



BANK OF ENGLAND

Rt Hon Andrew Tyrie MP
Chairman
House of Commons
London
SW1W 0AA

Ben Broadbent
Deputy Governor, Monetary Policy

6 March 2017

Dear Mr Tyrie

Re: Treasury Select Committee Inquiry: The effectiveness and impact of post-2008 UK monetary policy

1. Please find below a written submission to this inquiry. I have shared this letter with my colleagues on the Monetary Policy Committee (MPC) and on the Financial Policy Committee (FPC). I hope you and your colleagues on the TSC find it helpful.¹
2. In common with those of other advanced countries the UK's economic performance since 2008 has been disappointing. After the most acute phase of the financial crisis the economy was stabilised by a range of policy measures, as was the case elsewhere. However, the recovery has been sluggish. Over the past decade real earnings have grown at the slowest rate since the mid-19th century (Carney (2016a)), and output per head is only around 1% above its pre-crisis peak (Haldane (2016)). This disappointing backdrop provides the context for your inquiry into the impact and effectiveness of monetary policy.
3. Before turning to the themes and questions set out in the Terms of Reference² it's worth making a couple of broad opening points.
4. First, one of the cornerstones of monetary analysis, both in the theory and the data, is the long-run neutrality of monetary developments, including from monetary policy. They can have important effects over the shorter run on real aggregate variables, such as real interest rates and real output (GDP). To that extent, monetary policy has provided important support for activity in the period since 2008, offsetting the headwinds to growth arising from private deleveraging, fiscal consolidation and subdued world growth (Chart 1). More generally, this is why a concern for the real side of the economy, over cyclical time frames, is embedded in the MPC's remit.

¹ This letter is not intended to provide any new signals about the future stance of monetary policy. The MPC's latest Monetary Policy Statement, Minutes and *Inflation Report* are the appropriate source for presenting policy views.

² <http://www.parliament.uk/business/committees/committees-a-z/commons-select/treasury-committee/inquiries1/parliament-2015/post-2008-uk-monetary-policy-16-17/>

5. Over longer periods of time, however – long enough for prices to be considered flexible – monetary policy is generally thought to be “neutral”. It has no measurable impact on real variables, which are instead determined by other (also real) forces.³ In the long run, for example, real GDP depends on the supply capacity of the economy, as determined by productivity and the active workforce. The rate of unemployment is determined by the structural characteristics of the labour market. Real interest rates are the price that equilibrates the demand for investment and the supply of savings. In the long run, discretionary changes in monetary policy have little or no bearing on these variables. And attempts to use it to such ends, over extended periods of time, have rarely ended well. It is for this reason that the objective of monetary policy is always anchored in a nominal quantity such as consumer price inflation.

6. Second, in any open economy like the UK, with free movement of capital across borders, longer-term real interest rates are largely determined by global developments. In any market asset prices will tend to adjust so that, once risk premia are accounted for, real expected returns are equalised. When capital can flow freely that equalisation tends to occur across countries as well as across asset classes. Amongst other things, this implies that real bond yields are determined predominantly at the level of the global economy, not any single country. Chart 2 below displays the very tight co-movement between bond yields across the G7 economies over the past twenty-five years.

7. Real bond yields can diverge if markets expect changes in real exchange rates over the future, if there are variations in country specific risk or term premia, or if frictions hinder the equalisation process in some way. But a small open economy is, to a significant extent, a “price-taker” when it comes to the long-term risk-free real interest rates, just as it is in the markets for commodities (like oil) and other tradeable goods. The UK is one of the world’s largest single economies but is still “small” in this sense, accounting for only 3% of world investment demand and 2% of global saving.

8. These points are relevant for this inquiry as several of the questions in the Terms of Reference involve real variables that are not ultimately determined by monetary policy: productivity, the distribution of income and relative asset prices.

9. Over the past several years the advanced economies have seen weak productivity growth and low real interest rates. The fact that these trends have persisted for so long, and that inflation has been broadly stable even as policy rates have declined, strongly suggests their underlying causes are real rather than nominal. And for real interest rates in particular, those causes are likely to be global, not specific to any single country. In the main, low policy rates are far more likely to be a symptom than the cause of these underlying, structural factors.

³ This dichotomy between the real and the nominal side of the economy has a long history in economic thought, starting with David Hume. Milton Friedman’s Presidential Address to the American Economic Association, in 1968, is still as clear a statement of this principle as any: “The monetary authority controls nominal quantities... [But] it cannot use its control over nominal quantities to peg a real quantity – the real rate of interest, the rate of unemployment, the level of real national income”.

Theme 1: The effectiveness of monetary policy in meeting the inflation target

Since 2008 monetary policy has provided significant support to aggregate demand – and hence to jobs and growth - in line with the MPC’s inflation-targeting mandate. Looking ahead, the MPC has the tools to either tighten monetary policy or to provide further stimulus as needed.

10. Since 2009, when interest rates were cut to 0.5% and the MPC first undertook asset purchases, unit labour costs in the UK have grown at an average rate of 1.4%, just over a percentage point lower than the historical average under inflation targeting. CPI inflation, which also depends on imported costs, has averaged 2.2%. Had Bank Rate not been cut to the same extent, following downwards the neutral rate of interest⁴, GDP would have been lower, unemployment higher and growth of nominal quantities – unit wage costs and inflation – weaker.

11. That support from monetary policy depends on various channels. As far as interest rates are concerned, a lower real short-term rate reduces the incentive to save and also encourages investment. Consumption is additionally supported, in aggregate, via the “cashflow effect” on net interest payments. Cuts in interest rates reduce interest payments for indebted households and firms, relieving financial constraints on spending. It’s true that they also reduce interest receipts for those with deposits. But the evidence suggests that the net effect is positive for demand and output. Nor does the evidence indicate that it’s any smaller at lower levels of interest rates. This is demonstrated by the evolution of the household saving ratio over the period in question. The saving rate rose sharply during and immediately after the financial crisis, reaching 11½% in 2010 Q1. It has since fallen to 5½% (Chart 3). Household saving is influenced by a number of factors, not just monetary policy. But if there had been a significant perverse effect of low interest rates – if, for example, households had collectively decided to save more to compensate for lower returns – it’s unlikely the saving rate would have fallen to this extent.

