

# Here we go again? Assessing the inflation risks of the recent energy shock – speech by Megan Greene

Given at University of Derby Business School

02 June 2026

---

# Speech

---

## Introduction

It's a real pleasure to join you here at the University of Derby. As the birthplace of the modern factory system and as the so-called "capital of rail", Derby is the perfect place from which to explore some of the implications for monetary policy of disruptions to supply chains.

The past few years have been a real doozy on this front. Starting in 2020, we had Covid 19 lockdowns, supply chain disruptions and a sharp contraction in economic activity. Two years later, Russia's invasion of Ukraine caused a surge in energy prices, compounding existing pressures and contributing to UK inflation of over 11%.

And now we are facing yet another energy shock following the eruption of conflict in the Middle East, including attacks on energy infrastructure and the effective closure of the Strait of Hormuz. It would seem that negative supply shocks have become the new norm ([Greene, 2025](#)).

But not all shocks are created equal. Their impact on the economy, and the appropriate monetary policy response to them, will depend on a number of different factors. I intend to explore the latest shock in the Middle East in light of this today.

But before I get into the economics, I think it's important to recognise that the outbreak of war in the Middle East has had a profound human impact on those in the region, with many lives sadly lost. Although today I will be focusing on the macroeconomic implications of the conflict, this very real human impact should not be overlooked.

Much about the current energy shock remains uncertain – especially its duration. But even if the war ends today and the Strait of Hormuz reopens fully and immediately, the macroeconomic impact will continue to be felt over the coming year.

As a negative supply shock, the war in the Middle East will push up on inflation and down on activity, putting central banks in an awkward position of trading off supporting price stability with supporting output. Traditionally, monetary policymakers have tended to look through such shocks – there is nothing the Bank of England can do to reopen the Strait of Hormuz. But, as I have noted [before](#), I believe a more proactive approach may be needed to lean against inflation when an economy has been hit by successive supply shocks.

This will depend to a large degree on how much second-round effects take hold through a shift in the wage- or price-setting processes. Unfortunately, conclusive evidence on

second-round effects will take time to emerge. Most pay settlements in the UK had already been agreed before the outbreak of the war, for example, and so we may not have much sense of how wage setting has been impacted until next year. Our Decision Maker Panel (DMP) and Agency intelligence may help provide some indication of firms' pricing intentions earlier than that, but the picture will remain partial. Given that it takes time for monetary policy to impact the economy ([Friedman, 1961](#)), we will have to make a judgement about second-round effects and act accordingly before we're able to verify this judgement.

The aim of my speech today is to draw on theory and recent experience with energy shocks to gauge the likelihood and extent of second-round effects in the current energy crisis. First, I will discuss the ways in which energy price shocks affect inflation, focusing on the role of second-round effects. Second, I will look back at the energy shocks in 2011 and 2022 to assess what factors helped drive inflationary outcomes. Third, I will draw lessons from these episodes to gauge the extent of second-round effects from the shock at hand. Finally, I will use scenarios to explore the appropriate monetary policy strategy.

## How can an energy price shock lead to persistent inflation?

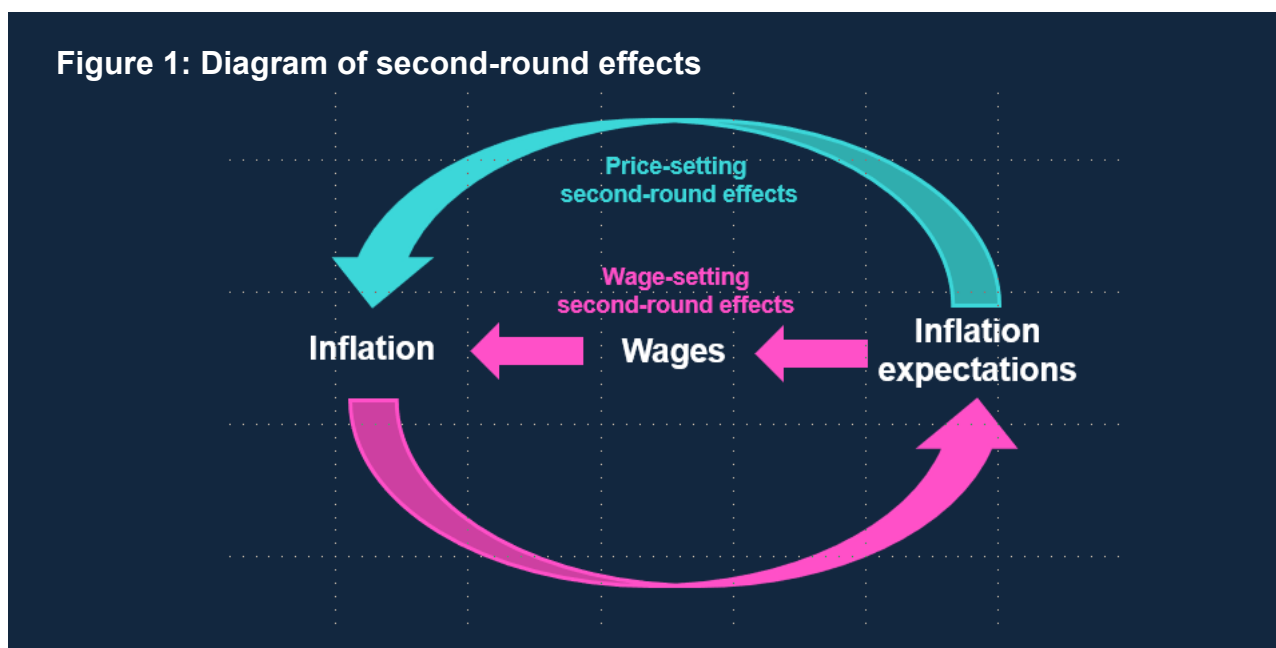
There are several channels through which energy price shocks affect inflation. The first channel involves the **direct effects of higher energy prices**. An example of this is the increase in the cost of fuel and utilities directly consumed by businesses and households. These effects come through very swiftly and in isolation are unlikely to persistently raise inflation. The direct effects are relatively easy to measure for a given shock and in the current episode are already evident in some of the data. Indeed, the April CPI release recorded the largest rise in fuel prices since at least 1988, with forecourt prices rising around 15% on the month and 23% on a year ago.

