

**Submission to Treasury Select Committee, by Jonathan Haskel, Imperial College.
13th June 2018.**

**Appointment of Prof Jonathan Haskel to the Monetary Policy Committee of the
Bank of England**

Personal and professional background

- 1. Do you have any business or financial connections or other commitments which might give rise to a conflict of interest in carrying out your duties as an external member of the MPC?*

No.

- 2. Do you intend to serve out the full term for which you have been appointed?*

Yes

- 3. Have you, or do you intend to take on, any other work commitments in addition to your membership of the MPC. If so, what impact will they have on your work on the MPC?*

In addition to my membership of the MPC I will be at Imperial College on a 20% contract teaching a Business Economics course to weekend students. This will avoid clashes with MPC meetings. I shall also continue as a non-executive director of the UK Statistics Authority. I would hope that this will enhance my contribution to both committees by giving me an increased awareness of the demands from the Bank for data and developments at the ONS.

- 4. How has your experience to date equipped you to fulfil your responsibilities as a member of the MPC?*

I am an Economics Professor at Imperial College Business School, and so feel that I can offer analytical economics ability.

I have a PhD in Economics from the LSE and have published papers across several fields in Economics journals. My main research effort over the last few years has been to study productivity growth in the UK and other countries, and in particular the effect of investment in intangible “knowledge” assets on growth. This research speaks to the critical question of UK productive capacity (which of course bears critically on the Bank’s responsibilities for inflation). It speaks to it in the context of an increasingly “knowledge-intensive” economy with a shift away from manufacturing towards services, and indeed a shift within manufacturing to knowledge-intensive products and processes.

There has, of course, been extensive investigation into the knowledge investment that is (measured) R&D. R&D however is far from the only knowledge investment that

companies make. Indeed, in numerous service industries, R&D is a knowledge investment that many companies actually never make: until recently, for example, the ONS did not even send banks the official R&D survey. This knowledge investment, largely ignored in GDP, consists of spending on software, artistic originals, design, branding, training and business processes. Thus my scholarship seeks to understand better an economy less of cars, steel and coal, and more of Tesco, EasyJet and Harry Potter. I would hope that this would be of help to the MPC's decisions.¹

I would hope to bring to the table other skills beyond academia. I was a member of the *Competition Commission* (now the Competition and Markets Authority) for eight years. I served on three major inquiries (Mobile Phones, Home Credit and Airports), and one small merger (EMAP and ABI). I am in my third year as a non-executive director of the UK *Statistics Authority*. I have gathered experience and knowledge of ONS procedures and data methods, which I hope will be valuable to the Bank.²

Finally, in terms of communication, I hope that, my teaching and non-academic writing experience has helped me with the crisp articulation of logical reasoning from rigorous Economic principles. I have been kindly nominated by the students for Best Teacher award in a number of the years that I have been at Imperial. I am the co-author of *Capitalism Without Capital*, a book that tries to explain the move to the intangible economy in an accessible way to an everyday audience. This has been extensively reviewed and many reviewers have kindly commented on how rigorous and accessible the book is. I hope that I can therefore bring these communication skills to the MPC.

5. Which of your publications or papers are of most relevance to your future role as an external MPC member?

a. The move to the “intangible economy”.

My main work has been, as set out above, to describe better the shift to the “intangible economy”. This is summarized in a non-technical way in our book, *Capitalism Without Capital: The Rise of the Intangible Economy*, videos and reviews of which are [here](#). I believe this to be of relevance since it helps understand business activity and economic growth.

My main academic work underlying this book is set out in some of the following papers.

¹ At Imperial, I have sat on a number of committees and so have experience of committee work and decision-making including the Richardson Review of Performance Metrics (<https://www.imperial.ac.uk/media/imperial-college/research-and-innovation/public/research-integrity/AcademicPerformanceMetrics.pdf>) and the 2015-2020 College Strategy: Lead convener on “Leading the Data Revolution” (<https://www.imperial.ac.uk/strategy/>).

² I will be stepping down as a member of the *Financial Conduct Authority* Competition Decisions Committee and the Payment System Regulator Enforcement and Competition Decisions Committee.

