn and 33% was owned by the Treasury. Ignoring this Treasury owned debt the total debt in issue was, then largely unchanged from £1,699bn net of government holdings in March 2020 to £1,734bn in September 2021. QE cancelled almost all the new government debt issued during this period. Instead, new money of about £440 billion was placed on the central bank reserve

[7] https://neweconomics.org/2021/10/calling-time
[8] See the glossary for an explanation on how the government purchases its own bonds which make up its so-called debt.
[9] See the glossary attached as an appendix for a definition of base money

accounts held by commercial banks with the Bank of England. The new money in question inflated the amount of base money in the economy.

In that case was Mervyn King right to criticise the Bank of England for using quantitative easing to create new money during this period? This requires an answer in two parts. The first is to ask whether there was an alternative to that creation of new money by the government? The second is, could the bond markets have financed this activity instead of using money creation?

Definitive answers to neither question can be provided, and Mervyn King has noticeably not provided any hint of his opinion on these issues. We suggest, however, that like other governments around the developed world the UK government had no choice but spend broadly as it did during this period (minus the corrupt part of that spending that was a feature of this period in the UK[10]). Without doing so the likelihood that households and businesses would have survived the financial stress that would have otherwise resulted was minimal. The spending averted a deep recession, in our opinion, and this was a price worth paying that King has ignored, as he has also ignored the fact that without lockdowns the NHS would likely have been overwhelmed and many more people would have died from Covid. We think it a very brave person who would argue that avoiding a short period of uncomfortable inflation now would have justified more deaths in 2020 and 2021, and we will not do so and hope he is not.

In that case the only relevant question is the second one that we have posed. Was there an alternative to QE? In practice there were two. One was for the Bank of England to have simply provided the government with an overdraft on what is called its Ways and Means Account during this period. A £20 billion facility on this account was in fact provided by the Bank of England[11] in April 2020, but it was not used. QE was used instead, but the net effect was the same. The overdraft (or Ways and Means Account as it is called in IK government terms) would have inflated the central bank reserve accounts held by commercial banks with the Bank of England in exactly the way that QE did. In fact, all QE does is disguise that this is being done. In that case presumably Mervyn King would have been no happier with this.

As such, presuming King did not wish that the economy collapsed, or people died, or both as a result of reduced government spending he must instead have wanted the government to borrow £400 billion from the financial markets instead of using QE. This would, however, have sucked spending power out of the economy, and in all likelihood have reduced the capacity of banks to loan funds to businesses during this period. The result would have been

[10] See https://www.theguardian.com/commentisfree/2020/sep/10/uk-corrupt-nation-earth-brexit-money-laundering as an example of many expressions of concern
[11] https://www.ft.com/content/664c575b-0f54-44e5-ab78-2fd30ef213cb

recession. That is why this option was rejected by the government, when they realised how unlikely it was that financial markets could sustain this level of lending to the government at that time.

In that case it has to be concluded that the Bank of England used QE as it did because it was aware that there really was no alterative unless the government was to crush public services and support to those in need during a pandemic, including to the sick and dying. Unless King is willing to say this was what he wished the government had done his first argument fails.

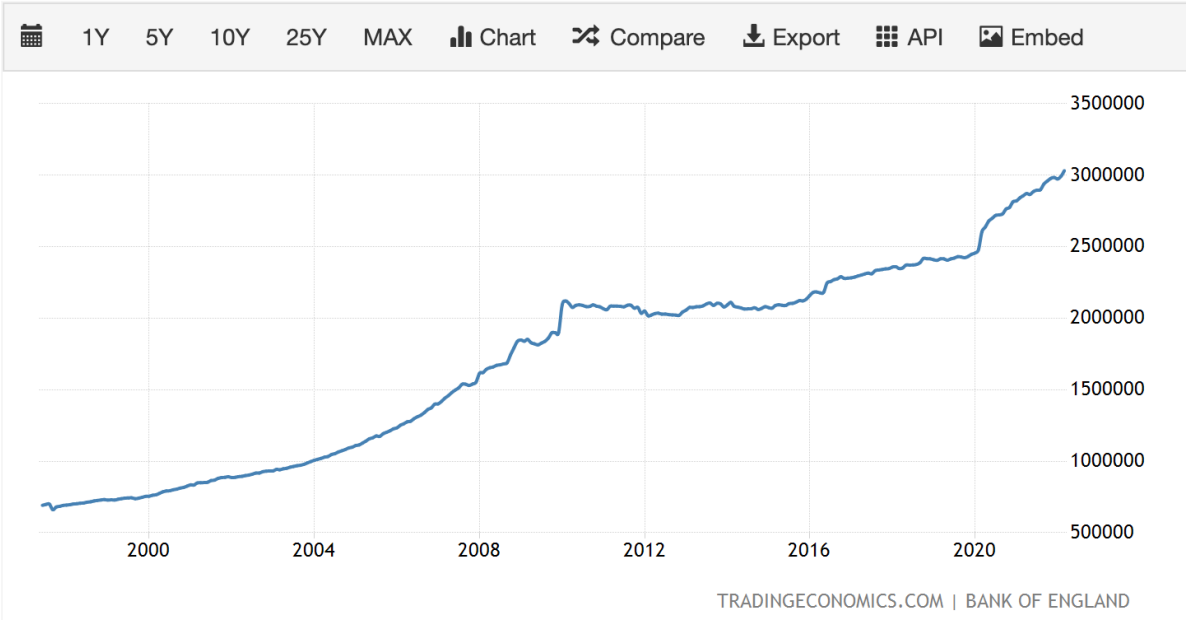
3. Has QE led to inflation?

King's argument is that the quantity theory of money holds true. This says that MV = PT, where M is the quantity of money, V is the speed at which money flows round the economy, P is the level of prices and T is the number of transactions. Movements in P reflect inflation. Those using this argument suggest that if T is constant, meaning that the actual level of activity in the economy is unaltered whatever the price level, and V, which is the speed with which money circulates is fixed, then if M (the amount of money in the economy) goes up then prices (P) must rise.

The argument is flawed in theory. It has also not been true for the last 13 years, at least, during which period QE has been in use.

QE does create more money. This is unambiguously true. Base money has risen from around £100 billion in 2009 to around £1,000 billion in 2021. Broader money supply has also increased. There are several definitions of this broader money supply, and I will use the mid-range example (M2) here[12]:

