

# Engineering Revisited – speech by Sarah Breeden

Given at the UK Women in Economics Annual Networking Event

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# Speech

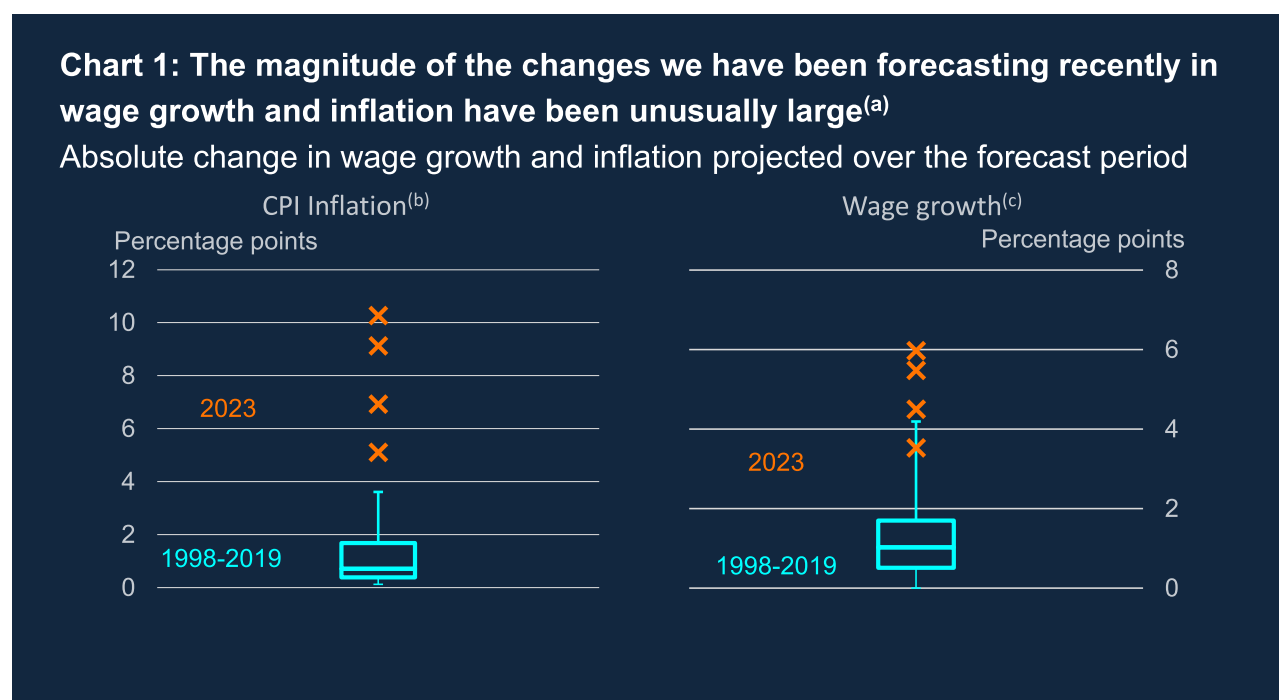
Thank you for having me here today.

It has been seven weeks since my first speech as a monetary policy maker. Today I'll provide an update reflecting the significant data news since then.

## My approach to assessing the data

In December, I set out how I thought monetary policymaking should be best considered as engineering rather than a science at present.

What did I mean by this? Having been hit by a series of unprecedented shocks – the departure from the European Union, a once-in-a-hundred-year pandemic and the start of the biggest war in Europe for 80 years – the UK economy had been subject to significant volatility. And, as the magnitude of the swings in the economic outcomes we monitor had gotten larger, so too had the magnitudes of the changes we have needed to forecast. In response to repeated supply shocks, this has been particularly true for inflation and wage growth (shown in the orange crosses in **Chart 1**).



Sources: ONS and Bank of England calculations.

(a) Box and whisker plot shows the median, interquartile range and absolute range for projections consistent with successive inflation reports and monetary policy reports from February 1998 to November 2019.

Crosses show projections consistent with monetary policy reports for 2023.

(b) Absolute differences between the latest quarter for which data was available at the time of forecast and the MPC's forecast for annual CPI inflation three years out.

