



BANK OF ENGLAND

Speech

Sticky inflation

Speech given by

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Why is inflation so high?

Or, more specifically, why isn't inflation lower?

After suffering the worst recession in living memory, our economy has barely grown over the past 2 years. Output is well below its pre-crisis level; unemployment close to 8%. But inflation remains stubbornly above 2%.

Sure, the dismal productivity performance experienced in recent years means there is a question as to exactly how much spare capacity there is in our economy. But even the most extreme supply-side pessimists would be hard pressed to argue there is no slack.

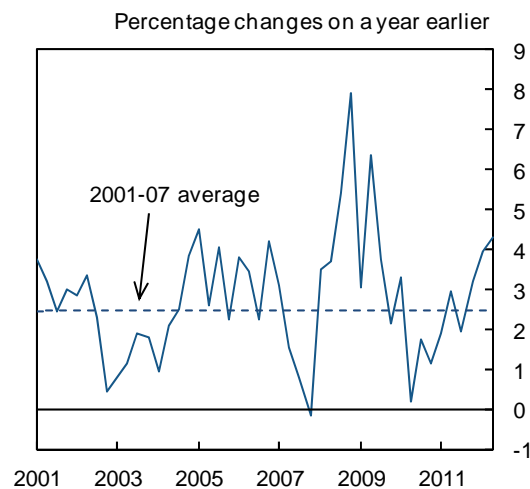
So why is inflation so sticky?

Some of the recent resilience in inflation can be accounted for by the impact of changes in the prices of goods and services that are less affected by the balance of domestic demand and supply: by the lingering effect from past increases in import prices; and, more recently, by the introduction of university tuition fees and by increases in food prices in the wake of poor global harvests.

But that's only part of the explanation.

Measures of inflation which are less affected by these sorts of relative price effects do not point to domestic cost pressures growing at very subdued rates. In particular, unit labour costs – the single biggest determinant of companies' costs - have grown at or above their average historical rate for much of the four years since the financial crisis (Chart 1).

Chart 1: Private sector unit labour costs¹



So why aren't domestic cost pressures growing more slowly?

There was a time when the chief suspect might have been the inflexibilities inherent in our labour market. But not this time around. Quite the contrary: the UK labour market has displayed quite extraordinary flexibility in recent years.

Nor does the stubborn growth in domestic cost pressures imply that slack in the labour market has failed to restrain the pace of wage growth. Earnings growth has been and remains very subdued. Contrary to what many would have you believe, the so-called Phillips curve which maps the relationship between pay growth and unemployment hasn't radically changed form or suddenly disappeared.

Rather, the stickiness in domestic cost and price pressures is in large part a by-product of the painful adjustments our economy has been required to make in recent years. Painful adjustments which can't be avoided.

This is the focus of the first part of my talk today. What adjustments? How have they affected inflation? And what role has monetary policy played?

In the second part, I want to consider briefly the implications of the Government's decision to use the excess coupons held by the Bank's Asset Purchase Fund to reduce the stock of government debt. I will argue that many of the criticisms and concerns expressed in the wake of that decision were misplaced. Even so, large

¹ Calculated using private sector average weekly earnings data, adjusted using the ratio of private sector employee compensation to wages and salaries, divided by market sector output per worker. Private sector employee compensation is calculated as whole-economy compensation less central government and local authority compensation, the latter two of which have been seasonally adjusted by Bank staff.

financial flows between fiscal and monetary authorities raise understandable concerns, and we need to be alive to the challenges and tensions that this transfer may give rise to in the future.

But let's start with the significant adjustments undertaken by our economy in recent years and the implications this has had for domestic cost and price pressures.

Real adjustments and sticky inflation

The effects of the financial crisis continue to reverberate through the global economy and, as a nation, we are still adjusting to the new realities they bring. I want to focus on two specific issues.

First, is the near unprecedented weakness of productivity in recent years. Output has barely grown for two years, yet the private sector has created nearly 1 million new jobs. The corollary is that the level of private sector productivity is 8% below its 2007 peak and around 15% below the level implied by a continuation of its pre-crisis trend. Much has been said and written offering possible explanations and interpretations of the productivity puzzle.² You may be relieved to hear that I don't want to add to that particular growth industry today. Instead, I want to consider how our economy has adjusted to this shortfall in productivity.

Second, are the large changes in relative prices triggered by the depreciation of sterling, repeated rises in commodity prices and the increase in VAT.