[12] https://tradingeconomics.com/united-kingdom/money-supply-m2

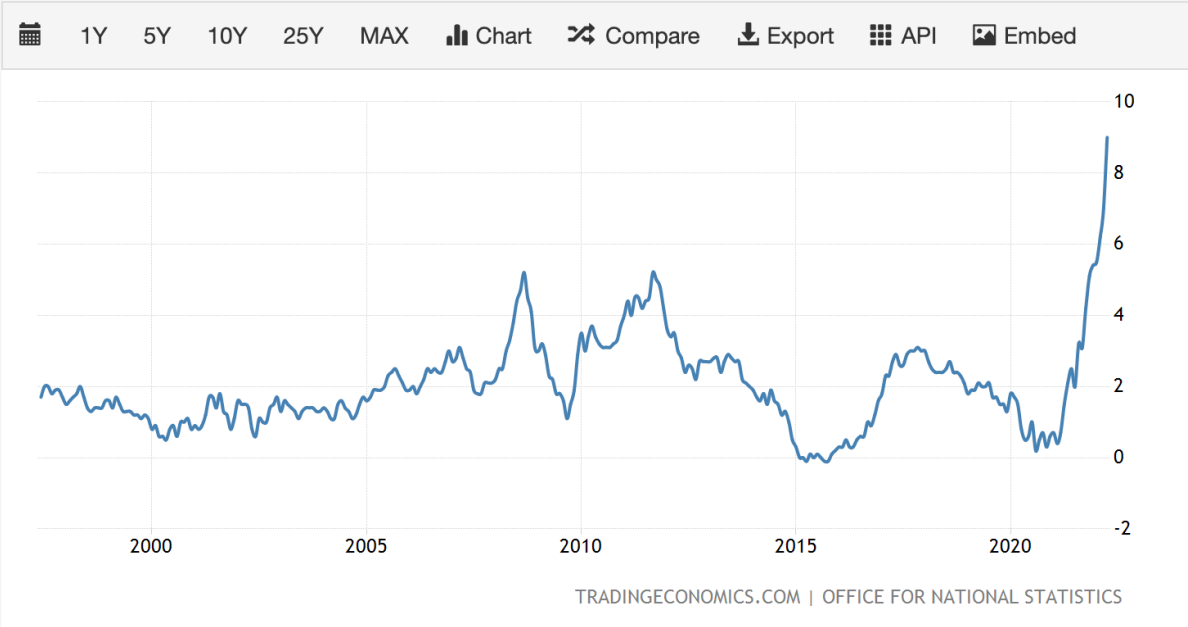


Money supply doubled from 2000 to 2008, without QE. This was all related to money created by commercial bank lending, which is the alternative source of new money in the UK economy to government created base money. The money supply has broadly doubled again since then, with QE, but over a longer timescale. The increases in money supply since 2008 broadly relate to the periods when QE was in use: this was obviously not the case before 2008.

The first thing to note then is that QE has not increased the rate of monetary growth: all that has happened is that government money has now substituted for commercial bank money creation, which has reduced since 2008, unsurprisingly as economic activity has been suppressed as a result of government austerity policies for much of this period.

Second, this is the relative inflation track record. It looks like this[13]:

[13] https://tradingeconomics.com/united-kingdom/inflation-cpi

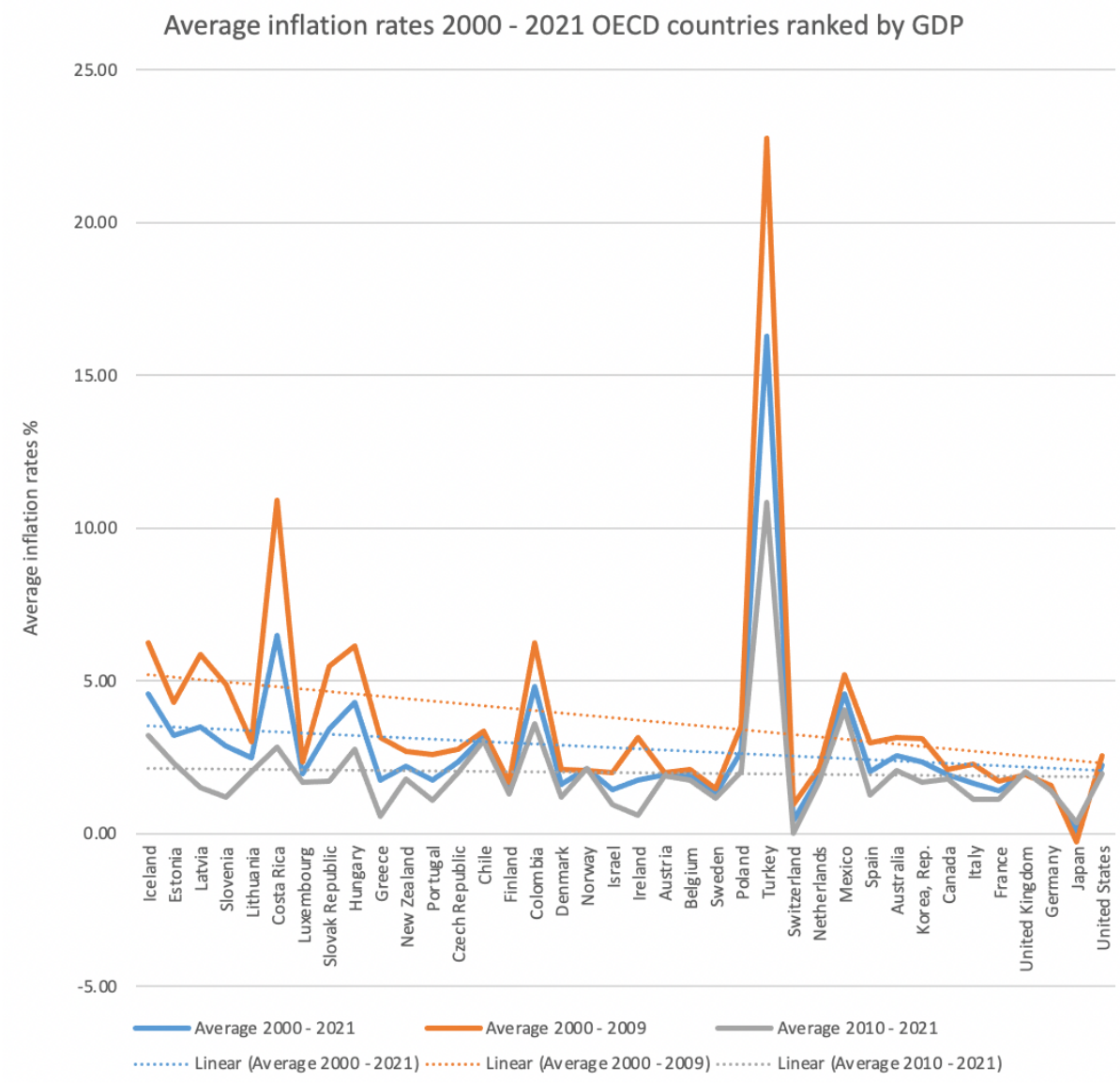


Inflation broadly rose, a little to 2008, and was then higher in the aftermath of the financial crisis, before being on an overall downward trend from 2012 until 2021, when there was a substantial change.

What is apparent in that case is that if money supply (M) rose and price levels (P) did not by much and the number of transactions was broadly fixed then the velocity of money fell significantly in the economy. This is what is now agreed to be the case: cash was hoarded by banks on their balance sheets. It still is. As a result even if the quantity theory of money is correct (and there are good reasons to challenge that it is) the way in which its proponents have used it to claim money creation results in inflation is wrong: they ignored that the new money created by QE has slowed the velocity of circulation of money as banks have hoarded cash.

