BANK OF ENGLAND

MEETINGS OF THE MONETARY POLICY COMMITTEE
June 2016

A meeting of the Monetary Policy Committee was held on Monday 13 June 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
Kristin Forbes, External Member
Andrew Haldane, Chief Economist
Ian McCafferty, External Member
Gertjan Vlieghe, External Member
Martin Weale, 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
Chris Young, MPC Secretariat
Melissa Davey, Editor of Inflation Report

Transcript of the Monetary Policy Committee Meeting on

Monday 13 June 2016

Governor Carney. OK, good morning everyone. I think we'll start, we'll go in this order. There has been a fair number of moves in asset markets so I might ask, at least since the MPC briefing, so I might ask Minouche to start off and I will ask Andy to go through the recent data, and I have the pre-release of the CPI which comes out tomorrow morning. So I'll brief on that.

Nemat Shafik. Thank you Mark. There's generally been a risk off tone to financial markets that began on Thursday, gathered pace on Friday and continued in Asian markets overnight. There is no doubt that the referendum has been a big factor as other events drop away and nervousness about the result is increasing. Relative to the data we saw at Pre-MPC the FTSE All Share is down 3%; the 10-year gilt yield is down 17 basis points; sterling ERI is down 2% and relative to the dollar, sterling is down around 2½% to just below 1.42. There was also a rapid 1% movement in sterling over a 15 minute period on Friday afternoon New York time following the release of the latest ORB/Independent poll showing a 55% lead for the Leave campaign which came out on Friday. Lift off date hasn't changed much only moving a month to June 2020. Brent is down $2 now at $49, and just finally to say that it is likely that the moves will be amplified in response to relatively small pieces of news in the days running up to the referendum so we should expect, given that market depth will be below normal activity and positions are squared up and market-makers appetites are limited, small bits of news are likely to have quite big impacts on asset prices in the days ahead.

Governor Carney. Very good. Thank you Minouche. Andy please.

Andrew Haldane. There is relatively little data since we last met. Just two pieces I will mention. First in the UK we had output in the construction industry for April. That rose 2½%, which was somewhat north of our expectation which was close to 1½%. This does come against a backdrop of 3 months of falls, all of which were concentrated in the non-housing construction sector and so too was the bounce back this month. Just in the detail of that, there was a significant fall in orders for new private housing in April which might chime with the other evidence we heard on housing through the month. The only other piece of data I have is international from China. We've had some data released over the weekend for retail sales, industrial production and for investment. The first two, retail sales and industrial production came broadly in line with our expectations. Investment was somewhat weaker. We'll see what impact that has on our nowcast. In the initial response it might not change that but we will come back and confirm that. Thank you.

Governor Carney. Thank you very much Andy. CPI and PPI are out tomorrow. We have the CPI rate for May which at 0.3% is in line with rate in April but 0.1 percentage point weaker than both staff expectation and market median. Weaker than expected outturn accounted for by weaker data in clothing and footwear and recreation and cultural prices. And since all of those are part of core, core is also slightly weaker than the STIF and the market median expectation, both of those were 1.3 and the outturn annualised for May will be 1.2. OK. Good, if there are no questions about any of that I'll start off with Ben please.

Ben Broadbent. Thank you Governor. On the eve of what might be a very substantial economic shock to the country, it is an odd time to be thinking about interest rates. This Committee is unlikely to be at the front line of contingency measures should the UK vote to leave the EU. But we would have a lot of thinking to do, and a lot about the real side of the economy in particular. Where will be the first signs of any retrenchment, further retrenchment I might say, in investment; in response to a fall in the currency – and fall it surely will – will exports respond as expected or will the countervailing hits to trade start to come through early on? On supply, what happens to employment indicators but also to those related to mismatch? So there will be a lot to do, just not right now.

In the meantime, I'll start with the usual overview of the global economy. I'll be brief because there wasn't much news. In the May *Inflation Report* our central estimates for UK-weighted global growth were 0.5% for Q1 and 0.6% for Q2; we now think those numbers will be 0.6% and 0.5% - so just the other way round - essentially the same, in other words. And part of that little switch reflects a judgement that the 0.6% figure for the euro area, in the first quarter, was erratically strong and there'll be a little payback in the second. In China, debt continues to grow. As Jon pointed out, the rates of growth are quite a bit lower than in the post-crisis period – low double digit as opposed to the 40%+ we saw in 2009 and 2010 – but they've picked up a little in the past few months and they remain higher than those of nominal GDP. In the United States, a weak employment number has all but eliminated expectations of another rate hike from the FOMC in June; or, for that matter, July. Many suggest that it won't be possible given the proximity of the presidential election to raise interest rates till late year.

But as I say overall not that much news and, although we like to look at the rest of the world, at the moment the rest of the world is looking at us. So let me return to our own economy. Andy gave us a useful overview of the evidence on referendum effects. Several, as he pointed out, are more apparent in asset markets than in actual value added so far. We know all about the behaviour of the currency. Flows into commercial real estate, which had been coming mainly from abroad, have fallen sharply; in London they've collapsed.

The most recent data on trade and manufacturing actually surprised on the upside; consumer confidence and retail sales have also held up well. At 0.5%, the nowcast for GDP growth in the second quarter is slightly higher than our central forecast of 0.3% in the last *Inflation Report*.

On trade, I don't think we should expect to have seen any significant referendum effects. Upon exit, one imagines, competitors to UK exporters will no doubt argue that their customers might start looking for other, more reliable suppliers. But there's no reason thus far why foreign demand for UK output should yet have been affected or, for that matter, why exports should not have been supported, in the normal way, by a weaker currency.

The continued health of retail sales and consumer confidence is perhaps more surprising. There is a large part of consumption that carries on regardless and that is relatively insensitive to consumer sentiment. In general, investment spending is far more cyclical than consumption and, despite its smaller size, accounts for more of the variation in aggregate demand. There is also a significant portion of households that simply spends all the income that comes in. Nevertheless, not to have seen any rise in the saving rate at all – indeed, if anything, it appears to have dipped further in the past six months – is perhaps surprising. Theory says that, in response to a dip in expected future income, the saving rate should rise. Greater uncertainty should do the same.

In the macro data, these effects aren't that easy to detect. The impact of uncertainty on investment is much clearer. Saving rates are better correlated with two other things – unemployment and developments in the housing market. The first makes some sense because, for any individual, being employed is the most important determinant of income, and therefore it's not until your job is seriously at risk, or that you perceive it to be at risk that you start to save more. But the implication is that consumption tends to turn later than investment through the business cycle.

It's not clear that housing is any more forward-looking, as an indicator of the saving rate. But, we do at least get slightly more advanced indicators of housing itself. And it's here, I think, that there is some downside news since the May *Inflation Report*. Turnover looks to have corrected even more in April than we had expected following the hike in transactions costs. More significantly, the survey data – from the RICS, in particular, has been very weak. It looks as if turnover will decline further through the second quarter. It also looks as though prices may now be falling – not just in central London, where my guess is they may have peaked over a year ago, but nationally too. Housing starts, which have recovered very strongly since 2012, fell back in Q1 to a level slightly below the average of last year.

Of course it's hard to know how much of this is referendum related. Prices may simply have got ahead of themselves, especially in the capital. Big tax changes will obviously have depressed turnover. But one imagines some of it is connected with the uncertainty created by the referendum and, at least in London, where foreign buyers are more numerous, with the risk of EU exit specifically.

Now let me just say a couple of things of what it might mean for us. First, even to the extent this is referendum related, and even if the UK votes to remain, some of this is likely to persist. I think there's a certain degree of inertia in these things and my view there is that the near-term risks to our housing forecasts in the May *Inflation Report* lie to the downside. Second, while one might eventually expect some combination of a weaker currency and a deceleration in domestic demand, for an economy with a stretched current account position, Brexit itself is likely to trigger a more

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violent move in this direction on both fronts. This of course is the general shape of the simulations we were shown last month. But I suspect the effects will show up relatively promptly, and visibly, in a housing market that already looks to be on the back foot.