(c) Absolute differences between the latest quarter for which there was data available at the time of forecast and the indicative projection for annual growth in whole-economy average weekly earnings three years out since August 2010. Data prior to that use the average earnings index, the pre-cursor to average weekly earnings.

When shocks hitting the economy and the changes we forecast become this large, we need to be humble about the ability of our models to fully capture the complex dynamics of what is happening and to fine tune economic outcomes.

It was, for example, uncertain how firms and households would behave in response to the very high levels of inflation and the sharp tightening in monetary policy seen over the past couple of years. Such events had not been seen since the introduction of inflation targeting and so it was unclear how well these dynamics would be accurately captured in our models. In such a situation, I suggested we must – like engineers – pay attention to real world outcomes, learn how the economy is responding to shocks, and adjust accordingly.

My interpretation of recent developments had led me to two lessons. First – that there was greater than usual uncertainty about the resilience of demand, a part of which I attributed to uncertainty about the transmission of monetary policy. Second – that wages and prices had been stickier than normal. And I set out two scenarios that illustrated these uncertainties: one where demand was weaker than expected as the Monetary Policy Committee's (MPC's) previous tightening in monetary policy took hold and one where inflation remained stubbornly persistent as a result of continued and strengthened second-round effects. And I highlighted how considering the impact and likelihood of those scenarios would help guide my policy response.

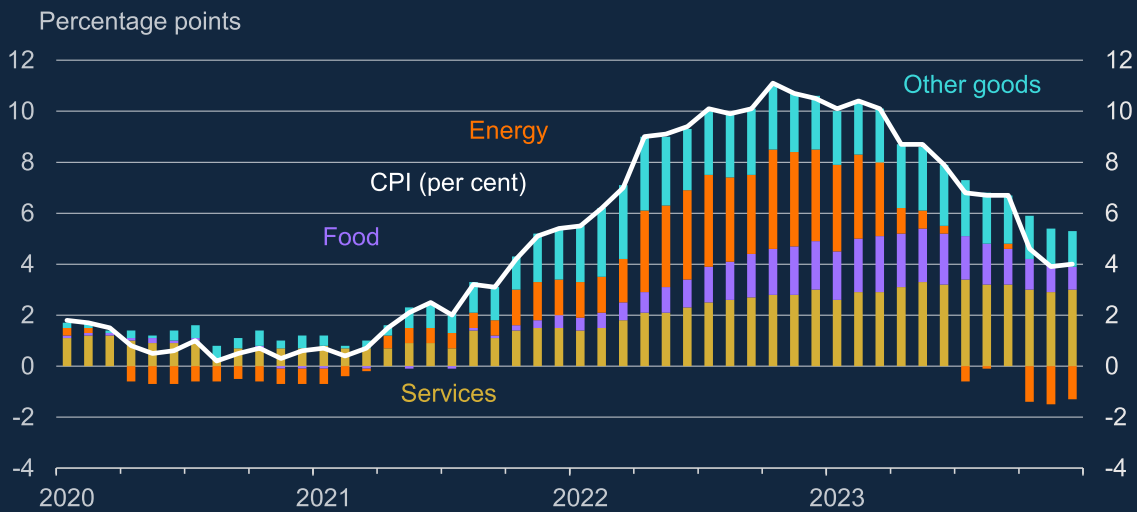
With that backdrop, the scenarios have provided me with a helpful framework to assess the very considerable amount of news received since December.

And so today I want to talk today about my interpretation of that news, what that means for the likelihood of either scenario occurring and, most importantly, what I think that means for the policy outlook.

### **What have we seen?**

Starting with inflation, headline CPI inflation ended the year at 4.0% in December – a little over half a percentage point lower than we expected at the time of the November Monetary Policy Report (MPR) and down from over 11% at its peak in October 2022. The downside news – which was broad-based across lower fuel, core goods and services inflation – was a very welcome sign that things are moving in the right direction.

**Chart 2: Consumer price inflation has continued to fall**  
Contributions to CPI inflation <sup>(a)</sup>



Sources: Bloomberg Finance L.P., Department for Energy Security and Net Zero, ONS and Bank of England calculations.

(a) Data to December 2023.

