Report to the Treasury Select Committee
From Professor Kristin Forbes, External Member, Monetary Policy Committee
August 29, 2016

Setting monetary policy is often compared to driving while looking in the rear-view mirror. Monetary policy should be set based on where the economy is going (given the time required for any policy changes to fully take effect). But these decisions must be made based on information about the past (given the time lags for data on the economy to become available). Policymakers have developed a number of tools and frameworks to manage this challenge, although some have recently been less effective at predicting key variables such as inflation. Since the vote on UK membership in the European Union, these standard frameworks are even less informative. A better analogy for setting monetary policy in the UK today might be driving while looking in the rear-view mirror on a dark night with no road lights. As a result, my approach to monetary policy continues to be to proceed cautiously, treat models and forecasts with more skepticism than usual, and place even greater weight on incoming data to continually evaluate the appropriate stance for monetary policy.

The Past Year BV (Before the Vote)

In my last annual report to the Treasury Select Committee, in September 2015, I summarized the outlook as: "The UK economy is on track to continue its solid recovery. Inflation should begin heading back toward target by year end, and in the not-too-distant future it will be appropriate to begin the next voyage of gradually increasing interest rates." I also highlighted three key questions "that will be key factors for my decision on exactly when inflation is showing enough positive momentum that it is appropriate to begin raising interest rates." These three questions were: 1) "any implications of recent weakness in key emerging markets and market volatility for the UK outlook?"; 2) "the effect of recent exchange rate movements on UK inflation?"; and 3) "will measures of core and domestically generated inflation pick up?"

The UK economy was evolving largely as expected in the run-up to the vote, with the same three questions continuing to be critical in my monetary policy assessment. UK economic growth continued to be solid—albeit not spectacular—with quarterly GDP growth over the four quarters through Q2 2016 averaging 0.6% (using the BoE's backcast). Even though this was below average pre-crisis growth rates, it allowed the UK to repeat its 2014 accolade of being the fastest growing G7 economy in 2015, and it was on track to be neck-and-neck with the US for this title in 2016.[1] Unemployment continued to fall, from 5.4% in the three months through August 2015 to 4.9% in the three months through June 2016. Headline CPI inflation started to pick up from its historic low of -0.1% in October 2015, gradually increasing to reach 0.5% in June 2016. Inflation was poised to pick up even more quickly in the second half of 2016 as past falls in energy and food prices dropped out of the annual price comparisons. The central forecasts in the November, February and May *Inflation Reports* (which are based on market interest rates and continued government policy, including a Remain vote) showed inflation exceeding 2% within two years, suggesting that monetary policy would need to be tightened before markets expected.

The three main questions that I highlighted last year continued to dominate my monetary policy assessments, albeit with differing degrees of resolution. First, risks to the outlook for China and most major emerging markets increased in late 2015, leading to heightened financial market volatility and increased concerns about negative spillovers to the UK. This increased downside risks to the UK economic forecast. These risks remain in the medium-term (especially related to debt accumulation in major emerging markets), but immediate risks to the UK have recently moderated somewhat due to factors such as: policy support in China, stabilization in global energy prices, and a slower pace of US monetary policy tightening supporting capital flows to emerging markets.

[1] According to IMF statistics and forecast. This incorporates recent data revisions for 2014 and 2015.

Second, the extent of pass-through to import prices and inflation from sterling's appreciation from 2013 to mid-2015 is now better understood. A series of analyses has caused the Bank to reduce its "rule-of-thumb" treatment of the effects of exchange rate movements on prices, as well as to be more nimble at adjusting these estimates over time as we understand the factors driving the exchange rate movement.[2] As a result of this improved methodology, sterling's appreciation from 2013 to 2015 is now believed to be dragging less on headline inflation than initially estimated.