Now that storm may or may not come; let us hope it does not. At least in relative terms, the state of the economy in the second quarter is one of calm. Growth of demand looks to have been in line with our estimates of underlying supply growth, unemployment is close to its natural rate; while still below the levels consistent with the inflation target, growth of wage costs is on a slowly rising trend, it seems to me; inflation expectations have dipped in financial markets but have risen in household surveys. So with some trepidation about what is to come, I am therefore inclined for the time being to vote for no change in policy, either Bank Rate or the stock of purchased assets.

Governor Carney. Good, thank you Ben. So I have Kristin and then Andy please.

Kristin Forbes. "A watched pot is slow to boil" captures the sensation that time seems to move more slowly when you're waiting for something, combined with frustration that you can't do anything to accelerate the process. This also captures my feeling today as we wait for the referendum. We have done the analysis relevant to monetary policy. The UK economy and issues for the MPC will be starkly different based on the outcome. There is now little to do except wait, and then adjust monetary policy as appropriate.

Even though "watching the pot" is not advised in Poor Richard's Almanac (where the phrase supposedly originated in 1785) we are obviously still monitoring economic developments. Our pre-MPC briefing and Discussion meeting showed that we are not only still "watching", but probably pushing the limited data to isolate referendum effects more than most econometricians would recommend. My comments today will therefore take a break from watching the UK pot, and instead focus on developments elsewhere. Global developments will be a factor determining the appropriate UK monetary policy after the vote – no matter which outcome.

Beginning with the US, recent data confirms that the Q1 growth slowdown was largely temporary weakness combined with seasonal adjustment issues. The initial estimate of annualized Q1 growth of 0.5% has already been revised up to 0.8%, with another upward revision expected to 1.2%. [redacted] Most recent indicators show solid momentum; growth in Q2 and Q3 is expected to be above potential. The recent increase in the US savings rate indicates more upside potential; it is hard to explain using standard economic variables and is expected to be temporary.

The one outlier in US data is May's employment report. Thursday I explained why I think the sharp negative reaction was an overreaction. Data dependence has been replaced by data dramatics. Yes – it was a weak report and employment growth has slowed. But average job creation over the three months through May (smoothing through monthly volatility and adjusting for the Verizon strike) was 127,000. This is lower than the previous three-month average, but well above estimated steady-state. Unemployment is now at 4.7% – a new cycle low – and this is generating wage pressures. Although different wage measures send different signals, growth in compensation per hour is at 3.7% year on year. Unit labour costs grew 5.4% in Q4 and 4.5% in Q1 – boosting the year-on-year pace to 3.0%. This will not be consistent with inflation around target unless productivity picks up.

The bottom line: the US recovery is slowing, but solid. The labour market is tight and pushing up on labour costs. Barring major surprises, the Fed is likely to want to increase rates at least once before year-end. Given timing challenges around the election, a rate increase may be on the table sooner than expected (albeit not June). Any such surprises could generate adjustments in global capital flows, currencies and commodity prices.

Next, moving more quickly around the world. In the euro area, Q1 growth improved to 0.6%, despite a trade drag of 0.1%. Even though Q2 growth will likely be lower due to fluctuations in industrial production, average growth over the four quarters to June will be the highest since 2011. Japan's Q1 GDP growth has been revised up to 0.4% compared to a quarter ago. There are a number of reasons why this overstates underlying growth, but when combined with the delay increasing the consumption tax and the possibility of additional stimulus, there is more upside than downside risk to short-term Japanese growth. The longer-term challenges for Japan are still imposing, but there is a reprieve for now.

Speaking of reprieves, our China narrative remains in place: solid growth around 6.7% for now, albeit fuelled by credit that increases future risks. The current stabilization has been important though for other emerging markets and the global economy. I recently estimated correlations between capital flows to emerging markets with variables such as US long-term interest rates, the VIX, and global growth. These correlations have all fallen sharply since 2010. In contrast, the correlation between capital flows to emerging markets and China's GDP growth has increased sharply. A new IMF working paper reaches similar conclusions, showing a significant increase in the spillovers from China to other Asian countries, including through financial linkages. It shows that after incorporating the effect of China on global risk, the spillovers can be even larger than those from the US.

There is substantial divergence in other emerging markets. For most of the larger economies, Q1 GDP growth was stronger than expected – albeit from very low expectations. For example, Brazil's GDP contracted by 5.4% on a year ago compared to an expected -6%; Russia contracted by "only" 1.2% compared to an expected -2.0%. India continues to shine – with Q1 growth of 7.9%, strong despite legitimate questions about the new growth calculations. Even Turkey beat expectations at 4.4% growth – despite its surge of migrants. The weakest emerging markets are mainly oil exporters (no surprise). Although recent increases in oil prices will provide some support, many oil exporters require additional substantive policy adjustments. For example, the IMF estimates that the GCC and Algeria need a fiscal adjustment of 10 to 15% of GDP. For some it is hard to see how these adjustments will proceed smoothly. Although recessions and even full blown crises in some countries should not come as a surprise, contagion can occur in unexpected ways.

Another risk in emerging markets is credit growth. It is now at levels in some countries (not just China) that often foreshadows problems. The World Bank's June GEP highlights this risk, and the BoE staff analysis shows this should be on our radar for the UK. Faster credit growth abroad increases the risk of crises in other economies, especially those which are financially open. Although the increased resilience of the UK banking system should provide some buffer, this is another risk to watch.

Another final noteworthy change in emerging markets is inflation risk. Last year 43% of emerging markets had inflation below 2%; in the first quarter of this year 61% had inflation above 2%, and 39% above 4%. Currency depreciations in some countries have played a role, plus the reduced drag from energy and food prices, which constitute a higher share of the consumption basket than in advanced economies. Below-target inflation in many emerging markets (outside the euro area though) is ending.

All in all, although there are risks to the global economy, and growth will not return to anything close to pre-crisis averages, the global environment presents less of a risk to the UK than in past months. In a striking reversal, recent market volatility suggests the greatest immediate risk to the global economy may be from the UK – the referendum. Within the UK, most recent economic data has been solid – with more positive than negative surprises. Nonetheless, with domestic inflationary momentum still modest, and uncertainty about the referendum, I will vote for no change to monetary policy this month. If there is a remain vote, however, and the recent stabilization in the global economy continues, tighter monetary policy will likely be needed well before markets expect. Although, then I will shift from waiting for the "pot" of the UK referendum to boil, to waiting for the "pot" of UK wages and unit labour costs to pick up.

Governor Carney. Very good. Thank you very much. Andy and then Jan please.

Andrew Haldane. Thank you Governor. We are on the eve of a referendum, the results of which could re-shape the UK's economic fortunes. That means the option value of waiting to see which way the referendum – and hence the economy – turns is unusually high this month. Given that, there is unlikely to be a month when the monetary policy decision is easier. So let me get my presumptive decision out of the way up front, by saying I am minded to leave unchanged both Bank Rate and the stock of asset purchases.

Looking to the period ahead, then, let me discuss some issues which are likely to be important for the monetary policy stance, whatever the result of the referendum. They concern underlying trends in the economy, both real and nominal, and what can be inferred about them from the incoming data.

Starting on the real side, what can we say about the underlying growth rate of the UK economy at present? Last week's discussion framed the hypotheses nicely, I thought. Based on the current data, either there is a deep referendum-related freeze underway in the economy which is masking an otherwise strong, indeed accelerating, economy. Or the referendum effects on activity have instead been relatively modest, at least so far, as then has been the underlying strength in the UK economy.