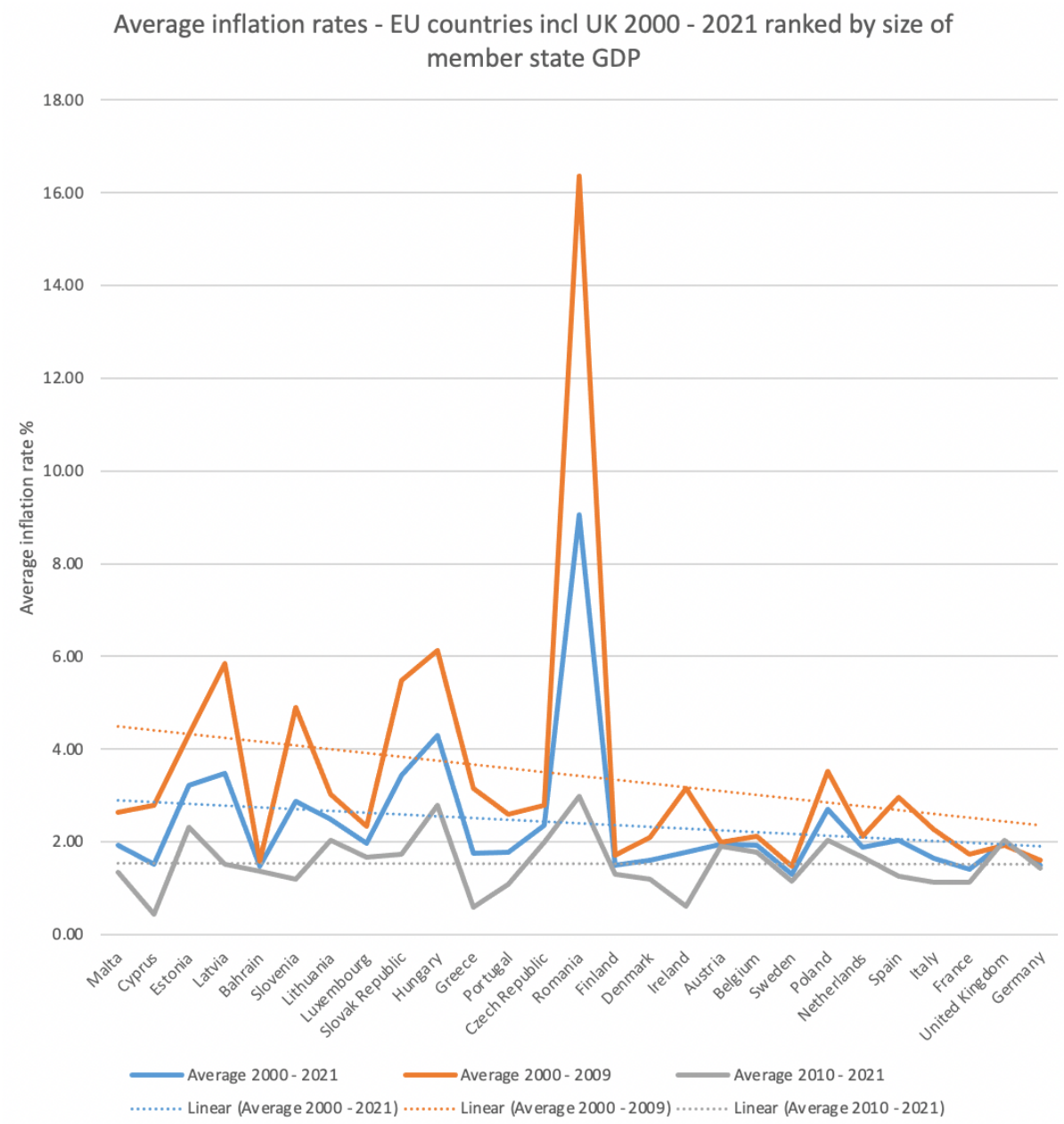
Reviewing inflation data from the Word Bank[14] supports the suggestion that the quantitative easing era – which has been post 2009 in all countries excepting Japan – has produced low inflation. This is data for OECD countries ranked by size of their GDP for the period 2000 to 2020, split around 2010 so that before and after QE data can be seen (all calculations being by the author):

[14] https://www.worldbank.org/en/research/brief/inflation-database April 2022 version used



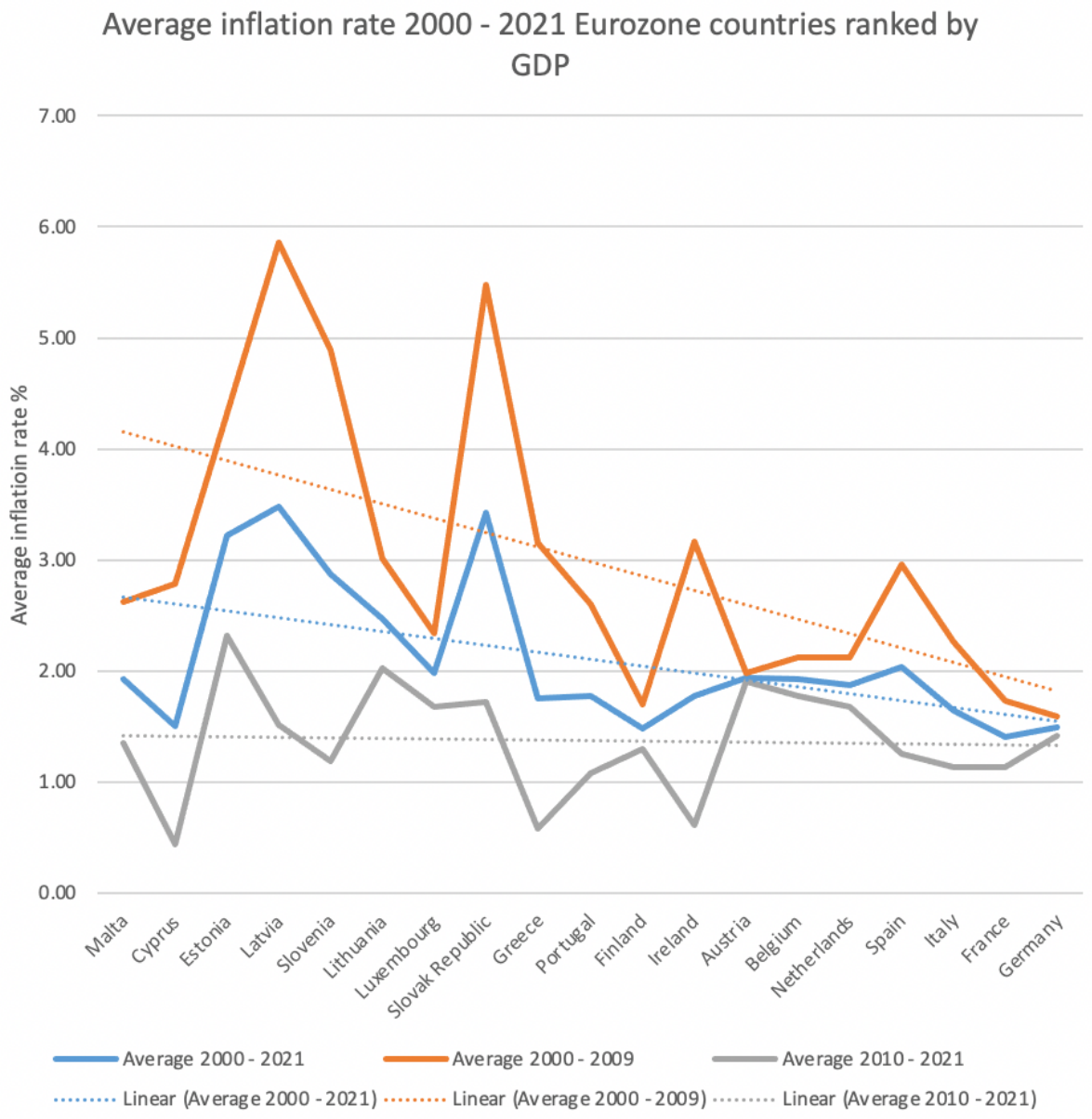
Turkey is clearly aberrational. The UK data is almost identical for each basis used. What is notable is that the average pre 2010 was markedly higher than the post 2009 data. Pre-2010 the data showed a decline in the average inflation rate as the size of a state grew. Post-2009 the data was almost flat across states, and lower. There is no sign that QE delivered inflation in the many countries in which it was used from 2009 onwards, in other words.