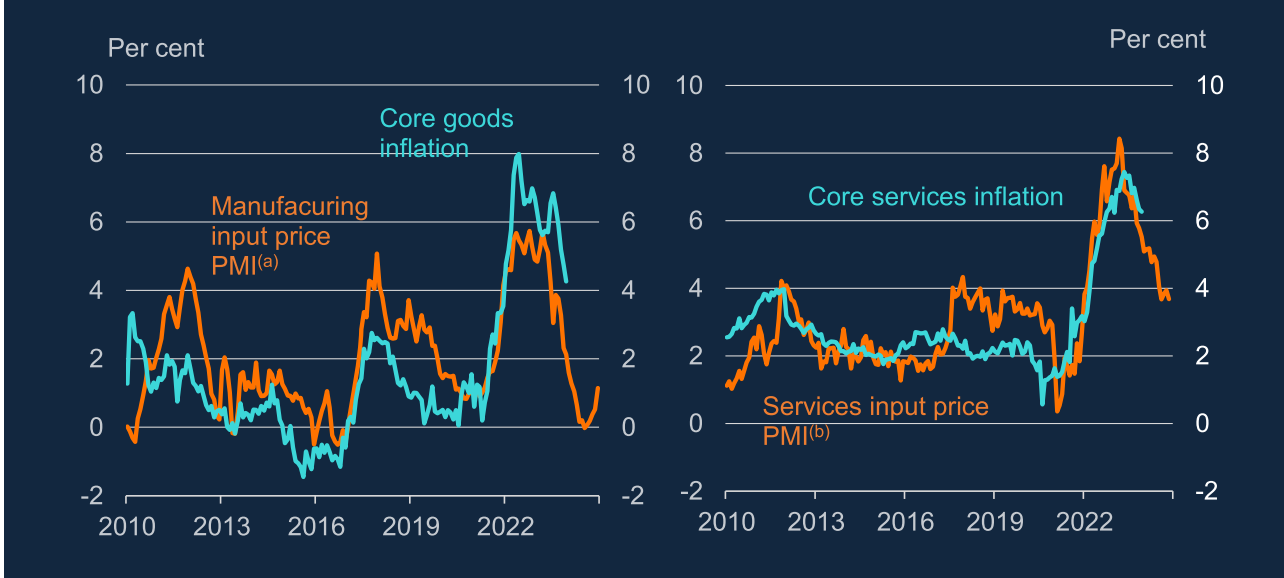
In an absolute sense, the fall in inflation can largely be accounted for by a fading of global inflationary shocks (the orange and purple bars in **Chart 2** show energy and food prices), although higher interest rates have of course been vital in acting to contain second-round effects.

Easing input cost pressures have weighed on core consumer goods inflation and are indeed expected to continue do so in the near term (as indicated by input price PMIs in **Chart 3**).

We have seen a similar trend in services price inflation, albeit to a much lesser extent so far, where, despite recent downside news, inflation remains above 6%. This is perhaps not surprising. Services inflation is by its nature less volatile than goods price inflation. Labour costs make up a significant part of services firms' costs. Some combination of a moderation in pay pressures and firms' margins will be required for services inflation to return to more normal rates.

**Chart 3: Easing input cost pressures have weighed on goods and, to a lesser extent, services price inflation**

Core inflation and PMI input price indicators (leading by 10 months) <sup>(a)</sup>



Sources: ONS, IHS Markit/CIPS and Bank of England Calculations.

(a) Manufactures input price PMI is mean variance adjusted to core goods inflation and leads by 10 months.

