BANK OF ENGLAND

MEETINGS OF THE MONETARY POLICY COMMITTEE
February 2017

A meeting of the Monetary Policy Committee was held on Monday 30 January 2017. The following members of the Committee were present:

Mark Carney, Governor
Ben Broadbent, Deputy Governor, Monetary Policy
Jon Cunliffe, Deputy Governor, Financial Stability
Nemat Shafik, Deputy Governor, Markets and Banking
Kristin Forbes, External Member
Andrew Haldane, Chief Economist
Ian McCafferty, External Member
Michael Saunders, External Member
Gertjan Vlieghe, External Member

Dave Ramsden was present as the Treasury representative

Anthony Habgood was present as an observer in his role as a member of the Oversight Committee of Court

The following members of staff were present:

Gareth Ramsay, Director, Monetary Analysis
James Bell, MPC Secretariat
Simon Hayes, MPC Secretariat
Bob Hills, MPC Secretariat
Melissa Davey, Editor of *Inflation Report*

Transcript of the Monetary Policy Committee Meeting on

Monday 30 January 2017

Governor Carney. Call this to order. I will start with Minouche to give us an update on financial markets, and then ask Andy for any data update and then we'll go through indicative policy positions. So, Minouche, please.

Nemat Shafik. Since Pre-MPC, short rates have continued their moves higher, such that the 3-year forward rate is now 10 basis points higher than what we were shown at Pre-MPC, and in fact 14 basis points higher than that used in the forecast. If you look back, that's actually 43 basis points higher than the one we used in the November *IR*, so it's crept up quite steadily since then. So what's driven those moves? Market contacts have generally welcomed additional clarity around the Government's strategy for negotiating exit from the EU. They point to the additional parliamentary oversight of Brexit negotiations as increasingly supportive of growth and rate expectations, with the move higher beginning on the day the Supreme Court ruled that Parliament would be required to vote on the triggering of Article 50, and gathering pace when the Prime Minister indicated the following day that the Government would publish a White Paper. In the background, the prospect of a material overshoot of the inflation target driven by exchange rate pass-through has been brought into focus by the recent inflation data, in the context of our message that there are limits to our tolerance of an inflation overshoot. This has added to the move higher in short rates. And, in the same way, the pound has continued its recent appreciation. It is now 1% above the 15-day average used in the *Inflation Report*. Equity prices are not materially different to those used in the forecast. The FTSE's just down 1%. That's it.

Governor Carney. Very good. Andy.

Andrew Haldane. So, on the UK side, we have an advance release of the Markit/CIPS Composite, which you'll have seen go round. This has output down a bit and expectations up a bit. Both now at around their average levels, so continuing that pattern of resilience that we have seen. We have to be careful what we say in the minutes, because actually this Composite isn't out until Friday, so this will have to appear not in the minutes, but it's ok for the transcript. The other thing we will have by the time of the minutes release, I think, will be the manufacturing sub-component on Wednesday. It is also quite important for the press conference as well that we have had advance warning of what's going on there.

Internationally, the only thing I'd mention would be on the US side, where the string of positives continues. We've had some strong PMIs for January. We've had some strong consumer sentiment numbers for January and Q4 US GDP came out broadly in line with expectation at +0.5%. That's all from me, thank you.

Governor Carney. All right, so if we can turn to policy indications, we'll start with Ben please.

Ben Broadbent. Thank you, Governor. I'll begin with a brief overview of the news on the global economy, which has generally been positive, at least as far as near-term activity is concerned. In the United States, GDP is estimated to have grown by 0.5% in the fourth quarter of last year, and, after a further rise in the Composite PMI in January to a 14-month high, we expect growth of 0.6% in the first quarter of this year.

The momentum in domestic demand looks stronger than that. Consumption grew by 0.6% in Q4; consumer confidence rose throughout the quarter, hitting a 15-year high in December; both residential investment and core capital goods orders grew at the fastest quarterly pace for over two years.

The counterpart of stronger domestic demand has been a widening trade deficit, at least when measured in constant prices, and a further appreciation of the US dollar. The dollar may also have benefited from other things, including the suggestion of a border tax adjustment, effectively a subsidy for exports and a tax on imports.

But, whatever their cause, the combination of a stronger US currency and stronger domestic spending has probably contributed to an improvement in sentiment and growth elsewhere in the world, including in Europe. In the euro area, business and consumer confidence rose again in December, in January the PMIs remained close to multi-year highs, and we now think that euro-area GDP grew by 0.5% in the fourth quarter, and that it will maintain that pace in the first quarter of 2017. In fact, given the unfavourable demographics in continental Europe, this is actually a faster rate of growth than in the US, relative to their respective trends. So it may be that local factors are also playing a part. In the *Inflation Report*, we attribute better growth in the euro area partly to improvements in the cost and terms of bank lending: credit growth edged up again towards the end of the last year, while lending rates edged down.

Against the backdrop of a significantly weaker currency than in recent years, the same combination of rising credit supply and a better global environment are likely to be supporting activity in this country as well. Sterling's weakness reflects the market's worries about the impact on the UK of leaving the EU, particularly in the manner to which the Government now seems committed. The Prime Minister has made explicit something that was probably clear enough beforehand: that control over immigration will be put ahead membership of the single market, freedom from the jurisdiction of the ECJ ahead of membership of the Customs Union. But, for the time being, those arrangements are unchanged, the currency more competitive, and UK-weighted global demand growth stronger than it has been for quite some time.

As we've observed, the currency has been acutely sensitive to any news about the likely shape and consequences of EU exit. No doubt it will remain so. But, for all this volatility, what's also stood out is an apparent insensitivity – at least as far as near-term interest rates are concerned – to UK economic news. That news has certainly been no weaker than in the US, relative to prior expectations. Yet, over the past few months and perhaps until very recently, the reaction of near-term interest rates, one to two years ahead, has been much more muted and significantly smaller than has typically been the case in the past.

To some degree, too, this must reflect Brexit, in the face of which near-term economic data are probably judged to be less informative than usual about prospects for the medium term. Even without any further negative news on that front, the outlook for private consumption is pretty challenging. Household spending outgrew labour income by well over a percentage point through the second half of the last year, at least according to our latest estimates. That's not something that can carry on indefinitely. In the meantime, real income growth is slowing quite sharply: the February *Inflation Report* has it almost flat through the course of this year.

So perhaps the market is right to believe that the near-term data are less meaningful than usual for policy. And nor, despite the relative flatness of forward interest rates, have market expectations of future inflation risen any further, following their rebound in the autumn of last year. If the stickiness of forward rates had reflected scepticism about our preparedness to raise interest rates, whatever the strength of the economic data, as opposed to a view about a likely deterioration in those data, you might have expected forward inflation rates to take the strain. But that's not been the case.

That said, we are about to publish a forecast in which the expected path of demand growth is significantly stronger than the consensus view, and in which inflation fails to respond to that demand only because we have revised up our estimate of aggregate supply, via a lower equilibrium rate of unemployment. Sterling's recent rise helps in containing inflation, relative to the November *Report*, but the bulk of the work is done by the upward revision in potential output. Without that lower value of U*, the new demand forecast would clearly call for a steeper yield curve, and perhaps, indeed, some of that has now been coming through in the market.

As it happens, my own view is that our new forecasts for demand are, if anything, a touch too strong. They imply that consumption will continue to outstrip household income, throughout the forecast, and that the worst of any slowdown in investment is already behind us. Nor do I think we've evidently overdone the change in our estimate of U*. So my indicative vote will be to leave the current policy setting unchanged, for both rates and purchased assets. That said, the new forecast does present some presentational difficulties, and it will be important to spell out the implications for wage growth and the path of policy, should our new estimate of U* prove too low.

Governor Carney. Thank you very much. So I have next Jan, and I should have said at the outset, the propositions will be: maintaining Bank Rate – you said "unchanged policy" – but maintaining Bank Rate at 25 basis points, and continuing the corporate bond purchase programme, and then maintaining the stock of assets purchased for Government debt at £435 [billion][1], given the reinvestment. But I have Jan and then Jon please.

Gertjan Vlieghe. Thank you. These are challenging times for monetary policy. There are good reasons to expect the economy to slow, but it continues to be resilient for now. There are good reasons to expect some firming of underlying inflationary pressure, but the evidence of firming is still largely absent. The challenge is not what we do today – I am minded to vote for no change – it is how we communicate the outlook for the next few years.