- i. General reviews, recent trends, data collection etc.: (Corrado et al. 2013; Corrado et al. 2017; Borgo et al. 2013; Corrado et al. 2016; Haskel, Goodridge & Wallis 2015; Goodridge & Haskel 2016;; Goodridge et al. 2013, Haskel 2015)
- ii. Econometric testing: (Goodridge et al. 2017;; Goodridge et al. 2012)

- a. Other work on productivity

My other papers on productivity have been about the contributions to productivity of science, foreign direct investment, multi-nationals, privatization, retailing and the contribution of competition and restructuring to productivity. They are (Disney et al. 2003; Crespi et al. 2006; Criscuolo et al. 2004; Criscuolo et al. 2010; Griffith et al. 2006; Haskel 1991; Haskel et al. 2007; Haskel & Sadun 2012; Green & Haskel 2004).

Finally, for information, my other academic work has been on labour and product markets, exploring, for example, the labour market rewards to schooling; competition between airports; international trade and inequality.

Openness, accountability and performance

6. Is the accountability process delivering better public understanding of decisions made by the MPC? Based on your experience, are there ways in which either the accountability process or the MPC's public communications could be improved?

As Silvana Tenreyro has pointed out in her evidence to the Treasury Committee, an operationally independent Central Bank can potentially help citizens by avoiding an inflationary bias due to the electoral cycle and/or a temptation to over-stimulate the economy.

Yet, it is clearly vital to make sure that unelected Central Banks are accountable to the citizens whom they are supposed to be benefitting (the same argument holds for independent competition authorities: I have had the privilege of sitting on the Competition Commission, 2001-09).

The main accountability mechanisms are as follows.

- a. Treasury Select Committee hearings
- b. requirement to account to the Chancellor for the missing of the inflation target by more than one percentage point;
- c. the Inflation Report, setting out forecasts and key judgements
- d. the public record of voting at MPC meetings and the need for members to account for their opinions.

This accountability process has a number of elements and has, in my view, been strengthened in a number of ways in recent years. One way is how the Inflation Report has expanded to set out views, highlight new thinking on key issues and keep up to date

on new challenges. For example, it has an explicit section setting out key judgements and risks on inflation: see for example, section 5 of the May 2018 Inflation Report, especially Table 5E. That table sets out a series of key judgements. For example, the latest table sets out the judgement that small slack remains and it also details the accompanying likely developments in 2018 if that judgement evolves as expected e.g. unemployment to fall to 4%, hourly labour productivity to grow at just over $\frac{3}{4}\%$. It also has a series of informative boxes, for example, Box 5 of the May Report set out how the economy has evolved relative to the February 2017 Report, thus being explicit about what went right and wrong in earlier projections (growth and unemployment were a little lower, inflation a little higher). As another example, the published minutes and the need for members to defend their views are now a matter of public record.

As regards improvements, I have not joined the Bank yet, so I am not in a position to take a view based on the experience that the question refers to. However, I consider public accountability of paramount importance and undertake to reflect actively on this vital question during my time on the MPC.

Regarding public communication, this is a vital part of that accountability and I set out some views below.

7. What are the costs and benefits of the MPC collectively, and members individually, providing greater clarity on their expectations for the path of interest rates, including through conditional forecasts?

It is clearly important for the MPC to communicate its views and expectations to the public. It currently does so, as above, via Reports, speeches, appearances in front of the Treasury Committee, social media etc. Conditional forecasts would be another dimension to this communication.

From my current position outside the Bank, I would judge that the costs of this additional communication would outweigh the benefits, but that it is a close-run judgement. The current position in Inflation Report formal forecasts, as the Committee will know, is to use market interest rate expectations as an input to the forecast. I think this is a helpful benchmark; well-understood, and readily publicly-available and the commentary in the Report is around this market forecast. So already there is quite a lot of information communicated.

Whilst the principle of providing additional information is desirable, I suspect that the practical difficulties are substantial. A simple conditional forecast would take the form of “if X then Y”. However, in practice the economy is subject to many disturbances and the arrival of new information: new technological breakthroughs, world trade, foreign relations changes etc. Thus any practical implementation of such a rule would have to include a list of exceptions to the rule (“if X then Y, unless Z”). But that list is potentially very large. Thus practical formulation of such a list of exceptions would be either so inclusive as to make the rule unwieldy, or so vague as to make the rule

uninformative. Thus my current preference would be to stick to a clear articulation of the target set by Parliament and the general path of policy that would achieve that target.

8. What are the main operational challenges now facing the MPC?

I take operational challenges to be (a) communication, (b) FPC and MPC coordination and (c) Bank Rate and QE. I discuss communication below. Regarding FPC and MPC interaction, one useful way to think about this, set out in Gertjan Vlieghe's May evidence to this Committee, is that the MPC is concerned with "everyday" or "on average" outcomes of inflation and growth and the FPC is concerned with exceptional or extreme events, i.e. financial stability questions. One might imagine a position where there might be conflict between the objectives. For example, a declining economy might need interest rate cuts to loosen policy, but during the decline, lending is somehow becoming excessive and so financial stability needs tighter policy. But this does not seem to have happened yet and there is joint representation on both committees to help with co-ordination.