This is also true for the EU:

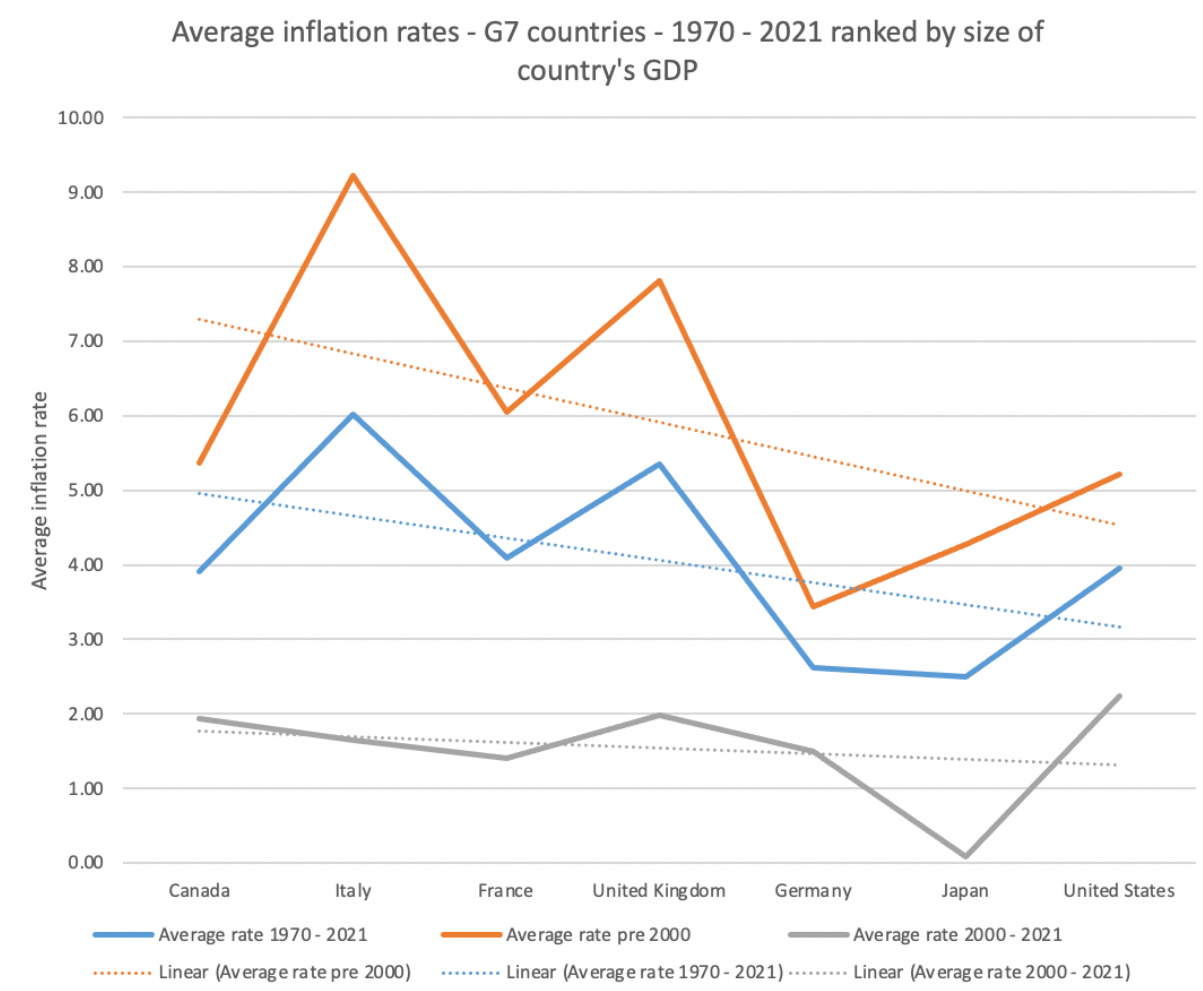


Romania is the aberration here.

And for the record, the eurozone shows the same trait:



And the G7 does too:

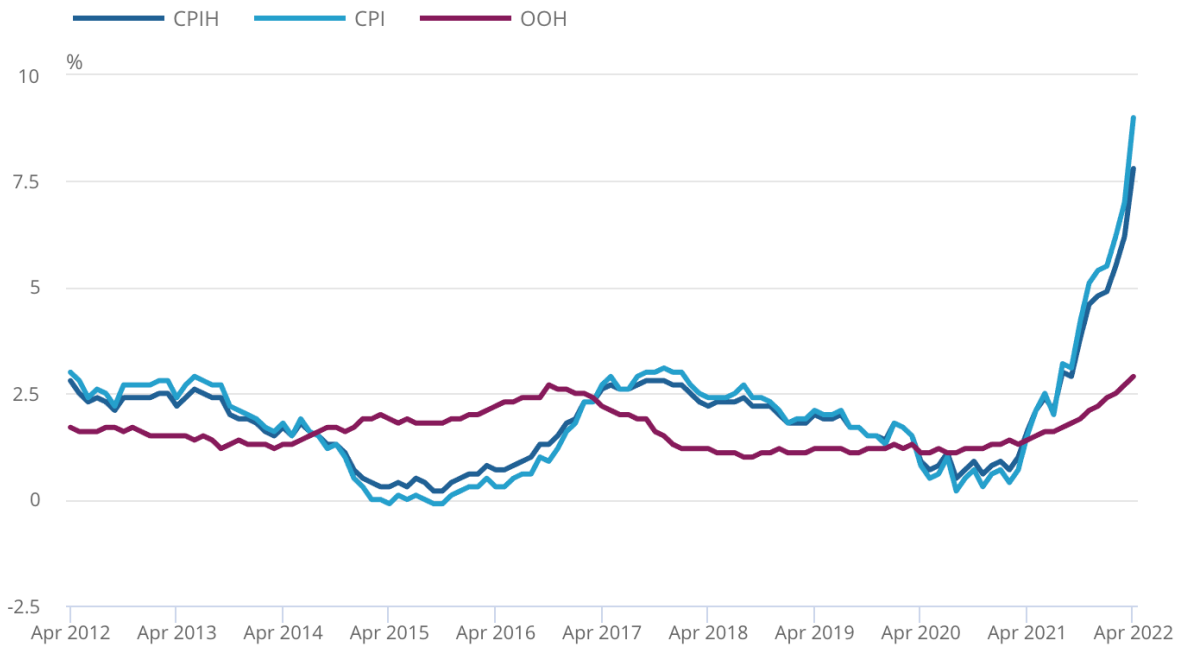


If QE caused inflation pre 2021 then the evidence is very hard to find. In fact, the exact opposite is the case: QE seems to have been associated with very low inflation.

In that case Mervyn King's claim that QE suddenly changed its nature and created inflation in 2020/21 when previously it had not would only be sustainable if there were no other explanations for inflation from the summer of 2021 onwards, which is when it lifted off in the UK, as this chart shows[15]:

[15] https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/april2022 CPI is the consumer price index; CPIH the consumer price index including housing costs and OOH owner occupier's housing costs.

CPIH, OOH component and CPI 12-month inflation rates for the last 10 years, UK, April 2012 to April 2022



Source: Office for National Statistics – Consumer price inflation

There were, however alternative explanations:

- Covid reopening without adequate planning, creating supply chain disruption;
- Bottled up Covid demand created short term excess demand;
- Inadequate energy planning for reopening, especially in gas markets.

These were then followed by:

- War in Ukraine;
- Disruption of energy markets in the face of anticipated (but not actual, to date) supply shortages as a result;
- The economic impact of sanctions;
- New Chinese Covid lockdowns.