For me, the evidence we have so far speaks strongly to the second hypothesis, with referendum effects on aggregate activity relatively modest. There has, of course, been no shortage of referendum-related talk – indeed it is hard to get people to talk about anything else – which has generated a further uptick in our measures of uncertainty. And there seems to be clear evidence of some sectors being affected significantly by that uncertainty, with the three-letter trio of CRE, IPO and M&A perhaps the most visible casualties.

At the same time, none of these particular activities is especially large in the direct impact on GDP, beyond professional service fees. That is because, by and large, they involve the reassignment of title to assets, rather than the generation of new assets or new activity.

When looking to the economy at large, we do have direct evidence this month from surveys (including from CIPS, the BCC and the Agents) on the impact of the referendum on firms' activity. A decent number of them, getting on for a third, reported some impact. The number noting a material impact was significantly smaller, however, at less than 10%. And even for those companies reporting a material impact, it is possible the referendum may be more "convenient hook" than "underlying cause". I say that because I have spoken previously about this being a "looking for excuses" recovery. Businesses are still in defensive mode, a response which is perfectly understandable in the aftermath of crisis, with excess sensitivity to events which could dent future demand.

The EU referendum - like Grexit, China, the Scottish referendum and the general election before it – may be the latest in a long line of events that have been used by companies to justify caution. But it is post-crisis caution which is the deep cause here, rather than the events themselves.

That deep caution appears to have shown up recently in business investment, where the National Accounts now show two quarters of weakness, weakness which is unlikely to be reversed in Q2. Caution also appears to be evident in the housing market, with surveys over the month pointing towards both a relatively sharp and a reasonably broadly-based slowdown.

While the referendum may have provided some added momentum, I doubt in either case it has been the root cause of this caution.

Meanwhile, if this slowing in business investment and housing were to continue, it would tend to reinforce the pattern, evident in surveys and in quarterly GDP for the past three years, of a gently decelerating economy.

Second, are nominal pressures in the economy building as required to return inflation to target? The mechanical pick-up in headline inflation through this year has begun and has been given a tailwind by the recent rise in oil prices and by sterling's depreciation since the end of last year.

Perhaps reflecting these developments, household measures of medium-term inflation expectations have also shown signs of ticking-up in recent surveys, which is good news. Against that, other indicators show fewer signs of nominal pressures building at any real pace. Core rates of inflation remain close to 1%, with shorter-term measures suggesting no imminent pick-up. Underlying wage growth also shows few signs of deviating greatly from the 2-and-a-bit mark, with the same true of wage settlements. Indeed, it is striking just how steady underlying wage growth has been at these sorts of levels for the past five years.

Striking, because this wage flatness has taken place against a backdrop of very significant falls in both labour market slack and in measured inflation over the period, in both cases by around 3 percentage points. It is possible that, in a divine econometric coincidence, these two effects have had a perfectly offsetting impact, leaving overall wage growth flat. If so, then as headline inflation picks up, and as slack continues to be eroded, albeit more slowly, we would expect a build in nominal wage pressures as our forecast envisages.

But there is an alternative, somewhat simpler, explanation for the flatness of underlying wage growth. This is that nominal wage norms have simply shifted downwards since the crisis, from the 4% mark to the 2% mark. This is a story I often hear from workers and from firms, as well as from some academic labour market economists. And it carries somewhat different implications for the future path of wages. Low wage and cost pressures are then likely to prove more stubbornly persistent, at least until they are dislodged by the next "big event". An ever-tighter labour market could be such an event. But with employment growth now slowing, and with signs of recruitment difficulties reducing, that risk no longer appears as great as six months ago.

Meantime, lower nominal norms would tend over time to generate greater persistence in wage and price dynamics. As Ben said last week, although that would take time to show up in wage equations, there may already be early-stage signs in the greater persistence in measures of inflation expectations.

With financial market measures having fallen over the month, it is notable, too, that we now have a pretty consistent picture – across households, companies and financial markets – of medium-term inflation expectations sitting at lower levels than in the past.

So where does this leave monetary policy?

Any slower-than-expected build, either in the economy or in nominal pressures, carries a direct and immediate risk to our inflation target. It also carries a more indirect risk to monetary policy by potentially imparting greater persistence into the wage and price-setting process. That latter would tend to support a "more-pre-emptive-than-usual" approach to monetary policy, as would the proximity to the zero lower bound.

Put differently, the longer the period nominal pressures fail to build, the stronger the case for a pre-emptive response to prevent nominal inertia becoming embedded. This is the "stich in time saves nine" principle, as it applies to monetary policy. With inflation expectations already lower, and perhaps stickier, than in the past, any further disappointment on the nominal or real sides of the economy in the second half of the year would weigh more heavily on my decision-making.

For today, though, I am minded to vote Remain, for interest rates and asset purchases that is.

Governor Carney. Andy, thank you. Good so we have Jan and then Minouche please.

Gertjan Vlieghe. Thank you. The June MPC meeting has the potential to be of considerable historical significance – it might be the last meeting where the MPC sets monetary policy for the UK as a member of the EU.

It is a nation's democratic right to determine its own alliances and international relations, that is beyond question.

Emotions are running high in the political debate, and rightly so, given what is at stake. The debate is about far more than just the performance of the economy in the coming years, and rightly so. But I am saddened to see that the debate on the performance of the economy in the coming years is not a real debate.

Economists genuinely argue about the merits of demand management, about the impact of fiscal policy, about optimal exchange rate regimes, about the productivity puzzle. The evidence is mixed, and theory often does not give a conclusive answer.

But the debate on the economic impact of Brexit has, on one side, theory, analysis and evidence that there will be a negative consequence for supply, demand and the exchange rate. On the other side

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of the debate is a two-pronged approach: either that economists cannot be trusted because there is a global conspiracy against the Brexit campaign, or that economists cannot be trusted because they make forecast errors. [redacted]

Back to our own – objective – analysis. As we approach the referendum date, we have discussed what the short-term consequences for asset prices would be of a vote to leave. The challenge is that many asset prices will have both positive and negative forces acting on them, making the net effect more difficult to predict. Only the exchange rate is unambiguously negatively affected, the combined effect of increased uncertainty and a deterioration in the terms of trade. In the case of equities and credit spreads, even though domestically generated profits are likely to fall, the drop in the exchange rate will provide a substantial counter-balance, increasing the sterling value of profits earned in foreign currency. I suspect the net effect will still be negative, but the magnitude is hard to judge.

In the case of government bonds, there are negative effects from the short-term rise in inflation, as well as from a possible deterioration in the expected fiscal position if tax-intensive sectors such as financial services shrink as a share of the economy. But there will be positive effects from heightened risk aversion and a resulting flight to relatively safer assets. And, to the extent that an aggregate demand deterioration precedes a future supply deterioration, a lower expected path of the policy rate for a period would also be supportive for government bonds up to a certain maturity. Lower potential future supply has an ambiguous effect, lowering the equilibrium interest rate but bringing forward the point when it is reached.

There is a substantial probability that heightened risk aversion is not limited to UK financial markets, but spreads globally. Concerns about the political fallout in other EU countries, and the risk of renewed tensions within the eurozone, are one plausible transmission mechanism by which risk aversion spreads from the UK to global financial markets.

Let me now briefly turn to recent data developments. As we have said in recent months, the referendum will make the economic data harder to interpret. For me, the data over the past month has, if anything, made it more difficult still.