Since I started on the MPC in September 2015, I have been describing GDP growth as "losing momentum" from its peak in 2014 of over 3%, down to 2% and then below 2%. It is time to update that description. After briefly dipping below 2%, GDP growth has actually regained some momentum through the course of 2016, and we are now cruising at around 2¼ to 2½ %. That cruising growth speed has taken place despite the referendum to leave the EU, and neither the run-up to the referendum nor the uncertainty about the future changes since the referendum have dented growth so far.

Business investment growth has been around zero, but it had already slowed well ahead of the referendum, and slowed no further since Q1 last year. Consumption growth has been resilient at a pace of 2¾ %, both in 2015 and in 2016 so far. Consumer confidence is down from its peak, but only mildly so, and not enough nor with the right timing to suggest that a slowing is now definitely in train.

I continue to think that Brexit-related uncertainty is unlikely to allow the economy to continue with "business as usual" in the next few years, in the face of the possible disruption to future immigration, the possible loss of financial passporting, and the risk of a reintroduction of tariffs, as well as non-tariff barriers to trade. But we do have to explain why the near-term performance of the economy continues to beat our expectations. I see three reasons.

First is that the increase in uncertainty surrounding the referendum did not manifest itself in a tightening in financial conditions. In large part, that was because of our easing package in August. This may well have made a bigger difference to the outlook than we ourselves attributed to it. Moreover, the improvement in global data, which happened to take place in the second half of 2016, probably helped support both global financial conditions and economic sentiment more broadly, feeding back positively onto the UK.

Second, and partly related, the kind of uncertainty that the UK is experiencing may not be the kind of uncertainty that causes business spending decisions to be suddenly put on hold. Perhaps we have put insufficient weight on the fact that, while firms have learned that the future trading relationship with the EU could change fundamentally, that change will not happen until 2019 at the earliest, and we will have few concrete details until then. As Ian already warned last summer, this might lead to a re-evaluation of some long-term *new* investment plans, of which there is increasing evidence, but not to a reduction of spending already planned, or with short pay-off horizons.

Third, having seen ongoing modest improvement in the labour market, consumers have had no obvious trigger to start worrying and reduce spending. Indicators related to retail sales, cars and housing have remained resilient, and have only come off slightly in the past month or so, too early to tell whether it is signal or noise.

What does this analysis of the causes of our near-term forecast errors tell us about the likely future path?

On global financial conditions, there are plenty of downside risks: Trump's trade and foreign policies, China's management of both its outflow pressure and its leverage-supported growth, EM

[1] Added by the MPC Secretariat for clarity.

vulnerability to a stronger dollar and higher US rates, and the eurozone's politics. But, despite those risks, growth momentum has been steadily improving since last summer.

On the slow-burning response of investment, there are, of course, downside risks too. Troublesome negotiations could yet push firms into more sudden action. My sense is that there is a meaningful risk that the negotiations go badly, and we end up in WTO unwillingly, and with quite disruptive short-term economic consequences. But I have little sense of the magnitudes involved, and I am content with a central forecast now being a long drawn-out adjustment of investment, and the risk scenario being a sudden sharp slowing.

That bring us to the outlook for consumption. Given the magnitude of the real income slowdown, from nearly 3% to around 0%, the baseline should be a slowing of consumption growth. But given the drawn-out nature of the impact on businesses and therefore employment, there might not be a sharp, sudden response. A more gradual response, in line with the normal response of consumption to income shocks, is a reasonable central path. Downside risks are that the business sector switches to a more sudden adjustment, but also that real income erosion that is specifically due to higher inflation somehow has a more automatic – and therefore quicker – effect on spending, in the way that Ben described.

I am also putting some weight on the possibility that strong household consumption has been boosted by what seems to me a sizeable expansion in credit supply to households. During a period when our policy rate was largely unchanged, the rate on unsecured loans has fallen by 600 basis points, the interest-free period on credit card balances has risen by around two years, and the change in the structure of car finance has meant that an increase in credit supply has taken place there as well. Such loose conditions better enable households to postpone an income-related adjustment to consumption.

What does this mean for policy?

For the first time since I have joined the Committee, growth has been improving rather than slowing. And for the first time since I have joined the Committee, I can therefore seriously entertain the idea that monetary policy is providing stimulus that is adequate, or more than adequate, rather than barely enough.

When we discussed the appropriate monetary policy response to Brexit, before the vote back in April, I thought that monetary policy would need to be looser than the counterfactual for a period, and then tighter than the counterfactual. The timing would depend on the extent to which demand anticipated the future supply slowdown. It now seems that demand is not anticipating the supply slowdown as much as we thought, which means the transition from looser to tighter needs to happen earlier.

I am, of course, still very mindful of the combination of downside risks to near-term demand and an asymmetry to our ability to ease significantly, versus our ability to tighten, which makes me more patient before tightening than otherwise. In addition, I have not changed my mind about how low the trend real interest rate probably is, so, even when we need to hike, I do not think we have to hike very much, which also makes me patient. I would like to see, at least, whether the start of negotiations looks promising or not, and whether there is any economic fallout if it does not go well. In addition, I would like to see some more data on how consumers are responding to the real income slowdown, which has only recently begun. That is in addition to the ongoing importance of data on wages, services inflation and inflation expectations, which should give a reliable signal on underlying inflation pressures during a period of exchange rate pass-through.

I see the trade-off in our new forecast as marginally closer to my tolerance level than in November, and I would not mind saying so. Moreover, I think it would be useful to point out that the trade-off will become even less tolerable – and therefore require a somewhat steeper curve – if growth does not slow, or if U* is not as low as we think. I think such conditional statements are more useful than trying to judge the likelihood of the next rate move being up or down. Thank you.

Governor Carney. Thank you. So Jon, and then Ian, please.

Jon Cunliffe. Thanks very much. Probably influenced by too much Swiss cheese, I had a very vivid dream last night in which I had to cast a provisional vote today, but, in this dream, Brexit hadn't happened…

Governor Carney. This is all recorded, just so you know!

I realise that! [Laughter] I can live with it in eight years' time. I don't worry about that. But there had been a strange cosmic force that had pushed down the exchange rate by about 20% over the last year or so, and also written down the UK's productive capacity by nearly 4% over 15 years.

So, in that dream, I reviewed the underlying strength of the UK economy and our forecast. And I was looking at an economy that enjoyed solid growth in 2016 of around 2%, broadly similar to 2015, with fairly even growth throughout the year, including growth in Q4 of 0.6%. And we were forecasting growth to slow from 0.5 to 0.6% in recent quarters to around 0.4% from the second quarter this year over the forecast period.

In that world, the main surveys of output and of output expectations were around historical levels overall, although with some exceptions. Having fallen somewhat in Q3, there was no single clear picture from the surveys of investment intentions, but, taken as a whole, they seemed around average and slowed a bit since Q2 of last year.

Consumer confidence was around historical averages, having increased in December. And credit conditions were accommodative, and house price inflation and activity was reasonably robust, running at 6.3% in December for house price increases, up from around 3.6% in November, and mortgage approvals for house purchase running at about 67,500, which was the highest since March 2016, but well below the levels we saw before the crisis.

And the international economy looked a bit stronger than it had in recent years, at least in advanced economies. Consumer and business sentiment in the US had picked up to their highest levels since 2007 and 2004 respectively, and momentum had picked up in the euro area.

In the UK, labour market quantities looked solid - for example, unemployment was relatively low and vacancies remained around historic highs. However, unemployment was still above U* – as adjusted – contributing to a small negative output gap.

And productivity had grown by 0.9% in Q4, taking the annual rate of growth to 2.2%, but that reflected a dip in average hours in Q4, and we were forecasting that largely to unwind over the forecast, with an annual productivity growth of around 1% at the end of this year.

So, putting all that together, it was picture of a fairly solid, if unspectacular economy, neither roaring away nor sinking, pretty much the picture we've seen for the last few years.

Of course, we were forecasting a large and prolonged inflation overshoot as a result of cosmic forces, and one that was still present at the end of our forecast period. So the question in my dream was whether I should look through the overshoot because I knew it was temporary. And at that point, I heard the voice of Charlie Bean and realised my decision should rest on three bases.

First, inflation expectations, well, they looked well anchored. Summary measures of short- and long-term inflation expectations had risen quite sharply recently but only to around average levels, and those movements had removed the risk that inflation expectations could be dragged down persistently by the previous period of very low headline inflation.