A key feature of the shocks both to productivity and to relative prices is that they are what economists refer to as real shocks. Real in the sense that they require companies and employees to adjust their behaviours and actions in response. Real in the sense that these adjustments can't be avoided by simply altering the money values of goods and services. And very real in the sense that they affect living standards of people up and down our country.

The harsh but inescapable reality of these developments – and the real adjustments they necessitate – is that households and families in our economy are worse off.³ Much worse off.

The flat lining in productivity in recent years means that the amount of goods and services that we are likely to be able to produce in the foreseeable future is less than we previously expected. The less we produce, the less we can ultimately consume.

²Explanations for the recent weakness in productivity are summarised in a box on page 33 of the November 2012 *Inflation Report*. The productivity puzzle has been discussed in various speeches by MPC members: Dale (2011), Broadbent (2012), Weale (2012); and by external commentators, eg Martin and Rowthorn (2012).

³The fall in the exchange rate and the increase in VAT may well have positive implications for longer-run living standards by helping to ensure the long-run sustainability of our external trade position and public finances respectively. The analysis here focuses only on the immediate impact on real wages.

The fall in the exchange rate and the rise in commodity prices mean that the amount of foreign goods and services we can purchase using the proceeds from our domestically produced output has fallen. The terms at which we trade with our foreign competitors have deteriorated.⁴

And the rise in VAT means a greater proportion of the available resources accrue to government rather than to households.

The pie has got smaller and with it so must the slice given to households.

When faced with similar adjustments in the past, we have often added to our woes by trying to resist the inevitable. The required reduction in households' real incomes has initially come about by a sharp rise in unemployment rather than a reduction in real wages. One of the most striking – and indeed encouraging – features of the performance of our economy since the financial crisis are the falls in real wages that have been achieved without a very sharp rise in unemployment. Unemployment has indeed risen, but by far less than would have been the case had the labour market displayed the resistance and rigidities of the past.

So what type of adjustments do these real shocks entail?

In order to maintain profitability, companies need to offset the impact of weaker productivity by holding down wage growth. Ultimately, so-called real product wages – wages paid by companies valued in terms of the prices they receive for the goods and services that they produce – have to adjust to reflect any short fall in productivity.

And that indeed is pretty much what has happened. Chart 2 compares the path of private sector productivity and real product wages. As I said, private sector productivity – shown here by the blue line – is around 15% below the level implied by a continuation of its pre-crisis trend. Over the same period, real product wages – shown by the red line – have fallen by a similar amount.⁵ A quite remarkable degree of real wage adjustment.

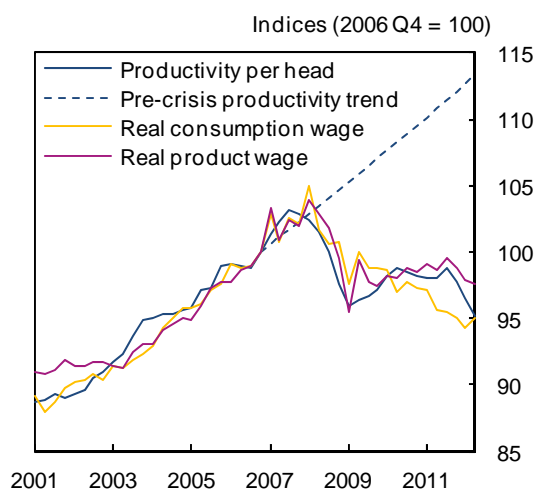
The fall in the terms of trade and the rise in VAT mean that real wages measured in terms of consumer prices – the so-called real consumption wage (shown by the yellow line) – have had to fall even further.⁶ No wonder that people are finding life tough.

⁴ Sterling UK import prices have risen by over 25% since mid-2007. To a large extent, this increase has been matched by higher UK export prices following the depreciation of sterling. Even so, the UK's terms of trade with the rest of the world have fallen by over 3%.

⁵ While the weakness in real product wages over the past few years has been broadly commensurate with that in productivity growth, this need not imply that real product wages have fully adjusted in response to past productivity shocks. Movements in companies' other costs, such as prices of commodities and other imports, will affect both the real wage that companies are prepared to offer employees and the prices of the output in which real product wages are measured. Nonetheless, the scale of the falls in real product wages relative to trend suggests that a large proportion of the required adjustment to past shocks has taken place.

⁶ The rise in VAT and increases in import prices will have had a larger impact on CPI inflation than on output prices (measured at basic prices), which implies that the real consumption wage will have fallen by more than the real product wage.