12. It is also worth noting that only a small proportion of savers are likely to have been strongly affected by lower deposit rates without also benefitting from higher asset prices. Of the £10 trillion of assets held by UK households, only £1.5 trillion are held in the form of deposits (Vlieghe (2016)). And the majority of significant deposit holders also have other forms of wealth. The micro-data collected for the ONS’s Wealth and Assets Survey suggests that only around 2% of households have over £5,000 of deposits but no net housing wealth and less than £5,000 of financial assets (including pensions).

13. A monetary policy expansion at home, relative to policy abroad, can also lower the value of sterling, supporting net trade and raising the cost of imports — the exchange rate channel. Finally, monetary policy can directly influence people’s expectations and behaviour. An easing in policy in the face of a prospective reduction in demand can bolster sentiment and prevent a drift down in inflation expectations — the confidence and expectations channel (August 2016 *Inflation Report*).

14. It is harder, given the more limited evidence, to estimate precisely the impact of Quantitative Easing (QE). What studies we do have, from the UK and other countries, suggest QE too has helped

⁴ The real equilibrium or neutral rate of interest that stabilises demand around supply, and therefore keeps inflation stable over the medium term, appears to have trended downwards, across the developed world. In the UK, one can infer from the gradual closing of the “output gap” that policy has nonetheless been expansionary.

stabilise and support the economy. Using monthly data from 2009 to 2014 to assess the impacts of asset purchases in the UK, Weale and Wieladek (2016) find that an asset purchase announcement of 1% of nominal GDP (about £18bn) leads to a statistically significant rise of 0.25% in real GDP and 0.32 percentage points in CPI inflation. Averaging across several different estimation methods, Joyce *et al.* (2011) concluded that £200 billion of QE may have raised the level of real GDP by 1½% to 2% and increased inflation by between ¾pps and 1½pps – effects roughly equivalent to a 150 to 300 basis point cut in Bank Rate. Studies of asset purchases in the US and Japan also find a positive macroeconomic effect (Chung *et al.* (2012), Engen *et al.* (2015), Gertler and Karadi (2012) and Hausman and Wieland (2014) for example).

15. The empirical evidence also typically finds a significant impact on financial markets, albeit one whose scale has varied over time and across countries. For the August 2016 package, and using surveys to estimate market expectations ahead of the announcement, the response of gilt yields looked to be more consistent with the size of the effects seen at the launch of the Committee's gilt purchase programme in 2009, rather than the smaller effects during subsequent phases (MPC Minutes, September 2016). Overall it seems likely that any changes in potency of QE are due primarily to changes in the prevailing economic and financial market conditions rather than to diminishing marginal returns *per se*.

16. There is currently scope for significant further gilt purchases if warranted. Based on the Asset Purchase Facility's (APF) current approach, further significant QE can be undertaken if that were ever deemed necessary⁵.

17. When launching the Corporate Bond Purchase Scheme (CBPS) the MPC considered it likely that purchases of corporate bonds would provide a greater boost to activity, pound for pound, than purchases of government bonds. The MPC's clear intention has been to minimise interference in the private sector credit allocation process by buying a portfolio which is representative of issuance by firms making a material contribution to the UK economy. This includes buying bonds issued by firms that invest in long-term infrastructure and housing associations in proportion to their share in existing issuance.

18. The MPC decided in August 2016 to buy up to £10bn corporate bonds. There are currently around £122bn of additional eligible corporate bonds, and there is therefore significant scope to expand the CBPS scheme further if warranted.

19. Forward guidance can take many forms but in general is intended to reduce uncertainty about the future course of policy, thereby enhancing its effectiveness. The *Inflation Report*, published for almost 25 years, is an example of guidance in its broadest form (Miles (2014)). The MPC's description of the economic outlook helps to inform households and firms about the balance of risks regarding the future path of interest rates. On occasions the MPC has also made use of more explicit forward guidance about the policy outlook. In August 2013 the MPC announced "threshold-based" guidance, setting out necessary conditions before a rate rise would be countenanced. In February 2014 the MPC said any future rises in Bank Rate were likely to be more gradual and more limited in extent than during previous

⁵ The stock of gilts outstanding, including those held in the APF, is larger now than at the start of QE in 2009.

cycles. This reflected its view that the underlying neutral real rate was likely to remain relatively depressed for some time, a view that subsequent events both here and elsewhere would appear to have borne out. On neither occasion did the Committee commit unconditionally to any fixed path for interest rates. Monetary policy has been and is always set according to what the circumstances at that time dictate. At certain times explicit guidance can be invaluable as a means of communicating either the Committee's reaction function (as in August 2013 and August 2016⁶) or its view of the balance of risks regarding the neutral rate (February 2014). And in its broadest form, guidance is an essential part of central bank communication and transparency.

20. More generally, the MPC indicated in its latest minutes in February 2017 that monetary policy, including Bank Rate, can respond, in either direction, to changes to the economic outlook as they unfold to ensure a sustainable return of inflation to the 2% target.

Theme 2: The unintended consequences of monetary policy

Monetary policy affects real variables – output, employment and real asset prices – for a period of time. These effects are part of its standard and intended transmission to nominal quantities such as inflation. In the longer run however monetary policy can only affect nominal quantities. This is why the UK's primary target, determined by HM Treasury and laid before Parliament, is the rate of inflation and not any real quantity.

21. Any easing in monetary policy, whether conventional or unconventional, tends in the first instance to support asset prices. Indeed this is a key aspect of its *intended* transmission to the economy. In doing so it helps to support demand. However, monetary policy is only one of many factors affecting real asset prices. Even in the shorter run their evolution can be dominated by other things, including international developments. Bank Rate was cut by over 5 percentage points during the financial crisis, between November 2007 and May 2009, but UK equity prices almost halved over that period. More recently, gilt yields fell after the MPC eased monetary policy last August, but they've since moved significantly higher, in line with those in other countries.