The domestic news over the past month has probably been slightly better than expected, with strong retail, IP and trade data, and business surveys on balance slightly better, and consumer confidence not falling any further. On the negative side of the ledger, car demand and the housing market have been disappointing. If the referendum was already having a major impact via uncertainty, one would expect the drag on spending to get more severe as we approach the referendum date. Perhaps the data are just noisy, and the deterioration will resume. Perhaps pre-referendum uncertainty is not as severe a drag on spending as we feared. The details of the PMI survey does offer some support for that last hypothesis: while a third of firms report that the referendum is having a detrimental effect, only a tenth say it is having a strongly detrimental effect. But I remain very cautious about these interpretations, and data noise is likely to be part of the story as well. The next data point for retail, IP and trade will be informative in that regard.

I would also like to discuss recent developments in the housing market. So far, the direction of recent moves have all been as predicted: a large spike in activity as transactions were rushed through ahead of the stamp duty change, followed by a large drop. This is the same pattern we have seen around earlier stamp duty changes, although the magnitude of both the spike and therefore the subsequent drop was much, much larger this time around. The real question is to what level transactions will rebound. Based on the data patterns around previous tax changes, we would expect transactions to rebound to their new equilibrium value next month already, ie in previous episodes the first data point after the drop was already a good guide to the run-rate of transactions in subsequent months. The sharp fall in the RICS new buyer enquiries balance does not bode well.

But this is a question about growth rates, not levels, and transactions did plunge by 45% between March and April. On balance, I fear our forecast that transactions will eventually rebound to around 110,000 per month will be too optimistic. The next monthly data point will be quite informative already.

In conclusion, UK growth momentum in Q2 appears not quite as bad as we feared. Perhaps the data are just noisy, or perhaps pre-referendum uncertainty is not affecting aggregate spending as much as we feared. More data are needed, but actually we do not have to wait very long. If April monthly data were erratically strong, we should see sharp payback in the May monthly data already. If monthly data hold up, it will suggest a smaller drag from the referendum than we feared, which conversely also means we should expect a smaller rebound after the referendum. Concerning the housing market, I think the risks remain skewed to the downside. And there again the next month of transactions data will be very informative.

On balance, the outlook is little changed since our May report, with the possibility of less of a pre-referendum wobble than we feared, which is in any case not that informative about the underlying state of the economy. I am minded to vote for no change in rates or asset purchases.

Governor Carney. Minouche and then Jon please.

Nemat Shafik. Like previous speakers in preparing my thoughts for this month's I've been torn between dwelling on the referendum or dwelling on the underlying state of the economy, and have felt a real conflict between my optimistic self who wants to take a favourable view of the referendum outcome and the underlying state of the economy and my pessimistic self that can't get over a defensive sense of scepticism.

Let me start with the conflict over the state of the economy. At times the optimist in me gains ascendancy – we've had a good run of date recently. For example, when I hear of the relatively positive survey and output data that we've seen that would mechanically suggest a healthy 0.5% growth in the second quarter despite the effect of uncertainty on investment and other activities, it gives me hope that on the other side of the referendum we may be able to sustain growth rates that are sufficiently strong to be able to begin the process of normalising monetary policy.

Similarly, when I hear that global growth finished 2015 on a stronger note than we had expected and that the positive news looks to have carried through to Q1, it makes me think that activity in our trading partners may provide a more dynamic source of demand than our conservative assumptions. The euro area even managed a spritely 0.6% growth in the first quarter, helped by positive surprises in France and Germany.

And when I look at the short-term forecast for inflation and see that the mathematical inevitability of base effects means that inflation is likely to double over the next 6 months, to reach 0.8% by October, I think that maybe the cycle of weak inflation and weak wage growth might finally be about to break.

But it is never long before the pessimist in me begins to fight back.

And often this is triggered by looking at a chart of productivity growth, which has fallen back to 0.5% – the same weak number it has averaged over the past 6 years. And while it is encouraging to hear the agents say that firms have plans to increase their output significantly without hiring new workers, I'm afraid the number of times we have heard this story before makes it difficult to attach much weight to it.

The pessimism is compounded by the fact that even after taking account of this weakness in productivity our models still struggle to explain the weakness in wages. I thought a good case was made last week that spare capacity in our largest trading partners is providing disinflationary pressure in the UK. But I am also wary of the fact that this is the latest in a long line of explanations for the weakness in wage growth, making me reluctant to take too much comfort from it.

And what perhaps is most worrying is that the UK's experience of weak supply growth and weak inflation is just one example of what has become a global phenomenon. In the US, six months of promising recovery in the participation rate have been erased in the latest two outturns. In the Euro area inflation remains below zero, and their inflation expectations heatmap is very blue.

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The combination of weak growth and low inflation also has implications for debt dynamics at a global level. Credit is once again growing more quickly than world GDP, and I was struck by the analysis we received this month showing that global financial conditions and credit growth abroad help to predict crises at home, especially in financially open economies. So not only is the UK reliant on the kindness of strangers, we are also bound to share their troubles.

So taking everything I've said so far together – it's fair to say that there are reasons for optimism and reasons for pessimism emerging from both the UK and the world economy. For the purposes of this month's decision, however, we need to focus on the here and now, and that means realism is likely to trump both optimism and pessimism. Being realistic, I was never going to get through my statement without saying something directly about the referendum, so let me turn to that briefly now.

It is clear that uncertainty around the outcome has had a role to play in the slowing of activity: we've all mentioned CRE transactions; IPOs that have been put on hold; agents report that contacts' clients are reluctant to commit to new contracts or hires; and that all of this is having a knock on effect on demand for credit and capital expenditure.

We've spent a lot of time thinking about the macroeconomic consequences of the referendum but at this point in time it is impossible to quantify the magnitude of the impact with any precision. Indeed it will be some time before we have reliable indicators of how the real economy is performing after the referendum, even in the event of a remain vote. And if it is a leave vote, there are just too many unknowns to try to define policy direction at this time. Much will depend on the signals we receive after the referendum, with the size of the moves in the exchange rate being one of the most important, but we will also have to consider the impact on demand and supply before we make a policy decision.

So for this month I intend to deal with these conflicts by voting realistically for no change in Bank Rate and no change in the stock of purchased assets.

Governor Carney, Minouche. Jon and then Ian please.

Jon Cunliffe. So I've always wanted to be Ben Broadbent but today is not that day. [Removes incorrect name plate.] We have spent much of this round trying to unpick the effects on economic activity of the referendum. We will, of course, know the outcome of the vote soon enough. But nonetheless, I think it has been a useful exercise, not least because it has helped us to clarify a little what to focus on in the event of a remain vote and I think some more questions about what to look at if the vote is to leave.

We discussed last week whether we were seeing a stronger than expected domestic picture this quarter. I think we are. The key question is whether the UK economy is stronger than expected because the referendum is having less of a dampening effect – and, if so, why – or because underlying activity is stronger. Some parts of that question will be relevant if the decision is to 'Remain', other parts of the question will be relevant if the decision is to 'Leave'.

The strength of consumption has been particularly noteworthy. It was a touch stronger than expected in Q1. Consumer confidence remains robust – it was striking that the 'major purchases at present' balance increased over the month. VAT receipts increased sharply in May as Dave told us and retail sales were strong in April and the BRC survey suggests that annual growth in retail sales looks reasonably solid in May. Overall, the British consumer is showing few signs of weakness and seems to have shrugged off any concerns about the referendum.

Broader economic indicators have also been positive. For example, manufacturing output in April saw its largest monthly increase since 2012, construction output in April exceeded staff and market expectations, and the Markit/CIPS output and expectations composite indices increased in May, the latter driven by the services expectations index. So we have seen signs of resilience across the economy. Partly as a result, staff have revised up their Q2 nowcast to 0.5%, 0.2 percentage points higher than the May Inflation Report projection.

The positive news this month came in spite of a pickup in uncertainty. The staff's uncertainty indicator increased to its highest level since October 2012 and the outcome of the referendum remains finely balanced. As the Governor noted, if we mechanically took out all uncertainty shocks then the forecast for Q2 growth would conceivably be around half a percentage point higher.

