BANK OF ENGLAND

MEETINGS OF THE MONETARY POLICY COMMITTEE
May 2016

A meeting of the Monetary Policy Committee was held on Friday 6 May 2016. 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
Andrew Haldane, Chief Economist
Martin Weale, External Member
Ian McCafferty, External Member[1]
Kristin Forbes, External Member
Gertjan Vlieghe, External Member

Dave Ramsden was present as the Treasury representative

The following members of staff were present:

James Bell, MPC Secretariat
Melissa Davey, Editor of Inflation Report
Gareth Ramsay, Director, Monetary Analysis
Fergal Shortall, MPC Secretariat
James Talbot, MPC Secretariat

[1] Ian McCafferty was unexpectedly and unavoidably, unable to attend on 6 and 11 May. He communicated his vote to the Governor, and the Committee, in accordance with the provisions of paragraph 12 of Schedule 3 to the Bank of England Act 1998, agreed that he should be treated as present at the meeting for the purposes of sub-paragraph (4) of paragraph 11.

Transcript of the Monetary Policy Committee Meeting on

Friday 6 May 2016

Governor Carney. Okay, good morning everyone. Let me start by just noting, actually, that Ian McCafferty is not attending today due to illness, he relatedly was unable to finish a written draft of his remarks, so the plan is that he will make his intervention at the Decision meeting on Wednesday and I'll indicate where he comes in the order. So with that, first I'll turn to you Andy for some PMIs and other data.

> **Andrew Haldane.** Thank you Governor. So starting internationally where, as you say, there has been a number of PMIs come out since last we met. Including for the euro area in April, both for manufacturing and for services they were down ever so slightly. In the US, on the services side, where both the ISM and the Markit indices were stronger in April. In Japan, where the PMIs for both services and manufacturing were both down, and in China, where both of the PMIs were also ever so slightly down. Here in the UK we had the PMI composites at pre-MPC and we now have the full breakdown across construction, manufacturing and services. That shows a broadly based decline across all three sectors. The only other UK data we have had is Halifax house prices for April, which showed three-month on three-month annualised house price inflation of just over 6%. That's broadly in line with the forecast we are about to publish. And then finally, this morning we had new car registrations for April. They were down 1.2% on the month, so that leaves the three-month on three-month now broadly flat. That's quite a coming off of the pretty healthy rates of growth we'd seen last year. That is all I think Governor. Thank you.

Governor Carney. Okay, thank you very much Andy. Any questions on any of that? Alright, so let's move to indicative decisions for May and I'll start with Ben please.

> **Ben Broadbent.** Thank you Governor. Earlier, we had a useful discussion about the recent recovery in financial markets: was it a response to better news about the global economy or to loosening moves in one form or another by central banks? I think we decided that it was mostly the latter. But, as I'll explain shortly, I think there have also been a few more reassuring signs in global activity data, at least compared with the start of the year. In fact, the two countries where activity appears to have weakened most sharply are Japan and, albeit from relatively high levels last year, the United Kingdom.
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> Now whether that's due to the forthcoming EU referendum or something else is – as we thought it would be – unclear. My view on policy therefore hasn't shifted much. But it has shifted a bit, certainly by enough to make me feel comfortable with the revisions we've made to the forecast. And we were right, at the very least, to lower our projections for near-term growth in the May Inflation Report.
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> So as I say, recent data on global activity, while they have been mixed, have on average in my view been better than at the start of the year.
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> In the United States, GDP barely grew at all in the first quarter. But recent industrial surveys look better than through the autumn and winter: the ISM and Empire indices rose in April, the Philly Fed index fell back but it remains above the readings in early 2016. After two falls the latest release shows a rise in capital goods orders and, as we've just heard, the non-manufacturing PMI improved in April as well. So after slipping to around 1%, nowcasts for underlying GDP growth in the US point to a figure of around 2%, at an annualised rate, which is also our forecast for the second quarter.
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> US GDP growth of 2% could hardly be described as strong, in an historical context. But it's faster than recent rates of productivity growth and likely to be enough to sustain reasonable rises in employment and the firmer rates of core inflation we've recently been seeing.
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> As we discussed, some of the turn in sentiment globally may be related to the turn in some commodity prices and the attenuation in tail risks, for commodity producers, that represents. In emerging markets capital inflows have resumed. Near-term economic indicators are generally a little more positive, sufficient for example for us to project slightly faster second-quarter growth in China and other emerging Asian economies.

Finally, the euro area saw a bounce in GDP growth in the first quarter, to 0.6%, and continued declines in unemployment. The unemployment rate is now at a near-five-year low. The European Commission consumer and business confidence indices both ticked up in April. And the PMI surveys, which do suggest a somewhat slower rate of underlying GDP growth than 0.6% a quarter - something more like the 0.4% we're projecting for Q2 - have at least been broadly stable.

This is not to say there aren't still significant global risks. The slight upturn in growth in China seems to involve a renewed and very sharp rise in debt ratios. The risk this poses to financial stability, somewhere down the line, means we have retained the downside skew to our global forecasts. In the euro area, despite falling unemployment, core inflation fell back to 0.7% in April, from 1% in March, headline inflation is still at zero and unlikely to rise much this year. As Jan pointed out, long-term inflation expectations - as measured by the five-year, five-year breakeven rate - are below 1½%. 1½% was the low point in September 2014 when the ECB first voiced its concern about the series.

Nor is any of this to deny that central bank easing, in one form or another, played an important part in stabilising sentiment. My only point is that, for what it's worth, I don't think it was the only factor behind the recovery in asset prices from the lows of January and early February. Real activity indicators provided some assistance as well.

We, of course, are setting monetary policy for the United Kingdom, not the world. And if global indicators have firmed a little of late, the opposite is true in this country. The composite PMI output index fell to 51.9 in April, that's the lowest for over three years. The index is more than a point below that of the euro area –the widest gap, in that direction, for five years. And while the CBI manufacturing survey bucked the general trend, other surveys – including for example that from the British Chambers of Commerce – show a similar weakening. Though some things are strong – indicators of housebuilding show pretty strong growth, starts were up strongly again in the fourth quarter - the latest monthly numbers show falls in manufacturing output, retail sales and car registrations. Thanks largely to tax changes, and the shift in timing they've encouraged, housing transactions are likely to have fallen sharply in Q2.

Our February forecasts predicted that, after somewhat slower rates in 2015, UK GDP growth would stabilise through the course of this year. That's not what's happened and, to me, the 0.3% figure we have for the second quarter doesn't look unduly pessimistic.

We've discussed in the past quite how correlated is UK activity with that elsewhere in the world amongst its trading partners. That doesn't mean they move in lock step obviously – the strength of the economy here in 2013 and early 2014 contrasted sharply with the stagnation of the euro area. But the continuing slide in UK indicators through the course of 2016, against the slight improvement globally, might suggest that UK-specific factors have had something to do with that.

One obvious candidate is the forthcoming referendum on EU membership. We've picked up strong signals of such an effect only in some areas: the commercial property market and obviously the foreign exchange market. We've also said that investment spending specifically is likely to be affected. But interpreting term investment spending broadly, as something whose benefits emerge only over time, or that involves some degree of pre-commitment, it's quite possible that demand for many business services are also being affected. Financial deals, consultancy contracts, IT projects, even some routine hiring of employees - these are all things that take time and that can easily be delayed.

Obviously we can't be sure it's just the referendum. Fiscal policy here is turning tighter at a time when it's either stable, or moving slightly in the other direction, in other countries; if more of the boost from low oil prices was spent by UK consumers than others, perhaps the fade from that is commensurately stronger; as far as the euro area is concerned, the recovery there is coming just a little bit later than it did here. There might be any number of idiosyncratic factors, identifiable or not, that explain why UK activity indicators are weakening while others aren't. It's just that the referendum is probably the most plausible single candidate.