Finally, there has been less progress resolving my third major question on the UK outlook—how quickly measures of domestically generated and core inflation would pick up to levels consistent with our inflation target in the medium-term. Although these measures have been gradually strengthening over the year, the pace has been glacial. For example, total economy wage growth (excluding bonuses) had only picked up to 2.3% in the three months through June, and an average of 10 measures of domestically generated inflation remained subdued at 1.1% in June (well below the pre-crisis average of 2.4%). Given the tightness in the labour market and solid economic performance, standard economic models (such as the Phillips curve) suggest wages and domestic costs should have picked up at a faster rate.[3] There are a number of possible explanations for the limited predictive powers of these models—such as changes in the composition of the workforce, low productivity growth, additional hard-to-measure slack, migration, and low headline inflation (which raises real wages and reduces the bargaining power of workers). It is still unclear how important these various factors were, and how much of any such effects would be temporary or more persistent.

What did these various considerations imply for my votes on monetary policy over the past year? The continued solid UK recovery, reduction in immediate risks to the UK from major emerging markets, smaller drag on inflation from sterling's recent appreciation, and gradual improvement in wage growth and domestically generated inflation suggested that monetary policy would need to be tightened soon—potentially quite soon. The surprisingly weak pace of improvement in wage growth and domestically generated inflation, however, meant that we had slightly more time than I had expected a year ago. If there were no substantive changes in the economic outlook, however, it was likely that I would have been voting for an increase in interest rates by now.

But of course, there was one substantive change—a vote on UK membership in the European Union. Uncertainty in the run-up to the vote could affect the economy in several (related) ways: 1) reduced investment and hiring; 2) increased risk premia; 3) weakness in housing and commercial real estate transactions and investment; 4) sterling depreciation; 5) delayed consumer purchases; 6) delayed wage increases; and 7) less stable funding of the large UK current account deficit.[4] It was unclear if any of these effects would emerge, and if they did, how persistent any would be. Most of these effects (with the exception of sterling's depreciation) would likely imply slower growth and lower inflation. Therefore, it made sense to delay any tightening of monetary policy in the run-up to the vote, and I continued to vote for no change in monetary policy for most of the last year.

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[2] After sterling's 2007-2009 depreciation, the BoE estimated that a 10% depreciation would increase import prices by around 9% and consumer prices by 2.7%. More recent evidence suggests the average effect of a 10% depreciation is closer to a 6% increase in import prices and 1.8% increase in consumer prices, before taking into account specific factors driving the exchange rate movement. (The effects of an appreciation are symmetric in the opposite direction.) For more details, see box entitled "The effect of imported price pressures on UK consumer prices" in the BoE *Inflation Report*, November 2015. Also see my speech "Much ado about something important: How do exchange rate movements affect inflation?", given on 11 September, 2015. For technical discussion, see *External MPC Unit Discussion Paper No. 43*, "The Shocks Matter: Improving our Estimates of Exchange Rate Pass-Through" by Kristin Forbes, Ida Hjortsoe, and Tsvetelina Nenova, Nov. 2015 available at http://www.bankofengland.co.uk/monetarypolicy/Documents/externalmpc/extmpcpaper0043.pdf.

[3] See speech "A Tale of Two Labour Markets: the UK and the US" given on 26 January 2016 and available at http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech875.pdf.

[4] See speech "The UK Current Account Deficit: Risky or Risk-Sharing?", given on 21 March 2016 and available at http://www.bankofengland.co.uk/publications/Documents/speeches/2016/speech890.pdf, and Bank of England External MPC Unit Discussion Paper No. 46, "Current Account Deficits During Heightened Risk: Menacing or Mitigating?" by Kristin Forbes, Ida Hjortsoe, and Tsvetelina Nenova, May 2016 available at http://www.bankofengland.co.uk/monetarypolicy/Documents/externalmpc/extmpcpaper0046.pdf.

The Outlook AV (After the Vote)

Since the June referendum, moderate uncertainty about the economic outlook in the run-up to the vote has been replaced by even greater uncertainty about how the economy will evolve in both the short- and long-run. Sterling depreciated sharply, and there are likely to be effects on both demand and the supply potential of the economy. How these forces evolve, the magnitude of these effects, and how they balance out is extremely difficult to predict. This is not just the usual uncertainty that always colours monetary policy decisions. Instead, depending on what new arrangements are negotiated, this could imply a major structural change with no historical precedent. Past data is even less informative than usual. This has forced us to develop new techniques and use less reliable higher-frequency data and rely more heavily on surveys to create our economic forecast.