One area where the referendum may have been a bigger drag is investment. Business investment fell by 0.5% in Q1 – much weaker than expected in our May forecast. Surveys conducted by Markit/CIPS and the BCC suggest that the referendum is weighing on the business activity of a significant minority of firms. But there has been no clear deterioration in investment intentions. And, anecdotally, I didn't pick up much concern from the business leaders I spoke to on an Agency visit to Buckinghamshire last week.

And yet, and yet my more enduring concerns have not gone away. I have been concerned for some time that, rather than a slow recovery that is being knocked by a long procession of unfortunate events, that the fading external disinflationary pressures could well reveal a weaker economy.

Economic weaknesses persist in the economy. I would need to see progress in some of these areas to be confident that the economy and inflation are on track.

The first weakness is pay. We had a false dawn in the middle of last year then pay growth fell back to around 2% towards the end of the year and it has remained at, or a little above, that rate ever since.

I was intrigued by Ben's classical explanation of weak wages in which the increase in labour supply suppresses wages in the near term and increases the return to capital. The implication is that, in the absence of other effects, it's not unreasonable for us now to expect a pickup in investment, in productivity and in wages. I find this story plausible though I note that the rate of return on investment has been elevated and picking up for some time and the capital-output ratio, though slow moving, is around its long-run average. And I've just learnt to be careful about 'pick-up in pay is just around the corner' stories. We've had a number of them, including following the sharp fall in unemployment and the increase in compositional effects.

One of the risks of low pay growth is second-round effects on inflation. News on inflation expectations was, if anything, positive this month, which gives me some reassurance that the risks of second-round effects from low pay are contained. But we are in relatively uncharted territory in terms of the reaction of wage expectations to a prolonged period of very low inflation – the longer it goes on, the more possible that social norms around pay just settle at lower levels. Annual whole economy regular pay growth has not exceeded 3% for over 7 years. And the finding in the Agents' survey that recruitment difficulties are easing is not in this respect a reassuring straw in the wind.

Second, and somewhat related, core inflation, while not getting worse, is not accelerating either. At 1.2%, it's low and roughly where it was six months ago.

Third, productivity growth remains poor. It was around 0.7% in the year to Q1 and is expected to fall to around zero in Q2. According to ONS estimates, productivity had surpassed pre-downturn levels by 0.3% at the end of 2014; at the same stage of the 1990s and 1980s recoveries, productivity was more than 16% above the respective pre-downturn levels. This is another explanation for weak pay of course.

The consequences of weak productivity for monetary policy are not straightforward. If it continues, supply and demand will be in equilibrium at a lower rate of growth as we run out of spare capacity. So a lot depends on how forward looking households and businesses are and the impact on the neutral rate. But at the very least developments in productivity make one worry about the underlying weakness of the economy. If I were German, of course, I might say that was not for monetary policymakers to worry about.

[redacted]

Fourth, growth is unlikely to be supported by fiscal policy. Following our decision in the May forecast round to take an average of the IFS and Cyclically-Adjusted Primary Budget approaches, fiscal policy is now expected to drag on GDP growth by around 0.4% per annum on average over 2016 and 2017 – a stronger headwind than the average 0.1% drag over 2014 and 2015.

Finally, the world economy has not weakened on the month, but it is fragile. [redacted] productivity growth is anaemic in the US and the election period could create policy challenges; Japan is struggling with persistently weak growth; and credit intensity in China continues to reach record highs as the IMF has just warned. Indeed, growth in emerging market indebtedness has increased global debt-to-GDP to a record high.

In addition to these factors, which have been a concern for a while, other downside risks have come to light in recent months, most notably around the housing market. The RICS new enquires balance fell to its lowest level since June 2008. This may just be referendum-related but given the importance of housing investment and consumption in the forecast it bears watching very closely.

Overall, I don't think that there is yet clear evidence that when the referendum has passed, and assuming a vote to remain, inflation will increase as expected.

The second half of the year will be particularly important in this respect. Assuming a vote to remain, the impact of the referendum on economic activity should fade and pay and inflation should start to head more clearly upwards. We will have a clearer picture of whether the economy has the strength to sustain the 0.5 to 0.6% quarterly growth rates we are expecting and whether this month's more positive numbers are the result of a strong economy overcoming the effects of the referendum that are weaker than we expected – or a weaker economy that is looking more robust simply because the referendum effects are not as strong as expected.

Finally, this month's numbers do raise some questions for me about the strength of the uncertainty effects we assume.

And those questions will be relevant if the vote is to leave. If uncertainty affects the Great British consumer less, or less quickly, than we thought, but damages supply potential we could face inflationary pressures sooner. If uncertainty simply has a less powerful affect all round, then that has a very different implication. We don't have long to wait now to discover if we will have to face these difficult questions.

Governor Carney. Good, thank you Jon. You almost sounded like Ben at the end there. Ian and then Martin.

Ian McCafferty. Thank you, Governor, and good morning. I am grateful to you for having represented me last month, but it is good to be back to give my thoughts in person.

And I am sure I am not the only one here that is finding the external referendum commentary increasingly wearing. It would be nice not to have to discuss the referendum further, but we cannot escape the question of how far the uncertainty is affecting the second quarter data.

The news-flow is clearly having an impact on the exchange rate; my only comment on this is to caution against trying to be too precise in trying to estimate mathematically exactly how much. More interesting, though, is what is going on in the real economy.

In terms of data, we are still early in the quarter, but the sharp rebounds in both industrial production and construction in April, alongside the resilience of the surveys, suggests that the impact on Q2 GDP might be less widespread than we'd initially feared. With survey data for the services sector pointing to modest growth, activity in manufacturing and construction would need to contract significantly over May and June to prevent quarterly GDP growth from being stronger than in Q1. Such falls are possible, given that some of the strength in both series is probably erratic: the 8.6% rise in pharmaceutical production is unlikely to be sustainable and the pick-up in construction activity, driven by non-housing, probably benefited from the start of the new fiscal year.

Now the impact of the referendum may not be widespread, but there is a clear impact on certain specific activities, even if these represent only a limited proportion of GDP. CRE, some capital investment projects and M&A have all been affected – activities that Andy described as large, lumpy and irreversible, for which there is high option value in waiting.

And weakness in these activities will have contributed to the slowdown in business services activity recently, as legal and advisory services, property services, and consultancy are important ancillary inputs. For example, some 22% of construction inputs come from the business services sector, according to the 2013 supply and use tables.

Given that the slowdown in business investment pre-dates the referendum period, the suggestion was raised at pre-MPC that recent weakness in business investment might not be referendum-related, but more underlying. I have some sympathy with this, but also support the alternative explanation given in the follow up note – that it reflects the softening in the global growth outlook and the elevated level of risk aversion of early 2016. If this is the case, we might expect that at least some of the shift towards defensive strategies recorded in the Deloitte survey might be reversed over the second half of the year (subject of course to the referendum result).

Importantly, referendum uncertainty does not seem to be affecting consumer behaviour materially. Strong April retail sales were accompanied, according to the VISA credit card spending data, by robust spending on recreation, culture, hotels & restaurants and other consumer services. The GfK survey also suggests that consumers still consider it a good time to purchase durables. The recent housing data is of some concern, but may be distorted by the buy-to-let market.

So in terms of the referendum effect, it is still early days, and the closeness of polls may yet have affected demand and activity more widely in May and June, but if the pattern of April continues, the uncertainty impact may prove surprisingly modest, leaving us less dependent on a second half rebound for our May forecast to be borne out.

But what else is going on?

The international news, on balance, has for me been slightly positive.