22. This is not to deny that the decline in longer-term real bond yields has had some bearing on the price of risky assets. For example, it is likely that the strong rise in prices of equities and of housing in the decade from the mid-1990s was connected with the fall in longer-term interest rates over that period. But that decline in bond yields is more likely to have had real than nominal causes (see paragraph 44). Nor is there a mechanical link between bond yields and the price of risky assets. Despite the further fall in yields over the past 10 years, and whether or not that was connected with monetary policy, real UK house prices are 6% lower than in mid-2007 (Chart 4). The real price of UK-facing equities⁷ is almost 30% lower. Monetary policy is likely to have provided some support to these prices, both directly and via its broader

⁶ In August 2016 the MPC said that, if the incoming data were to prove broadly consistent with the August *Inflation Report* forecast, a majority of members expected to support a further cut in Bank Rate to its effective lower bound at one of the MPC's forthcoming meetings during the course of the year.

⁷ These are defined as companies who derive more than 70% of their revenues from the UK.

support to economic activity. The declines would have been larger without that easing. But if nothing else this makes the point that low interest rates, and more specifically monetary policy, certainly cannot have been the only influences on prices of risky assets over this period.

23. Turning to other possible side-effects of monetary policy, the MPC recognises the potential impact of low interest rates on the balance sheets of financial institutions, including banks, building societies, insurers and pension funds. Three joint meetings of the MPC and FPC have recently considered these issues. The associated analysis by Bank staff has been summarised in recent *Inflation Reports*. The analysis and discussions at the first meeting informed the design of the August easing package – including the launch of a Term Funding Scheme calibrated so that it reinforced the transmission of the reduction in Bank Rate to the real economy to ensure that households and firms benefit from the MPC's actions (MPC Minutes, August 2016). More generally, the underlying return that large UK banks earned on UK retail and commercial lending in 2015 is estimated to be 15% of the equity held for that lending, on average, compared to an overall return on equity of 3% (February 2016 *Inflation Report*). These are healthy underlying returns which are being offset by a range of factors, notably challenges in wholesale banking and very large misconduct costs. It is worth noting that net interest margins have remained steady (Carney (2016b)).

24. At the latest joint meeting in January 2017, members of the FPC and MPC discussed and were presented with material on developments in defined-benefit (DB) pension fund deficits and evidence of their potential economic impacts. DB pension funds' deficits have widened over recent years. However falls in interest rates associated with an easing in monetary policy will typically boost the value of both assets and liabilities and, therefore, funds starting from close to a balanced position will generally remain so. A key driver of the wider deficit in recent years has been the underperformance of equities even as bond yields have declined. That shift in relative asset prices is unlikely to be a phenomenon driven by monetary policy actions. Indeed, this pattern has reversed somewhat in recent months – equities have outperformed bonds – and DB pension fund deficits have narrowed⁸ as a result.

25. Analysis by Bank staff showed that while investment does not appear to be negatively associated with the size of a firm's pension deficit, it is slightly lower among those firms with larger deficit reduction contributions. In aggregate though, this approach suggests that deficit reduction plans only had a very small effect on investment growth between 1996-2015. Bank staff estimate that annual growth of business investment was on average less than 0.1 percentage point lower over that period as a result of pensions contributions (February 2017 *Inflation Report*). More fundamentally, what matters for future savings income is the performance of the economy. If future productivity growth turns out better (or worse) than implicitly discounted in current bond yields then defined benefit pension liabilities will be more (less) affordable and aggregate savings income will be higher (lower).

26. All that said a prolonged period of low and relatively predictable interest rates could encourage the build-up of excessive financial stability risks (Carney (2016c)). For that reason, some argue that the active use of monetary policy to lean against the wind may have merits because it “gets in all the cracks.” (Stein

⁸ Pension Protection Fund Purple Book, January 2017.

(2013)). And Jaime Caruana and his colleagues at the Bank for International Settlements (BIS) argue that it would be appropriate for advanced economy monetary policy to begin to normalise in order to head off emerging macroprudential risks (BIS (2015)). These arguments have more merit in a system where policy makers have only one instrument – which is not the case in the UK. The FPC routinely considers systemic risks to financial stability including any arising from leverage, unsustainable debt or credit growth, the distribution of risk within the financial sector and connections between financial institutions. The targeted nature of the tools available to the FPC under the current institutional framework in the UK makes them a natural first line of defence (Shafik (2015)).

27. The FPC's recommendations on the residential mortgage market in June 2014 provide an illustration of the benefits of directing targeted⁹ macroprudential policy tools at sectoral financial stability risks vis-à-vis an alternative approach of raising interest rates. Former Deputy Governor Charlie Bean estimated that setting Bank Rate around 200 basis points higher than it was over the period 2003-2006 would have reduced the growth of credit by just 5.6 percentage points from 2003-2007 – small compared with the actual increase of 45% – at a cost of 2.6% of GDP (Bean *et al.* (2010)).

28. Distributional effects: Changes in monetary policy can have an initial impact on the distribution of income and wealth through a number of channels. Other things equal, lower policy rates will reduce the interest income received by savers and improve the lot of borrowers by reducing their interest payments. As noted above, the impact on spending by borrowers tends to be larger than that on savers, providing one *intended* channel – the “cash-flow channel” – by which lower policy rates boosts overall activity in the economy. Lower policy rates – along with asset purchases – will also benefit asset holders, with the initial benefits felt only by those holding assets¹⁰. This is also an *intended* channel of monetary policy and, as noted above, the initial rise in asset prices supports outcomes that ultimately benefit those with no assets too. Through these and other channels, looser monetary policy supports aggregate spending and hence the job prospects of savers and borrowers alike (Draghi (2016)). Ultimately, the *income* of borrowers and savers tends to rise by a similar extent in response to looser policy, via the impact of a stronger economy on wages, jobs and asset returns (Cloyne *et al.* (2016) and Casiraghi *et al.* (2016)).