In the UK there was also another factor:

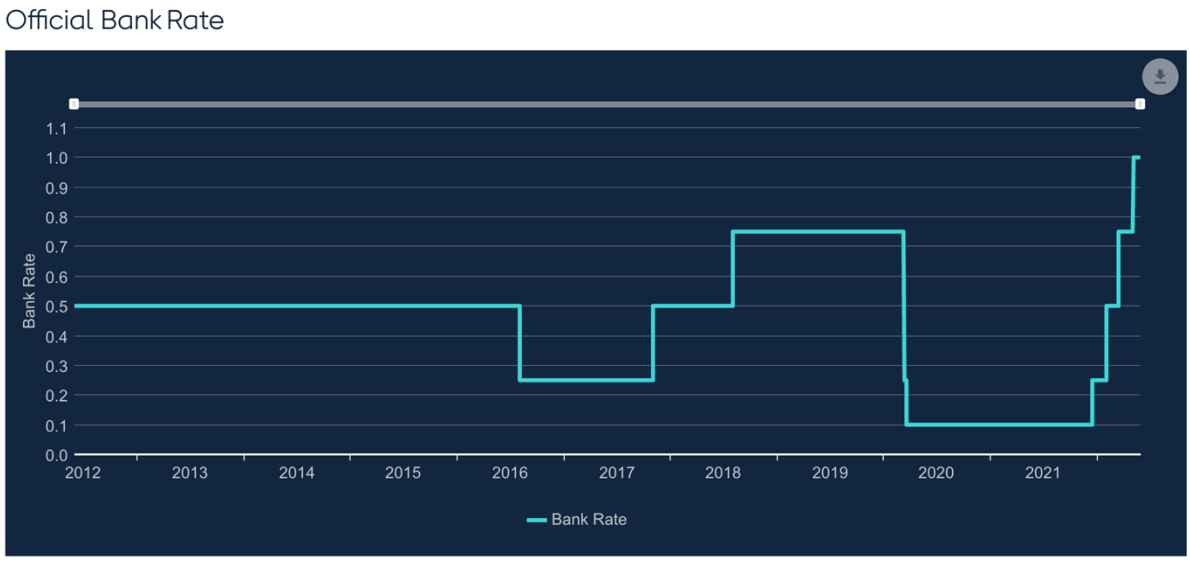
- Brexit disruption and costs to supply chains.

When there is no evidence that QE has created inflation, but that all these factors could, the suggestion that QE created the inflation we now have flies in the face of all the evidence.

So what about the formula MV = PT? Why did more money not create inflation? Simply because in the first instance most of it was base money[16], and secondly that the velocity of circulation of commercially created money fell, largely to match the increase in money supply. In addition, commercial bank lending created less money: to assume that all money creation is by governments alone is simply wrong, and those making this claim are making that mistake. The government necessarily created money to provide the funding the economy needed using the quantitative easing process when there was insufficient commercial bank money creation. Mervyn King appears to be wrong, again.

4. The Bank of England reacted too late

So, did the Bank of England react to the inflation outbreak in autumn 2021 too late, with it only increasing interest rates for the first time[17] in December 2021:

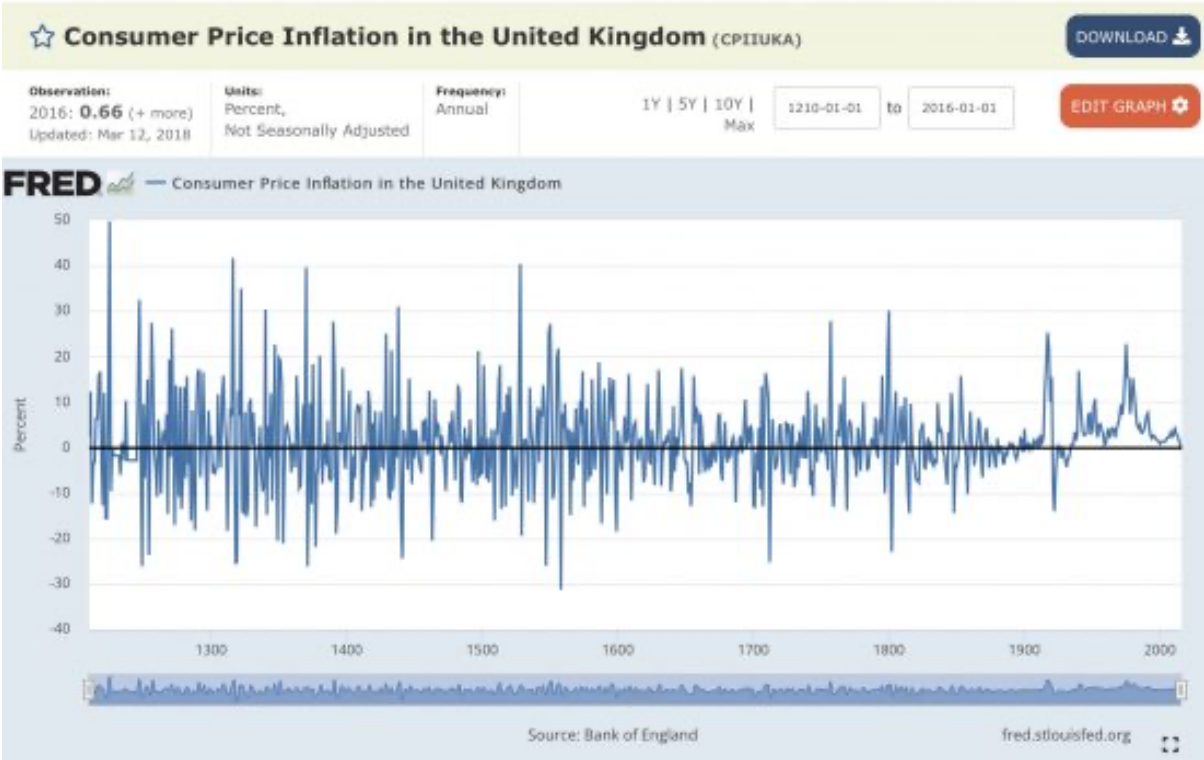


One reasonable question to ask is could the Bank of England have really reacted earlier, given how quickly this inflation emerged? King was himself notoriously late in reacting when Governor of the Bank. He was so late in fact it took him many months to realise there was a crisis in 2008[18]. Hindsight is a wonderful thing.

[16] See the glossary attached as an appendix for an explanation of base money
[17] https://www.bankofengland.co.uk/boeapps/database/Bank-Rate.asp
[18] See https://www.telegraph.co.uk/finance/recession/6195053/Mervyn-King-hits-back-at-Danny-Blanchflowers-interest-rate-claims.html

Another reasonable question to ask is whether the Bank of England should have done anything. There are two reasons for this. The first is that data shows that inflation always seems to go away by itself. The second is that the Bank of England did not have the right tools to tackle the current inflation anyway. They will be dealt with in turn.

The argument that inflation always seems to go away is backed by data. The data in question comes from the Bank of England but is best presented by the St Louis Federal Reserve Bank[19]. As they display it, this is the inflation data for England and then the UK from 1210 onwards (i.e. for a period of more than 800 years):



Note three things. The first is that the trend in the peaks in inflation is steadily downwards.

The second is that deflation has not happened for a century.