And one fears that, if this is just the result of the risk of leaving the EU - and I do think it is that, not simply the uncertainty involved in the decision: it's a "first-moment" phenomenon, not a "second-moment" phenomenon - then the result of actually leaving would be that much more dramatic. We

had a discussion about this on Wednesday, following a very useful note from economists in MA. Their simulations weren't pretty, involving significant hits to demand, to supply and to the exchange rate. Nor, in my view, were they over-dramatic. One could quite easily imagine larger hits in all of those three cases. And it is conceivable, not to say likely that, were we to leave, we would be facing a period of much weaker activity but above-target inflation. And even if we chose - and were able - to look through this, we would also be in a position we'd be extremely uncertain about the economy's underlying trend rate of growth over that period.

Quite what our response would be, it's hard to say. I'm certainly not inclined, at this stage, to offer some sort of put on the economy, or to suggest in any form where interest rates might go.

Given the difficulties interpreting the numbers, that also applies to the softer indicators we're getting right now. And I'm therefore inclined to vote for no change in either Bank Rate or the stock of purchased assets.

Governor Carney. Thank you, Ben. So I have Andy and then Minouche please.

Andrew Haldane. Thank you Governor. With one honourable exception, to which I will return, I am feeling slightly better about the world.

After its crash diet earlier in the year, risk appetite in financial markets has continued to return and the shift from risky into safe assets seen earlier in the year has continued to reverse. Up until recently, that reversal in risk sentiment was more clearly evident in risky asset prices, which had bounced, than in safe rates, which had remained at their lower levels. That led us to suspect central bank monetary accommodation had played an important role in restoring risk appetite.

Over the course of the past few weeks, we have seen though some upwards adjustments in safe rates too, although that has been reversed a bit over the past few days. From their low point in early April, UK three-year OIS rates have risen by 15 basis points, and by somewhat smaller amounts in the US and euro-area too. That still leaves the yield curve remarkably flat – UK OIS rates still scarcely reach 2% – but somewhat less implausible than a month ago. Perceptions of a fall in referendum risk can plausibly account for the larger adjustment in the UK yield curve than elsewhere. And that is consistent, too, with the 2% appreciation of sterling from its low point. But this shift up in yield curves seems in significant measure to have been a global phenomenon and, unlike moves earlier in the year, largely unrelated to central bank actions. As Minouche discussed earlier in the week, I think this can plausibly be put down to financial markets feeling ever so slightly better about global macro fundamentals.

I think, as Ben mentioned, there are some plausible reasons for doing so. The macro news in the US has been neutral-ish. But in the euro area and non-China EMEs, it surprised a little to the upside. In China, at least relative to some of the gloomier forecasts earlier in the year, the near-term outlook is much improved. It is the last of those factors, China, that I think has been a key motor for risk sentiment globally over the past 12 to 18 months. Last year, the Orient Express began visibly slowing, pulling down with it commodity prices and the fortunes of a number of other commodity-dependent EMEs. A rising dollar and US rates added a further brake to the train, The elasticity of global risk sentiment and global growth to China is much higher than in the past, so they too were held back by this slowing train.

That train now appears to have regained some macro-economic momentum, largely courtesy of the extra policy fuel, both monetary and fiscal, provided to it last year and this. In a reversal of last year's downward spiral, that's then supported commodity prices and, in turn, non-China EMEs, who have seen a striking reflow of capital, with portfolio inflows totalling over 60 billion [US dollars][2] over the past two months, after a lengthy stretch of outflows. Adding further momentum, the Fed has done the world a favour by lowering its prospective path of rates and thereby lowering the dollar. I think this re-acceleration of China could have some way to run, with positive implications for commodity prices, non-China EMEs, and global growth and risk sentiment.

[2] MPC Secretariat clarification.

Of course, there's still a big question about whether, or when, this train could run into the buffers. Even if the near-term flows are positive, debt stocks still look ominously large, not just in China but in other EMEs too. On staff's estimates, the Chinese private debt-to-GDP ratio could reach 280% by 2020. In other words, at some point that credit tailwind could become a debt headwind. But for now the Chinese tailwind seems to be providing a degree of go-forward to global demand and risk sentiment, one which our forecast might if anything have slightly under-estimated.

Turning to the UK, the GDP profile we are about to publish – steady growth, fuelled by domestic demand after a near-term dip – looks reasonable to me. It does however beg the question about whether it is realistic to expect quarterly growth rates to start picking up again into the second half of this year. Quarterly growth has been drifting down, steadily but consistently, for three years now. And the Q1 GDP data reinforced that impression. We expect that slowdown to continue into Q2, a picture reinforced by the recent PMIs, which have tracked quarterly growth pretty accurately over the past three years.

What then explains the pickup in quarterly growth in the forecast is our still fairly punchy consumption and investment profiles, as they bounce back from their referendum-related doldrums. The latter is associated with a further fall in the household saving ratio into territory which, depending on how you measure it, has either never previously been seen or was only seen at the dawn of the financial crisis. We have of course already made some upwards adjustment to household savings over the forecast, given concerns about national savings. Nonetheless, even with these adjustments, our forecast for national savings is low by historical standards, underlining the potential for some asymmetric downside risk to domestic demand. There are also, I think, downside risks to our inflation projections, where the degree of inertia in wages and prices could be greater than our models estimate. I think an undershoot of our inflation target at the two year horizon is probably slightly more likely than the slight overshoot we are about to publish.

Now, I have managed to use 1,000 words without any of them being "Brexit". In the current climate, that by itself is worthy of an EU rebate. Let me confine myself to just two Brexit-related points.

First, and tempting fate a little, perhaps a lot, if anything I have been struck so far by how little of a specifically referendum-related effect we've seen on activity so far. Perhaps, like the general election and Scottish referendum before it, there is some risk of us over-estimating its macro impact. Or perhaps it is simply a question of timing, with the weakness in the latest PMIs a sign of things to come.

Second, I thought the staff analysis of the channels of transmission in the event of Brexit was excellent as a framework for us thinking through the monetary policy consequences of a Leave vote. It's clear that even the direction of any monetary policy decision will hinge crucially on how much of a shock to confidence and credibility Brexit entails – confidence in the government, in the public finances, in sterling assets and indeed in our own monetary policy.

All of these are not just unknown, but unknowable. The best we can probably do, monetary policy-wise, is to signal our willingness, ability and readiness to move off either foot with interest rates, depending on how the confidence deck is dealt. Making clear there is two-way risk in interest rates may itself have some virtue, not least in engendering a sense of two-way risk into the exchange rate at a time when it otherwise might be seen as a one-way bet. Ultimately, though, it is a question of wait and see.

And that's my verdict on monetary policy too this month as I am minded to leave unchanged both Bank Rate and the stock of purchased assets. Thank you.

Governor Carney. Thank you, Andy. So Minouche and then Martin please.

Nemat Shafik. Well with less than seven weeks to go to the referendum, it seems as if we are very much in the Fog of War, and that everything we discuss is clouded by consideration of whether the outcome will be a vote for "Brexit" or for "Bremain". In my statement today I will try to peer through the mist, and assess recent developments in the global and domestic economy, before considering what the world might look like when the fog clears.

Let me start with recent developments. Since we met a month ago, concern about the outlook has receded a little. The key question for us is whether this represents a genuine reduction in the risks we face, or whether it just represents a brief respite from the policy challenges we have discussed over recent quarters. I'm afraid I'll conclude that they are only brief respite, which one could abbreviate to "Brespite", but I won't go there.

Let me start with China. annual growth in the first quarter was 6.7%, in line with their recently confirmed intention to double the level of GDP by 2020 [by comparison with its level in 2010][3]. But the authorities have also implicitly confirmed their reliance on credit to fuel this growth, with Total Social Financing growing by 14% over the past year, and property prices in Shanghai rising by almost 50% over the same period. So while it is ostensibly good news that growth in China is picking up, the way that growth is being achieved likely intensifies the long-term risk to the world economy of a disorderly unwind of imbalances there.