29. That monetary policy has important effects on inequality over the longer term is doubtful. Three points are relevant here. First, while the picture in the UK is complex, in general it suggests that, following sharp rises in the 1980s and early 1990s, most measures of inequality have since been broadly stable. Second, studies that try to isolate the effect of monetary policy on inequality find relatively small effects, even in the shorter run. Third, differences in the impact of policy measured in absolute terms largely reflect pre-existing disparities.

30. Take income first. As we noted at the outset, the UK's recovery has been sluggish and aggregate real income growth comparatively weak. Within that, however, the bottom 20% have seen the largest proportional gains in income since 2006 (Chart 5), in spite of a severe recession. All groups have gained

⁹ These recommendations were designed to address risks arising from highly indebted households in particular (Section 5 of the June 2014 *Financial Stability Report*).

¹⁰ It's worth saying that these beneficiaries may not always be aware of such gains. For example, the counterpart of the rising accounting value of firms' DB pension liabilities is a matching rise in the present value of the pension for current and future beneficiaries. That claim cannot be sold or realised in advance. But the one is no less real than the other.

since 2009, after extraordinary monetary and other policy measures had begun to be implemented and the economy to recover (Carney (2016a)). The standard Gini coefficient of income inequality has declined over that period. On a longer-term comparison, it has been broadly stable since the early 1990s.

31. The distribution of household wealth can be volatile from one survey to the next (Chart 6¹¹) but exhibits similar properties to that for income. All wealth quintiles have seen increases since 2006, with the largest proportionate increases over that period for the bottom group (Carney (2016a)). Although the data are sparser than for income, estimates of the wealth Gini coefficient suggest that, on this measure, inequality has been broadly flat in recent years, at levels below those in the 1990s (Broadbent (2016)). The data do not support the idea that the period of low rates has benefitted the wealthiest at the expense of the least wealthy.

32. This is not to say that low interest rates have had no distributional consequences. The steep rise in house prices between 1995 and 2005, partly associated with that fall in longer-term real interest rates described in paragraph 9, led to a sharp rise in the inter-generational dispersion of wealth, benefiting in particular older people who had already entered the market before prices began to rise. That trend has abated in recent years – real house prices are still slightly lower than they were before the crisis. But the broad stability of measures of income and wealth inequality during the post-2008 period of low Bank Rate and unconventional policy easing does not suggest a material role for monetary policy in this respect, or for low interest rates more generally (Chart 7).

33. This is borne out also by empirical studies which try to isolate the causal impact of discretionary monetary policy more precisely (Casiraghi *et al.* (2016), Coibion *et al.* (2016), Bundesbank (2016), Mumtaz and Theophilopoulou (2016) and O’Farrell *et al.* (2016) for example). In these studies, changes in monetary policy are found generally to have relatively small effects on inequality.

34. Sometimes estimates of the impact of policy on inequality are quoted in absolute terms, expressed in pounds. It is true, of course, that the same proportionate rise in asset prices will lead to greater rises in absolute terms for those who happen already to hold more assets. If all house prices were to rise (say) by 5%, the gains in pounds would be higher for those with more valuable houses. That is true whatever the source of the rise. The same would be true for incomes if everyone were to receive exactly the same percentage increase in wages: the increase in pounds would be larger for those whose pay was higher to begin with. But that is a result of the pre-existing distributions of income and assets, not a feature of the increase. If the changes are unequal it is only because the pre-existing distributions are unequal. In neither case would standard, proportionate measures of inequality be affected.

35. Productivity: As set out earlier, the influence of monetary policy on productivity is almost certainly very limited. It can only stabilise demand around the economy’s potential; it cannot increase that potential. It is possible that lowering policy rates to support the economy will allow some business to survive that would otherwise fail. The same would be true if weak capitalisation encouraged banks to forbear on existing bad loans even as they tightened terms for new lenders. Capital would to that extent

¹¹ The source is the ONS’s Wealth and Asset Survey.

be skewed towards weaker “zombie” firms, weighing on aggregate productivity in the short run. Broadbent (2012, 2013) estimated that these effects might have reduced cumulative productivity growth by up to 3% percentage points over the previous few years. Barnett *et al.* (2014) find that, had firm “deaths” followed a similar path to that in the 1990s recession, and been concentrated purely among less productive firms, the hit to productivity could be as high as 5% (see also Riley *et al.* (2015)). A recent study by McGowan *et al.* (2017) suggests the presence of “zombie” firms might have depressed productivity in a number of OECD countries.

36. However, tighter credit conditions are rarely so discriminating: they also threaten viable, growing firms who happen to be experiencing temporary cashflow difficulties. There can be similar “scarring” effects in the labour market: people who lose jobs in severe downturns can experience a loss of skills that permanently impairs their labour-market prospects thereafter. In the McGowan study the impact of “zombie” firms is estimated to be smaller in the UK than in most other countries in their sample as their number is judged to have fallen since the crisis. Bank staff have estimated that the direct effect of forbearance on productivity is around 1% (Arrowsmith *et al.* (2013)). Overall, it seems likely that the causation between interest rates and productivity runs predominantly the other way: it is weak actual and expected productivity growth, at the global level, that has helped to depress the neutral rate of interest.

37. The FPC is charged with protecting and enhancing the resilience of the UK financial system. As noted above, there are various channels through which low rates can lead to greater risks to financial stability. However they are not the only factor and others are likely to dominate. For example, prior to the crisis when interest rates were well above zero, households had higher debts relative to their incomes than now. Over recent years, the number of households with high mortgage debt to income (DTI) and high mortgage debt-servicing ratios (DSR) has fallen (Bunn *et al.* (2016)). More significantly, leverage in the banking system was much higher prior to the crisis. Since then, household leverage has declined, the major UK banks have raised more than £130bn in capital and now hold around four times more high-quality liquid assets (July 2016 *Financial Stability Report*). The financial system is therefore far more robust to shocks that might otherwise have destabilised it. The relative stability in the days following the referendum result is a recent example.