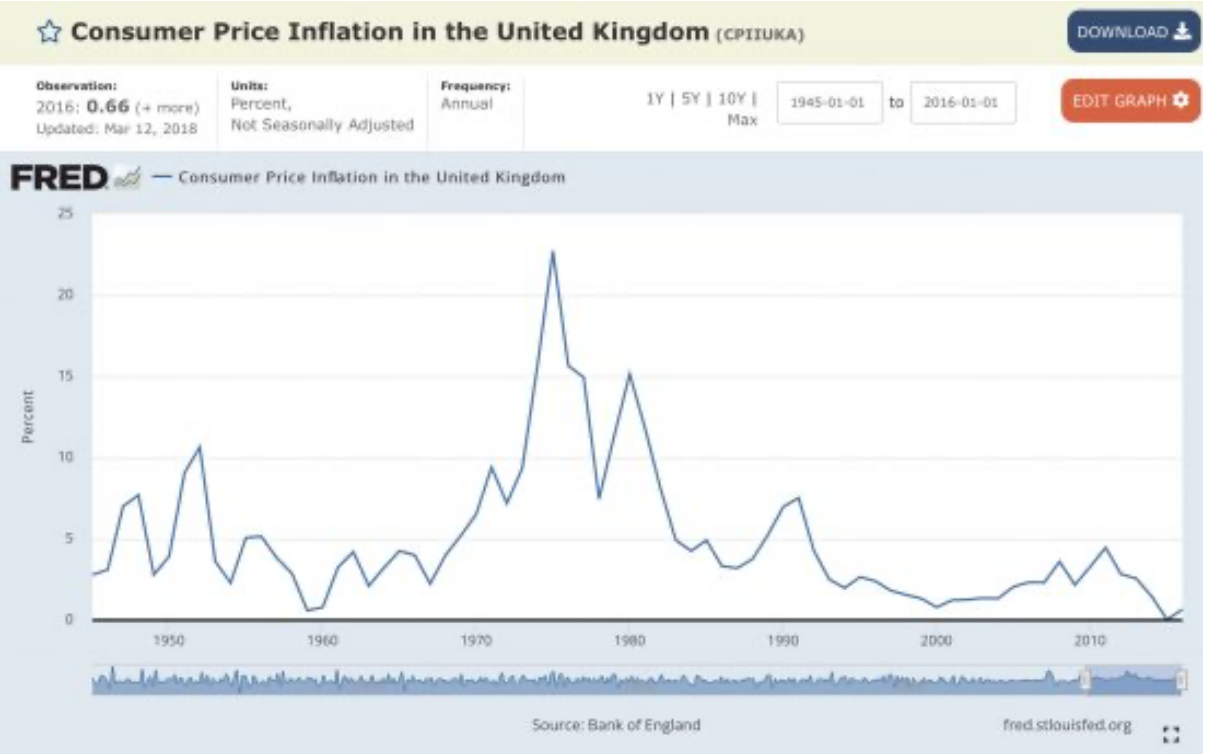
The third is that every peak is followed by a fairly rapid downturn if not to deflation then to a very much lower rate of inflation.

For those cynical about data from 1210 cutting the period covered by the data produces this second chart from 1800:

[19] https://fred.stlouisfed.org/series/CPIIUKA

What is very apparent is how wavelike the pattern of inflation followed by deflation is until the last century.

And just in case anyone still doubts the data, this is the data from 1945:



The relevance of this last chart is to show that inflation peaks are usually pronounced, and rarely result in stable plateaus. Even if they do, those plateaus are of short duration after which the trend is for there to be an almost invariable sharp decline in the rate of inflation.

Politicians can make things worse, of course: Margaret Thatcher did in the early 1980s, which most people tend to forget, but there are always consequences for deliberately trashing an economy, as she did. These exceptions apart, it is clear that inflation has not only recently, but throughout 800 or more years of history had a habit of correcting itself, and quite quickly. And remember this happened long before the era of independent central banks, which began in the 1990s.

There are three reasons for pointing this out. The first is to suggest that Mervyn King's suggestion that we might be facing a period of stagflation makes little sense. That is especially the case when pay rises are currently way below inflation, and we are facing a cost-of-living crisis because of a shortage of income at present. Stagflation requires that wage rises match the inflation rate and there is no sign that this might happen, especially given the weak state of most trade unions in the current UK economy.

Second, if inflation reverses without assistance much of the supposed role of supposedly independent central banks disappears.

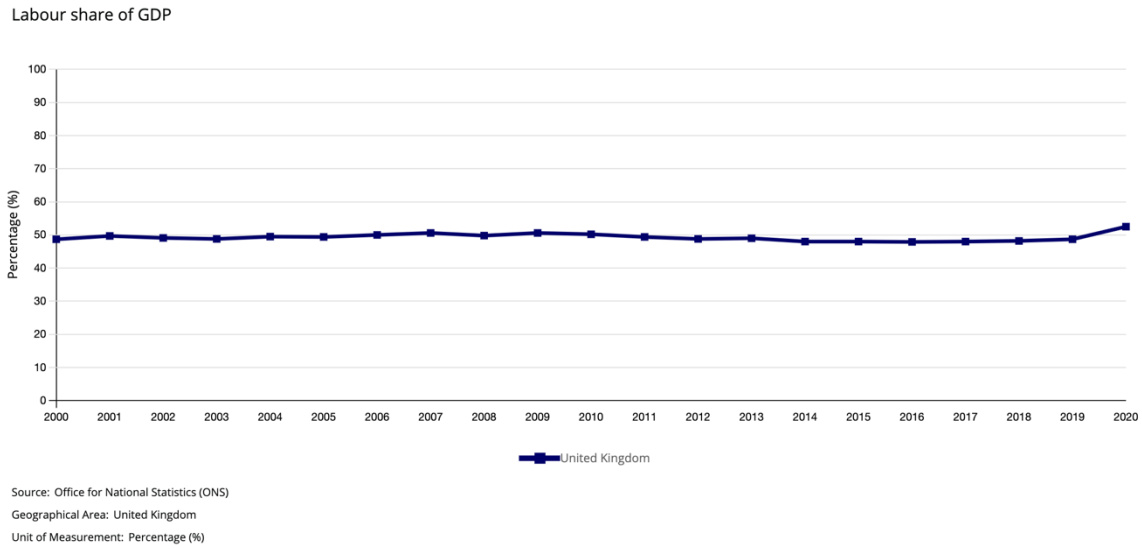
Third, the focus of policy during periods of inflation should not then be on tackling the inflation, as such. Once the supply shortages, panic buying and post-Covid disruptions work through the system (and they will) inflation is almost always resolved by the creation of a 'new normal' in which economic stability is restored and inflation falls: that is what the data shows and it is very hard to argue with it.

To argue then that the Bank of England reacted too late to this crisis is, then, hard to justify. The better argument is whether it should have reacted at all.

This is the point at the core of the second response to Mervyn King. He says the Bank should have reacted earlier. But that he can only mean that they should have raised bank base interest rates earlier than they did, because that is the only tool of monetary policy available to the Bank, barring QE.

The logic of this claim is that inflation is caused by a population with an excess of funds available to them and too few goods to buy who then push up prices, generically. This is so-called demand-pull inflation. The theory is supported by the idea that once inflation takes hold wage rises will match the inflation rate and so stagflation, which is a period of low growth but high inflation, sets in.

The problem for Mervyn King is that the facts do not fit his claims. We did not come out of the Covid era with people on excess wages: as a proportion of national income wages have been static for almost two decades[20]:



Given that this aggregate data ignores the distribution of wages in society, and the fact that many pay rises have gone to the already well paid[21], the implication is that those on low pay are now worse off.

It is also important to note that the upturn in 2020 was not because wages grew, but because GDP collapsed during the Covid crisis, meaning labour's share of income appeared to grow, but did not in practice. There was, then, nothing exceptional in 2021 about wages to drive inflation. Indeed, many people were hard up as a result of being on furlough, which paid less than full wages.

The exception were the wealthy. They had saved more during the Covid crisis: as it came to an end they did undoubtedly try to go on a spending spree with their pent up savings. Most of the rest of the country went out for a meal or a staycation at best. The cost of some items (second hand cars, which increased dramatically as new cars were not available due to microchip supply shortages, and kitchens) did rise, and fuelled a small increase in inflation, which would, however, have reversed quickly.

What also happened as the lockdowns ended was that demand for energy increased as the economy moved back into full production. This, bizarrely, had not been anticipated. Energy

[20] https://sdgdata.gov.uk/10-4-1/
[21] https://www.primeeconomics.org/articles/inflation-and-pay-doing-the-wrong-something/

prices rose as a result, fuelled by traders seeking to exploit the situation for profit in the energy futures market, who effectively locked in higher prices for gas, in particular, that many energy supply companies had not anticipated when offering fixed price contracts to consumers. Around thirty energy supply companies failed as a result. In the ensuing panic traders and remaining energy companies saw further opportunity for profit: prices rose again. What did not happen was that there was an increase in the cost of producing energy[22]. The problem was, instead, one of supply constraints. In autumn 2021 it was energy prices that drove inflation. Consumers did not pull them up. Profiteering energy companies drive them up. Then war, sanctions and Chinese Covid lockdowns just made things worse again: the profiteering in anticipation of shortages that have not as yet happened continued.