And in other Emerging Markets, some improvement in real-time indicators has underpinned another strong month of capital inflows, with asset prices and currencies rallying commensurately. But digging a little deeper there is little to suggest a sustainable change in fundamentals.

In developed economies, the biggest data news was probably the upside surprise in euro-area GDP. That is undoubtedly a positive development, but given our nowcast is for growth to dip back in Q2, it doesn't by itself represent the kind of significant change that would be needed to restore inflation or inflation expectations there. The story in the US is almost a mirror image: although inflation there has shown promising signs of life, the outlook for growth in the medium term is being increasingly called into question in light of continued slowing in activity against a backdrop of markedly weaker productivity growth.

So turning to the UK, the good news came in the form of the largest upside surprise in headline inflation since June 2014. But as dramatic as that sounds, nobody is getting too carried away because of the one-off effects of airfares. Headline and core inflation look set to fall back again to 0.3% and 1.2% respectively next month. And there has been no improvement in the underlying picture, with unit labour cost declining back to 1.1% in the latest quarter we have data for.

Finally, let me say a word about the referendum. The remain campaign seems to have recovered some momentum in recent weeks, helped by the Treasury's report on the effects of an exit, and president Obama's intervention on his recent visit to the UK. As a result sterling has appreciated on the month and sentiment in financial markets has become more positive although there's been a bit of a fall-back from that in the last couple of days. However, we can't count on the Obama effect lasting all the way until June 23rd, and we will surely witness many more twists and turns before the result is known.

So pulling all of this together, what does this mean for the period beyond the referendum? Although there has been some improvement in sentiment of late, I'm afraid it probably isn't representative of a dramatic change in fundamentals. So even if we emerge from the fog of war unscathed, what awaits us may not be a pretty sight.

At a global level, businesses seem reluctant to invest despite credit being readily available and interest rates low. And rather than productivity in the UK catching up with the rest of the world, the scourge of weak productivity seems to be becoming a global problem. As a result, our hope that the equilibrium real rate would rise once the recession began to fade into the background is proving too optimistic.

[3] MPC Secretariat clarification.

On the domestic front we are still faced with weak inflationary pressure. While it should still be our central case that a period of unemployment below its equilibrium rate will ultimately feed through to higher inflation, the longer that wage growth remains stubbornly in the region of 2% the more we will need to confront the problematic dynamics that weak nominal growth brings us. To that extent I thought Dave's report on weak PAYE and VAT receipts was a worrying development.

And all of this comes as monetary policy is at its frontier. Were a further shock to mean that more monetary stimulus were required, it would bring us into new territory – in the form of a new record low for interest rates, an even larger balance sheet, or venturing into more risky assets. I do believe that all of these can work, but the experience of other central banks has shown that they are not without consequential complications.

So that all sounds rather gloomy – and perhaps it's because fog tends to make you gloomy, or because my outlook has been coloured by too much time contingency planning for tail risk outcomes. But either way it may be a post referendum reduction in uncertainty provides just the kind of jolt to the economy that is needed to support it. But in the meantime it won't surprise you that I plan to vote for no change in Bank Rate and no change in the stock of purchased assets.

Governor Carney. Okay, thank you Minouche. So I have Martin and then after Martin I would have Ian, so I will have Ian on Wednesday but Kristin today following Martin. So Martin please.

Martin Weale. Thank you, Governor. To pick up on Kristin's last speech, Lady Eden famously remarked that it seemed that the Suez Canal was flowing through her drawing room. If Brexit can flow, it has certainly been flowing through the Bank of England in the last few weeks. But before I turn to this and its implications, I would like to make some more general comments.

The price of oil has been firm, with oil up by about fifty per cent since our February report, and a very visible increase in petrol prices. I see the firming oil price as a consequence of improving sentiment after the concerns of the winter. China may be an important influence on this but perhaps it's also influenced by the decline in US oil output as well as declines in other produces even though the latter are largely independent of economic influences. Higher oil prices may have reduced fears of losses on loans to oil producers. To that extent and perhaps for other reasons they may be a source as well as a consequence of improved sentiment.

Share prices have been weak in the last few days, perhaps as a response to perceived weakening output growth, but they remain substantially above the lows of February. We've certainly had better news from the euro area. Although this was a surprise to us, I am not sure that it was a complete surprise, and indeed it may account for some of the market recovery. The models that Eurostat maintains were indeed predicting numbers firmer than our forecasts. That said, staff pointed out that the Eurostat flash estimates are produced only from two months' data and so would be subject to downward revision if March had been particularly weak. But the March PMI was 53.1 compared with an average of 53.3 for January and February, so I don't see any pointer to a marked downward revision in the Q1 estimate. The April PMI figure was marginally down on March but other indicators turned up.

Growth of 0.1% in Q1 in the United States is disappointing even given their productivity prospects. The household savings rate has been at or over five per cent since 2015 Q1. This may be an indication that expectations of future growth have fallen back. It has not however risen materially since 2015 Q4, so the reality of an interest rate increase may not likely to be a substantial factor. Our forecast nevertheless relies on the growth rate of consumption being markedly higher than the 0.5% Q1 figure in the rest of the year. Fixed investment was weak probably as a consequence of reduced investment in oil extraction and it's not clear how much further this has to run. But as Ben noted, output growth indicators for Q2 point to some improvement.

A more general issue has been the weakness of investment internationally, at least given the evidence on average rates of return relative to the cost of capital. Variable remuneration certainly drives a wedge between the required return on capital and the return earned by equity investors, and, as a result, leads to capital starvation. Financial firms showed this very clearly in the period before the crisis, but I'm not sure that it is material elsewhere.

I think a better explanation is simply that businesses require high expected returns - i.e. risk premia continue to be elevated. The staff note showed gross returns but I think returns after deducting depreciation are also high in most countries. What about intangibles? The productivity figures must limit the extent to which we can entertain the idea of high net investment in 'dark capital'. In particular I remember a workshop on the topic of intangibles some years ago where we were told that, rather than productivity falling after the crisis, intangible investment had risen. My scepticism of that argument has increased rather than declined over time. Anyway it was reassuring that the 'light matter' investment ratio in our forecast is not particularly high.

The early output indicators have been weak, but the staff nowcast remains at 0.4%, compared to the 0.3% we have assumed. Overall I am comfortable with our forecast, and particularly the re-evaluation of the effects of fiscal tightening. I have further doubts about the shape of our [GDP][4] fan charts, having looked at past forecast errors; the experience of the last fifteen years points to a downside skew which I think would be larger than we have tended to assume, even if the effects of 2008/9 are largely suppressed. That downside skew would in turn widen the difference between the mode and the mean of the forecast, raising difficult questions about how far we do actually produce a modal forecast. Past errors, however, also suggest an upside skew to inflation and, to my mind, that may represent a degree of resistance by firms in some sectors to cutting their prices - a fuzzy zero lower bound to inflation, if you like.

In the event of a vote for Brexit, I would expect there to be some loss in export demand as a result of preference shifts in our traditional trading partners. This can be seen as a non-tariff barrier, and it is likely to require a lower real exchange rate on top, I think, of the effects described in the staff note. But all of this is speculation. While financial markets will be the first indicators to respond, their early movements may be poor pointers to the eventual impact. Nevertheless the Committee may need to address the question of how to respond to a lower exchange rate.

The experience of the last sharp fall in the exchange rate does of course demonstrate that credibility is not automatically lost as a result of a long period with inflation above target. Equally it cannot offer a guarantee that credibility will not be lost in the future. The reality, I think, is that not much can be learned from a single observation.