Finally, I turn to the operational instruments available to the Bank, namely the Bank Rate and QE via the Asset Purchase Facility. The Bank has expressed the widely-held view that using interest rates is the preferred active operational instrument. As the world economy strengthens and slack gets smaller, the problem of getting stuck at the lower bound would appear, if anything, to be getting less severe. Hence if anything, the opportunities for adjusting Bank Rate to control the economy would appear to be growing more.

9. How do you intend to add to the public's understanding of the role and decisions of the MPC?

I would hope that public communication is a key part of my role. I have had a career as a teacher and author and would hope that I can bring that communication experience to better inform the public about the MPC.

At time of writing, I have not started at the Bank, so my current plans reflect the activities that current members undertake. I would:

- a. Appear at Treasury Select Committee hearings and the submission of the annual report
- b. Travel in the UK, visiting with Bank Agents and communicating with business and third sector organizations.
- c. Give speeches, broadcasts and talks to explain my views and voting.
- d. Continue to produce research and present widely.

Over the last four years I have been a participant in Robert Peston's charity "Speakers for Schools" and would like to continue to do more work in this area (my predecessor Ian

McCafferty has been active in this area too). My next visit will be to the A Level students in School 21 in Newham (comprehensive secondary).

Monetary and economic policy

10. What is your view of the monetary policy framework in the UK, and what assessment have you made of the merits of altering it?

I think most people judge the UK policy framework to be strong. Some features of that are the symmetric inflation target and the explicit primacy of inflation as an objective, which helps avoid some of the conflicts that can occur with too many objectives.

The main discussion of altering the framework, to me, has been adjusting the inflation target. This is discussed in Sinclair and Allen (2017) and Miles et al. (2017). As the former note Alan Greenspan defined the aim of monetary policy to keep a rate of inflation “low enough that it was not a material factor in the decision-making of businesses and households”, a rate that would have the additional effect of keeping monetary policy “boring” (I prefer “unobtrusive”). The 2% target is in line with this, since a rate of zero with unmeasured quality change, likely implying deflation, which is highly undesirable.

Changing the target to some higher rate would have some benefit if it was felt that the zero lower bound was likely to be hit more often (perhaps due to a declining real natural rate) and if central banks were indeed able to hit a higher inflation target. It would however have some costs since it would involve considerable disruption to expectations and likely raise policy uncertainty. An upwards target change when inflation is low might lead people to, for example, expect a change downwards when inflation is high. This would add to policy uncertainty. Thanks to the work of Baker et al. (2012) and ongoing work by this team we do have growing evidence that the costs of policy uncertainty are potentially considerable in terms of reduced investment. Thus my current assessment is that changing the inflation target would be ill-advised.

11. What are the most significant risks to growth and inflation? Do you see any trends that give cause for either particular optimism or alarm?

Growth, in terms of GDP per citizen, depends mostly on what economists call the “supply side”; that is, the labour, capital and ideas that businesses use to produce products that people want; and the fraction of the citizens who are working. Inflation depends primarily on the interaction of that feasible supply with demand: too much demand relative to supply will raise prices. At the time of writing the most significant risks to growth and inflation are Brexit and the future path of productivity growth. I comment on each in turn.

The first point to note is the considerable uncertainty around Brexit, since we do not know what the trade and other arrangements will be. Given the degree of uncertainty, a current stock-take will likely be out of date immediately. As I understand it, the March 2018 draft text of the Withdrawal Agreement provides for a 21-month transition period after the UK exits the EU in March 2019, but it also states that “nothing is agreed until everything is agreed”.

The second point is to ask how Brexit will affect aggregate demand and supply. Brexit can operate on the demand side, if, for example, consumer confidence is changed as a consequence of it, and on the supply side if, for example, supply chain arrangements have to change. Regarding demand, consumer demand has remained, relative to expectations, quite high following Brexit, see below. Turning to the supply side, in the original HMT document issued around the time of the Referendum, there were two main mechanisms which suggested that Brexit would, under their assumption of a raised cost of trade, lower real GDP and its growth. First, an increase in trade costs is strongly associated in the data with lower GDP. HMT looked in particular at some “causal” estimates due to e.g. (Feyrer 2009a; Feyrer 2009b) and thereby assessed a fall in the real value of GDP. There were also estimates of the fall in FDI and consequent lowering of spillover knowledge along the supply chain, which would lower what economists call “total factor productivity” (TFP), namely the efficiency with which capital and labour are used (which might fall if the supply chain is impaired). . An updated set of estimates are in Erken et al. 2018) who suggest that “hard” Brexit cuts TFP growth from 1.1% to 0.5%, with soft Brexit at 0.8%.