In the US, the early year loss of momentum looks to be less than originally feared, and the latest non-farm payroll number looks so erratic that it is likely to prove somewhat of an outlier. Yes, payroll growth has slowed over several months, but is still broadly indicative of an economy expanding at a reasonable pace.

In the euro zone, the pattern of growth continues to broaden out a little, with more encouraging signals from France, and is more driven by domestic demand than at any time since the start of the recovery in late 2013. And of course, the Greek risk has again been taken off the table, at least for now.

Meanwhile, the continued slow rise in the oil price to over $50 a barrel has reduced some of the fears of financial upheaval for individual oil exporters.

Looking at the recent movements in the fundamentals of the oil market, that $50 a barrel level now looks more sustainable. First, in terms of production dynamics, $50 a barrel looks to be sufficient to stabilise the rig count in the US, but is still insufficient to trigger the widespread activation of the "drilled but uncompleted" wells that would signal a resumption of supply growth. Second, the falls in investment over the past 18 months – of the order of 30% to 50% in areas such as the UK, the US and Canada (data for provinces elsewhere are harder to find) – but that fall is now starting to balance the market globally, with inventory levels appearing to be peaking out. This should be sufficient to keep prices at around current levels. However, we are still left with an inventory overhang of about 700 million barrels, as a result of previous overproduction, and until this has worked through the system, which could take up to a couple of years, prices are unlikely to be able to climb a lot further in a sustainable fashion.

Our judgement in the May *Inflation Report* about the international economy – that the first quarter pessimism was overdone, and that the central outlook continued to be one of moderate growth, albeit with downside risks – therefore for me at least continues to be borne out. This suggests that the continued slide in global bond yields results from a further reappraisal of central bank intentions and the path of short rates, rather than widening risk premia. As was pointed out in our discussion last week, unless the Fed moves in the next six weeks, the US election means we are unlikely to see another rate rise this year – a marked change to the three to four moves expected early in the year. Here, expectations of the first move in Bank Rate have also shifted back significantly again, to Q2 2020.

This growing divergence between the markets and the available signals of central bank expectations – the Fed dot plots and our forecast inflation overshoot – worries me for two reasons. First, and most obviously, it increases the risk of a snap back, unless both we and the Fed are wrong about the outlook. But the longer it persists, the greater my second worry. Such low bond yields will have a material impact on UK corporate finances, through the rolling revaluation of defined benefit pension deficits. Widening deficits will require significant additional corporate contributions, constraining finance for corporate investment. It would be good for staff to do some work on the potential impact, not only for us but also the FPC, given the possible implications for corporate financial stability.

Other key elements of the economy continue to follow the May forecast. With stronger oil prices, headline inflation still looks broadly on track to follow the profile of the May *IR*. As inflation picks up, the drag on nominal wages is likely to dissipate, particularly as household inflation expectations are now starting to pick up and as the labour market continues to edge towards full employment. The continued underlying strength of job creation is demonstrated I think by the fact that both unemployment and inactivity continue to fall, albeit slower than earlier in the recover in spite of the estimated loss of jobs dependent on the UK oil industry of some 120,000 since late 2014.

We can return to these issues next month, once the referendum result is finally known. But for now, I intend to vote for no change in Bank Rate and no change in asset purchases.

Governor Carney. Good to have you back.

Ian McCafferty. Thank you.

Governor Carney. Martin.

Martin Weale. Thank you Governor. Apart from the effects of Brexit, the last few weeks have seemed fairly quiet. The exchange rate has given the impression of being excessively sensitive to movements in opinion polls relative to the signal that they probably contain. At the same time, it is trading higher than in mid-April despite some evidence of a shift towards leave since then. In the last couple of days other markets may also have been affected by referendum uncertainty.

The evidence for its effects on the economy is however unclear. On a visit to Newcastle, I heard more frequently than I had expected, that businesses were putting off decisions until the result was known. Perhaps this is consistent with the most recent information from our Agents. But it is difficult to see much impact in the aggregate data. We built a substantial margin into our forecast, based on a judgement about the effects of uncertainty. Governor, you made the observation, if I understood it correctly, that, if we took the uncertainty effect at its full value and allowed for the timing effects on housing transactions then the implied underlying growth rate was over one per cent. The conclusion I draw, is, however, not about the underlying strength of the economy but rather that our work on effects of uncertainty may overstate the marginal impact on output. One explanation is double-counting: to a greater extent than we assumed, the effects of the uncertainly may already be largely present in variables such as asset prices which are inputs into our forecast. Secondly there is also the most fundamental law of econometrics, that stable and well-defined relationships are stable and well-defined until you start relying on them.

In the last few days we have seen material data surprises both at home and abroad. The April figure for industrial production showed an increase of two per cent on March. Staff pointed out that this is the largest increase since July 2012. That, however, fails to indicate just how unusual such an increase is. In the last twenty years there have been four increases of this size or more. Of these two came in the wake of the Queen's more recent jubilees and were recoveries from low output in the previous month. Looking at the two others, the index of industrial production has not so far surpassed the peak it set in March 2004 which came after the first of these jumps. The April 2005 figure was held for the next two months but came after an unusually weak March. Historically large movements were more common but I think they were a consequence of the method of calculation rather than an indication that the economy was more volatile, so I do not think anything can be learned from them. Overall, the limited experience is that these data tell us something about Q2 but not, I think, anything about Q3.

The main foreign news has been the weak jobs data for the United States. Kristin suggested that the raw data be misleading but these together with referendum nerves have perhaps been behind the further falls in yields on government stocks internationally, with those in Germany dropping to very low levels. The GDP growth estimate for the euro area for Q1 was unrevised, taking it back to 0.6, with strong growth in Germany. Some of this may have been a result of mild weather and it is difficult to say that the April industrial production figures for Germany give a definitive signal as to whether the underlying growth rate is a bit faster than we have thought. Certainly, however, they do not suggest weakness.

More generally of course we have worried about low inflation in both the euro area and in Japan and its possible consequences for demand. I thought it might be interesting to look at the growth of GDP at purchasing power parities per person aged fifteen to sixty-four in the G5 economies from 2007 to 2015. The results surprised me. Germany comes top with 9.2% and Japan is second with 9.1%. The United States was just ahead of us with 5.3%compared with our 4.1% and France was bottom at 2.5%. Of course it is total growth and not adjusted growth which influences overall demand and thus is more material to our concerns. But, picking up on Gertjan's theme of some weeks ago, monetary circumstances in Japan may reflect mainly their declining working age population; it is certainly hard to see that growth has been held either back by mild deflation or by ineffective monetary policy.

Of course, our primary target is inflation, and not growth in GDP per person of working age. We had a helpful discussion of inflation persistence, so I thought it might be worth reviewing movements in inflation expectations. The summary measures and tables, which I find more informative than heat-maps, show levels are lower than before the crisis but that there has recently been a slight rise in expected inflation at all horizons. As staff noted, this is the result of a rise in survey measures of households' expectations. Financial market measures are a bit below their pre-crisis averages. The one-year measure is 2.4%compared with 2.6%before the crisis but the three-year measure is 2.8% the same as the pre-crisis average. Only the five year forward measure shows a material drop, at 2.6%compared with 3%before the crisis.

To the extent that these financial markets measures are material, and I am not sure how far that is the case for our purposes, there is nevertheless something to worry about because of course these are RPI measures and RPI inflation has risen relative to CPI inflation. The Bank's analysis two years ago suggested that the steady state wedge had risen from 0.5 percentage point to 1.3 percentage points. If the whole of that were taken into the financial markets measures, the figures would suggest expected inflation well below target at all horizons. The difference between the two indices' annual growth rates in April was however 1%, so if I take that on board, it would suggest that the three year measure of implied CPI inflation is just below target, but that the five-year five year rate points to materially lower inflation in the future. That may be because the five-year five-year rate reflects preferred habitat issues to a greater extent than the near-term issues but it might be something that needs further thought. The one area where there is clear evidence of a connection between expected and actual price increases is with the CBI survey. The Q1 CBI data on general price expectations point at most to a slight easing compared to before the crisis. Given the backwash from falling commodity prices, I am, however, surprised there has not been more movement.