King has not understood this: he has got the cause of inflation wrong. It is not households with excess money to spend causing inflation. Inflation is instead being imposed on households, including by regulators whose actions are forcing up fuel prices higher than they need to be[23], when those households already have too little money to spend. Consumers cannot afford this inflation and know that their pay will not rise to match inflation because there is no sign that it will. Instead, they face poverty, requiring urgent measures from the UK government that go beyond applying sticking plasters to an already creaking benefits system.

King, however, wants to tackle the problem he imagines we face. In this regard he is in the same position as the current Governor of the Bank of England, Andrew Bailey, who has notoriously appealed to people to moderate their pay demands[24] in the face of the current crisis, which will of course make their situations worse.

What is more, just in case people do not moderate their pay demands the Bank is anyway intent on taking their net income away. That is the whole logic of interest rate raises: they reduce the spending power of households with mortgages. This also affects renters as the landlords put up rent to cover increased borrowing costs, whilst the cost of servicing existing credit card debts and other loans also increases. Of course, such households are often on lower incomes, and are certainly people with lower wealth. The wealthy gain from the rate rises, of course as the earnings on their savings rise. The objective is, then, to crush the income of those households on average or lower incomes who are in debt when they are already facing poverty as a result of inflation not matched by wage rises.

King has criticised Bailey for not doing this soon enough, but the policy cannot, of course, ever work. That is partly because it is tackling a problem that does not exist: we do not have

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[22] For an explanation of this see https://www.taxresearch.org.uk/Blog/2022/03/12/oil-gas-and-energy-producer-profits-are-going-to-increase-40-fold-as-a-result-of-energy-price-increases/

[23] See https://www.taxresearch.org.uk/Blog/2022/02/04/the-uk-energy-market-does-not-need-sunaks-sticking-plasters-it-needs-total-reform/ for an explanation.

[24] https://www.reuters.com/world/uk/boes-bailey-says-wage-restraint-key-keeping-grip-inflation-2022-02-04/

the type of inflation that an increase in interest rates could tackle. It would also make the economy much worse than it already is, exacerbating every other problem in the economy. So, King's criticism is wrong again. In fact, he's got nothing right.

5. What should be done?

If Mervyn King has got everything wrong about inflation, as has the Bank of England, what should be done? We suggest the following:

a) Since the inflation we are facing is beyond our control now, largely arising outside the UK, no monetary policy reaction is required at all. Interest rates should be cut to where they were in mid 2021.

b) Make sure people survive this inflation i.e. protect the vulnerable who might otherwise suffer as a result of their loss of purchasing power (which should be the priority now). The UK government is now showing some awareness of this need, but it is partial.

c) Provide support for business to prevent the risk of recession caused by people buying less as a result of the poverty created by inflation. This will probably require selective loan schemes of the sort required during the Covid era, but with considerably more vetting being applied. This is especially important because unless it happens the current pressure on spending power is going to spillover very quickly into serious unemployment.

d) Address the systemic issues giving rise to the political, economic or social failure that resulted in the inflation. So, in the UK's case:

- address Brexit;
- continue measures to tackle the impact of Covid on society;
- tackle the causes of war in Ukraine;
- address the vulnerability in supply chains;
- reform energy supply and make it more sustainable, and
- address the global crises (I use the plural deliberately) developing around food, climate change and other pressing issues.

e) Stop the government profiteering from this inflation. So, for example, in the short term the tax take on fuel and energy might be capped at 2020 rates meaning that VAT or duty cuts could be put in place to reduce inflation without imposing cost on the government, who otherwise profits from rising prices[25].

[25] This is clearly not a long term policy That would require that the cost of fossil fuel energy change to price it out of the market.

f) Change taxes to take purchasing power away from those on high incomes and earnings who represent the one part of the economy where demand-pull conditions might exist.

6. Summary

As this note shows, the claim made by Mervyn King that quantitative easing is the cause of the current inflation in the UK is wrong. The facts do not fit his case. The economic theory he uses does not fit those facts. His prescription is as a result also wrong. In fact, what he would do if he succeeded in having his way would make the economic situation in the UK very much worse. That is why we have produced this note.

Appendix 1

Glossary

There are some terms used in this paper that some readers will not be familiar with them. The most important are:

- **Base rate**. The 'base rate' of interest is set by a central bank of a jurisdiction or a group of nations, such as the European Central Bank. It is the rate at which that central bank will lend money to other banks. It is also by convention the interest rate paid on central bank reserve accounts (see separate entry). The significance of the rate is that it influences the interest rates charged by the commercial banks to their customers using the currency issued by the central bank that sets it.

- **Bonds or gilts.** A bond is, in effect, a form of savings account available to save in for a fixed period of time. It is offered by a savings institution, whether that be a bank, building society, government, or company. The currency in which the bond is issued is fixed. The interest rate payable upon the savings bond is also usually fixed for the duration of the period for which it is made available. That period can vary in length. It can be a few days but is usually a period of a year of more. Both governments and companies now issue bonds for periods as long as fifty years. Those offering repayment within two to ten years of issue are usually the most popular.

In some cases no early redemption or repayment of the capital invested in the bond at the outset is allowed. In others this capital can be repaid early with a penalty being paid by the saver seeking that early repayment, usually in the form of interest foregone. This usually applies to the bonds offered by banks and building societies.

In the case of government and corporate bonds early repayment is very rarely an option but the bonds are instead traded on a stock market. To achieve this goal a bond issue is made on a specific date by a company or government. That bond issue is then effectively split down into many parts. So, for example, a £10 million bond issue could be traded in 10 million units of £1 each, or one million units of £10 each, or any other arrangement that suits the issuer. The bond in question can then be traded, with people buying or selling parts of it. In that case the price paid by the buyer of a bond reflects their assessment of the creditworthiness of the issuer and the value of the interest rate paid on the bond when compared to current alternative issues. Bond prices can vary as a consequence.

The bonds issued by governments are sometime called gilts, because the UK government once printed its bonds with a gold edge. The term now more commonly refers to the fact that a bond issued by a government like those of the UK, USA, Japan and Australia cannot fail as the central banks of the countries can always create the funds to ensure that repayment will be made. This cannot be said of other bond issuers. Because of this implicit Treasury guarantee in some countries, such as the USA, government bonds are called Treasuries. Collectively, government bonds form a part of what is commonly, and inappropriately, called government debt. The term is inappropriate because whilst bonds are liabilities of the government they are not actually used to fund its activities, which funding is always provided by money creation by the Bank of England: they are merely the voluntarily deposited savings of those who want to take advantage of the security that the government can supply to savers. To describe these sums as debt is, therefore, inappropriate when they are simply part of a savings mechanism offered by the government.

- **Central bank reserve accounts and base money.** 'Base money' is sometimes called 'central bank money'. It comprises the currency issued by central banks in the form of notes and coins and what are called the central bank reserve account balances or central bank reserve accounts (see separate entry). These balances are the sums owed by the central bank to the commercial banks who hold accounts with that central bank as a requirement of banking regulation.

  The central bank reserve accounts serve two purposes. Firstly, they provide the means for settlement of liabilities both from and to the central government to the rest

of the economy (i.e. people and companies) via the commercial banks. Secondly, they are the mechanism used by commercial banks to make settlement to each other of the liabilities that they owe each other when fulfilling the obligations that their customers request be settled with customers of another bank.

The central bank requires that the commercial banks hold funds in their central bank reserve accounts. As a result, these accounts are always liabilities of the central bank and assets of the commercial banks. Whilst the sum each bank might hold in their central bank reserve account will vary as inter-bank settlement takes place the quantum of funds in the overall central bank reserve accounts is always under government control and is determined by the governments decisions on the amount it spends (which creates new central bank reserve account balances), the amount the government taxes (which removes money from these accounts), and the amount the government issues in bonds (which also reduces the central bank reserve account balances since those buying bonds then have a different liability owing to them by the government). As such the overall central bank reserve account balances and so the quantity of base money is under central bank control.