Last time round our forecasts failed to anticipate the sustained nature of the inflationary forces, and had we done so I think it would have been difficult to look through the period of high inflation. The remit certainly offers greater flexibility now. The target applies at all times. It is, however, recognised that we may wish to allow inflation to deviate from target temporarily. I would have trouble describing the long period of above-target inflation which we experienced as temporary: it was prolonged. A part of the difficulty with raising interest rates as a reaction to forecast higher inflation is perhaps a belief that some people will see the first change in many years as a bigger deal than they will normally see a ¼ point change. That said I do not see immediate evidence of this from the United States. Nevertheless, if I add to such a concern a modest aversion to reversals, or fine-tuning as I might call it, then perhaps a case for looking through the inflationary consequences can be built.

One point I would make is that we may well face this situation without Brexit. For example the vote may lead to a period of political instability. My subjective probability that the exchange rate does not recover is certainly higher than implied by the confidence bands surrounding the staff analysis. The most fundamental law of statistics is, after all, that regressions, like that underlying our best estimate, always go wrong in the end. If the exchange rate stays where it is or falls further, our forecast certainly implies inflation materially above target at two to three years.

With the forecast as it is and, in particular, with our interpretation of the move in the exchange rate since November, however, I expect to vote for no change to asset purchases and no change to Bank Rate when we meet next week.

Governor Carney. Very good. Thank you Martin. So Kristin and then Jan, please.

[4] MPC Secretariat clarification.

Kristin Forbes. Minouche, I started to write my comments this month about the fog of uncertainty, but then figured I'd wait until next month when the fog would be thicker. So it may come back. You are braver than me. So, anyway. this month instead, I couldn't help but reflect on the similarities between the long path to "lift-off" since I began on the MPC and my recent 26.2 mile run through London. Actually, it was 26.7 miles according to my Garmin – apparently my path wasn't terribly efficient – another similarity with the UK economy. Today I'll cover four phases of both of these events. First – the strong start. Second – some slowing due to factors that were a surprise. Third, more slowing due to factors that were less of a surprise – where the UK is today. Finally – that last stretch to the finish line. Will the UK economy keep running with enough energy to begin "lifting off" rates from 0.5%?

Phase one: the marathon starts and all but the most experienced go out at an unsustainable rate. This was the UK when my MPC term started in July 2014. The August 2014 Inflation Report predicted that GDP growth would be 3.5% in 2014. Business investment picked up to 7.6% in 2014 Q2. The output gap was closing quickly and there was a good chance of "lift-off" by end-2014 or early-2015. Just as most runners don't expect to maintain their initial pace during an entire marathon, we didn't expect economic growth to continue at this pace as some of it reflected pent-up demand being released and normalisation after the crisis.

Then, the second stage: some slowing due to surprises. In my run, it was the unexpected crowding – forcing you to dodge other runners, sudden road barricades, and discarded bottles that occasionally sprayed cold water as an unwary runner tromped on them. In the UK economy, surprises slowed the recovery in prices, coming in the form of slow wage growth and then a series of sharp falls in energy and food prices. The international environment also had its share of surprises - from Greece's negotiations in the summer of 2015 to growing concerns about major emerging markets.

Next, the third stage: additional slowing – but this was more than expected in both cases. In the London marathon, this is the lonely stretch through the Docklands from about miles 13 to 20 when the initial adrenalin fades and your pace gradually slows, but you can still keep moving forward, hopefully. This is where the UK is today. GDP growth has continued to gradually slow from the unsustainable and above-trend growth in 2014.

This is the point, however, where an understanding of the factors behind the slowing is crucial. Is this as expected given the fiscal consolidation and weak global growth? How important are recent drags from uncertainty related to the global environment and EU referendum? Or is there additional weakness in fundamentals that is being masked? Is this a blister that can be safely ignored? Will there be a burst of energy when you see Big Ben and have more certainty on the distance left? Or is this a sign of an impending cramp that might cause you to stop running?

Since this evaluation is critical for monetary policy, let me discuss two possibilities.

Scenario 1: we're under-estimating the impact of uncertainty from the global environment and Brexit in the current slowing. Our shift to modelling uncertainty more formally in our forecast is welcome, although I look forward to carefully analysing different methodologies, as the simulations based on different identification techniques suggest the details do really matter. Whichever framework we settle on, however, the recent stabilisation in China's outlook, for now, emerging markets, and commodity prices should support the UK economy. The IMF's analysis highlighting the increased role of spillovers from EMs suggests the positive impact will likely be more than just a reduction in downside risk and greater than we can capture through measurable channels. Under this scenario, there is more underlying strength in the UK outlook than in our forecast. Since the reduction in global uncertainty has recently been replaced by referendum uncertainty, however, we will not know until well after a Remain vote.

Scenario 2: we're over-estimating uncertainty and its impact, and there is more fundamental slowing. The UK Economic Surprise Index is striking for its minimal movement since January – especially given changes in the global environment and referendum risk. The UK index was on average only 0.05 standard deviations since the start of the year. In contrast, the US surprise index shifted from -0.2 to +0.2 standard deviations and the euro-area index recently reached -0.4 standard deviations. There have been surprisingly few meaningful surprises in UK economic data since the

start of the year. There's thus a risk that we're over-estimating the impact of uncertainty and attributing too little of the recent weakness to more fundamental and persistent forces.

Although I can't rule out this second scenario – that the recent slowing reflects persistent UK weakness – I find this less compelling. If anything, the lack of more downside news in key variables is noteworthy given the dislocation that would occur after a Leave vote. For example, focusing on consumers, the key driver of growth, although the GfK/EC measure of consumer confidence fell to -1.7 in April, it is still above its historic average. Consumer spending continues to be robust, with no evidence that individuals are saving more due to concerns about the future.

My biggest concern about the longer-term outlook – assuming a Remain vote – continues to be productivity growth, and thereby potential. Unfortunately, heightened uncertainty is likely reducing incentives to invest, hire and restructure, thereby continuing stagnant productivity for several quarters. So we will continue to debate whether this reflects another temporary setback or evidence of a slower trend.

So where does this leave us for the last leg of the course? For the last mile of the marathon I got a burst of energy. If there is a Remain vote – and no further deterioration in the global outlook – I would not be surprised to see a similar burst of growth in the UK. Companies would be more comfortable committing to any investments or pay raises that have been on hold. This may not happen immediately, but we could quickly see enough evidence in surveys of business intentions and from our Agents that we should increase interest rates sooner than markets expect. The timing will depend critically on how sterling responds to the vote, however, and we all know that predicting exchange rates is a mug's game. This has been painfully apparent in our challenges estimating how much of the recent movement in sterling reflects referendum risk. Concerns about the large current account deficit could also weigh on sterling.

To summarise, we still don't know how this race will end. Therefore I plan to vote for no change in monetary policy this month. Assuming a Remain vote, the pieces appear to be in place for a healthy finish. But, for some runners, that late burst of energy never materialises. Similarly there may be more underlying weakness in the economy that drags out the last mile until lift-off. There could also be more surprises – especially winds from abroad – that affect timing in either direction. And of course, some runners never finish the marathon. If there is a Leave vote, the uncertainty and dislocation will be worse than a cramp that drives a runner to the medical tent. Wednesday's discussion was helpful in evaluating what would determine our appropriate response. Whatever the ending, the course of monetary policy to that first rate rise has turned out to be more of an Iron Man than a marathon.

Governor Carney. Great, thank you very much Kristin and congratulations on finishing the marathon and finishing strong and may we all do it as you were just suggesting. Okay, Jan and then Jon please.

Jan Vlieghe. Thank you. Another forecast, another downward revision. Each step seems small, but it adds up.

The key question for me, which I first raised in March, is how many more growth and inflation disappointments we tolerate before it becomes appropriate to ease monetary policy.

In the August 2015 forecast, we thought we would get 8% of cumulative GDP growth in the subsequent three years. Now we think we will only get 6.7% over that same period. That means a 1.3 percentage point downward revision to the GDP forecast. On the same basis, we have made a 1.2 percentage point downward revision to the inflation forecast. And these forecasts changes took place despite the large fall in the conditioning path for interest rates, to which I will return.