The effects of the vote to leave the European Union are multifaceted and will take a substantial amount of time to fully play out. There will be an intimidating renegotiation of numerous trade agreements. This uncertainty may cause businesses to delay hiring and major new projects. Sectors that involve long-term commitments or major expenses—such as commercial real estate and housing—are already showing signs of a slowdown. A series of business surveys taken immediately after the vote suggest a sharp deterioration in the outlook for businesses and investment intentions. Surveys of consumer confidence have also deteriorated (albeit still to levels at or above historic averages) and could indicate future weakness in consumer spending. All of these indicators suggest that the economy is going to slow, and a moderate easing of monetary policy could help mitigate the slowdown and support employment. With headline inflation at 0.6%, with 9 of the 10 DGI (domestically generated inflation) measures below their historic averages and 8 of the 10 below 2%, the upward price pressure from sterling's recent depreciation will likely only cause a moderate and short-lived overshoot of inflation relative to our 2% target. This has provided us with some flexibility to modestly ease monetary policy today.

Therefore, at our last MPC meeting in August, I supported a moderate reduction in Bank Rate by 0.25 percentage points. Moreover, in order to strengthen the effect on demand and employment, I also supported the proposed Term Funding Scheme. This should improve the transmission of the lower Bank Rate to borrowing costs for individuals and businesses, as well as provide a funding backstop against additional shocks. By improving the transmission channel as rates near zero, this provides evidence of our ability to lower Bank Rate further towards zero if needed.

Although I supported this reduction in Bank Rate and the Term Funding Scheme, I did not vote for any additional easing in monetary policy. This reflected four sets of concerns: the extent of weakness in the economy; the extent of weakness in demand relative to supply; the tradeoff with inflation; and the additional costs of asset purchases.

My first set of concerns is about the extent of actual weakness in the economy. Although demand will undoubtedly slow, at this time it is impossible to predict by how much with any accuracy. Will the weakness in the business surveys be a false signal of the corresponding weakness in business output/production? After the Asian crisis and Sept 11, sharp deteriorations in business sentiment quickly reversed with smaller real effects than expected. The Lloyds Business Barometer and CBI Industrial Survey have already partially recovered their initial post-referendum falls (although other surveys have not), and different surveys point to different degrees of business weakness. Uncertainty may also dampen demand by less than expected—a pattern we saw before the vote. Sterling's depreciation should provide a boost to some companies which export and/or compete with imports.

Perhaps most critical is the evolution of consumer spending. Since household consumption is 60% of domestic demand, will the deterioration in surveys of consumer confidence translate into weaker spending? Initial indicators provide no evidence of this weakness yet. High-frequency data from department stores and online retailers remain strong. Retail sales grew by 1.4% in July, not only substantially stronger than expected, but pushing the three-month on three-month growth rate to its strongest pace since November 2015. Granted, these measures are only loosely correlated with overall consumption growth and may reflect improved weather in July. Consumer spending may also follow the traditional pattern of taking longer than business investment to adjust to shocks. Nonetheless, there is currently little evidence that the falls in measures of consumer sentiment have yet translated into any weakness in this key component of aggregate demand.

A second, and related, set of issues is how any reduction in demand will correspond to any reduction in supply capacity. Even if GDP growth slows sharply, if this is matched by reduced productive capacity of the economy, then it will imply less disinflationary pressure and therefore provide less flexibility to ease monetary policy than might be expected given the slowdown. The supply potential of the economy could fall for a number of reasons, such as if: uncertainty causes reduced investment, growth in the labour force slows, or productivity growth falls further (through reduced trade and any reallocation to new trading regimes). If a reduction in supply potential occurs for any of these reasons, there will be less room for monetary stimulus without driving inflation above target—even if demand contracts.