- **Fiat currency**, or fiat money, is currency declared to be legal tender by a government for use in a jurisdiction even though it has no asset backing. The term 'fiat' is derived from the Latin 'let it be done', meaning that the currency is legal because the government has declared it to be so. In practice a fiat currency has value because of the ability of a government to impose taxation on a population which it can demand be paid using the currency that it declares to be the legal tender of the jurisdiction.

- **Fiscal policy.** One of the two generally recognised policy options available to a government to influence the behaviour of the economy for which they are responsible, the other being monetary policy (see separate entry).

  Fiscal policy describes the process by which a government determines its spending and overall level of taxation income with the intention of delivering a surplus or deficit when comparing government income with spending. The impact of the policy comes from a) the scale of the spending the government undertakes and b) the impact of the tax it withdraws from the economy (which has the consequence of reducing demand for private sector goods and services) and c) the relationship between the two.

  If government income exceeds spending it is generally presumed that this will have a deflationary effect within an economy by reducing the overall scale of economic activity, and vice versa.

Deficits are more commonplace than surpluses, usually because economies are not running at full employment and fiscal policy is seen as a way of delivering that goal.

- **Inflation.** Inflation represents a general increase in prices and consequent fall in the purchasing value of money. It is measured as a percentage rate and not as an absolute measure. This is important: just because after a period of above average inflation the inflation rate appears to fall this does not mean that prices then return to their original level or that a currency regains its original value. For that to happen a period of deflation is required, and none has happened for a century or more in the UK. Deflation represents a general fall in prices and consequent increase in the purchasing value of money.

- **Monetary policy.** One of the two generally recognised policy options available to a government to influence the behaviour of the economy for which they are responsible, the other being fiscal policy.

  Monetary policy involves a government, or its central bank, setting the interest rate at which that bank will pay for funds held by commercial banks on short term deposit with it. This is then seen as a way of influencing interest rates charges in the economy at large.

  The assumption is that increasing interest rates reduces demand within an economy, so reducing the overall level of economic activity. This then reduces inflationary pressure, which is the policy goal most commonly associated with monetary policy. Reducing rates has the opposite effect by encouraging demand and investment and so stimulates economic activity.

  Official interest rates were at or near zero per cent for more than a decade after 2008 in many economies. In that case what are called alternative monetary policies, such as quantitative easing, were developed as an alternative to direct interest rate intervention in many cases.

- **Money** represents a promise to pay denominated in the fiat currency of the country issuing it. The money is created by the acknowledgement of a debt within a banking system using the currency in which it is denominated. The bank acknowledging the debt can be the central bank, in which case what is termed base money is created, or within the commercial banking sector, when commercial bank money is created. Base money is cancelled or destroyed by the settlement of tax, which is a legally created liability owing to the government. Commercial money is cancelled or

destroyed by the settlement (by repayment) or cancellation (by agreement or default) of the loan that created it. Because both base and commercial money are cancelled or destroyed continually in the course of everyday transactions new money creation is a continual necessity. The government creates new money whenever it spends because all such spending uses funds created for it by its central bank. Commercial banks do it by lending, including on overdrafts and credit cards.

Notes and coins have no intrinsic value just because they physically exist. Their value lies in the government' promise to pay the owner the amount printed on the coin or note. As such they do not represent a different form of money. Rather, because they are created by governments, they form part of base money. They are physical manifestations of the debt that the government creates when spending. This is made clear on UK bank notes on which the phrase 'I promise to pay the bearer on demand the sum of ten pounds (or whatever)' is written. Like all base money, in theory notes and coin are cancelled on payment of tax, but in this case they are recycled. However, this recycling does not imply that money has a physical reality: it just means that the token used to record the debt is in this special case reused.

- **Quantitative easing (QE)** describes the process in which a central bank buys the debt or bonds of the government of its jurisdiction from whoever might own it (and occasionally commercially issued debt as well) and then holds it. The aim is to force up the price of this debt by reducing the amount of debt available for sale in financial markets, which scarcity inflates the value of that debt, which in turn then reduces the effective interest rate paid upon it. The theory is that this will then force investors seeking an adequate return to move their funds to risker assets, so providing money for investment in private markets.

  The effect of quantitative easing is to increase the central bank reserve account balances of commercial banks held with the Bank of England, with the increase representing the amount that a central bank has paid to buy back the bonds previously issued by the government that owns or controls it. Simultaneously, the aim is to reduce the quantity of government bonds available to those banks and their customers.

  The claimed intention of the central bank doing this in the periods after the financial crisis of 2008 was to encourage savers, other than commercial banks, to move their funds out of low-risk government bonds and into higher risk investments within the economy, which it was hoped would then encourage an increase in economic activity across the economy as a whole and so aid recovery of the economy. During the Covid crisis this did not, however, appear to the motive of central banks using QE. Instead,

those central banks appeared to be funding the expenditure of the governments that controlled them[26].

It is important to note that whilst quantitative easing was used from 2009 to 2016 to enable the commercial banks to make payment to the owners of the government bonds or gilts that had been sold by those owners to the Bank of England, the nature of money as debt meant that the onward payment by the commercial bank to those customers who had made those bond sales did not cancel the resulting debt owing by the Bank of England to the commercial bank on their central bank reserve accounts arising as a result. That is because the commercial bank that made the payment to its customer on the instruction of the Bank of England on behalf of the government now owes that customer money, because that is what the positive balance on that customer's bank account actually represents i.e. it is a debt owed to them by their commercial bank. The commercial bank is happy to take on this debt to their customer that it would not otherwise owe because it is in turn owed an equivalent sum by the Bank of England. This debt from the Bank of England is represented by the increased balance on its central bank reserve account with the Bank of England, which the commercial bank considers to be a bank deposit account for its own accounting purposes. Since the central bank reserve accounts held by commercial banks are a significant part of what is termed 'base money' (see separate entry) the consequence is that QE increases that part of the money supply.

The quantitative easing arrangements used differed a little in the Covid era. During this era quantitative easing was (although central banks vehemently deny this) little more than a sham to disguise the direct funding of government expenditure by central banks. The order of events was as follows:

- The government approved the payment of money to support the economy e.g. to pay the salaries of government staff or to provide furlough support to the private sector. The Bank of England then made payments to whomsoever the government directed (for example, government employees or companies receiving furlough support), routing the payment via the central bank reserve accounts to commercial banks, who then made payment onwards to their customers, as requested by the government, with the consequences noted previously.
- Then, to pretend that this expenditure was being funded by government borrowing the Treasury issued new bonds, which the commercial banks or their

[26] As the New Economics Foundation has shown, between April 2020 and July 2021 99.5% of UK government deficits were funded by quantitative easing. https://neweconomics.org/2021/10/99-5-of-government-covid-debt-has-been-matched-by-so-called-bank-of-england-money-printing

customers (and it does not matter which) then bought, making their payment to the Treasury via the commercial bank's central bank reserve accounts, reducing them as a consequence by the value of the bond then issued.

- Then the Bank of England did, usually within days of the new bond being issued, purchase an equivalent value of bonds back from the financial markets, restoring the value of the central bank reserve accounts that the bond issue had reduced.

In effect, the bond issue by the Treasury and the subsequent repurchase by the Bank of England were equal and oppose transactions that cancelled each other out and no new net government debt was created as a result. What it is important to note is that the netted off QE bond sale and purchase transactions did not have any impact at all on the actual government spending to support the economy that initiated this whole process. That spending happened using new money created by the Bank of England for this purpose and QE was used to pretend that this direct funding had not taken place when in reality it had.