Each quarter, we expected that growth would soon stabilise, and pick up again, and inflation pressures would follow. But each time, growth has continued slowing.

Looking back even further, GDP shows a fairly smooth deceleration from growth rates of more than 3% annualised down to 2% annualised, and our nowcast has dropped well below 2%. The composite PMI has followed a similar declining path, with no sign of any landing yet, and yet another fall in the most recent data published this week.

Over that period of slowing growth, the unemployment rate has gone from falling quickly, to falling slowly, to not falling anymore. So while we have also seen disappointing productivity growth over the period, we have nevertheless seen a marked slowing of demand growth relative to supply.

At the same time, we have been disappointed by the failure of inflation pressures, broadly defined, to pick up sufficiently. A wide range of indicators on wage inflation show a continued subdued picture. Core inflation has bottomed out a few months ago, but the upward momentum since then has been muted. Unit labour cost growth remains too low. My summary description of inflation pressures is that they used to be too low and falling, now they are too low and stable. That is still too low.

Since the August forecast, the yield curve that we condition our forecasts on has fallen by 100 basis points at the three-year horizon. It has gone from pricing in five rate hikes over the forecast horizon to just one.

The fall in the market path of interest rates started earlier than that, of course. It started nearly two years ago, around the time the oil price started falling in the late summer of 2014. The market path has dropped more than 200 basis points since then.

To use round numbers, and to avoid biasing my analysis by carefully choosing peaks and troughs, I looked at the historical two year change in the yield curve. A 200 basis point change is large, but not unprecedented. What is unprecedented, however, is to have such a large shift in the yield curve during a period when the monetary policy stance is not changing. Since Bank independence, we have never before seen a change in the yield curve of that magnitude over a period where there has been no monetary policy change.

In the face of these growth and inflation disappointments, the market has moved its pricing of the future policy rate by 200 basis points, but we have stayed put. We have let the market do all of our easing for us, but have not ourselves eased policy. We have not even discussed easing policy. There is a serious risk, in my view, that at some point this will be interpreted as a reluctance to ease or an inability to ease.

We have seen, just recently in the case of the ECB, and starting longer ago already in the case of Bank of Japan, how much damage can be done to inflation expectations when a central bank is viewed – rightly or wrongly – as being unable or unwilling to ease sufficiently when the outlook changes. A reluctance to ease ends up being interpreted as either a lack of commitment to the inflation target, or a lack of faith in the effectiveness of the remaining monetary policy tools. This poses a risk to inflation expectations not just today, but undermines the effectiveness of future actions as well.

We are not in that situation yet, with UK inflation expectations still reasonably well anchored. But we must guard against being seen to be unwilling or unable to ease in the face to so much economic disappointment.

One compelling justification, in my own mind, for not yet easing policy, is the referendum. As we discussed in our April meeting, the referendum throws up two challenges.

First, it makes it particularly difficult to interpret the data right now. How much of the economic slowing is due to a temporary referendum effect, and will therefore unwind after a Remain vote? How much of the fall in the currency will unwind?

Second, there is the risk that the vote is to Leave, which would change the economic outlook radically, and lead to a whole new set of monetary policy challenges. I already discussed monetary policy strategy in a Leave scenario at the April meeting. Today, I will focus on monetary policy strategy in a Remain scenario.

The referendum can lead to two types of mistakes. One is that the economy is actually already doing better, but the referendum is causing a short-term slowing that we risk over-reacting to. After a Leave vote, strong fundamentals will swiftly reveal themselves.

The other potential mistake is that the economy is continuing to lose momentum largely for reasons unrelated to the referendum, but we are wrongly ascribing the slowdown to the referendum.

That second mistake, in my view, is far more serious. It would mean that the economy already needs stimulus now, but we are mistakenly postponing it. A policy mistake in that direction, combined with less room for easing due to the effective lower bound and potentially less effective QE, could have large and persistent downward effects on inflation. Recent staff analysis on the more persistent response of inflation expectations to inflation news supports this argument.

The first mistake, of postponing rate hikes when really they should have been carried out now, is far less serious. We have ample room to hike a little more or a little faster. The baseline path of monetary policy is now so flat, that, even if we hike substantially faster than that, the path can still be more limited and gradual than the average past hiking cycles. Moreover, as we have said before, limited and gradual is a forecast, not a commitment. And for me, it is not an objective in itself either.

I therefore think that there should be a low bar for easing in a Remain scenario. Given how far we have already revised down our forecast, even a slight further deterioration in our inflation outlook should warrant an easing. The risk of unnecessarily postponing an easing should strictly be minimised.

With only one hike priced in for the next three years, there is little further easing that we can expect from the yield curve. More importantly, I do not want to rely any further on yield curve movements alone to deliver the required easing for us. It would make us look unable or unwilling to ease, which risks compounding the disinflationary effect of not easing, by creating doubt about our commitment to the inflation target or our belief in the effectiveness of our tools.

I am minded to vote for no change in Bank Rate or asset purchases, but set myself a low bar for easing after the referendum, with little tolerance for any further deterioration in the inflation outlook.

Governor Carney. Thank you very much Jan. Jon please.

Jon Cunliffe. Thank you very much. I normally leave weather-related metaphors to Kristin. I couldn't get through this without a couple of references, like Minouche, to fog. There's actually a long history of this in relation to Europe going back to that anecdotal Victorian headline "Fog in the Channel, Europe is cut off". So I said last month that, given that we are likely to see referendum effects in a number of economic and financial data, that there'd be a high hurdle to my considering policy adjustments on the basis of current data as they are unlikely to give us an accurate reading on prospects for the economy. With that in mind, I will run through some of the more noteworthy recent developments.

One area where the data are less affected, or not affected, by the referendum is the rest of the world. And overall, the international picture is probably a touch brighter this month.

In China, the big picture tension remains the same. The more solid near-term growth is welcome but it comes at the cost of increased tail risks. Total social financing, adjusted for local government debt swaps, is now growing at around 16% a year, and the flows in Q1 were the strongest on record.

More broadly, the EME picture looks brighter. Equities, bonds and currencies continued to rally over the month and as Andy said, EMEs received a second consecutive month of inflows above the 2010-2014 average.

The US picture, I think, can be read in different ways. On a more positive note, inflationary pressures in the US may be becoming entrenched. Core PCE inflation was 1.6% in March, up 0.3 from its trough in the middle of last year. But Q1 growth was very weak at 0.1%. And spending on durable goods shrank for the first time in nearly five years. Growth should recover in the rest of the year but there are downside risks here. And one story that would square these developments, as we've said, is weaker supply growth. All in all, I interpret the US news to be mildly negative.

And the picture in the euro zone was a little bit the mirror image. Growth in Q1 was stronger than we expected at 0.6%, albeit driven by monetary stimulus and lower oil prices, which might fade. Inflation, though, remains weak. HICP inflation was weaker than expected at -0.2% and core inflation came down to 0.7% in April from 1% in March. And there are I think some signs that inflation expectations have shifted down. The euro-area inflation expectations heat map that we were shown at Pre-MPC was strikingly blue. That said, I think the overall news in the euro area has

been net positive. And I don't think I've seen any evidence yet of UK referendum risk, of Brexit risk, affecting euro-area activity.

The domestic picture, however, is fogged by the referendum. The probability of a leave vote, as proxied by betting odds, has fallen. But nonetheless it's still material at 30%. And the polls have not really moved – which suggests that the outcome of the referendum remains very uncertain.

In general, news on domestic demand has been to the downside but it's again hard to disentangle the referendum effect. The Q1 growth of 0.4% confirmed an underlying softening in growth. Staff expect this to be revised to 0.5% over time, but it remains the weakest quarter since 2012. I do think some of the Q1 slowdown is likely to have been due to the referendum. As Andy pointed out, the slowing in professional and financial services between Q4 last year and Q1 could reflect some referendum effect which may have weighed on corporate activity.