Chart 2: Private sector productivity per head, real product wage and real consumption wage⁷



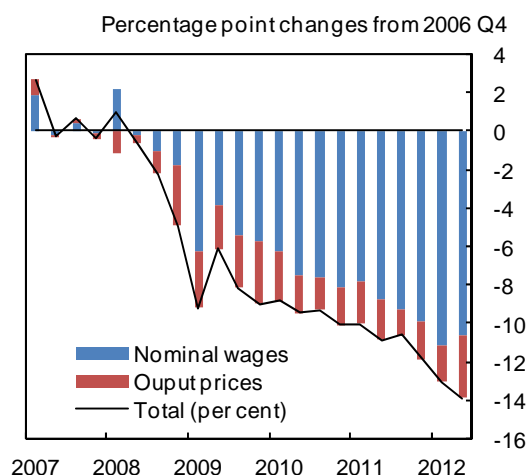
But what does any of this have to do with monetary policy and sticky inflation?

Monetary policy has only a limited role to play as an economy adjusts to these types of real shocks. The final destination can't be altered. Like a London cabbie picking up a new fare, all that monetary policy can do is decide the route by which that destination is reached. That is, by choosing the stance of policy, the Monetary Policy Committee (MPC) can influence the balance between demand and supply in the economy and hence how much of the required adjustment to real wages comes via slower nominal wage growth and how much by higher inflation. The MPC can try to pick the least costly route, but ultimately it can't avoid the journey being long and painful.

The road travelled by our economy over the past few years is shown in Chart 3, which shows the relative contributions of slower nominal wage growth and higher inflation in bringing about the adjustment in real wages. As I mentioned, real product wages are around 15% below the level implied by a continuation of their pre-crisis trend. Around three quarters of that adjustment has been achieved via slower than usual nominal wage growth – shown by the blue bars. We have seen a marked moderation in nominal pay growth.

⁷ Labour productivity is defined as market sector output per head. The continuation of the pre-2008/09 recession trend is calculated by projecting forward labour productivity from 2007 Q1 using the average quarterly growth rate between 1999 Q1 and 2006 Q4. The real product wage is defined as private sector average weekly earnings divided by the market sector output deflator (at basic prices). The real consumption wage is defined as private sector average weekly earnings divided by the Consumer Price Index.

Chart 3: Contributions to deviations in private sector real product wage from pre-crisis trend⁸



Even so, around one-quarter of the adjustment in real wages has stemmed from output prices rising more quickly than normal – the red bars in Chart 3. And the cumulative overshoot of the MPC's 2% inflation target is greater than implied by this contribution, since the rise in import prices and increase in VAT caused consumer price inflation to pickup by more than output price inflation.

So did the MPC pick the wrong route? Our job is to steer the economy so as to achieve the 2% inflation target. Does the sustained overshooting of the target suggest that monetary policy should have been tighter over this period such that even more of the required adjustment in real wages came about via slower nominal wage growth and less through higher prices?

As you know, inflation over much of this period turned out higher than the MPC expected. The 'Knowledge' of London Cabbies as they navigate through the streets of London far exceeds our understanding of the economy and how it's likely to evolve.

With perfect foresight, we might have voted for a tighter policy stance. But let's be clear about what that would have meant. That alternative route would have required the MPC to run a tighter stance of monetary policy, thereby presiding over an even deeper recession and an even larger rise in unemployment, such that more of the adjustment came about via slower wage growth. That during a period in which nominal wages were already growing at historically low rates and wage freezes were commonplace. Make no mistake: the cost of opting for a materially tighter monetary policy in the face of the most severe downturn in the post-war period would have been very high.

⁸ Pre-crisis trend growth in private sector real product wages is taken to be 2.3% on an annualised basis, which is in line with average productivity growth over 1999 Q1- 2006 Q4. If output price inflation were 2%, this would imply trend nominal wage growth of 4.3%, which is broadly in line with its pre-crisis average. The chart shows the deviation of private sector real product wages (as defined in Chart 2) from that trend.

The harsh reality is that there are no easy short cuts to achieving these types of real adjustments.

How does all this relate to my original question: why, given the slack in our economy, isn't inflation lower?

It's hard to be certain, but it seems likely that much of the stickiness in domestic costs and prices stems from the real adjustments our economy has been forced to make in recent years.

The majority of that adjustment has been achieved by weak nominal wage growth. Private sector earnings have grown on average by less than 2% a year over the past four years. I very much doubt that such wage restraint would have been possible without some degree of slack in the labour market. To repeat, the suggestion by some commentators that the (wage) Phillip's curve has suddenly become far flatter doesn't seem to accord with the quite remarkable wage moderation seen in recent years.