Since all this is so very uncertain it suggests the MPC should keep a very close eye on developments.

This takes one to the future path of productivity growth which has been the decisive determinant of growth and living standards and hence amply repays much attention. The key here is that there has been a substantial shift towards a more “intangible” economy throughout the developed world, a change reviewed in Haskel & Westlake (2017). That new economy, is a more “ideas” and “knowledge” based economy, the growth potential of which we are only beginning to understand. In terms of the question regarding optimism and alarm, I note the following.

The most significant fact is the prolonged slowdown in productivity growth. To those who think the past determines the future this is of course highly alarming. The alternative view is that slowdowns in (especially total factor) productivity growth are the lull before the storm of future increases (Crafts & Mills 2017). At the same time the growth of the intangible economy along with ongoing developments in the IT industry make measurement much harder. One reason measurement is harder because intangible goods have high costs of production, but low costs of reproduction, so that firms have to offer different versions of similar goods ((Shapiro & Varian 1999). This places an extra burden on the statistical authorities to measure the quality of goods which is very hard. In the IT industry the place to look is of course the US, which is very much on the technology frontier. One significant development is cloud computing which is associated with very sharp falls in computing prices and substantial rises in computer power ((D.

Byrne et al. 2017)(Byrne & Corrado 2017). This is also starting to appear in the UK data, as noted in recent work by Diane Coyle of Cambridge University, along with ONS and ESCoE co-workers. In addition, US companies are investing substantially in their own computer hardware networks and servers, using, it appears, highly advanced technology ((D. M. Byrne et al. 2017). None of this is well-measured in the US data at least and so suggests (a) an under-recording of US productivity growth and (b) some potential ICT-based gains for the UK economy if these technologies are used/adopted over here. Finally, as noted by Brynjolfsson et al. (2017) the productivity outcome of technology implementation in the electricity revolution took a long time to play out.

All of these developments require a blend of judgement and information from the statistical, technological and business communities. I am optimistic that the UK statistical community is, following the Bean Review ((Bean 2016) devoting much energy and resource to this key question.

12. What is your assessment of the effectiveness of quantitative easing (QE) in achieving the MPC's remit? What is your assessment of the wider economic impact of QE?

Let me try to make my answer to a big and complicated question comprehensible by setting out what QE is supposed to do, using the data and reasoning in (Churm et al. 2015; M. Joyce et al. 2012; Bean 2009) (Friedman 2013).

Start with “normal” times. The Central Bank (CB) controls Bank Rate, that is, the short term overnight nominal “safe rate”. Household consumption and company investment decisions depend upon the longer term, risk-adjusted real rate. In normal times with a well-functioning banking system, the various risk-adjusted rates such as those on credit cards and company loans move in relation to the Bank Rate depending on the process of competition between commercial banks, the risk profile of the borrower, regulation etc.

The CB, given the inflation target by the Government, then looks at the balance of supply and demand in the economy and uses the Bank Rate to heat up or cool down consumption and investment demand to hit the target. Changes in the Bank Rate are reflected by changes in whole the array of longer term, risk-adjusted interest rates.

When times are “abnormal” matters are different. In the financial crisis due to a collapse of confidence and panic, risk premia had risen very quickly, making the cost of borrowing prohibitive for what were otherwise perfectly solvent businesses. This panic-induced “freezing” of the financial system, had it proceeded, would have led to a disastrous wave of bankruptcies and unemployment by depriving business of the credit they need when they are going about their everyday activities. Such a panic may well, like the 1930s, have become self-fulfilling. It was clearly imperative to avoid this calamity.

By buying up safe long-dated assets from (mainly) pension funds, the Bank improved confidence in the market (as well as lowering safe asset yields, thus making (non-bank) company borrowing relatively more attractive). This enabled companies, of underlying good prospect, to borrow properly whilst the financial system was gripped by panic and staved off disaster.