And the second test was the extent of second-round effects on domestic costs. Pay growth had picked up. Private sector regular pay growth was at 3% in the three months to November, 0.3 percentage points higher than in our November forecast. And total economy regular pay was 2.7%. Those were the highest rates of growth since August 2015 in both cases. And while, if they were based on pre-crisis productivity trends, they wouldn't be consistent with inflation around target, that was less obviously the case with higher inflation.

But given the serial disappointments on pay, however, I think I was more inclined to take an 'I'll believe it when I see it' approach. Even though we had reduced U* somewhat, we might have been missing something that was driving pay dynamics, like a change in attitudes or bargaining power.

And the news on pay is not uniformly positive. Agents reported that pay settlements were expected to fall back from 2.7% in 2016 to 2.2% in 2017, wage expectations across sectors had increased only marginally according CBI surveys, and the wedge between public and private regular pay was historically high.

Finally on domestic cost pressures, the ONS measure of core inflation was 1.6% in December – its highest reading since August 2014 and 0.2 percentage points above the November forecast. Again thought this was more of a recovery towards levels consistent with inflation at target than an indication of excess inflationary pressure.

And the third test was the size of the output gap, which we were estimating currently at around 0.5%, and forecasting to close to around 0.3% at the end of the forecast. But it was still negative suggesting there were still some underutilised resources in the economy.

Taking all that together, a solid economy set for a gentle slowing and inflation pressures and expectations heading back to more normal levels, that picture on its own would leave the policy decision finely balanced – although, in my dream, I was still in the camp of leaving policy unchanged, given that we had had a number of false dawns since the crisis, given the lack of evidence of strong domestically-generated inflation pressures building, and given risk management concerns.

Well, I woke up at that point, and realised I was dealing with much more uncertainty. And, rather than a reassuring one-off cosmic reduction in the exchange rate and hit to supply, I had to factor in how Brexit might affect the economy.

And, to me, the key risk to our forecast is that, rather than adjusting relatively gently and together to Brexit in our forecast, supply and demand might adjust more abruptly and might be out of step.

Could demand adjust more slowly than supply? It is possible that consumers are more backward-looking, see Brexit as too far in the future to think seriously about now, or think the outcome will be good for the economy. According to the NMG survey, for those who voted to leave, a moderate net balance of households expected the referendum to have positive effects on the economy.

If demand adjusted more slowly that supply, that would pose a near-term risk to inflation, but that adjustment of demand to supply will happen at some stage. A slower adjustment in the near term implies a larger adjustment further out. And, as noted in the staff's strategy note, only a small amount of the supply adjustment happens over the next three years. Of course, supply might fall more rapidly and might fall further that we anticipate, for example, if the Brexit outcome is very disorderly. But, in those circumstances, I would be expecting consumers to react quickly as well, perhaps even more quickly than the supply side.

The second risk – the other way – is once that I've talked about before which is that demand adjusts faster than supply and potentially overshoots. This is the 'Road Runner' or 'Aha!' risk that I've been worried about for some time. And it might not take much news about the negotiation going nowhere and a cliff edge transition to trigger a larger change in business and household sentiment, and in that eventuality we would probably want to support demand.

So, once again, despite the strengthening we have seen since our last forecast, I have a relatively high hurdle for action in this period before we can see how the economy responds to the negotiations.

And, in that context, I am less sure than I would usually be about how much weight to put on short-term economic news, and in the circumstances of Brexit the cost of policy reversal could be higher. And, more generally, as I have said, I still put some weight on risk management arguments around acting when policy is close to the zero bound.

So I provisionally agree with all of the propositions.

Finally, just a brief word on communications. We made a major move in November, when we removed the forward guidance we had set out in August, and returned to a neutral policy stance. Given the charged political and media environment, it might be more difficult than usual to fine-tune that position and to signal that we have moved a little closer to tightening, without risking that expectations run away with us. So I would stick with the balanced stance for now.

Ben Broadbent. What a dream! Hardly 'Ozymandias', but it's still quite a dream!

Governor Carney. Ian and then Kristin, please.

Ian McCafferty. Well I suppose I should say at this juncture that I'm going to have to treat Swiss fondue with a new respect now!

Another quarter, another forecast upgrade. That remark is far from being a criticism of our excellent forecast team, and more a reflection of how much we have learned about the behavioural reactions of the British public since the shock of the referendum. As a result, we have hugely improved both the ways in which we might measure uncertainty, and our understanding of how it plays into real variables, and in the process been reminded that consumers tend not to think like economists.

The latest data support the view that the economy retains considerable momentum. GDP growth continues to surprise on the upside, business and consumer confidence remain robust, and the strength of the survey data of short-term trends in activity suggest little change in that momentum into Q1. The only question mark to set against this is in the weakness in the headline December retail sales data, but for me this can be explained by a combination of normal Christmas volatility, combined with the difficulties in the seasonal adjustment process. Profit statements by individual retailers earlier this month were upbeat, and there are no signs of distress in the post-Christmas sales period.

I have been slightly surprised by the recent strength of business investment spending in the national accounts, although those data are still in their infancy, and could be heavily revised. But the strength of the survey data on investment intentions suggests that, for now, this is a real phenomenon, and that firms are responding more to short-term demand and capacity pressures than Brexit uncertainties.

I am also heartened by the signs of some reflation underway in the global economy. Of particular note for me are the early signs that animal spirits are improving in both Germany and France, such that even though the more peripheral countries will continue to face some economic challenges in coming months, that modest acceleration in growth in the eurozone may well prove sustainable, in spite of election uncertainties.

As a result, our current forecast looks very reasonable, even though it departs from the current external consensus in several respects.

But there are a couple of elements with which I would take mild issue, which I will mention as they have a bearing on my current policy thinking.

On the demand side, I have few quibbles, though I do worry whether the persistent growth, albeit modest, in business investment throughout the forecast will come about. This was justified in [the] Draft [meeting][2] as being influenced by the need to maintain or improve the level of the capital stock, such that the current profile of modest growth already incorporates some Brexit effects. The capital stock approach is a reasonable framework to use in the model, but often departs from the practice of human investment decision-makers in practice. Not only is it difficult to estimate the real value and effectiveness of the capital stock (it is easy for a firm to run down its measured capital stock by, say, running its vehicle fleet for an extra year or two, without any real impact on performance). It is also the case that, in practice, the timing of investment decisions through the cycle is strongly influenced by perceptions about short-term demand. As consumer demand slows, some of those as yet uncrystallised fears and worries about what Brexit really means may well start to play a role, if only as justification for pulling back on investment plans until firms understand better their role in the brave, new, post-Brexit world.

I have slightly more important reservations about how the demand profile feeds into the nominal elements of the forecast. I still have some concerns about two possible upside risks to our inflation profile, in spite of the downside skew to demand.

First, I retain some concerns about reducing U* as far as 4.5% – quite a material shift. It is not that I reject the hypothesis outright, but that find it as yet unproven, even though some reduction from the

[2] Added by the MPC Secretariat for clarity.

previous 5.1% is justified. Vacancy levels and reports of skill shortages both suggest we are already close to full employment. I also think it too early to reject the possibility that current inflation may be having at least a temporary impact on wage determination, even if, as Ben showed, the wage suite equation using prospective inflation works somewhat better.

Second, I still worry that we are not capturing all of the different effects of a sharp move in the currency on CPI inflation. Before you start throwing rocks at me, this is not to question all the work we have done on traditional pass-through. It is that there are other, less direct, pressures from currency depreciation, especially on foreign currency denominated profit margins, which we do not appear to capture in our suite models. I recently hosted a dinner here for foreign-headquartered companies with activities in London: [redacted] and they were all talking of the need to raise UK prices by between 5 and 12% in order to protect foreign currency denominated margins. Some have already announced such price rises, with others still considering it. This would mean that the "other" component in our inflation decomposition needs to move into more positive territory, pushing up our forecast somewhat.

For me these reservations are important, as both, if realised, would worsen our trade-off calculation, compared to that derived from the Draft forecast. To tolerate the realisation of either factor individually would require a lambda of close to 1. If margin enhancement added 0.2 percentage points to inflation, the lambda required would be just less than 1. If U* were 4¾%, the required lambda would rise to above 1. If both factors were to materialise together, that would really stretch our tolerance.