A third consideration is that sterling's recent depreciation is already putting substantial upward pressure on inflation and will likely cause it to overshoot our 2% target. Historical relationships suggest sterling's 18% depreciation since its high in August 2015 will increase the price level by about 3¼% in aggregate. The impact will be larger if it primarily reflects weaker productive capacity.[5] We are already seeing evidence of a pickup in import prices. Additional monetary easing would likely cause further sterling depreciation—not only building on these effects, but generating greater pass-through to inflation. Any such additional effects could quickly raise inflation to levels which I am not comfortable "looking through", creating a more difficult tradeoff for monetary policy.

A final consideration is that easing monetary policy not only has benefits, but also costs. People will earn less on their hard-earned savings—potentially causing some to cut back on spending to reach a target savings pot. Banks will make less money on lending—potentially making it harder for consumers and businesses to get loans. Pension and life insurance funds will have a harder time meeting their commitments. Companies may need to put more money into pension schemes—leaving less to spend on workers and investment.

The MPC is aware of these costs and risks of looser monetary policy. This puts us in a difficult position. We also face a tradeoff between supporting demand and our inflation target. Even before the easing announced by the MPC in August, the economy had already received some stimulus—such as from the lower yield curve, sterling's depreciation, and the easing of banks' buffers to increase their lending capacity. In August, the MPC provided additional support to the economy through: the reduction in Bank Rate to 0.25%, the new Term Funding Scheme, the £60 billion of purchases of government assets and the £10 billion purchases of corporate bonds. If merited, there is further room to provide additional stimulus using each of these four tools. But these tools are not limitless, and the costs are likely to increase over time.

Therefore, given this substantial stimulus already in place, the resilience in the economy to date, and that the forthcoming adjustments to the UK economy will take a substantial amount of time to play out, there is time to wait and make any additional adjustments to monetary policy gradually as more information becomes available. There may be a case for additional easing in the future. If so, I will be ready to act if the benefits appear to outweigh the costs at that time. But if demand does not weaken as much as in our baseline forecast, if supply weakens more than expected, or if sterling's depreciation continues, then I will be less likely to support additional easing. In just the past few weeks, we have learned a substantial amount about the underlying strength of the economy on the eve of the vote. In the next few weeks we will learn substantially more about the initial effects. We will always be setting monetary policy by looking in our rear-view mirror, but at least daylight is beginning to dawn and the image in that mirror is becoming clearer.

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[5] Bank of England External MPC Unit Discussion Paper No. 43, "The Shocks Matter: Improving our Estimates of Exchange Rate Pass-Through", by Kristin Forbes, Ida Hjortsoe, and Tsvetelina Nenova, Nov. 2015, available at http://www.bankofengland.co.uk/monetarypolicy/Documents/externalmpc/extmpcpaper0043.pdf

Explaining Monetary Policy

I have used a range of different forums and outlets to attempt to explain monetary policy, the views of the committee and my personal views. Below is a list of: 1) written speeches; 2) other presentations, talks, briefings, and conferences (including *Inflation Report* briefings); 3) meetings with various business groups; 4) published interviews, articles, opeds, and BoE Working Papers; and 5) agency visits.

Written speeches (all available at http://www.bankofengland.co.uk/publications/Pages/speeches/default.aspx)

September 2015	Speech at MMF, Cardiff University, "Much Ado about Something Important: How do Exchange Rate Movements Affect Inflation?", in Cardiff
October 2015	Speech at Brighton Business Summit "Growing your Business in the Global Economy: Not all Doom and Gloom", in Brighton
January 2016	Speech given to the Henry Jackson Society, Parliament, "A Tale of Two Labour Markets: The UK and US," in London
March 2016	Speech at Official Monetary and Financial Institutions Forum Roundtable, (OMFIF), "The UK Current Account Deficit: Risky or Risk-Sharing?" in London
September 2016 (forthcoming)	Speech at Imperial College, "Contagion, Common Shocks, or Coincidence: Why does Bad Economic News (sometimes) Spread so Quickly?" in London