The second channel involves the **indirect effects of higher input costs**, for example the pass-through of higher energy costs by firms that use energy as an input to produce goods and services. These take a little longer to come through, as firms may not pass on cost increases right away and the price hikes can take some time to filter through the entire supply chain. These effects can therefore persist for some time.

A third channel is that of **real income effects**. For a net importer of energy, such as the UK, a rise in energy prices constitutes a negative terms of trade shock, reducing incomes and weighing on demand. All things equal, this will push down on inflation.

While these channels are important considerations, they are not the focus of my speech today. As a monetary policymaker, it is the **second-round effects** of such a shock that prove most persistent and therefore are most likely to impact the monetary policy relevant time horizon.

There are two main avenues through which second-round effects propagate across the economy following a shock (Figure 1). The first avenue is via a change in wage setting processes. Households' inflation expectations rise following the shock and they demand higher nominal wages in order to protect their purchasing power and minimise any deterioration in their living standards. The second avenue is via a change in price setting processes. This occurs when firms' inflation expectations increase, leading them to raise prices by more than can be explained by higher direct or indirect costs alone in order to maintain or improve their margins.



Inflation expectations are therefore “terribly important” ([Powell, 2021](#)), given the key role they play in propagating second-round effects via both channels (Figure 1).

But it is not just inflation expectations that shape second-round effects. The size of the shock matters – large supply shocks have been found to lead to supply-chain pricing cascades, exaggerating the price impact for a given initial disturbance ([Ghassibe and Nakov, 2025](#)).<sup>1</sup> The type of energy shock must be considered too, as oil and gas shocks do not behave the same way. The Bank’s energy BVAR finds that oil supply shocks tend to have more immediate but short-lived effects on UK inflation, while gas supply shocks tend to have broader and more persistent effects ([Copeland et al., 2025](#)).

While higher inflation expectations may raise firms’ desired prices and workers’ desired wages, that does not necessarily mean they will be successful in getting them. The economic context also matters. First I’ll consider how the shock interacts with expectations before considering the wider economic backdrop.

<sup>1</sup> [Ghassibe and Nakov](#) (2025) make use of Euro Area data. Bank analysis using UK data also finds non-linearities stemming from the size of the energy shock.

### *Inflation expectations*

We know that inflation expectations play an important role in driving second-round effects following an energy price shock. But what drives them? Let's consider households' and firms' expectations separately.

In general, households are not particularly good at gauging current or future inflation and tend to believe that it is higher than it actually is. One proposed explanation for this is that households are “rationally inattentive” ([Weber et al, 2023](#)), neglecting to pay attention to inflation when it is low and stable, but then paying more attention to it when it is high and volatile, adjusting their expectations accordingly. As such, the size of the shock and its impact on inflation matters for household expectation setting.

This also aligns with analysis undertaken by Bank staff, which finds that household inflation expectations become more sensitive to global oil price shocks above certain inflation thresholds. Consequently, the risk of second-round effects emerging increases when overall inflation rises to above 3.1% (Gaffney et al., 2026).