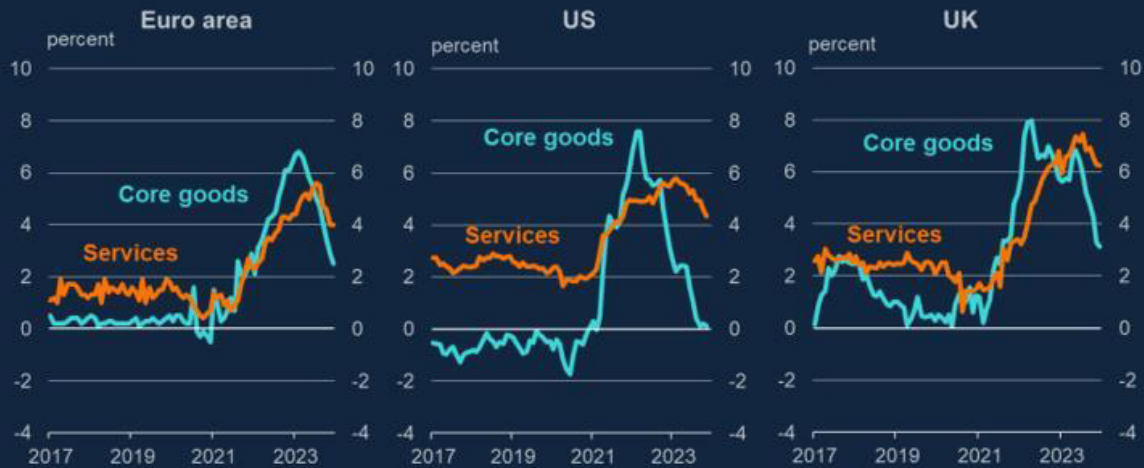
(b) Services input price PMI is mean variance adjusted to core services inflation and leads by 10 months.

Looking overseas, and consistent with this story, we have seen good news on inflation since December in international data too, with a pronounced decline in core goods inflation across advanced economies, although at a somewhat faster pace in the US (**Chart 4**).

Services inflation, however, remains higher in the UK than both the US and Euro Area. There it is already at rates close to 4% compared to over 6% in the UK, probably reflecting differences in wage growth, which is higher in the UK than elsewhere.

### Chart 4: Core goods inflation has fallen more quickly than services inflation across advanced economies

Annual core goods and services inflation <sup>(a)</sup>



Sources: Bureau of Economic Analysis, Eurostat ONS and Bank of England calculations.

(a) UK CPI core goods inflation refers to goods excluding energy, alcohol, tobacco, food and non-alcoholic beverages. Euro-area HICP core goods inflation refers to Eurostat's series for non-energy industrial goods. US PCE core goods inflation is an in-house measure constructed from the goods inflation subcomponents to be broadly comparable to the euro-area and UK data. Similarly, the US PCE services inflation measure shown here excludes energy services to improve comparability to euro-area and UK data. The chart shows data up to December 2023.

There has been some downside news on wage growth over the past month or so. Annual private sector regular average weekly earnings (AWE) growth declined to 6.5% in the three months to November (**Chart 5**), around 1 percentage point weaker than embodied in the November MPR. However this just brings it closer to the steer from other indicators of annual pay growth which remain in the 6%-7% range - still elevated and, given the current weakness in productivity growth, several percentage points higher than what is consistent with the inflation target were they to persist.

### Chart 5: Regular private sector pay growth has fallen back into line with other indicators

Measures of annual private sector wage growth <sup>(a)</sup> <sup>(b)</sup>



Sources: Bank of England Agents, DMP Survey, Indeed Hiring Lab, KPMG/REC/S&P Global UK Report on Jobs, ONS and Bank of England calculations.

(a) Lines show measures of realised pay growth, while diamonds indicate projections or expectations. Definitions of wage growth vary between each of the measures. Private sector regular pay growth is Bank staff's estimate of underlying pay growth from January to March 2022 and ONS private sector regular pay growth otherwise. DMP shows three-month average realised pay growth from the DMP Survey. KPMG/REC shows average starting salaries for permanent staff compared to the previous month. The REC index is mean-variance adjusted to ONS private sector regular pay growth over March 2001–19 and is advanced by 12 months, which coincides with the greatest correlation with private sector regular pay growth. The HMRC Real Time Information (RTI) measure is adjusted to strip out pay in sectors with a high share of public workers, such as public administration and defence, social security, education, health and social work, to proxy private sector wage developments. In contrast to the AWE measure of private sector regular pay, HMRC RTI data include bonus payments. Latest data points are the three months to November 2023 (ONS private sector regular pay), December 2023 (REC, HMRC RTI and Indeed Wage Tracker) and January 2024 (DMP Survey).