In this account, the impact of QE thus hangs on whether it affected the relation between Bank Rate and the corporate borrowing rates. This is of course a difficult question to answer, since many other things were occurring at the same time and future work will no doubt improve our detailed understanding. However a number of studies suggest that QE was highly effective in reducing corporate borrowing costs in a dysfunctional banking system (M. Joyce et al. 2012; Churm et al. 2015; M. A. S. Joyce et al. 2012; de Roure et al. 2018).

Turning to the wider impact of QE, most of the discussion has been around distributional effects. Most discussion has, rightly, pointed out gains to asset-holders as asset prices have stayed comparatively high. Such asset holders are typically wealthier and older. However, as the account above suggests, that is not the end of the matter. QE, by avoiding a self-fulfilling collapse of the economy has maintained demand and so employment. Thus the main effect of QE, in my view, is to have prevented a rise in unemployment. The distributional consequences of rising unemployment are well-established. Such a shock would have disproportionately affected the young, unskilled and inexperienced and quite possibly had permanent scarring effects. Thus it would seem to me that the distributional consequences of QE are to protect the vulnerable.

13. What are the principal risks associated with monetary policy normalisation, and what can be done to mitigate them?

I take it that monetary policy normalization has two aspects: raising interest rates from their historically low levels and an unwinding of QE.

The first risk involved in raising interest rates would be if this is done too quickly, disturbing investment and borrowing plans by more than would have been expected. At first blush, this would seem a material risk since rates have been low for a long period, historically-speaking. So it might be felt that borrowers and investors have “baked in” expectations of low rates in which case a rapid rise would be unexpected and hence have deleterious consequences. This risk can of course be mitigated by moving in a gradual and limited fashion. Whilst the MPC has always to be careful, from the outside, it seems to me the risk would not currently seem to be material. The MPC has been explicit about its future expected path of rates over and over again. In addition, in the case of the mortgage market, the FPC has overhauled affordability rules in the last few years so that new mortgages have to be “stress-tested”. That is, new borrowers have to demonstrate that they can afford a mortgage if rates were up to 3% higher. Like all regulations, the efficacy of this rule has to be carefully monitored, but this should ensure that the new cohort of borrowers at least are insulated from interest rate rises.

Turning to the possible unwinding of QE, the issue is what effect this has on the inflation target (other issues arise regarding profits and losses on the public balance sheet, but I stick here to the inflation target). As mentioned above, the purpose of QE is ensure that company borrowing is not too expensive in times of market stress when risk premia are elevated and hence companies find it very expensive to borrow, even if they are of underlying good prospect. An unwinding of QE in principle raises borrowing costs via raising risk premia on longer interest rate risky assets via raising the supply of safe long-dated assets and debt holders turning towards more advantageous long-dated Treasury bonds. However, if the banking system is normalized then risk-premia should be falling anyway, which is an offset to this effect. As Allen (2017) points out , the APF now holds £545 billion, of which £435 billion is comprised of gilts. Gross gilt sales undertaken by the Debt Management Office currently run at around £130 billion a year. To sell off the entire stock of assets in, say a year, would clearly be highly disruptive to markets. This then points to a gradual unwinding of such holdings. Thus I would want to monitor carefully data on risk premia to understand any possible threat posed by the unwinding of QE.

14. To what extent are you concerned that protectionism in global trade will negatively affect the UK economy?

If protectionism were to break out into a widespread trade war I would of course be very concerned, for in such a situation economies would have higher inflation (due to higher import costs), lower demand (due to confidence etc.) and likely lower supply (to the extent that supply chains were interrupted that couldn't otherwise be established). We are not in that position yet by any means. Thus this is clearly a subject to keep under close review, but does not seem material at the moment.

15. What is the outlook for consumer spending in the UK?

In the last few years, private consumer spending has been the most significant contributor to GDP growth (of the components of aggregate demand), accounting for over 75% of aggregate demand growth in 2017 for example, at about 1.7% growth. The latest NIESR forecast is of a slowdown in 2018 and 2019 relative to this figure the forecasts being 1.1% and 1.6% in the context of forecasted GDP growth at 1.9% for 2018 and 2019 (the 2017 figure being 1.8%). The slowdown this year is due to a combination of bad weather and survey results by Bank Agents and The British Retail Consortium and a forecast rise in savings.

Ultimately, long run consumer demand depends on how much (perceived long run) incomes grow and how much is saved or spent. In recent years savings rates seem to have declined and thus consumption has been stronger than was expected. I would expect that savings rates would fall assuming the outlook for wages and productivity remains subdued. Thus I would predict the outlook for consumer spending in the UK is that it will be similarly subdued.