So it is against that background that I turn to policy considerations. My current judgement is that for now the policy stance we adopted in August continues to be appropriate, though I would be happier if the yield curve were slightly above that contained in the forecast. Or, putting it another way, as Minouche has just pointed out, it was consolidated at closer to where we are today. But my "no change" stance hides some significant shifts in the distribution of possibilities on either side of it, and I would be keen for that to be reflected in the minutes, particularly if shared by others. In particular, the evolution of the trade-off calculation since August is such that I can now envisage an important probability that at some stage later this year I might wish to reverse some of the easing that we put in place last August.

While it can be argued that that possibility is covered by our current guidance, as we have moved from easing bias to neutrality, it is not clear to me that markets have fully appreciated its full implications. The latest Reuters survey showed two things.

One, that the dominant view is that we are most unlikely to move at all until at least 2019. This could indicate expectations of a Goldilocks economy (not too hot, nor too cold), or a more cynical view that we are just going to "sit out" the Brexit negotiation period. While I support Ben's conclusions that the recent fall in market sensitivity to short-term data news is a consequence of the spectre of Brexit-related downside risk over the medium term, it could easily mutate into a more worrying view that we are simply unwilling to act.

The second thing the survey showed was that the market bias in favour of expectations of further easing (if we measure that by the balance between those expecting a tightening and those expecting a loosening) does not disappear until the end of 2018, which feels to me a little complacent, given the evolution of recent data.

Both of these market perceptions, if left uncorrected, could be damaging to the policy process. The first would tarnish perceptions of our independence and our credibility, which are critical in delivering the mandate effectively. The second risks the possibility of a snapback over-reaction to any move on our part. This is something I would be keen to avoid, especially as I argued a year ago, when I previously began voting for a small tightening of policy, in favour of gradualism, one element of which is the avoidance of surprises. So if the economy were to evolve such that I feel the need to undo some of our policy stimulus in the quarters ahead, I would prefer to have provided some advance warning of the possibility.

So I strongly support the need for some carefully crafted language in the minutes to address market expectations, as well as nudge the yield curve. Such language should come as a gentle tap on the shoulder, rather than a punch on the arm. I would prefer such a signal not to be couched in probabilistic terms – “more likely up than down” – as the uncertainties on both sides are still acute. My preferred approach would be along the lines of “any further overshoot in inflation, unless accompanied by at least as much of an expected slowing in the economy as envisaged in the February forecast, would be difficult for the MPC to tolerate”. If this were not a unanimous view, I would like it to be recorded as the view of “some members”. I am sure our excellent staff can improve on such drafting. Such a signal would encourage the markets to take more notice of the evolution of the data than they have recently, as well as set out our collective reaction function to that data, without offering any hostages to fortune.

But, for this month, I expect to vote for no change in Bank Rate, and the completion of our current asset purchase programmes.

Governor Carney. Thank you, Ian. So Kristin and then Andy, please.

Kristin Forbes. One of the many things economists are not terribly good at is predicting turning points. Nonetheless, I will discuss four turning points: one that is certain to occur, one which appears to be occurring, one which has not occurred, and one which I would like to put in motion.

First, the turning point that is certain. This is the last MPC round that I will have the pleasure of sitting next to Minouche. I will miss her insightful comments, her measured assessments, and her clever analogies capturing her discussion theme each round. Today I will draw on these analogies.

Second, the turning point which appears to be occurring: in the global economy. The global PMI data began to improve about seven months ago, just as oil and many commodity prices began to firm. The BoE decomposition suggests about 80% of the explainable increase in oil prices since the November *IR* corresponds to stronger demand. Even global trade flows have stopped declining and picked up a bit. This does not imply a return to record global growth of the mid-2000s, and there are substantive risks in several key emerging markets that could derail this turnaround. But this stronger global economy should support the UK.

Next, the turning point which has not occurred: a sharp slowdown in the UK immediately after the referendum. It has now been over seven months. GDP growth has been remarkably stable at an above-trend 0.6% for three quarters. Growth may still slow as higher inflation reduces real incomes, or if negative supply effects build over time. But what is striking is how well our Q4 forecast has played out for most real variables – that is, our last forecast before the vote in May based on a Remain vote. Let me highlight some key results from this comparison.

Starting with demand and its components, GDP growth in Q4 was 0.3 percentage points stronger than the 1.9% (year-on-year) we forecast in May. Our February forecast suggests that this outperformance is largely due to consumption, which is expected to be 0.4 percentage points stronger in Q4 than the 2.4% predicted in May. The one demand component which is predicted to be weaker is investment, which is on track for only ½% growth in Q4, well below the May forecast of 2.2%.

Moving to the labour market, all measures are close to our May forecast, and most a touch stronger. Unemployment is currently 4.8% (lower than the 5.0% predicted in May), slack is lower (looking through our U* adjustment), and total weekly hours higher. The only data that is a bit weaker than predicted in May is wage growth.

Finally, moving to asset prices and the nominal data, Bank Rate and most borrowing costs are lower than expected in May. By far the biggest change from our pre-Brexit forecast is sterling, which is now 14% weaker than predicted in May (incorporating the 12% fall post-referendum and lack of recovery of some of its pre-referendum weakness). This depreciation has driven up many nominal variables such as import prices and inflation expectations, and contributed to CPI inflation 0.3 percentage points higher than forecast in May. Inflation going forward is expected to be much higher. These nominal effects of sterling’s depreciation, however, are largely in line with the standard effects from a depreciation of that magnitude.

So, the bottom line: the real economy, including the labour market, has been surprisingly resilient to Brexit uncertainty, even after accounting for policy support. Most measures (except investment) matched or slightly outperformed our May expectations based on a Remain vote. The main exception is sterling and the nominal data, which indicate sharply higher inflation. Given that I was poised to raise Bank Rate before the vote, and now the real economy has basically performed as forecast, while inflation is going to be substantially higher, it is increasingly difficult to explain why monetary policy should not be tightened.

The justification, of course, has been the outlook. Initially, our concerns rested on the detrimental effects of heightened uncertainty. These have not played out, possibly for the reasons I outlined in my November speech. But there are other headwinds – even ignoring the structural changes that will be negotiated and take some time. Uncertainty could increase in measures that have a more meaningful impact on demand. But most worrisome is consumption, as faster inflation erodes real income growth.

Very broadly, consider three scenarios. First is the Road-Runner-suspended-off-a-cliff: consumption briefly continues at levels unsupported by incomes, but, when consumers suddenly realise this is unsustainable, they sharply reduce spending and growth plummets. Second, the Road Runner continues running and only gradually runs out of steam; consumption only gradually tapers, supported by reduced savings and increased borrowing, justified by low borrowing costs, wealth gains, labour market strength, confidence in the future, and a belief that any real income shock is temporary. Third, confident consumers see the coming squeeze from higher inflation and demand higher wages. Companies agree due to concerns about labour shortages, so that wage growth picks up faster than expected, growth does not slow and inflation accelerates even faster. This is when the Road Runner throws a bomb back at the coyote. Each scenario has very different implications for growth, inflation and monetary policy.

Also important for the outlook are several tailwinds supporting inflation and growth that are likely to continue: cheaper exports, stronger global demand, stronger wage growth for those most constrained, and the lagged effects of fiscal and monetary easing. Minouche once talked about “A Series of Unfortunate Events” which kept dragging on the UK. Recently, we have had “A Series of Fortunate Events”.

The risks to inflation in our forecast may also be to the upside. I see our pass-through assumptions as on track: as I discussed in past months, the earlier stages of sterling’s depreciation correspond to shocks generating slightly less pass-through (as we saw through November), but the later stages of the depreciation should correspond to more pass-through (which we may be starting to see in December’s data). My concern is that we lowered U* too much, so our actual output gap is smaller than forecast, and wages will pick up faster. The weak settlements predictions from the Agents, however, suggest risks in the other direction. Another upside inflation risk is a continuation of the recent positive surprises in a range of nominal data and price expectations. Even the DGI measures have accelerated to surpass 2% – for the first time since 2013 Q2 – despite most measures not being updated since Q3. Granted, DGI measures averaging 2.5% have historically been consistent with inflation around target but that incorporated an average drag on the CPI from import prices, which is not in prospect.