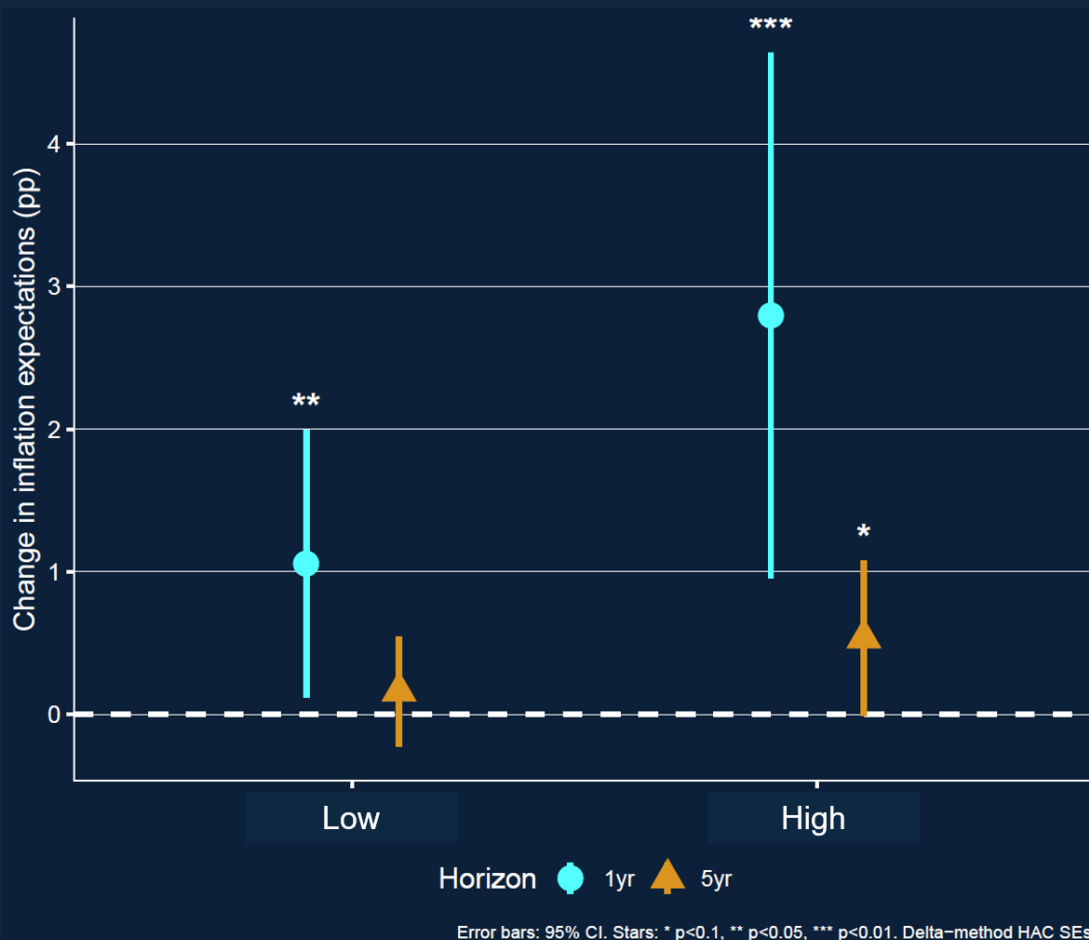
Moreover, households' inflation expectations are particularly responsive to changes in the prices of salient items, particularly energy ([Patzelt & Reis, 2026](#)) and food ([Anesti et al, 2025](#)). Analysis by Bank staff suggests that the sensitivity of inflation expectations to energy - in particular, petrol prices - is partly driven by media coverage. Figure 2 shows that when media coverage of energy prices is heightened, household expectations respond by nearly 3pp in the short-term and around 0.5pp in the longer term to a 1pp change in inflation driven by petrol prices.<sup>2</sup>

---

<sup>2</sup> Sensitivity to utilities is less stark, though still significant at the 5-year ahead horizon.

**Figure 2: Media coverage contributes to increasing the sensitivity of household inflation expectations to petrol prices<sup>(a)</sup>**

Change in inflation expectations (percentage points)