16. What is your current estimate of the size of the output gap, the potential rate of productivity growth, the natural unemployment rate, and the equilibrium rate of interest?

I do not run my own macro model and hence I rely on others in this respect.

Regarding the output gap, Table 5B in the May 2018 Inflation Report reports the MPC judgement that there is currently around $-\frac{1}{4}\%$ of excess supply in the economy, that is, output is $\frac{1}{4}\%$ of potential GDP below potential. Underlying this is an estimate of the potential rate of productivity growth 2018-20 of around 1%. With estimated labour supply growing at about 0.5%, this gives the economy's estimated "speed limit" of 1.5% (February 2018 Inflation Report, Chart 3.1). Thus at the moment, even though supply growth is much below what has been estimated in the past (previous productivity growth, 1990-07 for example has been 2-2.5%), demand growth is rather weak as well.

The February 2018 Report also gives a new estimate of the equilibrium rate of unemployment, which is now estimated to be around $4\frac{1}{4}\%$. This is pretty much the current headline rate. It is worth noting that these forecasts are in line with others. For example, the National Institute May 2018 forecast contains very similar numbers: they perhaps would take the view that the natural rate of unemployment is a touch higher, but the projections are similar. In Box B of that report for example they suggest some possible correction from public sector wages.

I am perhaps somewhat more optimistic on productivity growth, primarily because I believe that the current mismeasurement of the high tech sector and the scope for catch up with the US suggest future productivity growth might be higher: see above.

Turning to the equilibrium level of interest rates, you will of course be aware that the MPC use market forecasts for their actual interest rate projections. However, as I understand it at the May 2018 Inflation Report TSC Hearing the Governor committed to setting out more of the Committee thinking on this in the August 2018 Inflation Report. Since I am not privy to that thinking, I set out my views.

The work of King & Low (2014) suggests that real interest rates have indeed fallen over the last 25 years, a phenomenon also discussed in C. Bean 2016; Bean 2018; Miles 2014). The reasons for this and future outlook are not clear, but seem to include (a) lower productivity growth (b) a higher demand for safe assets especially from emerging economies (allied with a near fixed supply of US Treasuries, UK gilts etc.) (c) an increasingly elderly population saving for retirement. More research is needed to establish whether these trends are permanent or not and how this relates to monetary policy (if the equilibrium real rate is very low, there is more chance of nominal rates hitting the lower bound more frequently other things equal). That said, some broad conclusions are in order regarding the equilibrium nominal policy rate. Think of this rate as the sum of the equilibrium safe real rate of interest and the inflation target. If the inflation target is 2% and the equilibrium safe real rate of interest, given by, say the rate on index linked bonds, is 3%, then then equilibrium nominal policy rate is 5%. As Miles (2014) points out, the 1694-2014 average Bank of England policy rate is 4.8%: and

consumer price inflation is, over this 320 year period, 2%. Before the financial crisis, the real safe rate had dropped to around 1-2%, giving an implied policy rate of around 3-4%. This implies a higher Bank Rate than now, but not as high as in previous decades.

17. Based on the current MPC forecast, how do you expect interest rates to change over (a) the next year, and (b) the next three years?

As the TSC will know, the MPC bases its forecast on market-implied expectations for Bank Rate. The May Inflation Report forecast was based on the average of market-participants' Bank Rate expectations between 12th April to 2nd May. Financial markets expected Bank Rate to be around 0.9% next year (2019 Q2) and to be around 1.24% by in the next three years (2021 Q2). The NIESR May forecast expects Bank Rate to be somewhat higher, at 1.1% in 2019 (they give full year forecasts) and 2.0% in 2021 (see their Table 1, page F13).

Now, as you will also know the MPC has said, repeatedly, that, with the current state of knowledge, over time interest rates will need to rise from their current level of 0.5% to keep inflation at target. The pace of that rise, the May Inflation Report comments, depends on circumstances at the time.

Since I have not started at the Bank yet, I think it would be premature for me to express a view, as I don't have access to the full array of forecasts and knowledge within the Bank. At this stage, I would merely say that given current conditions and current economic data, I agree with the broad direction of travel. That said, it might help the TSC if I note that I did respond in December 2017 to the FT's survey of UK economists asking them for their projections this year, 2018. In that survey I forecasted that interest rates would stay low since wage pressure would be weak.

Finally, it is worth repeating the remarkable data in Miles (2014). In the 320 year period, 1694-2014 the average Bank of England policy rate has been 4.8%, with consumer price inflation 2%. A Bank Rate of 0.5% is historically unprecedentedly low.

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