38. The Terms of Reference also ask about the implications of a large balance sheet and the Treasury indemnity for Bank accountability and its relationship with the government and other agencies. I should start by saying that, as outlined in the MPC’s remit, decisions on monetary policy, including the APF, remain solely a matter for the independent Monetary Policy Committee.

39. The Bank’s balance sheet has significantly expanded following stimulus measures taken by the MPC in response to the global financial crisis, as has been the case for other major central banks. Before the crisis, the size of the balance sheet was effectively determined by demand for its liabilities, mainly banknotes and reserves. Since 2009, the size of the balance sheet has been primarily determined by the stock of assets purchased by the Bank’s Asset Purchase Facility.

40. When it was established it was agreed that the APF would be fully indemnified by HM Treasury (HMT). The presence of this indemnity means that the risk management of the APF is of legitimate and

understandable interest to HMT. Any changes to the maximum size and composition of assets held in the APF and therefore indemnified by HMT require agreement through an exchange of letters between the Governor and the Chancellor.

41. The Bank has taken a number of steps to ensure that risk management of the APF remains robust and that the HMT is fully briefed on the risks associated with the evolving portfolio:

- First, the design and operation of the APF is a matter of public record. Periodic reports are made available to the public through the Bank's external website (for example in the APF quarterly report). Furthermore, the MPC is accountable for its use of the APF in the same way that it is for any monetary policy decision and explains its decisions through Minutes, *Inflation Reports* and TSC hearings.
- Second, the risk management function of the Bank provides independent assessment of the creditworthiness of securities and counterparties to the APF.
- Third, the risk management of the APF benefits from changes made in 2015 which materially enhanced financial risk management arrangements in the Bank. Separate departments are now responsible for first-line risk management and second-line activities, including risk challenge, reporting to a senior Executive Risk Committee (ERC) chaired by the Deputy Governor for Prudential Regulation and, through that Committee, to the Bank's Court.
- HMT's risk oversight of the APF was further enhanced in August 2016 when the MPC announced the package of easing measures, increasing the size and scope of the APF. The Bank and HMT agreed to hold risk oversight meetings in relation to APF schemes at least once a quarter. The risk assessments sent to the Bank's Executive Risk Committee are shared in full with HMT at regular (quarterly) meetings. These meetings provide an opportunity for senior staff at HMT to scrutinise the risk profile of the APF, provide challenge where necessary and inform HMT's own risk management discussions.

42. Needless to say, outside these formal arrangements we have an ongoing and productive dialogue with HMT and the Debt Management Office (DMO) about conditions in the gilt market and the impact of our operations. Were the MPC to decide to unwind the APF, we would co-ordinate with HMT through the risk management channels outlined above, and with the DMO on how to minimise any impact on market functioning of reducing the stock of APF gilts (as highlighted by the Governor in letters to the Chancellor and to the Treasury Select Committee Chair)¹². The decision and final responsibility, nevertheless, would be with the MPC.

43. It should be pointed out that the APF is not the only thing affecting the size of the Bank's balance sheet. Even after the APF is unwound it is reasonable to expect the demand for reserves to be significantly greater than it was before the crisis. This reflects both a greater number of counterparties

¹² Governor's letter to the Chancellor in [August 2016 letter](#), Governor's letter to Andrew Tyrie: [December 2015](#).

and greater demand for reserves as high-quality liquid assets (both due to prudential liquidity requirements and banks' experiences of market stress during the crisis).

Theme 3: The prospects for monetary policy

The near-term prospects for the stance of UK monetary policy are described in the latest Monetary Policy Summary, Minutes and Inflation Report. The level of interest rates in the UK will also continue to be heavily influenced by global structural factors.

44. Both short-term and longer-term interest rates have fallen across advanced economies for much of the last decade. Some of the declines, particularly in short-term interest rates, are likely to reflect cyclical factors with many economies having experienced similar shocks and policy responses during and after the financial crisis. Longer-term interest rates have, however, been declining globally for several decades, suggesting that global structural factors – such as demographics and increased risk aversion – are likely to have been the more important drivers. The impact of shifts in desired saving and investment on global real interest rates could explain much of the fall in real long-term interest rates in recent decades (February 2014 & November 2016 *Inflation Reports*, Bean *et al.* (2015), Bernanke (2015), Fischer (2016), Rachel and Smith (2015), Summers (2014) and Vlieghe (2016) for example). The relative sizes of the effects of these factors are however highly uncertain, as is the outlook for real interest rates, which will depend on the extent to which these structural shifts persist (November 2016 *Inflation Report*).

45. Developments in the US economy and financial markets appear to have been important influences on asset prices and activity in the rest of the world in recent months, especially following the US presidential election. Alongside anticipation of a more expansionary US fiscal stance, market contacts suggest that those moves in asset prices reflect building momentum in indicators of near-term global activity growth.

46. During the period since August 2016, UK short-term and long-term interest rates also rose. Measures of inflation compensations also went up somewhat, though only back to their historic averages. They have been broadly flat since November 2016. The consequences for UK monetary policy of developments in the US – and from abroad more generally – depend in part on the reaction of sterling. Following a steep fall after the EU referendum, and again after the Prime Minister's conference speech in October, sterling's exchange rate has remained broadly stable.

47. The near-term prospects for the stance of UK monetary policy are described in the latest Monetary Policy Summary, Minutes and February 2017 *Inflation Report*. As described in those publications, the increase in import prices that has occurred over the past year, following the substantial fall in the sterling exchange rate around the time of the referendum, is likely to lead both to a reduction in real income and to a marked increase in CPI inflation to a rate significantly above the 2% target. That slowdown in real income growth is projected to contribute to a slowing in output growth over the MPC's forecast period. The MPC's remit specifies that in such exceptional circumstances the Committee must

balance the trade-off between the speed with which it intended to return inflation to the target and the support that monetary policy provides to jobs and activity. In February all members agreed that it remained appropriate to maintain the stance of monetary policy to balance the prospect of a period of above-target inflation with the support that monetary policy gives to activity and employment. But there were limits to the degree to which above-target inflation could be tolerated and the Committee will continue to monitor the evolution of inflation expectations.