(b) The Agents' pay survey diamond shows respondents' expected average pay settlements in 2024, weighted by employment and sector. The DMP diamond shows average expected pay growth one year ahead for respondents to the January 2024 DMP Survey. Pay growth projections are for 2024 Q1 to 2024 Q4.

The next few months will be incredibly important for my assessment of wage and price persistence, with the majority of this year's wage setting processes set to conclude by April. The survey conducted by the Bank of England's (Bank) Agents around the UK can provide us with an early steer. It suggests a modest decline in pay settlements to 5.4% in 2024, although there are expected to be fewer additional payments to compensate for a higher cost of living.

What will actually happen to pay over the next few months will be influenced by a number of factors, including the path for inflation and inflation expectations, the tightness of the labour market<sup>1</sup> and broader economic conditions more generally.

This latter point is important. Many of the wage settlements set to take effect over the next few months may even have already been decided. But how these feed through to inflation will depend heavily on the economic environment in which they are made. Demand has been somewhat weaker than we had previously thought. And the Bank's Agents survey suggests that firms do not expect to be able to pass on increased costs into prices as much as they did last year. That's an important reminder for us not to focus on a single indicator, such as pay, in considering the medium-term outlook for inflation but to consider developments in the round.

A key influence on the outlook for demand since my speech in December has been a significant downward shift in the yield curve as the market reacted to incoming data news. Given this move, Bank staff now estimate that around two thirds of the peak domestic impact of higher interest rates on the level of GDP has already come through, and while there is uncertainty around this estimate, demand will be stronger as a result<sup>2</sup>.

### **What does this tell me about my two scenarios?**

Considering this data holistically, what have we learnt about how the economy is operating and so the likelihood of either of my two scenarios occurring?

When assessing the weak demand scenario, my key question was whether demand would evolve materially differently to what we had expected in November, given the considerable uncertainty around the strength of the monetary transmission mechanism. But, as time has progressed, we have seen more of the transmission occur. This, combined with the effects of the lower yield curve, means that the amount of transmission that we are still waiting to see come through has become smaller.

Much of what is left relates to developments in the housing market, which appears to have stabilised, and how business investment reacts to demand more broadly. There are still uncertainties here. Indeed, the resilience in the housing market may prove to be a signal that demand is stronger than we expect. However, I am now more confident that downside

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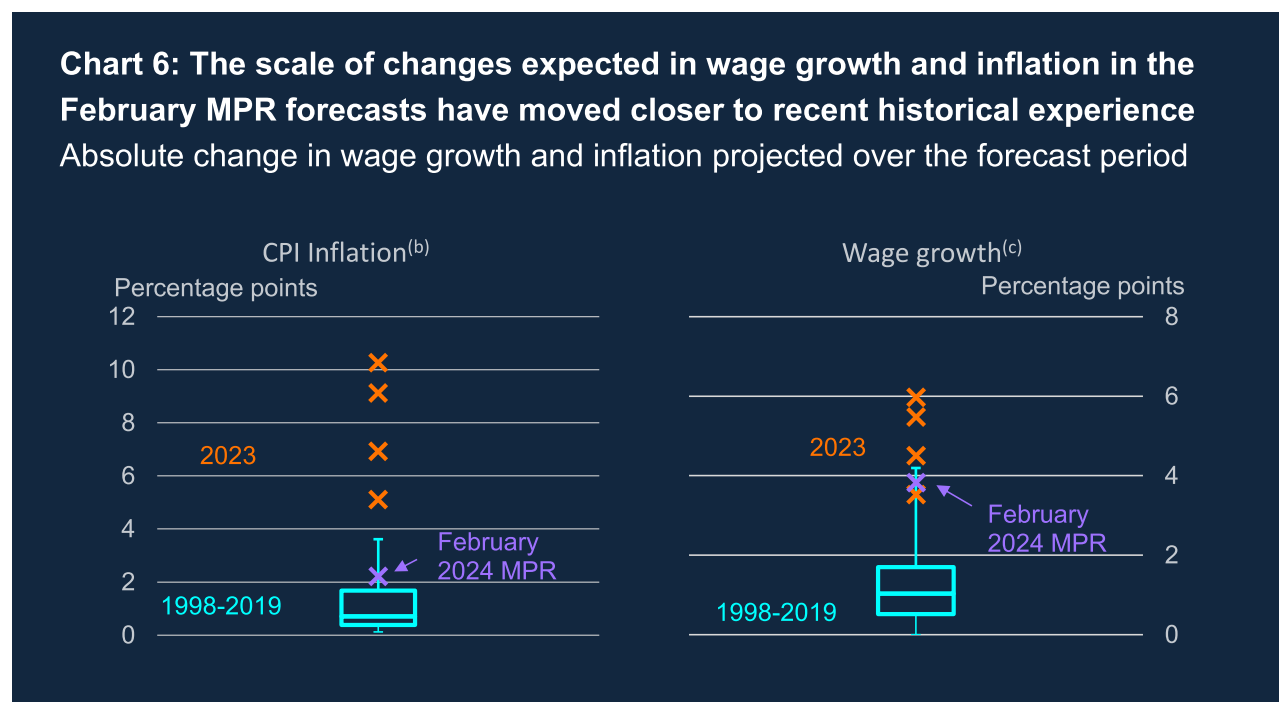
<sup>1</sup> Issues caused by a decline in the response rate of the Labour Force Survey have made conditions in the labour market more difficult to assess at present.