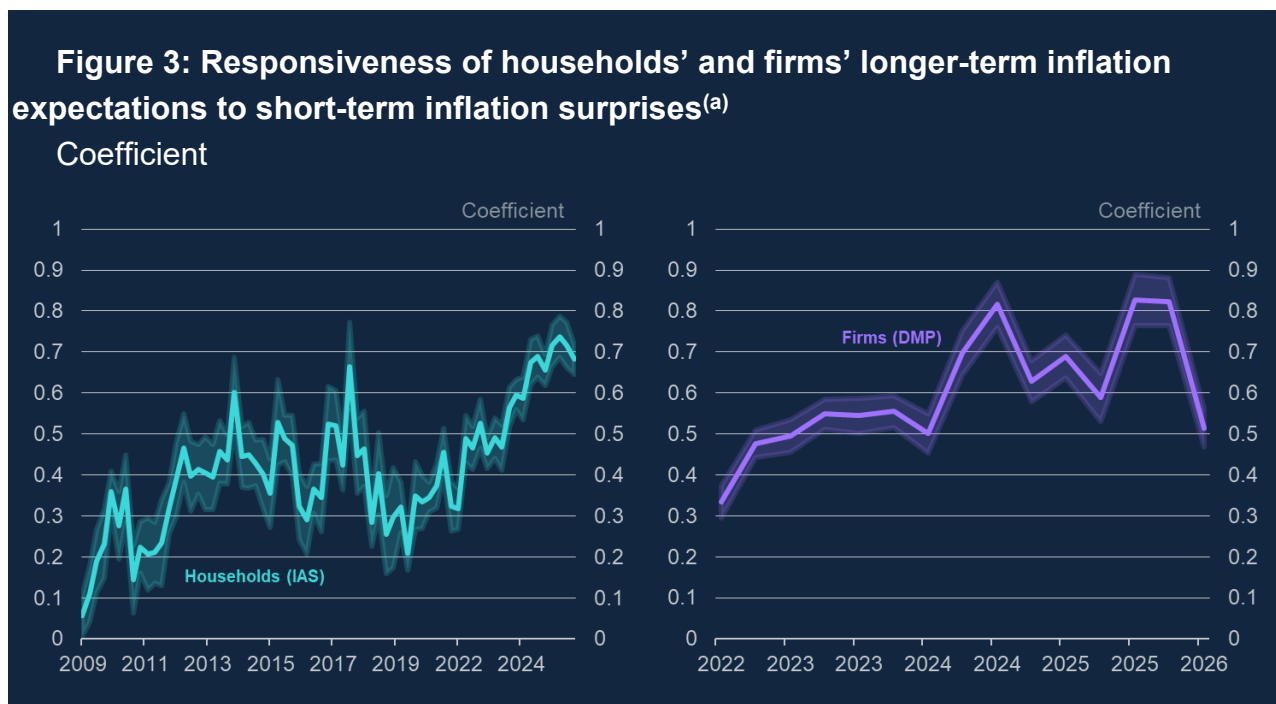


Source: ONS, Citi/YouGov and GDEL and Bank calculations.

- a) This chart depicts results from an augmented version of the regression specification in [Anesti et al., \(2025\)](#), testing the association of changes in Citi monthly household inflation expectations with changes in Core, Food, Petrol, and Utilities-driven inflation, respectively (January 2017 – April 2026). We interact changes in Food, Petrol, and Utilities-driven inflation with high media coverage dummy variables capturing whether the number of references to food and energy prices, respectively, in online UK media articles in that same month was in the top quartile in our sample. If the number of references is in the top quartile, then media coverage is said to be “High”, otherwise it is “Low”. We also include controls capturing the magnitude of the change in inflation driven by each component. Asterisks indicate statistical significance at the 1%(\*\*\*) , 5%(\*\*) and 10%(\*) level.

But it’s not only greater attentiveness that can amplify the response of inflation expectations and reinforce an inflationary episode. Following periods of successive inflation surprises, households and firms may place greater weight on more recent inflation outturns when it comes to forming their expectations ([Gáti, 2023](#), [Carvalho et al., 2023](#)). Indeed, recent staff analysis highlights that households’ and firms’ longer-run inflation

expectations have become more sensitive to short-term inflation surprises since the pandemic (Figure 3). This suggests that longer-term inflation expectations are less solidly anchored than previously.



Households: slope of 5y-ahead on 1y-ahead (IAS). Households (IAS): sex, age, income, education, region, housing tenure. Firms: slope of CPI 3y-ahead on CPI 1y-ahead (DMP). Firms (DMP): industry, number of employees, sales, lag of respondent's medium-horizon inflation expectation if in levels. A coefficient close to zero indicates anchored long-horizon expectations, insensitive to short-run developments. A rising coefficient indicates increased de-anchoring as long-horizon inflation expectations co-move with near-term news.