What are the implications for monetary policy? This is the turning point I hope to spur into motion. Inflation is likely to get close to 3%, and be well above target in the time horizon relevant for monetary policy. I was uncomfortable with this overshoot even when the forecast predicted this coincided with a meaningful increase in unemployment and sharp slowdown in demand. Despite waiting over seven months, this deterioration in unemployment and demand has not transpired. Recent data does not indicate it is going to start in the next couple of months. It is increasingly difficult for me to justify tolerating such a large and likely overshoot of inflation – especially compared to such a small and uncertain undershoot of growth.

Also important, some concerns which increased my tolerance of an inflation overshoot in the past have diminished. For example, the risks related to low inflation, secular stagnation, weakness in the global economy, and the effectiveness of our policy tools when rates were near zero. The pick-up in UK and global inflation, stronger global economy, and the effectiveness of our August package have not removed – but substantially reduced – these justifications for tolerating an overshoot.

I could make a case to tighten monetary policy this month, but instead will vote for no change. Minouche’s many arguments for why we should “tread carefully” are important. But I support communication to prepare for a change in Bank Rate very soon, if our forecast plays out. I suggest highlighting that, if the real economy and nominal data evolve largely as forecast, there is not a sufficiently large trade-off with increased unemployment to justify tolerating significantly above-target inflation. Highlighting the role of the trade-off in setting policy would provide us flexibility to adjust course based on how the data on both the real and nominal side evolve.

We should also highlight that we are nimble and the appropriate path for monetary policy can change quickly. We will be particularly attentive to the path for consumer spending – especially as the consumer could follow either of the three "Road Runner" paths I laid out, and each implies a different path for policy.

To conclude, one of my favourite Minouche analogies was how the UK economy post-Brexit was like a ship resetting its course to a new port. The UK economy has not veered off course yet, and we should adjust accordingly. Unfortunately, Minouche is sailing to another port. We will miss her.

Governor Carney. Certainly true, echo that sentiment. So, Andy then Michael, please.

Andrew Haldane. As would I. Thank you, Governor. Bill Gates famously noted "we tend to over-estimate the effects of change over the next two years, and underestimate them over the next ten". Gates was talking about technological change. But perhaps the same is true of economic and political change, like Brexit and Trump?

So far at least, the dampening effects of these changes have been over-estimated by many, with greater momentum in activity, asset prices and inflation than anticipated six months ago. Indeed, there is an interesting pattern emerging in the forecast errors for these variables over recent quarters.

For most of the period since the financial crisis, GDP growth and inflation have come in shy of expectations. Between 2010 and 2016, the IMF's world growth forecasts were revised down in every year between the Spring and Autumn Meetings, on average by 0.3 percentage points.

Here in the UK, the Bank's one-year-ahead forecast error for growth has been negative in 4½ of the past six years, averaging 0.2 percentage points per quarter. But the past six months have seen that string of negatives stall or even reverse. World growth forecasts have remained broadly unchanged over this period and, most recently, some have begun to nudge up. With the publication of the February *Inflation Report*, our own GDP forecasts will have been revised up for two quarters in succession.

It would be too early to be calling this a trend. But because these errors tend to be serially correlated – if you like, our methods typically tend to under-estimate momentum – it is possible this resilience in activity could persist. Certainly, the output surveys over the past quarter offer few indications of any weakening of momentum in activity.

Against that backdrop, I am comfortable with where we have reached on both the global and UK GDP projections in the February *Report*, with both having now built in a greater degree of near-term momentum. This means the expected slowdown in UK growth, comparing last year with this, is now very modest, while global growth is forecast to rise slightly.

If the UK and global economies have so far behaved roughly in line with the first part of Bill Gates's quote, what about the second bit? Might there be a risk of under-estimating the ultimate effects of regime change on spending? I think this is a good challenge. To take an example, in my view there is now a good chance of a sharper slowdown in consumption than is currently pencilled in to the forecast, as the real income shock to households takes hold.

A recent staff note assessed how different household cohorts might respond to looser credit conditions. It makes the point that there are larger numbers than in the past of households with high saving propensities and, in some cases, target levels of savings in money terms.

One example here would be young people saving for a deposit on a house purchase of a given size. The proportion of private renters saving to buy a house has roughly doubled since the 1990s.

A second example would be older savers with a defined contribution pension, accumulating assets to hit a pension pot of a given size. Membership of DC pension schemes has also risen sharply, from 1 million in 2008 to 3.9 million in 2015.

Because they have a target level of savings in money terms, an interest rate fall might well induce these households to increase their savings, rather than lower them, to hit their target. If that logic is right, then a similar response is possible if these households were to be hit by an income shock. An increase in their personal saving rate is then needed if their savings target is to be met on schedule.

A milder version of this same phenomenon arises among households with a target for their money spending, rather than their money saving – the flow rather than the stock, if you like.

One example of such "rule of thumb" consumers are those who simply spend what they earn. Around 15 to 20% of consumers are thought to behave in this way. These rule of thumb consumers have, effectively, a fixed saving ratio.

Of course, these are only subsets of household – albeit fairly large and growing ones – and, even for them, there may be other factors at work. Nonetheless, I mention them because of how sharply their implied behavioural responses differ from our aggregate projections. Those projections foresee the aggregate household saving rate falling fairly steeply, from around 5% now to around 3% by the end of the forecast, its lowest level since at least the 1980s.

If nothing else, disaggregated evidence suggests there is a material risk of a slower adjustment in saving, and hence a sharper one in consumption, at some point, though the timing of that adjustment is of course difficult to judge.

One means of avoiding that correction in saving and consumption would be if there were to be a sharper pick-up in wage growth than forecast. And there are certainly risks to the upside here – for example, because we may have set our new U* estimate too low, or because wage momentum in the economy builds more rapidly than expected as inflation rises.

That said, I am happy with the judgement we have made on U*. Indeed, I would have been even happier had we made it 18 months ago.

I'd also say that, even at 4½%, I think the risks around that U* judgement remain two-sided and broadly symmetric.

As for wage momentum, there is little in either inflation expectations or wage settlements so far to suggest they are running ahead of expectation.

Inflation expectations, having corrected back from levels that were previously a little too low to meet the inflation target, are now back on track. And, encouragingly, having corrected, those expectations have been reassuringly solid in the face of the good news on the economy over the past few months.

As for wage growth, neither data nor intelligence from companies suggests much of a pick-up during this wage round, a sentiment strongly echoed in the Agents' recent pay survey. So, despite talk of a global reflation, underlying or core measures of inflation remain either at or below historical levels, including in the UK.

Turning to policy, the forecasts we are about to publish, conditioned on a 15-day average of the yield curve and exchange rate, are "broadly consistent" – if I can use that expression – with November's output/inflation trade-off. With the risks around those projections, in my view, also broadly balanced my preference would be to stick fairly closely to our November language with a "neutral bias" on the direction interest rates might move next.

It would be useful, I think, to include some conditional statements about the circumstances that could justify a move, in either direction, at some stage. The "in either direction" and "at some stage" qualifications are, I think, rather important here. The yield curve and exchange rate are on the move and may already be at levels that imply, if anything, a slightly lower lambda than in November.

And the risk I most wish to avoid is imparting too much upwards impetus to the yield curve in a way which tightened credit conditions and catalysed, actually or in perception, that sharper-than-expected correction in consumption.

Being seen to overestimate the dampening effects of a regime change is one thing. Being seen to have underestimated the dampening impact of our own actions is quite another. Even Bill Gates would be easily forgiven for the first; the Bank would not be so easily forgiven for the second.

Against that backdrop, I am minded this month to leave unchanged both Bank Rate and the stock of asset purchases. Thank you.

Governor Carney. OK. Michael and then Minouche.

Michael Saunders. Thank you. This *Inflation Report* contains substantial upward revisions to both the demand side and supply side. I broadly agree with those revisions.

The upgrade to the growth outlook is relatively large. The new forecast lifts the projected level of GDP three years ahead by roughly 1 percentage point from the last *IR*, with the upgrade concentrated in domestic demand. Over the last 20 years, there have only been three *Inflation Reports* with bigger upgrades to cumulative GDP growth over the next three years. Those were in August and November 2009, and August 2013, all periods when – unlike now – the economy unarguably had plenty of slack. I agree with the judgement of a lower U*. But, even with that change, slack currently is modest.

It still seems likely that the adjustment to Brexit will adversely affect both demand and supply over an extended period of time. But risks that this adjustment will weaken demand much more than supply over the next two to three years – hence widening the output gap – have receded markedly in my view, perhaps because of the lower pound, monetary easing and the absence of any significant deterioration in the cost and availability of credit. Our central forecast for cumulative GDP growth in 2016 and 2017 is now basically the same as it was before the Brexit vote.