48. The neutral rate of interest in an economy with open capital markets is also subject to the global forces as described at the start of this letter. On many of these, government policy has only limited influence. There may be things that can be done to improve the economy's productive potential. Interest rates might be expected to rise somewhat following a loosening in fiscal policy, by lowering levels of national saving. This effect might have been at work, at least in anticipation of looser fiscal policy, in the United States and to a lesser degree in Europe. As noted earlier, the UK economy however only accounts for a small share 2% of global savings. Domestic policy changes are therefore likely to have only a limited impact on the global neutral real rate.

49. I hope that you find this letter useful as the Committee starts gathering evidence for the inquiry. In due course I would like to publish a version of it on the Bank's website.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ben Broadbent', written in a cursive style.

Ben Broadbent
Deputy Governor, Monetary Policy

References

Arrowsmith, M., Griffiths, M., Franklin, J., Wohlmann, E., and Young, G., 2013, "SME forbearance and its implications for monetary and financial stability, *Bank of England Quarterly Bulletin* 2013Q4

Bank for International Settlements, 2015, "85th Annual Report"
https://www.bis.org/publ/arpdf/ar2015_ec.pdf

Bank of England, February 2014, *Inflation Report*, see Box 'Bank Rate in the medium term'

Bank of England, August 2016, *Inflation Report*, see Box 'The implications of falls in the yield curve for financial conditions and stability'

Bank of England, November 2016, *Inflation Report*, see Box 'Explaining the long-term decline in interest rates'

Bank of England, February 2017, *Inflation Report*, see Box 'Macroeconomic risks of defined-benefit pension fund deficits'

Barnett, A., Chiu, A., Franklin, J., and Sebastián-Barriol, M., 2014, "The productivity puzzle: a firm-level investigation into employment behaviour and resource allocation over the crisis, Bank of England Working Paper, No. 495

Bean, C., Broda, C., Ito, T., and Krozner, R., 2015, "Low for Long? Causes and Consequences of Persistently Low Interest Rates", Geneva Reports on the World Economy 17, Centre for Economic Policy Research.

Bean, C., Paustian, M., Penalver, A. and Taylor, T., 2010, "Monetary policy after the fall", Federal Reserve Bank of Kansas City, *Jackson Hole Conference*

Bernanke, B., 2015, "Why are interest rates so low, part 3: The Global Savings Glut", blog post
<https://www.brookings.edu/blog/ben-bernanke/2015/04/01/why-are-interest-rates-so-low-part-3-the-global-savings-glut/>

Broadbent, B., 2012, "Productivity and the allocation of resources", speech at Durham Business School, <http://www.bankofengland.co.uk/archive/Documents/historicpubs/speeches/2012/speech599.pdf>

Broadbent, B., 2013, "Conditional guidance as a response to supply", speech given at London Business School, <http://www.bankofengland.co.uk/publications/Documents/speeches/2013/speech678.pdf>

Broadbent, B., 2016, "The distributional implications of low structural interest rates and some remarks about monetary policy trade-offs", speech at the Society of Business Economists Annual Conference, <http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech940.pdf>

Bunn, P., Shadbolt, N., Li, T., Stratton, T., 2016, "The financial position of British households: evidence from the 2016 NMG Consulting survey", *Bank of England Quarterly Bulletin*, Q4 2016.

Carney, M., 2016a, "The Spectre of Monetarism", speech given at Liverpool John Moores University
<http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech946.pdf>

Carney, M., 2016b, "Remarks given at the *Farewell Symposium for Christian Noyer*", Banque de France, Paris, 12 January 2016, http://banquedefrance.canalchat.fr/2016/1/index3_en.php

Carney, M., 2016c, "The turn of the year", speech given at Peston Lecture, Queen Mary University of London <http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech873.pdf>

Casiraghi, M., Gaiotti, E., Rodano, R., and Secchi, A., 2016, "A 'reverse Robin Hood'? The distributional implications of non-standard monetary policy for Italian households"; Banca d'Italia Working Paper, No. 1077

Chung, H., Laforte, J.-P., Reifschneider, D., Williams, J. C., 2012 "Have We Underestimated the Likelihood and Severity of Zero Lower Bound Events?", *Journal of Money, Credit and Banking*, Vol. 44, issue s1, p. 47-82

Cloyne, J. Ferreira, C., and Surico, P., 2016, "Monetary policy when households have debt: new evidence on the transmission mechanism", *Bank of England Working Paper*, No. 589

Coibion, O., Gorodnichenko, Y., Kueng, L., & Silvia, J., 2016, "Innocent Bystanders. Monetary Policy and Inequality in the US", *manuscript available at <https://sites.google.com/site/ocoibion/>*

Deutsche Bundesbank, 2016, Distributional effects of monetary policy; *Monthly Report September*

Draghi, M., 2016, "Stability, equity and monetary policy", 2nd DIW Europe Lecture <https://www.ecb.europa.eu/press/key/date/2016/html/sp161025.en.html>

Engen, E. M., Laubach, T., Reifschneider, D., 2015 "The Macroeconomic Effects of the Federal Reserve's Unconventional Monetary Policies", *Finance and Economics Discussion Series 2015-005*, Washington: Board of Governors of the Federal Reserve System

Fischer, S., 2016, "Why Are Interest Rates So Low? Causes and Implications", *Remarks at the Economic Club of New York*

Friedman, M., 1968, "The role of monetary policy", *American Economic Review*, Vol. LVIII, no 1

Gertler, M., Karadi, P., 2012 "QE 1 vs. 2 vs. 3... A Framework for Analyzing Large Scale Asset Purchases as a Monetary Policy Tool", *International Journal of Central Banking*, vol 9, s1, p. 5-53