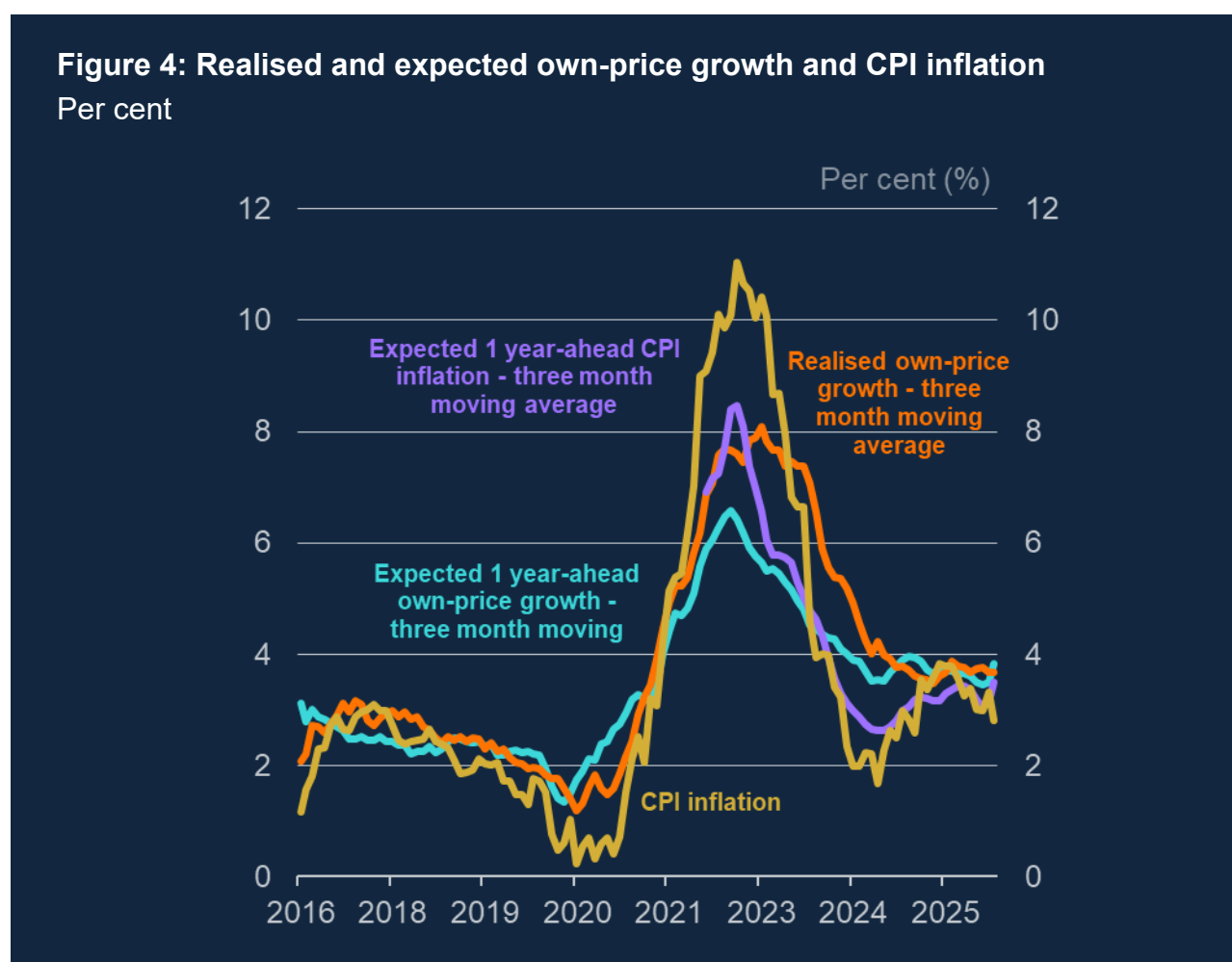
Firms are attentive to inflation outturns as well—whether higher inflation is driven by energy shocks or not. Evidence suggests that firms update their perceptions of CPI inflation very quickly as new data is released – often the same day as the data print ([Yotzov et al, 2024](#)). Headline inflation influences firms' expected own-price growth; a one percentage point increase in headline inflation is associated with a 0.3 percentage point rise in firms' expected year-ahead own-price growth (ibid.).<sup>3</sup> While we only have a few data points since the current war broke out, it also appears that firms have become more sensitive to CPI inflation changes when updating their inflation perceptions in 2025-26 relative to 2022-24.

Figure 4 shows a positive relationship between CPI inflation (in gold), firms' CPI expectations (in purple) and their expected price growth (in aqua). In turn, their expected price growth also moves closely with their realised price growth (aqua versus orange line

<sup>3</sup> Between 2022 and 2024

in Figure 4) – although there can be deviations between the two, such as post-2022 when firms underestimated the extent to which their prices would increase. Together, this suggests that firms’ pricing is linked to the general inflation environment.

The response of firms’ own-price growth expectations to changes in inflation are asymmetric as well – they have a stronger response when inflation rises than falls. As with households, media coverage also plays a role in their sensitivity – a one standard deviation increase in media coverage about headline inflation is associated with a 0.4 percentage point increase in firms’ own-price expectations (ibid.). Though longer-term comparisons are more difficult given data availability, Figure 3 likewise suggests that firms’ longer-run expectations have become more sensitive to short-run news.



Source: DMP and Bank calculations. Latest data point is for April 2026.

### *The wider economy*

Higher household and firm inflation expectations are a necessary but not sufficient condition for second-round effects to materialise. The state of the wider economy matters too, particularly the balance between demand and supply (or slack). The degree of slack shapes the extent to which higher inflation expectations can feed into wage or price demands.

For instance, workers are likely to possess greater wage bargaining power when the labour market is tight than when it is loose. This is partly because workers likely find it easier to switch jobs under a tight labour market and so can threaten to move to a new employer if they do not receive a wage bump. Firms have to compete harder for talent in a tighter labour market as well, potentially paying more in order to recruit workers.