But the sheer size of the required adjustment has meant that it could not be delivered by wage restraint alone. Some of it had to come about via higher inflation – hence the stickiness.

One important lesson we should draw from this episode – a lesson that we should all know but we sometimes seem to forget – is that there is no simple mechanical mapping from the output gap (however measured) to inflationary pressures. I'm surprised by how often I read that inflation is bound to fall below its 2% target because there is spare capacity in our economy. The size of the output gap is not a sufficient statistic for gauging the degree of inflationary pressure. The downward impetus from spare capacity has to be seen alongside the other factors affecting our economy, not least the real adjustments that our economy needs to make.

So what does all this mean for the future?

Part of the answer to that question rests on the degree of adjustment achieved so far. Although real wages have fallen sharply, it seems likely there is still a little further to go in adjusting to the shocks that we have seen so far. As we saw earlier, real wages have not yet quite fully adjusted to the past weakness in productivity growth and to the shifts in relative prices. The counterpart to that incomplete adjustment is that companies' margins have been squeezed. The private sector profit share is a little below its historical average. That squeeze is unlikely to continue indefinitely. Companies' margins at some point are likely to need to be restored, either by production costs growing less quickly or prices rising more quickly. The adjustment process is not yet complete.

The other part of the answer depends on what happens to productivity going forward. We don't have a complete answer for why productivity growth has stalled in recent years or for how quickly it's likely to begin

to pickup. But to the extent that the weakness in productivity persists, domestic cost pressures are not likely to ease materially unless private sector wage growth slows from its already muted rates.

To sum up this part of the discussion.

The stickiness of inflation is not a reflection of a rigid, inflexible, labour market. Far from it, the degree of wage flexibility observed in the wake of the financial crisis has been one of the most encouraging features of our recent economic performance.

Nor does it imply that the laws of economics have been revoked such that slack in the labour market no longer tempers wage growth. On the contrary, my guess is that the elevated level of unemployment has been instrumental in bringing about the wage restraint that we have seen.

Rather, the stickiness of inflation is a by-product of the real adjustment that our economy has been forced to make. The MPC could have tried to achieve a lower rate of inflation over this period. But only by steering a course involving an even deeper recession and even higher unemployment. There are no easy fixes to these types of real adjustments

Looking ahead, it seems likely that that this adjustment process is not yet complete and so the stickiness in inflation may persist for a while yet.

Coupon Transfers

Let me turn now to consider some of the issues surrounding the decision by the Government to use the cash flows generated by the Asset Purchase Facility (APF) to pay down government debt. This decision has led to a number of concerns and worries being raised, many of which are, to my mind, misplaced.

Some have argued that this decision amounted to some form of monetary financing. That's simply not right. The key point to remember here is that – as a result of the indemnity provided by the Government to the Bank on the asset purchase programme – all of the ultimate losses or gains made by the APF accrue to the Exchequer. Up until this decision, the Government in effect had been issuing debt in order to pay coupon payments into a savings account that it owned. It's perfectly reasonable for the government to decide it no longer wants to do that. That is not monetary financing.

It is the case, however, that the decision by the Government to use the £35 billion transfer from the APF to issue less debt has an effect akin to a similar sized increase in the MPC's asset purchase programme. Both reduce the amount of government debt held by the private sector and so boost – at least initially – the amount of broad money in circulation. This has led some commentators to worry that the Bank is no longer

in control of monetary policy; that the monetary stance is being determined by the Government rather than by the Bank. Again, I think this concern is misplaced.

The decisions made by the MPC are transmitted through to the wider economy via their influence on a wide range of interest rates and asset prices. That is, via their influence on monetary conditions in our economy.

But monetary conditions are affected by a number of other factors.

By the gradual appreciation of sterling over much of the past year.

By the continuing fall in corporate bond yields.

By decisions made by the FSA concerning banks' capital and liquidity requirements.

The MPC doesn't have a monopoly over factors affecting monetary conditions. But what it does have is the power – each and every month – to respond to those developments by changing its own policy instruments to ensure that the overall stance of monetary conditions is consistent with inflation hitting the 2% target in the medium term. That's as true for the impact of this transfer of coupon payments as it is for any of those other factors.

Aha, I hear you say. Given that the MPC did not change the size of its asset purchase programme in the light of the transfer, are you really asking us to believe – by some strange coincidence – that absent that transfer the MPC would have voted for £35 billion of additional asset purchases?