Broadly, our new forecast suggests that the economy currently has a modest amount of slack, and that the erosion of real incomes from currency-driven inflation will cause GDP growth to slow from above-trend recently to roughly trend near-term, with growth slightly above-trend further out as the cost-driven inflation starts to recede.

I view risks around our new growth forecast for 2017 as broadly balanced. The sharp drop in retail sales in December highlights a key downside risk, namely that consumers will adjust spending more abruptly as rising inflation erodes real incomes. At present, I am inclined to view the drop as largely erratic. The average for Q4 retail sales shows solid growth, while reports from retailers suggest that spending remained fairly strong in December. The December retail sales figures are often volatile, with month-to-month declines in half of the last ten years. Moreover, the weakness in the December 2016 data was heavily driven by seasonal adjustments that are inevitably uncertain. But I do note the weakness also in the January CBI retail survey, and will be watching consumer indicators closely.

There are also upside risks to growth in 2017. After all, GDP growth has markedly outperformed our expectations and the consensus for three quarters in a row, with repeated outperformance in consumer spending and investment. I have a hunch that our forecasts continue to overstate the dampening effects of Brexit-related uncertainty, and understate the boost to growth from loose monetary conditions, including the cost and availability of credit, as well as the support to exports and investment from the low pound. Business surveys on balance have strengthened in the last few months. And, in particular, business surveys suggest that the boost to export orders from sterling's depreciation is in line with the usual trends after currency swings, rather than the more muted export response in our forecasts. Moreover, the CBI reports that the share of manufacturing firms looking to invest more to expand capacity is the highest since data began in 1979, with above-average investment intentions for buildings as well as plant and machinery.

Against this backdrop, I am rather uncomfortable with the prospective trade-off between above-target inflation and the variability of output. In my view, we should be seeking to push market rate expectations a bit higher.

I do believe that policy should remain accommodative at present, with rates below neutral. I suspect the output gap is modest but not closed. And nor are inflation expectations at a worryingly high level.

But I question whether we should have as loose a stance as currently: whether we should have our foot pretty much on the floor of the accelerator. I believe there is a reasonable case that we should now – or soon – reverse part of last August's easing. That easing partly reflected insurance against risks that the near-term hit to demand from Brexit would be much greater than the hit to supply, hence causing a marked rise in the output gap. As those risks recede, it seems appropriate to consider reversing part of that easing.

It seems rather incongruous to me to maintain the corporate bond purchase program. But, given the pre-commitments over that scheme, as well as to maintain the TFS and to not unwind QE if Bank Rate is below 2%, the only element of last August's MPC package that can easily be reversed soon is the cut in Bank Rate. A 25 basis points hike in Bank Rate would, of course, still leave policy rather looser than a year ago. Policy would remain highly accommodative, continuing to support growth, but implying a preference for a slightly different trade-off to that shown in our base case.

There is always an advantage to waiting to see more data. But an early hike would probably allow a relatively gradual and limited tightening path in a scenario of continued above-trend growth, and could be reversed if it turns out that the economy weakens a lot more than expected. Conversely, the potential cost of delay is that the trade-off may become more stretched if growth continues to surprise on the upside, and inflation expectations may rise further, implying the need for a sharper and probably more disruptive tightening of policy down the road.

One key counter-argument is that an early tightening would come as a major surprise to markets, households and businesses, and could trigger an undesirably sharp tightening in financial conditions via the yield curve and sterling. Another is that the December retail sales data and the January CBI retail survey may not be erratic, but may be the precursors to a sharper-than-expected consumer slowdown, as real incomes are squeezed.

For these reasons, I am probably not going to vote for a hike at this stage. And nor would I want us to issue guidance that rates are likely to rise by any particular date. But I would like to use the MPS to push up market rates a bit, and to ensure that it would not come as a complete surprise to markets, businesses and households if – depending on how the economy evolves – it does become appropriate to hike rates during this year, perhaps even in the next few months. It may also be useful now, or soon, to resurrect the language that if rates do rise, tightening is likely to be "gradual and limited". Thank you.

Governor Carney. Thank you, Michael. And last, but certainly not least, but for the last time, Minouche.

Nemat Shafik. Thank you. So Ian forewarned me that since this is my last policy meeting there is a tradition that you are expected to give a slightly more reflective statement, so I will try to do so.

My first day in the Bank was 1st August 2014. And I was due to catch a flight to my brother-in-law's wedding that afternoon, but I was persuaded to postpone my flight in order to attend the Draft 1 forecast meeting, after being assured that it was one at which key policy issues were debated. In the end, we spent almost two hours discussing the ideal thickness of the pen that should be used to draw the output gap. [Laughter] Now I will admit now that I had my doubts as to whether obsessing about this level of detail was healthy – and that was even before I'd attended my first MPC grammar lesson – sorry, the minutes meeting. [Laughter]

Since then, I have come to appreciate just how valuable all of our debates are. The philosopher Karl Popper, who happens to have been a professor at the LSE, argued that in a world of uncertainty and complexity, we cannot know the truth. We can only weed out falsehoods through rigorous debate and conflicting views, and progress only occurs as evidence is accumulated through better and better guesses. I like to think that Popper would approve of the way the MPC reaches its decisions: making informed guesses about what's driving the economy, and updating or discarding them after the data comes in and we've argued a bit more.

This iterative process of individuals coming to a view is surely one of the best ways to make important policy decisions, and I feel proud to have been a part of it. This process has brought us on an unexpected journey over the past 2½ years. When I joined, it seemed likely that a gently rising path of Bank Rate would see all of the remaining spare capacity in the economy used up, and returning inflation to target. The prospect of beginning to shrink the Bank's balance sheet – a task that was the first line of my job description – seemed a realistic one, and we all looked forward to a more simple world in which Bank Rate was the marginal tool of monetary policy.

Alas, that wasn't to be. Several unwelcome surprises have since come our way. First, the economy has expanded more slowly than we expected. Cumulative growth over the period since August 2014 has been 6%, compared to the 7½% we projected back then. However, this fact cannot explain why the MPC has not seen fit to tighten policy. It's been more than matched by weakness in productivity, which cumulatively has been 2% lower than we had expected, meaning that unemployment has fallen faster and further than we thought it would.

The surprise that had most impact on our policy decisions – or at least mine at any rate – has been the weakness of inflation and its underlying drivers. When Martin Weale left the Committee, he was able to say with some glee that, taking his term as a whole, inflation had averaged 2.0% precisely. [Laughter] Sadly, for me the comparable statistic is just 0.8%. I take some solace from the fact that as a whole the price level has risen by 2%...but that's not quite the same thing! [Laughter]

Governor Carney. Not quite the remit!

Nemat Shafik. Of course, much of this weakness has been due to the effect of transitory factors on inflation: the decline in global energy prices, and the appreciation of sterling over the course of 2014/15, both of which have reversed and seem to be pushing inflation above target, possibly as soon as next month. But the real reason that I withheld from voting for a rate increase over my first two years on the Committee was the weakness in domestically generated inflation – specifically, wages and unit labour costs. Popper would have been pleased by our attempts at falsification through better and better guesses for why wages were so weak: compositional effects, weak headline inflation, and, most recently, lower U*. And I look forward to finding out from future *Inflation Reports* where the truth really lies.

And then the referendum happened. After all of the contingency planning, there was a sense of anti-climax in the Bank's dealing room after none of our worst case scenarios of liquidity shortages and market dysfunction materialised. Well, that was soon replaced by a sense of purpose when it became clear that the MPC was going to need some new tools with which to stimulate the economy. And, at this point, I would like to pay tribute to the staff in Markets and Banking whose work is like an iceberg of which the MPC really only sees the tip. Their practical knowledge of financial markets – combined with MA's [the Bank's Monetary Analysis Directorate][3] expertise on the transmission mechanism – has allowed us to develop innovative and unconventional tools to navigate around the zero lower bound and implement the Committee's decisions flawlessly. Moreover, their dedicated and professional approach to credit, operational and collateral risk management ensures that our balance sheet is protected, preserving our policy solvency, and ultimately our independence.