Similarly, it may be easier for firms to raise their prices and protect their margins when the labour market is tight and demand in the economy is strong.<sup>4</sup> Firms may also be more inclined to raise their prices when they have been through a period of margin compression. When both worker power and pricing power are strong, these pressures can become mutually reinforcing and give rise to a “battle of mark-ups”: firms raise prices to preserve margins as their costs increase, while workers push for higher wages to maintain their real incomes ([Layard & Nickell, 1986](#), [van der Ploeg & Willems, 2024](#)). This, in turn feeds back into firms’ costs and pricing decisions.

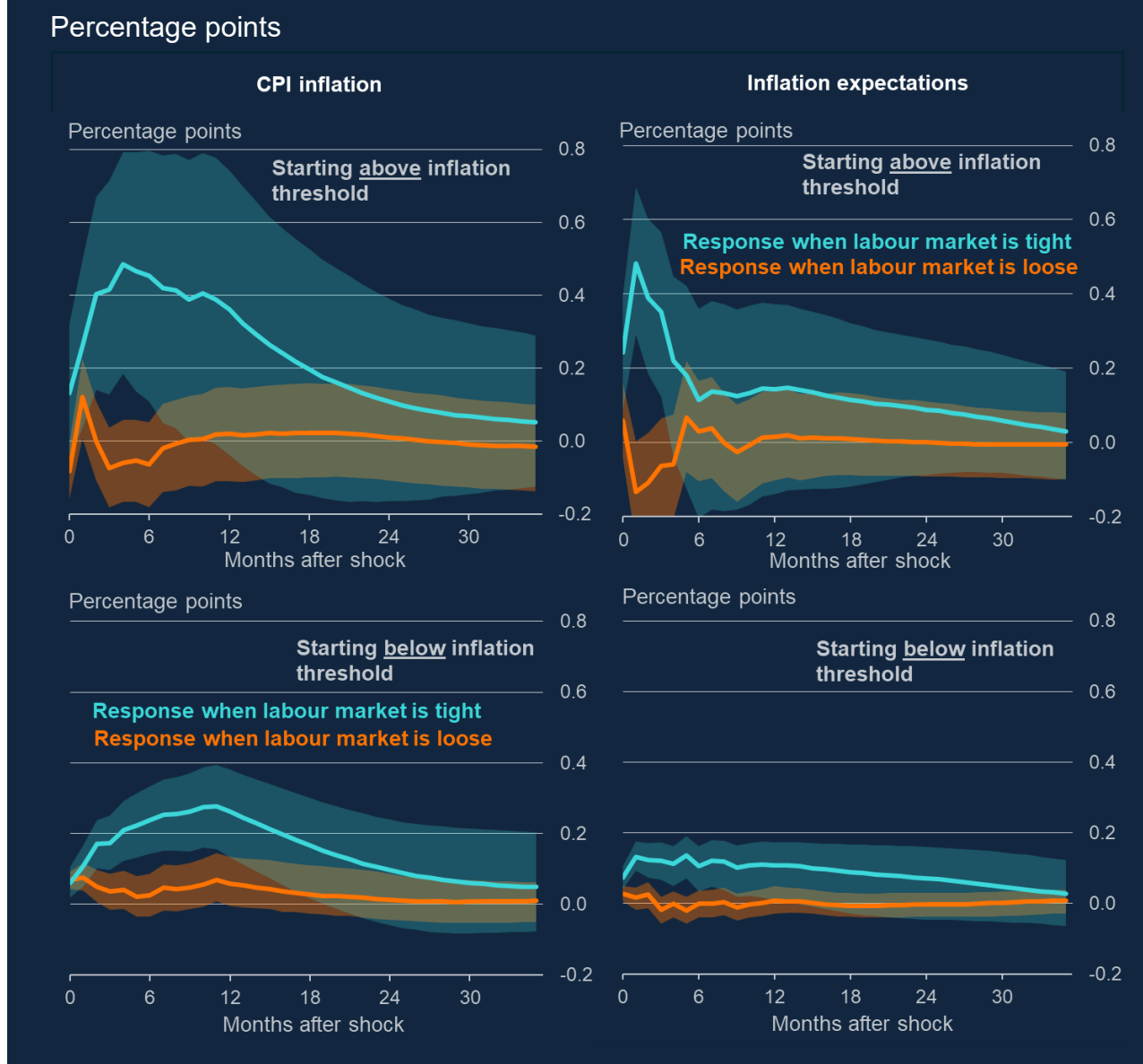
This battle of mark-ups is shown in Figure 5, which extends the threshold analysis I mentioned earlier to consider the state of the labour market at the time of the energy shock. These charts are a series of impulse response functions based on previous adverse oil supply shocks. The left-hand panel shows that, regardless of whether or not the shock occurs when inflation is above the 3.1% threshold, inflation responds more forcefully and persistently in a tight labour market than a loose one (aqua vs orange lines). The difference becomes more extreme when inflation is high (top left-hand panel).