I can't speak for other MPC members, so let me speak purely personally. For me, the answer is no: in all likelihood I wouldn't have voted for more QE even in the absence of the Government's decision.

So why – some commentators have asked – did MPC members in my position not vote to sell £35 billion of assets and so neutralise the impact of the Government's actions? Again, let me speak purely for myself.

That's a fair challenge, but I fear it implies a degree of precision in policymaking far greater than is actually the case. The likely impact of the government's actions on inflation in 2 or 3 years time is small compared to the uncertainty surrounding the inflation outlook. I'm not suggesting these decisions do not matter, but we should be realistic about our ability to fine tune policy – and, indeed, about the desirability of trying to fine tune policy – each and every month to offset exactly the impact of the myriad of factors affecting monetary conditions.

Moreover, since financial markets often react disproportionately to turning points in the direction of policy, the impact of selling an equivalent amount of gilts is likely to have been far greater than that of the Government's actions. This disproportionate effect of policy reversals is one of the reasons why I didn't vote to reverse the decision to increase the size of the asset purchase programme by £50 billion in July of this year, even though I voted against that increase.

But that doesn't mean that, as a result of the Government's actions, monetary policy is likely to be looser than I judge appropriate for a sustained period. As I said, the MPC revisits the setting of monetary policy each and every month. In subsequent meetings, I'll take the Government's actions into account, both in terms of any decision to increase further the size of the asset purchase programme and, potentially, in terms of the timing at which we begin to tighten monetary policy.

Rest assured: the MPC remains firmly in control of the stance of monetary policy.

So does this mean that all the concerns and worries expressed about this transfer of coupon payments are much ado about nothing? Not quite: there is a potential sting in the tail.

The flows of money between the Bank and HMT that are likely to result from this decision are large; very large. As I said, the initial transfer from the APF is for £35 billion and, until such times as the MPC begins to tighten policy, the total size of this transfer is likely to accumulate at a rate of around £10 billion or so per year. But – and this is the key point – under many plausible assumptions, the size of the eventual profit and loss of the APF is likely to be small relative to this gross transfer.⁹ If the gross transfer from the Bank to HMT is very large, but the net profit or loss is relatively small, the implication is that much of that transfer will eventually need to be reversed.

The transfers are most likely to be reversed at a time when the MPC is tightening monetary policy, raising Bank Rate and selling back gilts. This is already likely to be a time at which the relationship between the Government and the Bank will be under increased scrutiny since the MPC's actions will be increasing Government borrowing costs rather than reducing them as now. This relationship might be further complicated if, at that very same time, the Government has to increase its debt issuance in order to finance these reverse flows back to the Bank.

None of this is a deep economic problem. The MPC's decisions about the pace at which to tighten monetary policy will, as always, be determined by the outlook for inflation. And the Bank has a firm agreement that

⁹ The ultimate profit and loss of the APF will depend on a range of factors and is impossible to predict with any certainty. But under many plausible scenarios, the net profit or loss is likely to be relatively small. In that context, I view the scenarios in the OBR's recent analysis which allow for the possibility of a rise in gilt yields as the MPC unwinds its asset portfolios more likely than the OBR's central assumption that assumes no impact on gilt yields (OBR 2012). It is important to recognise that the final profit or loss of the APF does not provide a measure of the financial implications of the asset purchase programme. See Bean (2009) for a discussion of this issue.

these return payments will be met by the Government on a timely basis.¹⁰ But we should have our eyes open that large financial flows between the fiscal and monetary authorities may raise understandable concerns.

Conclusion

Let me conclude.

Inflation remains above its 2% target. Some of that stickiness in inflation reflects the impact of changes in the prices of goods and services that are less affected by the balance of domestic demand and supply. But much is probably a by product of the painful adjustments our economy has been forced to make in recent years. The resilience of domestically generated inflation doesn't mean that slack in the economy hasn't helped to temper inflationary pressures. But rather that it hasn't been sufficient to ensure that all the adjustment could be achieved via weak nominal wage growth alone.

This adjustment process probably still has some way to go. That's one of the reasons why, in the MPC's Inflation Report published last month, inflation was judged likely to remain above its 2% target for much of the next two years. There are limits to what monetary policy can do in the face of such real adjustments. But I'm pleased to report that the death of the MPC's independence has been greatly exaggerated. And we will continue to do everything we can to steer our economy on its journey through these adjustments back to normality.

¹⁰ See the exchange of letters between the Governor of the Bank of England, Sir Mervyn King, and Chancellor of the Exchequer the Rt. Honourable George Osborne MP, dated 9th December 2012.

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