It's a testament to the economy's continued ability to surprise us that, just six months after the vote to leave the EU, we find ourselves in such a different place to that which we expected immediately after the result, which Kristin has highlighted in her statement. This month, I intend to vote for no change in the level of Bank Rate or to our asset purchases – though, as more twists and turns unfold over the coming months and years, I expect monetary policy will have to respond in one direction or the other, in order to ensure a sustainable return of inflation to target. The market intelligence we receive suggests that participants generally understand this two-sided risk to monetary policy, and in the current environment I would be wary of trying to communicate a message that is any more certain or complicated than that. We should remember Bertrand Russell's words: "the whole problem of the world is that fools and fanatics are always so certain of themselves; but wiser people are so full of doubts".

So let me end by saying it has been a real honour to serve on this Committee with such a distinguished group of economists, and served by such dedicated and exceptional staff in MA and

[3] Added by the MPC Secretariat for clarity.

the International Directorate. Gareth kindly pointed out to me that there's a bit of a tradition that Adam Posen took to poetry in his final meeting, and I have since been sent several pages of his verse. Poetry hasn't ever really been my strong suit.

Ben Broadbent. Nor Adam's!

Governor Carney. Also recorded!

[Laugher and inaudible comments]

Nemat Shafik. Perhaps I could establish a new tradition and restrict myself to a limerick. So here I go:

> There once was a nine-strong committee
> Who sat in the heart of the City
> They aimed for stable prices
> But were buffeted by surprises
> No wonder they deserve our pity!

I'll stop there.

Governor Carney. Thank you very much, Minouche. OK, well, as usual, I can't follow any of those interventions, but I have to. Obviously, I join others in noting the notable changes since November. Growth in our forecast is materially stronger. We should be clear why, at least, we think it is. Four main drivers. First, the world outlook is stronger. That's based on improved PMIs in the US, Europe, China. Fiscal policy is now easing in most major economies, and a significant easing is in prospect in the US, and it's not clear that monetary will take all of that away. And, for the moment, the prospect of tax reform and deregulation appears to be boosting animal spirits in the United States and swamping any potential dampening effects from possible de-globalisation. The stronger growth outlook is reflected in higher industrial commodity prices – those are up 25% year-on-year and 10% month-on-month – and the move up in bond yields and most equity markets. But about a third of our growth upgrade is because of a stronger world. Half of it is because of stronger UK fiscal policy, half of the upgrade in our growth [forecast][4]. The new fiscal rules in the Autumn Statement give more scope for fiscal support and after… I won't give you all the gory details, I think you are familiar, but after stripping out interest payments, this implies around 20 basis points less fiscal drag in each of the next five years; but shock minus control. This is a material fiscal stimulus, and there's room for more, consistent with the debt tolerance that the Chancellor has set out to 2021. A tenth of the upgrade, 10 basis points, is from improved credit conditions and more broadly supportive financial conditions. And, again, I won't go through all the details of that. I would include in that, well, actually that includes financial conditions, adjustments to sterling, which, as you know, has been slightly restrictive since November. And then a tenth over the forecast horizon is greater consumer momentum, because we have an adjustment in consumption coming. So I think it's important to keep context here about where things have gone in our forecast. It's also important to keep in comparisons to last May, the last undisturbed forecast, what has happened since then, which is major fiscal policy, monetary policy and, if I can put it this way, macroprudential stimulus, plus a much stronger global economy, or a notably stronger global economy. So if things are tracking similar, it's for reasons which we would not have anticipated, which have at least leaned into the near-term headwinds, such as they are, from the referendum result.

Now, of course, the higher path for demand in our forecast is broadly matched by a higher path for supply – a much-discussed issue – and, as a consequence, on the central path in the forecast then, the monetary policy trade-off is less challenging than would otherwise have been the case given the news. In fact, it's broadly consistent with November, so for inter-temporal consistency, if we were comfortable in November, we would be comfortable now, or one would be comfortable now, if we are right, and the question is the degree of risk around it. And that will remain true as long as three things happen, though there's lots of others, but I'm going to pick up three. The first is that growth slows as expected, consumption in particular. The second is that wage growth remains subdued, reflecting the enduring influence of the slack we now estimate to be in the labour market. And, thirdly, I'm going to make a point on pass-through, just the speed of pass-through and how that might affect expectations, because I want to bring expectations back in, obviously expectations come in in all aspects of these.

[4] Added by the MPC Secretariat for clarity.

So what's the evidence for the first of these, the slowing in consumption? Well at best there are straws in the wind, only straws, as others have noted. The output surveys are at best mixed, between expectations and current output. Hours growth has slowed notably from around 2% in the summer to around 0.5% in October. Investment intentions surveys continue to point to a slowing relative to pre-referendum. I join others in noting the exceptionally weak retail sales, even with the usual caveats, but one data point, particularly in a heavily seasonally adjusted month, one has to be careful. And then, finally, I do take some information from the constellation of asset prices, which are consistent with expectation of a slowing in growth. And I would underscore as we've sort of drifted into talking about inflation expectations, is there is nothing wrong with the market levels, in my view, of inflation expectations here. And particularly if we look at what's happened to inflation expectations in financial markets globally, there has been quite a notable move in inflation expectations in the US and even the euro area, and there's basically, since November, been *de minimis* in the UK. So this overhang, the market can get it wrong and the market can also move discontinuously, but I think we're pretty hard-pressed to find concern there. But the bottom line on the first factor, the slowing, as others have noted, there is little, if any, evidence in the hard data yet. It's still in prospect and it's one of the key risks.

The second factor on subdued wage growth, Ben went through in our discussion meeting, the relationship between inflation expectations, how they play into our wage equations. And there is a question whether that, whether we're in exceptional circumstances in this regard. Whether the salience of the Brexit shock, the sharp exchange rate move, increases in food prices, all highly visible factors cause households to revise their expectations up more quickly and more aggressively than usually, and as a consequence there are upside risks to the wage profile. And there's the risk around the call on U*, and then there's, I would suggest, a potential expectations dynamic that one, this is just very high profile and could play in. Now, you could make the argument the other side to some extent for employer bargaining power as well, but the two obviously play in together.

We'll learn something, something but not everything, as always is the case with wage settlements. As you know, three-quarters of wage bargains occur about now, this and next quarter. For what it's worth, the Agents' survey suggests a marked deceleration in wage settlements. However, even with those wage settlements, even if they come in in line with the Agents' surveys, they do only cover about a third of UK employees and only 15% of the private sector, so we will have to wait to be fully informed and rely on surveys as well.

In terms of the third factor, the speed of exchange rate pass-through and its implications for inflation expectations, it's too early to test the null of the speedier pass-through that we are expecting, despite the best efforts of the team to parse the Q4 CPI data. If it turns out that pass-through is slower, however, then more of the exchange rate effect would appear over the policy horizon, and that, on the margin, makes the trade-off more challenging. Of course, if it comes sooner, we have another inflation risk on the other side, which is the possibility of reinforcing building inflation expectations.

So how to map those considerations into policy strategy? I'll set aside for the moment wage growth, although I would focus, I would note in that regard, that the focus is on growth as opposed to gap. Having made a material adjustment to supply, and I do support the adjustment we made, it is obviously subject to considerable uncertainty, and in this regard the application of Orphanides/Williams to me seems appropriate. There's some who see Orphanides/Williams in everything, but I think in this case, given the supply uncertainty, it's more appropriate. So let me go through four variants. First, if pass-through is faster and the economy slows more than we expect, the policy prescription is straightforward: easier policy on the margin. If pass-through is slower, and the economy doesn't slow, the prescription is straightforward again: tighter policy, there's going to be more inflation over the policy horizon. Then there are two off-diagonals. If pass-through is slower, meaning higher inflation later on, but the economy slows more than expected, meaning weaker DGI and a higher output gap, then on balance the policy trade-off is probably left unchanged, neutral prescription. Finally, if pass-through is faster and growth doesn't slow, on balance I'd suggest this calls for tighter policy. Inflation will be both higher in the near term from faster pass-through, and higher further out from faster growth, all of which risks embedding stronger inflationary pressure throughout the forecast period, including via inflation expectations. And I recall that in our previous MPSs, our last few MPSs, well-anchored inflation expectations were one of the self-identified risks to the limits to our tolerance. Now I'm not suggesting, as I said earlier, that we're seeing any evidence of them not being well-anchored, in fact they look pretty well-anchored to me, given where the data's been coming out, but I think it's important to tie it back in if we could.