The outlook for Q2 growth is weak. We have growth of 0.3% in the draft forecast. That partly reflects the judgement that we made on referendum-related uncertainty. It also reflects weak survey data, which itself is likely to have been affected by the referendum. The Markit/CIPS composite output index fell in April – now at its lowest level since March 2013. And this fall was driven by the services output index which remains below its historical average. For those that reported lower activity, uncertainty surrounding the referendum was reported as a contributing factor, as well as the general economic slowdown.

GfK/EC consumer confidence also fell in April to its lowest level since November 2014. It remains above its historical average – of course the historical average includes some major troughs and peaks. If you compare it to its pre-crisis levels it's now hovering around pre-crisis levels. The forward looking balance for the general economic situation dropped to the lowest level since June 2013 and is now below average. But the financial situation of households has held up more firmly.

Developments in property markets are also difficult to read at the moment. I ascribe most of the fall in CRE prices and activity to the referendum. And the referendum may also be clouding developments in the housing market. Staff have included a referendum-related uncertainty effect on housing transactions in Q2, lowering them by 5,000 a month.

But I think the more important factors clouding the housing market are the recent tax and regulatory change in relation to buy to let. The forestalling effect of the tax change looks to be the key factor behind the record monthly surge in housing transactions in March. And so transactions in Q2 are likely to be correspondingly weaker.

And finally on domestic demand, the one area that I expected to be particularly susceptible to referendum-related uncertainty was investment intentions. These have picked up on the month but the dispersion across the measures of intentions have widened. And that may be in part due to the small downward move in the uncertainty indicator over the month, but it's hard to say.

So overall it's clear that there is a fog bank around indicators of domestic demand which, in the main, have weakened. And that fog will lift in June. And I think it is quite likely then that some of the weakness that we see is not just referendum related but I'm prepared to wait and see. Referendum-related uncertainty may also be affecting the labour market, including companies' hiring decisions. And reflecting this, staff have reduced their forecast for employment growth by 0.1 percent in Q2.

Pay growth has been less obviously affected. On a positive note, regular pay growth was 2.2% – which was a little bit above our expectations. And, as Ben has pointed out, between March and October 2015 basic pay in the private sector rose at an annualised rate of only 1.3%, but the growth rate since has been 3.2%. So there may be some sign that pay growth may be heading in the right direction. And, to the extent that productivity growth is likely to be lower than pre-crisis, the rate of pay growth consistent with inflation at target is also likely to be lower.

But there are also some signs that we will remain stuck in a period of low pay growth. First, the Agents have reported evidence of companies pushing back on higher pay awards and the average Agent's company visit scores point to expectations of continued moderate wage growth over the next year.

Second, in the 2016 Q1 data from the CBI survey, firms expected wages to increase by 2.3% over the next year, which is slightly lower than their expectation in 2015 Q4. And that expectation is also somewhat below the forecast for private sector wage growth in our draft.

And third, around 35% of the respondents to the Bank/TNS Inflation Attitudes Survey in the first quarter of this year on household wage expectations expect no earnings change over the coming year. This number is broadly unchanged relative to the first quarter of 2015 despite the tightening that we've seen in the labour market over the period. Median expectations remain at 1%, unchanged compared to the first quarter of 2015.

Taking all that together, while regular pay may have started to grow at a faster rate, consistent with the trajectory in our forecast, there is I think some evidence that points the other way. And even with the trajectory in our forecast we are still dependent, as Andy has said, on dissaving to support consumption and a rise in the household debt-to-income ratio.

On inflationary pressure, I think there is evidence that the oil price has now stabilised and, if anything, is likely to move up slowly. Although, we will probably still see disinflationary pressure from energy prices further out due to cuts in gas prices, some of that external inflation pressure I think will wane.

And given that we have discussed our treatment of the depreciation in sterling at length I don't propose to say anything more about it here, other than to note that, while the adjustment was necessary, the error bands around the adjustment are pretty wide.

And so to conclude, before we entered into the period overshadowed by the referendum, there were signs that the economy was slowing and, despite labour market tightening, we hadn't really seen any strong pay pressure. Now, the international picture is a bit brighter and the domestic picture is clouded. I want to wait and see what state of the world we end up in before I take a firmer view. In the event of a 'Remain' vote, we may well find that some of the weakness in Q2 continues well into the second half of the year. And by then, as external disinflationary effects starts to drop out, we may get a better read on the underlying inflationary pressures.

In the event of a vote to leave, we'll have a little more information for our July meeting on the immediate reaction of variables like the exchange rate, and perhaps on the political situation. But, while our initial discussions of this scenario this forecast round have been helpful, I think we need to think through very carefully the likely paths for supply and demand and the appropriate policy response, which to me is by no means clear. I think we may face a difficult trade-off between inflation and growth. I think, though, that we will probably have to work these things out in our next forecast round.

So I provisionally vote for no change in Bank Rate and no change in the stock of asset purchases.

Governor Carney. Great. Thank you, Jon.

So the Referendum is the biggest risk, in my view the biggest risk to our forecast. Even if we remain, uncertainty around the vote may be obscuring or even reinforcing deceleration in underlying economic momentum, as a number of you have mentioned. Alternatively, a leave vote would tip the UK in stagflation in my opinion. Under a leave vote the government's responsibility would be to ensure as orderly a transition as possible to new trading investment and migration arrangements. Over time it would also need to put in place new regulatory frameworks. For the MPC our immediate challenge would be to recalibrate policy to meet the inflation target in a deliberate and transparent fashion. That means being clear about our reaction function. The first step to doing that is to describe the key dynamics affecting growth and inflation.

As the staff's illustrative scenario showed, the consolation of demand, supply and exchange rate shocks in a vote to leave would likely entail, could well leave us facing an uncomfortable monetary policy trade-off. As I said last month, everything bad isn't good, stimulus doesn't reflexibly follow shocks, monetary policy is not always nice. Our recent discussions have confirmed that this is a possibility, and I'll underscore 'possibility'. In the event the degree of relative tightness would be a question of credibility. Acknowledging this possibility would help us to less in my, in my view ignoring it would require us to do more. And in this regard I would

rather be clearer sooner about the possible economic implications of a leave vote than surprise an already volatile market environment.

The net impact of 'leave' on activity in inflation would depend on the combined effects, as we've discussed, of any exchange rate move alongside the effects on both demand and supply of: greater uncertainty, particularly concerning the future degree of openness of this economy; tighter financial conditions; lower asset prices, including potentially, sharply lower house prices; and spillovers to foreign demand via tighter financial conditions abroad. As we have discussed, following a vote to leave, sterling would likely depreciate sharply and possibly undershoot its new lower medium-term equilibrium value. In isolation and accounting for protractive pass-through, particularly as Kristin reminded us the other day, given it would be accompanied by a negative supply shock, this would boost inflation over the policy horizon. In the near-term demand would likely fall raising unemployment as households defer consumption and firms delay investment. The boost to net trade from a fall in the exchange rate would likely be insufficient to offset this drag on activity and, all else equal, such lower aggregate demand would tend to dampen inflation over the policy horizon. At the same time a period of weaker supply growth could also be expected, reflecting slower capital accumulation as investment slows and the challenge of seamlessly reallocating resources across sectors of the economy as the UK's trading patterns change, technology adoption from abroad slows with decreased over all a degree of economic openness, lower FDI flows are seen and barriers to trade rise overall. All else equal, such supply effects would tend to boost inflation again over the policy horizon. It's likely that the combination of such demand, supply and exchange rate effects would lead to a materially lower path for growth and a notably higher path for inflation, again, over our policy horizon. The staff analysis flirts with recession and I'd expect one.