<sup>2</sup> The literature suggests the possibility for non-linear and state dependent effects of monetary policy. For example, [Ascari and Haber \(2022\)](#) find evidence that large monetary policy shocks should yield proportionately larger initial responses to the price level. They also find that in a high inflation trend regime, monetary policy shocks have larger price effects but smaller real effects. [Tenreiro and Thwaites \(2016\)](#) find that the effects of monetary policy can be dependent on the pace of economic growth.



risks to demand are less likely to materialise beyond that embodied in our February forecast.

When assessing the high inflation scenario my key question was about the likely persistence of inflation. The downside surprise in services price inflation and wage growth suggested a little less persistence than we had assumed in our central forecast back in November, and so my concerns about the risk of even greater persistence emerging have diminished.



Sources: ONS and Bank of England calculations.

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That is not to say risks do not exist, however. Whilst our forecasts for the change in inflation and wage growth are now much closer to recent historical experience, we still have some way to go (**Chart 6**). For services inflation to fall to levels consistent with target, some combination of a further moderation in labour cost growth and firms' margins will be needed. I have taken some comfort from developments in other advanced economies, which appear to be a little further ahead than the UK. But I need to see further evidence to be confident that the UK economy is progressing as set out in our forecast. Here,

monitoring wage growth and how firms pass these onto prices over the next few months will be vital.

### **Conclusion: what does this mean for policy?**

When I gave my speech in December, I judged that domestic risks were skewed to the upside. As I set out then, the high inflation scenario would also, in my view, be the more costly of the two<sup>3</sup>, and so was the more important scenario to lean against when setting monetary policy. At that juncture, the question I was focused on was whether there was evidence of more persistent inflationary pressures which might mean we needed to tighten further.

As I have become more confident that persistence is likely to evolve as embodied within our forecast, I have become less concerned that rates might need to be tightened further. Instead my focus, and indeed the focus of many on the MPC, has shifted to thinking about how long rates need to remain at their current level.

To answer this question going forward, I will return once again to engineering. The forecast will, of course, provide a useful guide. But, I will also want to be focused on how real world outcomes are evolving to tell me how well this forecast is capturing the dynamics of the economy. In particular, I will look at how pay growth and demand are influencing firms' pricing decisions, to assess how persistence is evolving in relation to what is embodied within our forecast. And that will allow me to be more confident that inflation will return sustainably to target in the medium term.

I'd like to thank Nickie Shadbolt for her assistance in drafting these remarks. I would also like to thank Andrew Bailey, Lauren Barnes, Jamie Bell, Jonathan Haskel, David Latto, Martin Seneca, Dave Ramsden and Carleton Webb for their helpful input and comments. The views expressed here are not necessarily those of the Monetary Policy Committee (MPC) or the Financial Policy Committee (FPC).

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<sup>3</sup> See my [speech](#) from December.