Haldane, A. G., 2016, "Whose recovery", text based on speech given at Port Talbot, Wales <http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech916.pdf>

Hausman, J. K., Wieland, J. F., 2014 "Abenomics: Preliminary Analysis and Outlook", *Brookings Papers on Economic Activity*, Spring 2014

Joyce, M., Tong, M. and Woods, R., 2011 "The United Kingdom's quantitative easing policy: design, operation and impact", *Bank of England Quarterly Bulletin*, 51, issue 3, p. 200-212

McGowan, M., Andrews, D., and Millot, V., 2017, "The walking dead? Zombie firms and productivity performance in OECD countries", *OECD Economics Dept WP No. 1372*

Miles, D., 2014, "What is the right amount of guidance? The experience of the Bank of England with forward guidance" speech at De Nederlandsche Bank annual research conference, Amsterdam, <http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech779.pdf>

Monetary Policy Committee (MPC), August 2016, "Monetary Policy Summary and Minutes"

Monetary Policy Committee (MPC), September 2016, "Monetary Policy Summary and Minutes"

Mumtaz, H., and Theophilopoulou, A., 2016, "The Impact of Monetary Policy on Inequality in the UK. An Empirical Analysis", *Queen Mary WP #783*

O'Farrell, R., Rawdanowicz, L., and Inaba KI., 2016, "Monetary Policy and Inequality", *OECD Working Paper*, No. 1281

Rachel, L., and Smith, T., 2015. "Secular drivers of the global real interest rate", *Bank of England Staff Working Paper No. 571*.

Riley, R., Rosazza-Bondibene, C., and Young, G., 2015, "The UK productivity puzzle 2008-13: evidence from British businesses", *Bank of England WP No. 531*

Shafik, M., 2015, "The Interaction of Monetary and Macroprudential Policy", remarks at the IMF panel on "Revisiting Monetary Policy Frameworks", Lima, Peru <http://www.bankofengland.co.uk/publications/Documents/speeches/2015/speech846.pdf>

Stein, J., 2013, "Overheating in Credit Markets: Origins, Measurement, and Policy Responses," speech at the "Restoring Household Financial Stability after the Great Recession: Why Household Balance Sheets Matter" research symposium sponsored by the Federal Reserve Bank of St. Louis, St. Louis, Missouri.
<https://www.federalreserve.gov/newsevents/speech/stein20130207a.htm>

Summers, L., 2014, "U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound", Business Economics Vol. 49, No. 2

Vlieghe, J., 2016 "Debt, Demographics and the Distribution of Income: New challenges for monetary policy", speech given at the London School of Economics.
<http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech872.pdf>

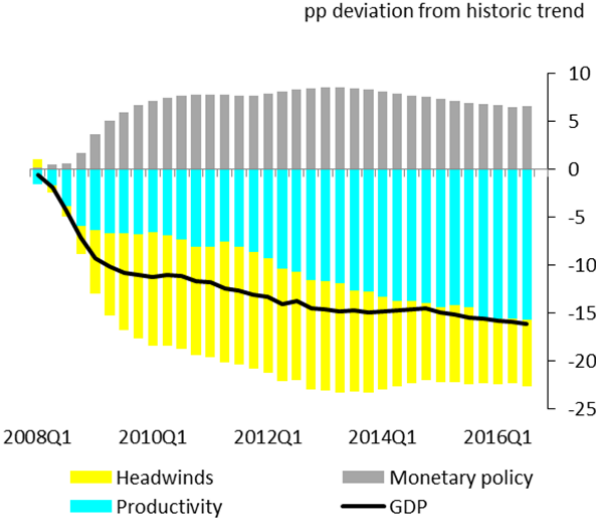
Vlieghe, J., 2016, "Umbrella don't cause rain", speech given at Sheffield University.

<http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech944.pdf>

Weale, M. and Wieladek, T., 2016 "What are the macroeconomic effects of asset purchases?", Journal of Monetary Economics, 2016, vol. 79, issue C, pages 81-93

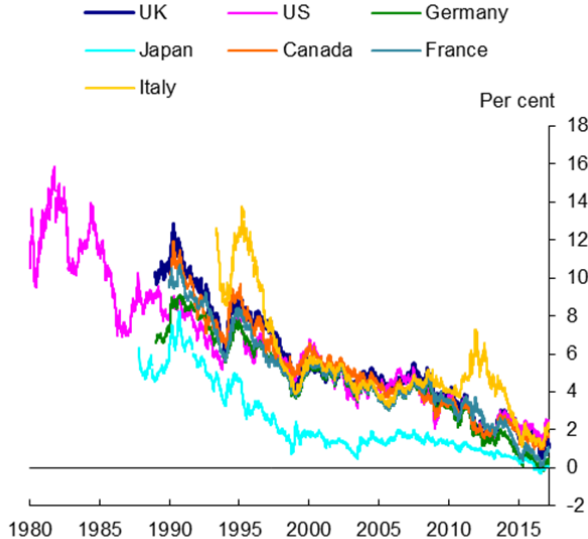
Woodford, M., 2003, "Interest and Prices: Foundations of a Theory of Monetary Policy", Princeton University Press

Chart 1: Productivity explains all of the shortfall of GDP; while monetary policy has offset all headwinds to it



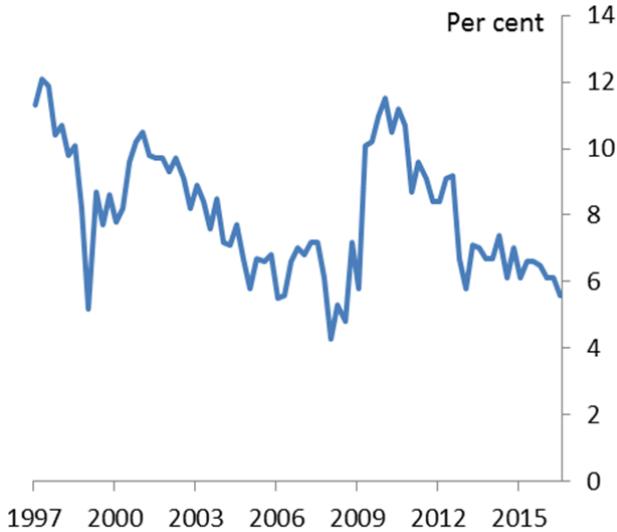
Source: ONS and Bank Calculations. "Headwinds" include the drags on demand from deleveraging, subdued world growth, fiscal consolidation, and uncertainty. The contribution of monetary policy is computed by considering the impact on demand of maintaining Bank Rate the level prevailing immediately before the crisis.