In these circumstances, we would face, as others have noted, an uncomfortable trade-off between stabilising inflation, on one hand, and stabilising the output in employment, on the other. And we would face that set of decisions during a period of a regime shift. Leaving the EU would mark a regime shift. As I've said there would be new trading and investment and migration relationships, new regulatory frameworks, possibly a new government. It's not the time to consider a new monetary policy. Under such circumstances, it would be crucial to hold monetary policy credibility. Of course that is within our power, although a number of factors could conspire to make it more difficult than in the past.

The first of those arises from the lessons of the crises as we discussed the other day. At the onset of the Great Recession, the Bank had accumulated considerable monetary capital, whose market value reflected more than a decade of successful inflation targeting. When UK productivity collapsed and with it the exchange rate, some of that capital could be spent. A look-through strategy was the optimal one ex ante, given what the MPC believed then about exchange rate pass-through and the likely timely return of inflation to target. It was also likely optimal ex post, though knowing what we know now about exchange rate pass-through, at least what we think we know about exchange rate pass-through, I guess I should say, it did mean a draw-down of our monetary capital, and as Martin wondered, was that a narrow escape, or I forget your other alternative Martin, business as usual or evidence I guess, evidence of the credibility of the framework left undented. If the same happens again, as is likely with a vote to leave, we could not credibly forecast a period of rapid exchange rate pass-through that did not affect the policy horizon. And we wouldn't have a forecast where we were converging to target from below as the MPC was able to do then.

The second challenge I think arises from the nature of the vote itself. As I argued last month, it's questionable, whether having voted for a utopian future liberated from Europe's Leviathan, that a majority of households would immediately adjust their consumption plans to the much harsher reality of diminished economic prospects. Perhaps, as Jan suggested, a financial market shock would wake them up. But as the staff note, one of the staff notes, helpfully showed, was less forward-looking rationality and more adaptive learning, the more that is the case, the more that monetary policy has to do to bring about the necessary adjustment in demand. In this sense, policy would have to be tighter than optimal in a purely rational forward-looking model.

Now to be absolutely clear, I'm not advocating at all that we tie our hands and thankfully, even if I were foolish enough to do that, given our structure we couldn't do it. But I think it's important that a loosening post-Brexit, should not be the presumption, and a tightening post-Brexit should be at least recognised as a possibility. I think Andy alluded to the importance of having some two-way risk around this, at least in market expectations. Certainly a more neutral look-through strategy would have to be more explicitly acknowledged ex ante this time round, with us forecasting that we would tolerate a prolonged overshoot and would act if second-round effects began to emerge. To reinforce our monetary capital, we need to be credible and

consistent in our forecast, as clear as possible about our reaction function and resolute in our willingness to use our tools to achieve the inflation target.

So briefly on the other mode, at present still the more likely mode, according to the betting markets, following a vote to remain uncertainty would likely persist for a while with the high hurdle we now face to action gradually falling. And while the knowing the result of the referendum would lead to a step-down in uncertainty, its effects would likely persist for some time thereafter. As others have noted, the referendum is doubly awkward, because it comes at a time the economy has been slowing anyways from the 0.8s per quarter of 2013 to the 0.7s of 2014, the 0.6s of 2015, the 0.5s latter half of this year, 0.4 Q1, 0.3 if we're lucky Q2 – growth steadily moderating. In my view there are three main underlying contributors that stand out in that moderation. First on the supply-side, the fade of the positive labour supply shock has outweighed the lessening drag from productivity – in other words the modest recovery in productivity – and as a consequence pulled down overall on supply growth. On the demand side, the uncertainty effects that were left over from the financial and euro crises when they faded led to push up on growth in 2014, now with the referendum and some global uncertainty pushing down on growth now. And fiscal policy has oscillated, switching from hard to soft and now back to hard austerity as our new forecast recognises.

On net, through all of this, the output gap still seems to have been closing, unemployment has continued to fall and is likely now close to its equilibrium rate, while wage growth has been held back by a combination of low productivity and probably some second-round effects from low inflation itself. Absent the referendum, we seem to have been on track for a mild reflation, albeit at a pace that was testing the monetary patience of some of our number. We'll now face what could be an air pocket in Q2 – not just through the referendum but reinforced by-to-let. And following a vote to remain I would want to see that gap – that resumption of the reflation – filling in quite smartly, including in coinciding indicators from surveys, financial markets, labour market data, in order to be reassured we haven't undergone a sustained loss of momentum; a slower rate of reflation risking reinforcing those second-round effects.

I have to say in terms of balancing concerns, my main concern is that in the fog a temporary slowing has been masked. The temporary slowing because the referendum has masked a more persistent one. Now if that is the case, and assuming that a further slowing is not met with further supply disappointments, the next movement in rates could look a bit less clear-cut and it does raise the possibility of an optimal control strategy as described in one of the staff notes. In my view it remains the case that rates will likely need to be higher than today in three years' time. The question is what the optimal path between now and then will look like under a remain vote once uncertainty has begun to dissipate. For now I'll join others in being inclined for no change in Bank Rate and no change in asset purchases.

So that concludes this bit of the meeting. I am going to summarise the intentions as eight of us who gave indications were all the same on the bottom line as no change in Bank Rate, no change in asset purchases. As you know Ian, not being here, hasn't given an indication and we'll just take it as a vote when we meet; we'll all make our final determinations next Wednesday. So I think with that we'll conclude this bit of the meeting.

A meeting of the Monetary Policy Committee was held on Wednesday 11 May 2016. 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
Andrew Haldane, Chief Economist
Martin Weale, External Member
Ian McCafferty, External Member [5]
Kristin Forbes, 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 Talbot, MPC Secretariat
James Bell, MPC Secretariat
Fergal Shortall, MPC Secretariat
Melissa Davey, Editor of Inflation Report

[5] Ian McCafferty was unexpectedly and unavoidably, unable to attend on 6 and 11 May. He communicated his vote to the Governor, and the Committee, in accordance with the provisions of paragraph 12 of Schedule 3 to the Bank of England Act 1998, agreed that he should be treated as present at the meeting for the purposes of sub-paragraph (4) of paragraph 11.

Transcript of the Monetary Policy Committee Meeting on

Wednesday 11 May 2016

Governor Carney. Okay. Good afternoon everyone. Let me begin by noting, as you will have noticed, that Ian McCafferty is still unwell and felt best not to attend today, but he has communicated his intention rationale and his vote and asked that I read that vote in for the Committee. So we are in possession of his thoughts and his vote and I would propose that we treat Ian as present at this meeting under the statute set out in the Bank of England Act and so I just check that all members are in agreement with that.

Seeing everyone nod, that's right, eight, so I will record that as an 8-0 vote in favour of Ian's presence and we are supportive of that.

Ok, very good, thank you. Minouche, why don't we start with the market update.

> **Minouche Shafik.** Ok. It's been a month of two halves since our April MPC meeting. Over the period up to Pre-MPC risk sentiment generally improved as evidence by the further recovery in the prices of many risky assets and risk-free rates rising somewhat. But since our Pre-MPC meeting on 3 May, some of these moves have retraced. The approximate triggers for this reversal had been idiosyncratic, including some underwhelming European bank results and the weakening of the oil price. But the underlying drivers of risk sentiment remain those that we discussed at our meeting, including central bank communications, concerns about the banking sector, the global growth outlook and some more UK specific risk related to the EU referendum. Taking the month as a whole, I think it remains the case that risk sentiment has improved a little. Although the FTSE All Share is down just over 1%, risky asset prices more generally including the S&P 500 and the Euro Stoxx 50 are all up on the month and the VIX is down a touch and corporate bond spreads have narrowed. Overall since our April meeting, the UK short-term interest rates are little changed, the three-year instantaneous forward rate is up 2 basis points to 0.64 and the UK OIS curve still crosses the 0.75 point in January 2020. At very short maturities, the OIS forward curve is downward sloping and the MPC meeting dated swaps currently reach a low of 0.34, down 3 basis points since our April meeting. And the sterling ERI has risen by 2% since our April MPC meeting. That's it.