The right-hand panel suggests these differing responses hinge partly on household inflation expectations, which in past episodes tended to rise when the labour market was tight but remain stable when the labour market was loose.

---

<sup>4</sup> There is also evidence to suggest that firms’ price-cost markups are countercyclical ([Kryvtsov and Midrigan, 2012](#); [Gilchrist et al., 2017](#)). This is typically linked to the notion that firms sometimes may have stronger pricing power in a downturn as their competitors fail and concentration in the industry rises.

**Figure 5: Estimated impulse response functions of CPI inflation and inflation expectations to an adverse oil supply shock when inflation is above and below 3.1%<sup>(a)</sup>**



Sources: Bank of England, Citi/YouGov, [Känzig \(2021\)](#), LSEG, ONS, [Stelmach et al \(2025\)](#) and Bank calculations.

- (a) The sample period is January 1989–June 2025; data are monthly. Generalised impulse response functions (GIRFs) to an oil supply news shock by [Känzig \(2021\)](#) that raises sterling oil prices by 10% on impact, from a self-exciting threshold Bayesian vector autoregression that endogenously estimates an inflation threshold (following [Gargiulo et al \(2026\)](#)). The partitioning of the sample yields four regimes in total, with piecewise-linear coefficients across regimes. Bayesian estimation is used. The GIRFs account for regime changes over the propagation horizon. The lines represent the median estimate, and shaded areas show the 68% credibility interval. Results remain broadly similar over an extended sample starting in January 1976, which yields a larger number of observations by regime and allows for the inclusion of more control variables, and when using a filtered unemployment gap as the labour market slack measure. Household inflation expectations refer to the one-year-ahead measure, from the Citi/YouGov survey.

Having slack in the economy reduces the risk that second-round effects are set off and inflation proves persistent. An energy shock could in and of itself increase the degree of slack in the economy by sapping demand. The extent to which this occurs depends on a number of factors, including how much firms can substitute energy for other production inputs, how much households can reduce their energy consumption or smooth their consumption by spending down savings or borrowing, and the degree to which it is firms or households that bear the brunt of the real income squeeze ([Chan et al, 2024](#)). All else equal, weaker demand from the shock can put downward pressure on inflation, leaning against the emergence of second-round effects.

Overall, the extent to which second-round effects take hold following an energy shock will depend on a number of different factors that influence price- and wage-setting. I'll next explore the energy price shocks of 2011 and 2022 in this context.

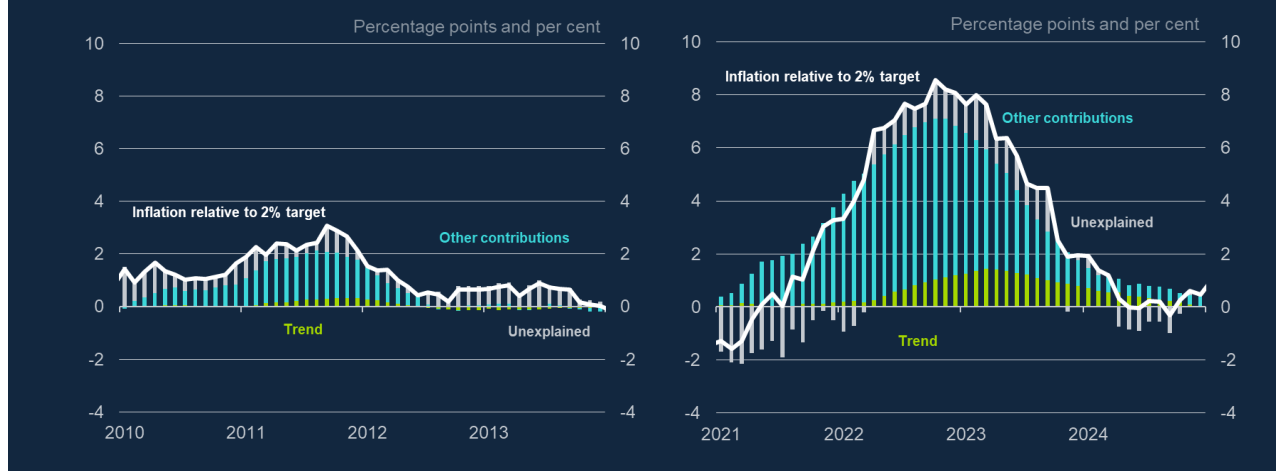
## What can we learn from previous energy price shocks?

We've faced a few energy shocks in recent years that can serve as guides for how the current one might propagate through the economy. Energy prices soared in March 2022 following the Russian invasion of Ukraine. Prior to that, they saw a sharp and sustained rise in the early 2010s as political unrest in the Middle East and North Africa led to heightened concerns over the supply of energy. These are by no means the only adverse shocks we have faced in recent times, but they are useful examples given their very different inflationary outcomes.

In both cases, disruptions to energy markets led to a substantial increase in global energy prices. But while headline inflation rose after the 2011 shock, second-round effects played a smaller role and CPI inflation did not reach the extreme highs of 2022.