Other presentations, discussions, briefings and conferences

September 2015	CEPR/EABCN presentation at Bank of England, "Rethinking the Link Between Exchange Rates and Inflation: Misperceptions and New Approaches" in London
October 2015	Lecture to Centre for Central Banking Studies (CCBS) at Bank of England, "Contagion & Capital Flows" in London
November 2015	*Inflation Report* Briefing in Glasgow
November 2015	Bank of England conference on "Making GDP-Linked Bonds a Reality", chaired session in London
November 2015	Panelist on "Finance in the Current Economy" at Godolphin & Latymer School in London
January 2016	Bellagio Group meetings in Rome
February 2016	Council on Foreign Relations dinner speaker on "The Global Economic Outlook" in London
February 2016	CEPR/Bank of England Monetary Policy Roundtable, chaired session "To What Extent is the UK affected by the Global Financial Cycle?" in London
March 2016	Hahn Honorary Lecture at Royal Economic Society Annual Conference, "Current Account Deficits During Heightened Risk: Menacing or Mitigating?", in Brighton
June 2016	ECB forum on Central Banking in Sintra, Portugal
August 2016	Chair of panel at Monetary Policy Symposium organized by the Federal Reserve Bank of Kansas City in Jackson Hole, Wyoming

Meetings with business groups

September 2015	Roundtable dinner hosted by Wales Agency with local businesses in Cardiff
September 2015	Roundtable dinner hosted by JP Morgan Roundtable in London
September 2015	Roundtable lunch hosted by Morgan Stanley in London
September 2015	Roundtable lunch hosted by Suffolk Chamber of Commerce at Bank of England in London
October 2015	Talk to Young Presidents' Organisation, hosted by Scotland Agency in London
October 2015	Roundtable lunch hosted by RBS in London
October 2015	Roundtable breakfast with local businesses hosted by Agency for Central Southern in Brighton
November 2015	Dinner with Scottish Chief Financial Officers in Edinburgh
November 2015	Roundtable lunch hosted by Goldman Sachs in London
May 2016	Roundtable lunch hosted by UBS in London
May 2016	Roundtable lunch hosted by Northern Ireland Agency in Belfast
July 2016	Roundtable lunch with local businesses hosted by Institute of Chartered Accountants in England and Wales (ICAEW) in Cambridge

Published interviews, articles, Opeds, and BoE Working Papers

August 2015	Oped in *The Telegraph*, "Avoiding Sunburn and Other Considerations for Interest Rates"
Sept. 2015	Interview with *Western Mail*, Cardiff
Nov. 2015	*External MPC Unit Discussion Paper 43*, "The shocks matter: improving our estimates of exchange rate pass-through" (with Ida Hjortsoe and Tsvetelina Nenova)
January 2016	*External MPC Unit Discussion Paper 44*, "The spillovers, interactions, and (un)intended consequences of monetary and regulatory policy" (with Dennis Reinhardt and Tomasz Wieladek)
February 2016	*VoxEU*, "Using Rules of Thumb for Exchange Rate Pass-Through could be Misleading" with Ida Hjortsoe & Tsvetelina Nenova
March 2016	Short video, "Current Account Deficits: When to Act?" for Royal Economic Society in Brighton
May 2016	Interview in *Belfast Telegraph*, Belfast
May 2016	*External MPC Unit Discussion Paper 46*, "Current account deficits during heightened risk: Menacing or mitigating?" (with Ida Hjortsoe and Tsvetelina Nenova)
July 2016	Oped in *The Telegraph*, "Wait for Brexit Fog to Clear Before Interest Rate Cut"
Expected September 2016	*Macroprudential Policies* (BIS/Central Bank of Turkey Volume), "Banking Deglobalization: A Consequence of Monetary and Regulatory Policies?" (with Dennis Reinhardt and Tomasz Wieledak)
Expected September 2016	*The Manchester School*, "Much Ado about Something Important: How do Exchange Rate Movements Effect Inflation". Vol 84 (Sept), pgs. 15-41.
Forthcoming	*The Economic Journal, "*Current Account Deficits During Heightened Risk: Menacing or Mitigating?" Forthcoming.

Agency visits and hosted meetings

September 2015	Wales Agency
September 2015	South East/East Anglia Agency
October 2015	Central Southern Agency
November 2015	Scotland Agency
January 2016	Greater London Agency (Visit to JobCentre Plus in Brixton)
May 2016	Northern Ireland Agency
July 2016	South East/East Anglia Agency