Governor Carney. Okay, thank you Minouche. Andy, updated data please?

> **Andrew Haldane.** So data-wise and just starting internationally since last we met, we have had one or two pieces of new data. In the US we have of course had non-farm payrolls for April, which came in at 160,000. That's somewhat below market expectations. In China we have had trade data for April, where both imports and exports were a touch weaker than expectation. And then finally in the euro area you will recall we had a pre-flash estimate for Q1 of 0.6%. Recently we have had some country-level industrial production data for March, which has been on the weaker side and that's meant there's a chance that when the flash estimate of Q1 GDP in the euro area comes out on Friday, that might be shaded down from 0.6 to 0.5. The pre-flash estimate I think was at 0.55, so it wouldn't take very much to nudge that down, so that's something to watch for later in the week. And then domestically: two things, briefly. We had UK trade for March where both goods exports and imports were a bit stronger than our expectation – imports more so, the net effect of which therefore is for a lowering by 0.1 percentage points in the net trade contribution we expect during Q1. That net trade contribution will be, we think now -0.2 percentage points. And then we have also had industrial production for March that grew by 0.3%. That's in line with our expectation, given that we'd already seen the Q1 GDP estimates and it's in line with that. That's all, thank you.

Governor Carney. Thank you very much, Andy. Any questions on that? Okay. So I'm going to go in the same order as we went on Day 2. The proposition is that Bank Rate be maintained at 0.5% and that we maintain the stock of purchased assets at £375 billion. And I'll start with Ben, please.

> **Ben Broadbent.** Okay, I confirm my vote for both propositions.

Governor Carney. Thank you. Andy?

> **Andrew Haldane.** No change, no change.

Governor Carney. Minouche?

Nemat Shafik. I also confirm no change, no change.

Governor Carney. Martin?

Martin Weale. I'm voting for no change and no change.

Governor Carney. Okay. And this one will take a little longer because it was Ian's turn and I'm going to read in his statement, which starts dramatically and the rest is going to be a quote.

[Ian McCafferty's statement read by Governor Carney]. There are any number of Hollywood B movies in which the hero looks out into the middle distance and says the immortal words "it's quiet out there – too damn quiet".

Although it is a cliché, there is a similar feeling of uneasy calm about the world economy.

Financial markets have settled down, and have regained their appetite for risk. Minouche argued that, with little change in the fundamentals, this could only reflect the absence of bad things happening. I think there is a little more to it than that: for each of those specific risks that transfixed markets back in February, recent developments back up the argument that the true probability of the risk being realised in the foreseeable future is actually somewhat less than perceived at the height of the market funk.

For China, the announcement of the 2020 growth targets, and the accompanying policy shift, reduce the likelihood of a sharp GDP slowdown this year and next; while the weaker dollar and the recent revival of capital flows into EMEs have taken pressure off the management of the renminbi exchange rate peg.

The revival in the crude oil price, in spite of the complete lack of agreement within OPEC and what are as yet only modest adjustments to non-OPEC supply, has helped reduce fears of financial upheaval within the group of commodity exporters.

In the US, the Q1 slowdown in GDP growth and the changed tone in Fed communication have reduced the fear of an over-rapid tightening of policy.

In the eurozone, albeit that they are unlinked causally, the bolder than expected action on behalf of the ECB, and the slightly more upbeat news about eurozone Q1 GDP have challenged the view prevalent at the start of the year that central banks in general, and the ECB in particular, were running out of ammunition, and hence credibility.

This more balanced perception of the global risks will be tested again in coming months. A slightly less benign reading of the current oil market data would soften prices again, at least until the data for the US driving season is known, which could test the market's resolve over a number of EME-related risks. As for China, there is likely to be a growing recognition of the trade-off implicit in the current growth strategy: that the near-term risks have been reduced only by kicking them further down the road, and in the process making them potentially larger, if later.

So much for the risks around the forecast. What of our central path?

I fully concur with the slightly more cautious outlook set out in the May forecast, and agree that this is justified more on the basis of less robust growth in UK domestic demand, rather than any further adjustment to the international side.

Internationally, things remain roughly on track. The US outlook remains a puzzle. Q1 GDP growth was disappointingly weak, but the payrolls data, consumer income growth, and residential investment all suggest an economy in reasonable shape, such that this year may be another victim of the BEA Q1 seasonality problem, with things normalising in Q2. Other news, in Europe and China, were encouraging.

As far as the domestic side of the UK economy is concerned, separating the effects of short-term referendum uncertainty from other influences remains difficult.

Our Bloomberg-based model seems to tie in shorter-term movements in the exchange rate with what appears intuitively the case in terms of the ebb and flow of the campaign, and has helped provide a logical structure to our treatment of the conditioning assumptions for the forecast.

But it remains more difficult to calibrate the magnitude of the uncertainty effect on the performance of the real economy. The recent softness appears more in the short-term activity indicators – the CIPS and CBI measures of current and future output – than in the survey indicators for either investment intentions or the measures of business and consumer confidence per se, which have remained stable. This pattern is counterintuitive, and makes it difficult to determine how much of the slowdown over the early spring is specifically referendum uncertainty related. With the exception of the CRE sector and M&A activity, where there is evidence from the Agents of some postponement, I suspect that it is not great. The more likely culprits are difficulties with the construction data, a further globally driven slowdown in the pace of activity in manufacturing. More recently, I have heard reports of a modest easing in the pace of activity in some key service sectors, which is likely to result in a more widespread slowdown in GDP over the second quarter, which is unlikely to be quickly reversed as we move into the autumn.

Over the medium term, I support our slightly more cautious trajectory for domestic demand, and in particular that for corporate investment. Financial conditions remain supportive, but the key driver of investment growth in coming years will be the pace of demand growth and the effective depreciation of current kit. We should get some support from both (capital-income ratios, on a perpetual inventory basis, remain elevated but are now declining). But a slightly more modest pace of investment growth feels more realistic.

Perhaps the only encouraging elements in the current constellation are the developments in some of the key elements driving the UK nominal environment. Nearly all of the fall in the oil price between October and January has now been unwound; since November, net of the referendum effect, sterling has fallen by around 5%; and regular wages excluding bonuses have started to accelerate after their pause in the autumn. If these persist, the unwind of the drags on headline inflation may well be somewhat more powerful over the second half of the year than we have so far assumed. I therefore agree with Ben's conclusion from our discussion that our inflation judgment is still on track.

For me, for now, our broad narrative about the economy remains about right.

But to return to my B-movie metaphor, inevitably, the use of the "too damn quiet" cliché is a signal to the alert movie watcher that something awful is imminent. Let's hope that that is not the case for us. But, like our hero, we need to remain vigilant, and keep our guns cocked and our ammunition ready. So, it was very helpful this month to have had a discussion of future policy options, and their applicability to different scenarios.

Our central case still suggests that at some stage, a rate rise will still be required to deal with the re-emergence of an inflation overshoot at the end of the forecast. But for now, that long-term future remains clouded by short-term risks and uncertainties. So for this month, I vote for no change in Bank Rate and no change in the level of asset purchases.

Governor Carney. Very good, okay. Right, Kristin, thank you for waiting.

Kristin Forbes. I can't beat that, no change, no change.

Governor Carney. Thank you very much. Jan?

Gertjan Vlieghe. No change, no change.

Governor Carney. Jon?

Jon Cunliffe. No change, no change.

Governor Carney. And myself, I also vote for no change in Bank Rate and no change in the stock of asset purchases. I haven't missed anyone have I? No, you've made me nervous there, Minouche. It's been known to happen. So, by my always shaky math, that is 9-0, everyone voting for no change to Bank Rate

and no change to the stock of purchase assets. And with that I'll close this formal part of the meeting and we'll go downstairs to work on the minutes.