Chart 2: Bond yields across the G7 economies co-move tightly



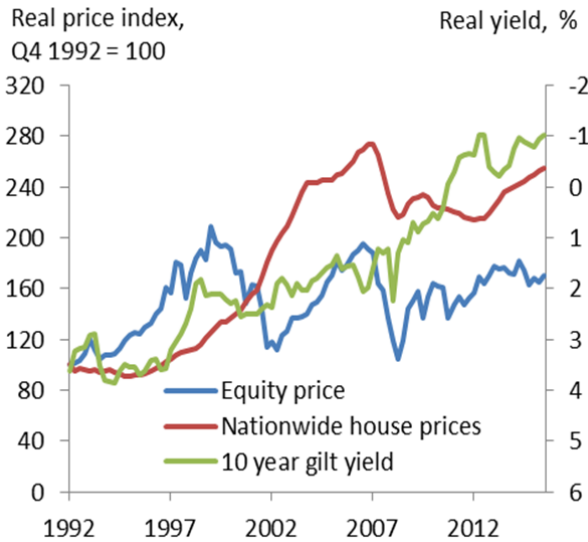
Source: Bloomberg. Data are 10-year generic yields

Chart 3: UK household saving ratio



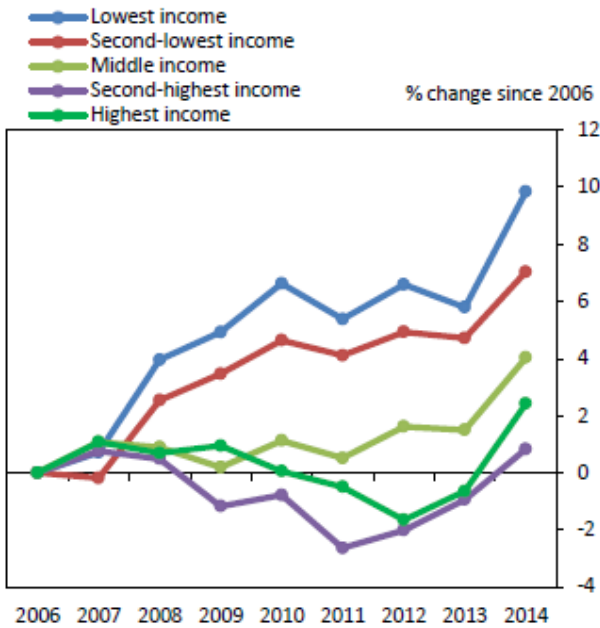
Source: ONS. Saving as a percentage of household post-tax income

Chart 4: Real equity and house prices no higher now than a decade ago



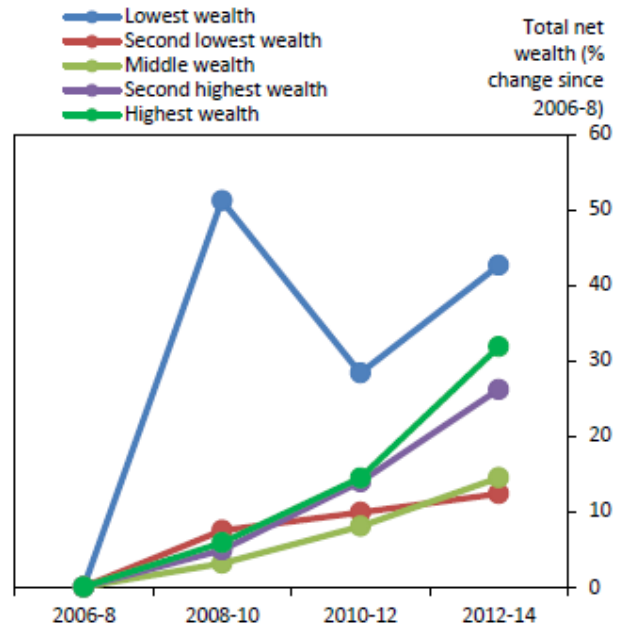
Source: Datastream and Bank of England

Chart 5: All income quintiles have gained since 2006-8...



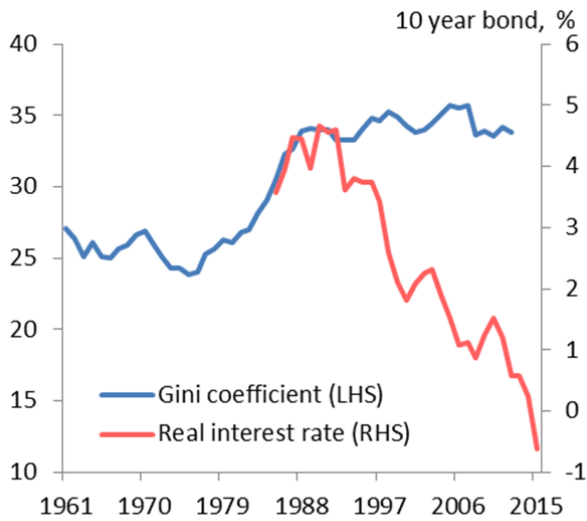
Source: Family Resources Survey (FRS) and Bank Calculations. Income deflated by the consumption deflator

Chart 6: ... as have all wealth quintiles



Source: Wealth and Asset Survey (WAS, ONS) and Bank Calculations

Chart 7: Income inequality broadly flat since real rates began to decline in 1990s



Source: World Bank and Bank of England