So that, with those quadrants, that if you assign an equal probability to each of those, the balance of risk likely suggests, at the margin, the need for a bias towards slightly tighter policy in expectation, relative to before, and then, once you layer in labour supply and wage growth, despite a sound but big call on supply that we have made – the hard data will obviously trump this estimate, so to speak. But, if we have strong demand, if wages hold up and we have faster pass-through, on balance the risks to the path of inflation likely have shifted upward in my view. And, on the margin, this feels about right, to me at least, relative to November and December. So the important caveat to all this: it has shifted up, one can do that, at least I can do that from my perspective, shifted up but by how much? And I think, as Minouche noted at the start, it has shifted up 14 basis points since we locked the conditioning assumption, it was 17 basis points at the start of the day on Friday, it will be something different over the next few days. We'll get the usual drift in the run-up. So I think we do have to be very careful about the perils of fine-tuning here. We could really have things run away with us in either direction, which is part of the reason, I think, Jan started the day by noting how challenging things were.

I would suggest that our communciations strategy could slightly refine what we have been saying previously. We've been discussing the key influences on demand, supply and the exchange rate since May that would be crucial in determining the appropriate path for monetary policy post-referendum. I'd suggest that we would emphasise that policy remains ready to respond to developments as they unfold. That we are carefully monitoring the prospects for the expected slowing in real consumption spending. Secondly, we are monitoring whether wage growth remains relatively subdued, consistent with our updated judgements on the degree of slack in the labour market. And, thirdly, how quickly the lower exchange rate affects traded goods prices and ultimately consumer prices, and any evidence of second-round effects on inflation expectations.

Last thing I'll say is that, having taken contingency actions to reduce the biggest near-term risks, and monetary and macroprudential measures to support the economy during a period of uncertainty and adjustment, from here on we'll be able to respond to developments as they unfold, in order to ensure a sustainable return of inflation to the 2% target. And the last, last thing I'll say, there's always that, is: I am persuaded a bit, not that I feel like I'm on the… to be clear, I'm minded to vote for no change to policy. I see a shift but I don't see a big shift vis-à-vis November, if our forecast is right. So I see the risks around the forecast starting to be more clear and the potential direction they go. I do think that when the first shots are fired in anger, not that I expect a big market adjustment but some of the concept of the separation becoming a reality, or possibly I would like to see how businesses and consumers respond to the reality of the disengagement from Europe, particularly since it's more likely than not that there will be more heat than light in the early stages of these negotiations, but we'll discuss through.

So by my reckoning, and these are only indicative views, is that the expressed intentions are nine votes in favour and no votes against maintaining the current stance of policy. A number of people have made comments about what they'd like to see in the minutes, which keeps the drama of the minutes meeting going, which is good and healthy. I will note that we should, consistent with those indications if they are confirmed, that we should have, it would follow, that we'd have language in the minutes on the reinvestment of some cash flows in the APF to the effect of "consistent with the Committee's decision to maintain the total stock of UK Government bond purchases at £435 billion, and as described in a market notice accompanying these minutes the Committee agreed to reinvest the £11.6 billion of cash flows associated with the redemption of the January 2017 gilt held by the Asset Purchase Facility".

OK, good, very good. So why don't we close the meeting now and we are due to meet this afternoon to go through the chapters, are we not?

A meeting of the Monetary Policy Committee was held on Wednesday 1 February 2017. The following members of the Committee were present:

Mark Carney, Governor
Ben Broadbent, Deputy Governor, Monetary Policy
Jon Cunliffe, Deputy Governor, Financial Stability
Nemat Shafik, Deputy Governor, Markets and Banking
Kristin Forbes, External Member
Andrew Haldane, Chief Economist
Ian McCafferty, External Member
Michael Saunders, External Member
Gertjan Vlieghe, External Member

Dave Ramsden was present as the Treasury representative

The following members of staff were present:

Gareth Ramsay, Director, Monetary Analysis
James Bell, MPC Secretariat
Simon Hayes, MPC Secretariat
Bob Hills, MPC Secretariat
Melissa Davey, Editor of *Inflation Report*

Transcript of the Monetary Policy Committee Meeting on

Wednesday 1 February 2017

Governor Carney. Good afternoon. Welcome to this Decision Meeting. We'll start off with Minouche, if you could give us a quick market update, and Andy on data, please.

> **Nemat Shafik.** As I outlined on Monday, UK short and long rates have risen since Pre-MPC, bringing the three-year forward rate around 12 basis points higher than that used in the forecast. That continues the recent trend which, market intelligence suggests, may have been driven by greater clarity around Brexit and recent stronger inflation data. That's led to growing expectations that the MPC will reiterate or slightly strengthen its stance on the limits to its tolerance for an overshoot, which may have come into sharper focus as the *Inflation Report* approaches. This rise in short rates may also have been supported by the broadly similar moves internationally over the same period. As I said on Monday, sterling also benefitted from market perceptions that the process for Brexit is a little clearer and Government strategy more credible. It's given up some of its gains in recent days but the ERI remains about 1% above the level incorporated into the forecast. Recent days have also had a risk-off tone, as the consensus 'Trump trades' have begun to be reassessed and are now being referred to as the 'Trump fade'. Consistent with this, risky assets are a little weaker since Pre-MPC.

Governor Carney. OK. Thank you, Minouche. Andy?

> **Andrew Haldane.** Data-wise, starting with the UK, we had manufacturing PMIs for January. They were up for the third consecutive month and a bit above our expectation too, well above their average, the highest level now since May 2014. Now, interestingly, within that, export orders were weaker, which was puzzling. We had Lloyds Business Barometer, also for January. That fell, and is now below its historic average. We had the GfK Consumer Confidence measure for January. That fell ever so slightly, though it still remains above its historical average. And, finally, domestically, we had Nationwide house price data for January, up 0.2 percentage points – that's 2.6% three-month annualised. That's well below, actually, what the other house price indices are signalling. The wedge that existed with the Rightmove and Halifax has, if anything, got a bit wider on the latest data.
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> And then, internationally, this morning we had Q4 GDP for the euro area. That came in 0.5%, which is in line with our own internal expectations. Inflation at 1.8% in January was a touch above our in-house expectations. Thank you.

Governor Carney. Thank you. No questions? Good. So put forward three propositions for voting. The first that Bank Rate be maintained at 25 basis points. The second that we continue with the programme of sterling non-financial investment grade corporate bond purchases totalling up to £10 billion, financed by the issuance of central bank reserves. And, thirdly, that the Bank completes the purchases of UK Government bonds financed by the issuance of central bank reserves and completing that programme, which should happen in the relatively near future, would bring the total to £435 billion in the APF.

So with that, those three propositions on the table, I'll go through the same order as we did last time and start with Ben.

> **Ben Broadbent.** I confirm my vote for all three propositions.

Governor Carney. Jan, please?

> **Gertjan Vlieghe.** I vote for all three propositions.

Governor Carney. Jon?

Jon Cunliffe. I vote for all three propositions.

Governor Carney. Ian?

Ian McCafferty. I vote in favour of all three propositions.

Governor Carney. Kristin?

Kristin Forbes. I vote for all three propositions.

Governor Carney. Michael?

Michael Saunders. I vote for all three propositions.

Governor Carney. Whoops. I said I'd try to go in the right order, I've missed it. It should have been Andy before you, but I'll take your vote, but Andy, I apologise.

Andrew Haldane. I vote for all three propositions.

Governor Carney. OK. Minouche?

Nemat Shafik. I vote for all three propositions.

Governor Carney. Thank you. And I also vote for all three propositions, so, by my reckoning, that is nine-nil for all three propositions. And then finally, just on behalf of the Committee, we said some of this last time – Kristin more eloquently than I will – and I said some of this last night. But, on behalf of all of us, and by extension colleagues at the Bank and the people of the United Kingdom, thank you for your contributions, Minouche, as a member of this Committee, and for establishing the role of Deputy Governor, Markets and Banking. Many, many contributions at this Committee, but more broadly at the Bank, including – close to our hearts on this Committee – new facilities for both liquidity and monetary policy facilities, financial risk management framework, the Fair and Effective Markets Review, the RTGS Review, contributions at the G20 internationally, and really demonstrating the best of this institution. So thank you on behalf of all of us. And your reward, yes [clapping]. It's a round of applause that will be recorded for posterity, and then you can have a Ginger Nut on the way downstairs and we can go through the minutes. So with that we can close the meeting. Thanks.