We had some discussion of the merits of an extra meeting in the event of a leave vote. My view is that there should be a very substantial bar to an extra meeting. We do not provide a put to markets and it is unlikely that we would have a good sense of what the consequences of a leave vote would be in its immediate aftermath. My vote in ten days is secret but ahead of the referendum I can see no case for changing either the Bank Rate or our asset holdings, and that is how I expect to vote this Wednesday.

Governor Carney. And you are registered to vote for both and in ten days' time and at the next MPC meetings, so you'll be able to make those judgements – the next regularly scheduled MPC meeting.

OK. Well, I'm going to join Andy and others in a few things. First, in terms of the non-option value of waiting, I don't see the point in waiting and I intend to vote for no change in Bank Rate and asset purchases joining others by my count of 9 nil for both of those.

I am going to talk about uncertainty, and an unholy trinity of uncertainty, starting with geo-political uncertainty. Actually, there is an interesting mimeo which has come out of the Fed which quantifies geo-political risk post-9/11. Construction index dating back to 1985, effectively since 9/11 it is twice the average of the index. It's also more volatile and can be shown, at least on VAR analysis, to have persistent effects on real activity as it moves around. I can get it circulated if that's of interest.

The properties of that index appear distinct from those of more familiar indices of economic uncertainty. Our own in-house measure [of uncertainty] shows a period, obviously, of relative calm during the great moderation, as you'd expect, but has been persistently elevated and volatile since then and is up, as everyone knows, about two standard deviations since the summer.

The third member of the trinity is policy uncertainty, the Nick Bloom-type analysis of newspaper headlines, expiring tax codes, surveys of forecasters' disagreement. In the first quarter of this year, coinciding with somewhat of a crisis in confidence in global monetary policy, it rose sharply to 1½ times in the US and Japan. Three times its pre-crisis average, pre-crisis being 1998 to 2007, in China, and just under 4½ times for the UK. One area where we beat China! The source of these moves are broad-based, exchange rate jitters in China, changing OPEC reaction function, risks around the Middle East, the US election and the current top of the global pops, the UK's EU referendum.

The effects of these three uncertainty dynamics have compounded and contributed to a form of economic post-traumatic stress disorder in markets and in the real economy. Despite unprecedentedly low real rates, the return on capital remains elevated, as we've discussed. UK equities yielded around 4% in the start of this year, 5 percentage points more than 10 year real bond rates, a spread that was around zero on average during the 1990s and around 2 percentage points just before the crisis. As Ben and others have noted, this is suggestive of fear of disaster in markets. And more broadly it suggests an affect heuristic at work with enduring non-trivial potential effects.

Research has shown that depression babies of the 1930s who experienced low stock market returns throughout their lives reported lower willingness to take financial risk, were less likely to participate in the stock market, invested a lower fraction of their liquid assets in stocks, and were more pessimistic about future stock returns. In the real economy these effects can translate into a reluctance to spend, particularly by corporates. The upward trend in corporate savings across the advance world ratcheted up further post-crisis and has remained elevated since. Globally the investment picture remains weak and the softness is broader than just public and residential investment.

Now turning domestically, in the past month there have, as others have discussed, there have been broader indications of such uncertainty effects. In the real economy, as Andy highlighted, many large, lumpy and irreversible investments are on hold, and to my mind, with the exception of getting through the short-term aftermath of a leave vote without a Lehman-style event, there would likely be an increase in uncertainty post-referendum that would give little reason to reverse those. I think it is worth noting that the value of commercial real estate transactions fell 15% in May, it was 29% lower than its Q1 average, which itself had fallen sharply compared to levels in Q4. Transactions have now been cut in half since their Q1 peak in 2015. Others have noted the fall in the new buyer enquiries. I think I may have misheard you Jon, but my read is it's the lowest level since the question was introduced in 1999.

Based on past ready reckoners, the RICS data are consistent with around 5 percentage points off annualised price inflation, suggesting a period of at least flat house prices nationwide. As Andy noted, new car registrations fell in May with three month on three month growth now negative. The expenditure split, for what it's worth, in Q1 GDP suggests that business investment fell for the second straight quarter. And it's reinforced by special surveys by Markit and the BCC which suggest that the referendum is having a significant and likely growing detrimental effect on business activities for a significant minority of firms, and that is also consistent with reports from Bank agents and regional visit discussions. And there's widespread market intelligence of capital markets and M&A transactions being on hold.

In rates, short rates are more sensitive to changes in the odds of polls at any time since the May *Inflation Report*. And I would note that we are above a 50% probability of a rate cut by December with today's market moves. Ten-year gilts are at an all-time low. Banks' CDS are moving closely with Betfair odds on the probability of Leave and market intelligence suggests that investors see the referendum as the biggest near-term risk in UK bank profitability.

[redacted]

On sterling I agree with staff that recent moves corroborate and possibly strengthen the relationship – our view, as expressed in the *Inflation Report* - and it does raise the possibility that the market-implied appreciation of sterling could be larger than we expected at that time. And the referendum effects in asset prices are also borne out in surveys of asset managers including BoAML's survey which cited Brexit as the biggest global risk, consistent with our market intelligence. It is also consistent with the views of G7 central bankers based on direct conversation that this is the biggest risk, for what that's worth.

Let me close with what all this may mean for policy. Obviously there's not much we can do about generalised uncertainty itself. It's possible we can do something about the effect on demand. The most direct channel to affect is policy uncertainty, and the broader prescription in an environment of persistent uncertainty, whatever the cause, should be to hedge downside risk where possible and that can be on incomes policies and other forms of insurance. It should be to have clear macro frameworks, particularly with respect to fiscal policy, fiscal anchor, fiscal policy rules. [redacted] All we can do in that environment is to undertake sensible contingency planning to make sure that there is not another uncertainty shock layered on top of that, and this Committee will be briefed tomorrow on what the Bank is doing in that regard. And then as the MPC continue to fulfil our remit as best possible, that requires clear, consistent messaging in how we see the arguments of our reaction function being affected under both leave and remain.

To my mind, therefore, there is a strong case for reinforcing the messages in the May *Inflation Report* through our communications on Thursday. Specifically, I'd observe that the most significant risk to the MPC's forecast to growth and inflation concern the referendum. Secondly, with macroeconomic and financial indicators likely to be less informative than usual in light of the referendum campaign, the Committee is currently reacting more cautiously to data releases than would normally be the case, and that itself brings a risk that we could be over or under-estimating underlying momentum in the economy in the event of a vote to remain – something I think that everyone has mentioned. Thirdly, that the recent behaviour of the foreign exchange market suggests that if the UK were to leave the EU, sterling's exchange rate would fall further, perhaps sharply, and this would likely be consistent with some of the changes to real fundamentals driving sterling, including a worsening in terms of trade and productivity and risk premia. That households could defer consumption and delay investment lowering labour demand and causing unemployment to rise. At the same time supply growth is likely to be lower over the forecast period reflecting slower capital accumulation and the need to reallocate resources. In this regard I would note, at some point in the minutes, the growing evidence of delaying of major investments in housing and commercial real estate, business investment and major purchases of autos. And I agree with Ben in terms of the assets before value added. The combination of these influences, as we observed on demand, supply and the exchange rate, could lead to a materially lower path for growth and notably higher path for inflation than in our central projections in May. And in circumstances we would face a trade-off between stabilising inflation on one hand, and output and employment on the other. The implications for monetary policy would not be automatic and its direction would depend on the relative magnitude of these effects.

Now I will just close by stating the obvious, which is, well, there are things that the Bank can do and will do to mitigate the risks to the financial sector from a leave vote, and try to dampen rather than amplify uncertainty of the large moves in asset prices that may be consistent with such a vote. There are limits to what monetary policy can do in the short term in the face of a major shock and there are extreme limits on what monetary policy can do to the path of, I would say, almost total limits, with the exception of doing harm, on the path, on the long-term path, of economic growth. But whatever the outcome of the referendum and its consequences we will take whatever actions necessary to ensure that inflation expectations remain well anchored and inflation returns to target over the appropriate horizon.

So that is that. Summed up at the start we meet tomorrow, I can't remember, does anyone recall the time? Wednesday, sorry on Wednesday – that's why I can't remember the time of the meeting tomorrow because we are not meeting tomorrow, we are meeting on Wednesday and we will get a brief on contingency planning as well.

A meeting of the Monetary Policy Committee was held on Wednesday 15 June 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
Kristin Forbes, External Member
Andrew Haldane, Chief Economist
Ian McCafferty, External Member
Gertjan Vlieghe, External Member
Martin Weale, External Member

Dave Ramsden was represented by Gareth Ramsay

The following members of staff were present:

Gareth Ramsay, Director, Monetary Analysis
James Bell, MPC Secretariat
Simon Hayes, MPC Secretariat
Chris Young, MPC Secretariat
Melissa Davey, Editor of Inflation Report

Transcript of the Monetary Policy Committee Meeting on

Wednesday 15 June 2016

Governor Carney. OK alright, good afternoon colleagues. Minouche, if you can give a markets update and then I'm going to ask Andy for an update on the data release since our second day and then we'll turn to the vote. So Minouche.

> **Nemat Shafik.** This week the risk of tone across global financial markets that began on Thursday, gathered pace on Friday, has continued, although this does seem to have stabilised a bit today. There's no doubt that the referendum is coming into focus and increased nervousness about the result has been an important factor. There's been a shift in voting intentions towards the leave vote, with the latest polls suggesting that the leave camp is now ahead. Betfair odds currently put the probability of a leave vote at 40%. Brexit remains the biggest tail risk according to the latest Bank of America/Merrill Lynch global fund managers' survey released this week.
>
> So let me start where financial markets are relative to the data we were shown at Pre-MPC on Thursday. Note that the figures I'm going to give you are based on the MPC's usual conventions and fitted curves so they may differ slightly from the numbers you've read in the Financial Times today. But UK short rates and the sterling exchange rate have declined materially. UK three-year instantaneous forward OIS rates have fallen 12 basis points and the date at which the curve crosses 0.75 was pushed out a further eight months to January 2021. Slightly weaker than expected UK inflation data also contributed to some of these moves. Longer-term interest rates have also fallen, with the UK gilt falling by 13 basis points and sterling has fallen by just over 2%, reversing some of the moves earlier in the month when the opinion polls were pointing to a remain vote.
>
> The recent sharp moves in sterling associated with the polls highlight how thinning liquidity is serving to exacerbate the impact of flows on the exchange rate. Contacts anticipate that bouts of volatility are likely to become more frequent in the run up to the vote as liquidity thins further. International spill-overs from worries about a UK vote to leave the EU have become more evident, with safe haven flows reportedly putting pressure particularly on the Swiss franc as well as the yen. 10 year US Treasury and Bund yields have fallen by 11 and 6 basis points respectively, reflecting flight to quality flows. The 10 year Bund yield, as I said earlier, has traded below zero for the first time at negative 0.05, and there has been a noticeable pick up in periphery spreads over Bunds this week.
>
> So risk off moves have been evident also across equity and credit markets, with the FTSE all share down nearly 6% and CES indices widening in Europe and the US. Since close of business on the 7 June, which is just before Pre-MPC cut off, European and US high yield CDS indices are up 58 basis points and 33 basis points respectively, and the VIX has risen to around 21%, the highest level since the peak volatility we saw in February.
>
> Overall since our May meeting, MPC meeting dated swaps currently reach a low of 0.31 in both February and March 2017, suggesting a cut in Bank Rate is more likely than not. UK 10 year gilt yields are down 26 basis points, the FTSE all share is down 3.6%. International indices are also all down. The SMP is down a little by 0.4%. The Euro Stoxx equity index is down nearly 6%. Sterling is down overall by 1½% since May. The dollar price is up on the month by 5%, although this masks a fall of 5% since the data cut off for our Pre-MPC meeting. Sterling oil price, which we use in the minutes is up by 8%. So overall a pretty gloomy set of numbers.

Governor Carney. Ok good. Very good, Andy.

> **Andrew Haldane.** My data are far less exciting than that I'm afraid. So I will be brief. So internationally we had euro area industrial production for April, which was up 1.1%. We expected some bounce back from the weak March numbers, but this is greater than expected. Nonetheless the nowcast for Q2 GDP in the euro area remains at 0.3. In the US we had retail sales growth for May, which was up ½%, again roughly in line with our expectation and the nowcast for Q2 remains at ½% in the US.
>
> And then domestically, we had a couple of surveys from the CBI covering financial services in the second quarter, and manufacturing in June. Both of those surveys remained above average and in some cases a touch stronger than the previous period. We had house prices, the new ONS house

price index for April. That showed a slowing in rates of growth, 7.4% three month on three month annualised, consistent with the data from the lenders but somewhat lower. And then finally this morning you've seen and probably most significantly we had the labour market statistics, the unemployment number came in a little below our expectation at 5% relative to our forecast of 5.1. Average hours were down though.

The biggest news is probably I think on the pay side, where the news in total pay was that it came at 2% relative to our expectation of 1.6. Somewhat less large news in regular pay where it came out at 2.3% relative to our forecast of 2.1. In both cases though some upside surprise there. Thank you.

Governor Carney. Very good.

Ben Broadbent. Do you mind if I ask something and I'm going to reveal my ignorance? What sectoral breakdown we have in AWE, if any?

Ian McCafferty. Stable at 2.4…

Ben Broadbent. No, no not private/public I mean within private. The private number went … the single month number was quite a reasonable jump on a monthly basis. And whether there's anything we can learn about NLW within that?

James Bell. Not from this release I don't think, not from these.

Ben Broadbent. OK.

Governor Carney. OK. Jamie, maybe you can follow up.

Ben Broadbent. Even if only anecdotally.

James Bell. I'm sure we can do that.

Governor Carney. Very good. So with that I will invite everyone to vote on the propositions that Bank Rate maintained at 0.5% and secondly that the Bank of England should maintain the stock of purchased assets financed by the issuance of central bank reserves at 375 billion sterling. And I'll go in the same order as before, starting with Ben.

Ben Broadbent. I vote yes to both propositions.

Governor Carney. Kristin please?

Kristin Forbes. I also agree with both propositions.

Governor Carney. Thank you. Andy?

Andrew Haldane. No change, no change.

Governor Carney. Jan?

Gertjan Vlieghe. No change, no change.

Governor Carney. Minouche?

Nemat Shafik. I agree with both propositions.

Governor Carney. Jon?

Jon Cunliffe. No change, no change.

Governor Carney. Ian?

Ian McCafferty. I agree with both propositions.

Governor Carney. Martin?

Martin Weale. I agree with both propositions.

Governor Carney. I also agree with both propositions so by my count that is 9-nil in favour of both propositions, or put differently 9-0 for no change, no change, and actually the breakdown on no change, no change is 3 out of 9 if we use differently terminology. [laughter and chat] I would like to confirm, that is why I read it into the record so that's the same thing. OK so very good so with that I'll close this part of the meeting and we will go down and write the minutes.