This is evident in Figure 6. First, we can compare the evolution of actual inflation relative to target (the white lines), which is significantly bigger following 2022 than 2011. Second, the trend component of inflation (green bars) from our Boosted Inflation Model (BIM) - a machine-learning based decomposition of CPI inflation ([Buckmann, Potjagailo and Schnattinger, 2025](#)) - approximates the degree of second-round effects. The trend component is informed by expectations, past services inflation and wage growth - the parts of inflation the model considers more slow-moving and that we typically think of as driving second-round effects. While by no means a perfect measure of second-round effects, it does suggest that second-round effects were larger and more persistent in 2022 than 2011.

**Figure 6: Boosted Inflation Model (BIM), CPI inflation decomposition<sup>(a)</sup>**  
Annualised and smoothed



Source: Bank analysis based on [Buckmann, Potjagailo and Schnattinger \(2025\)](#). Latest data point is for December 2013 (LHS) and December 2024 (RHS).

- (a) Block-wise predictive contributions (coloured bars) to 1-month-ahead annualised month-on-month CPI inflation (white line), around 1993-2019 mean (2%). Model estimated via cross-validation over the 1989M1–2024M12 sample. White line: actual CPI inflation, annualised and smoothed over 12 months.

The difference in second-round effects and inflationary outcomes between these two episodes mainly boils down to two factors: the nature of each shock and economic context in which the shock hit.

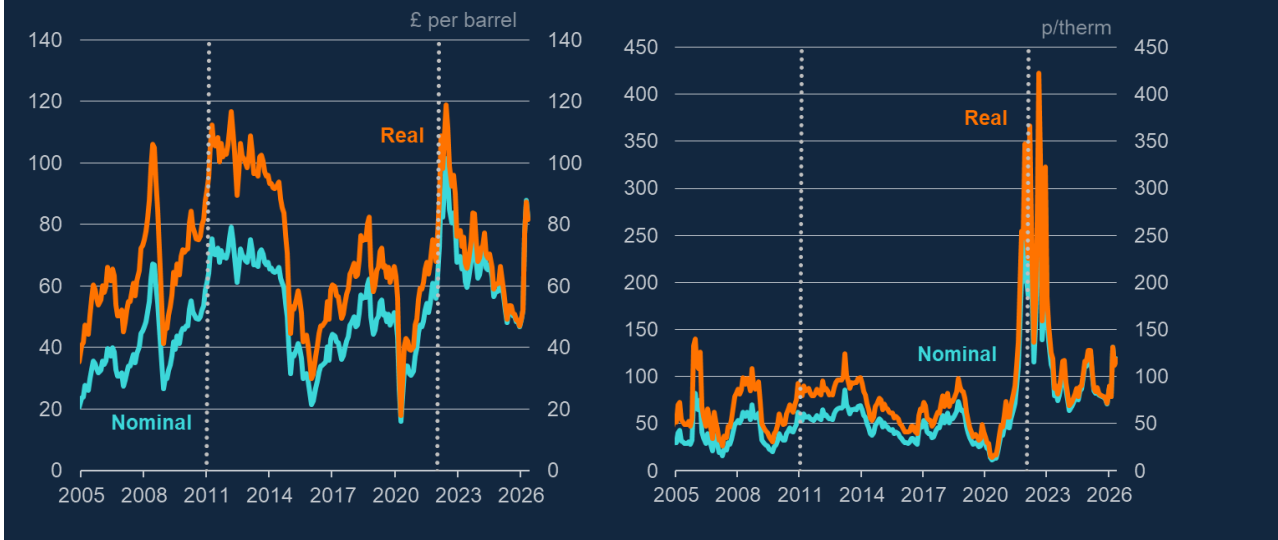
Starting with the nature of the shock, overall energy CPI price inflation peaked at 18% in 2011, compared with 59% in 2022. Figure 7 shows the evolution of oil and wholesale gas prices over the last twenty years. Oil prices have been no stranger to sharp and sudden movements during this period, even outside the episodes we are discussing today.

The outbreak of the First Libyan Civil War prompted a sharp upward surge in real oil prices to over £110 a barrel by April 2011.<sup>5</sup> Prices remained at an elevated level for the next three and a half years. In 2022, oil prices rose to similar highs in real terms, but the increase was not sustained, and prices soon fell back from their peak.

Figure 7 paints a very different picture for wholesale gas prices between the two episodes. Even a quick glance shows that any early volatility in wholesale gas prices – including that seen in 2011 – was dwarfed by the sheer scale of the 2022 surge.

<sup>5</sup> Real prices are deflated using the GDP deflator indexed to February 2026.

**Figure 7: Nominal and real wholesale oil (LHS) and wholesale gas (RHS) prices<sup>(a)</sup>**  
 £ per barrel



Source: ONS, Bloomberg Finance L.P and Bank Calculations.

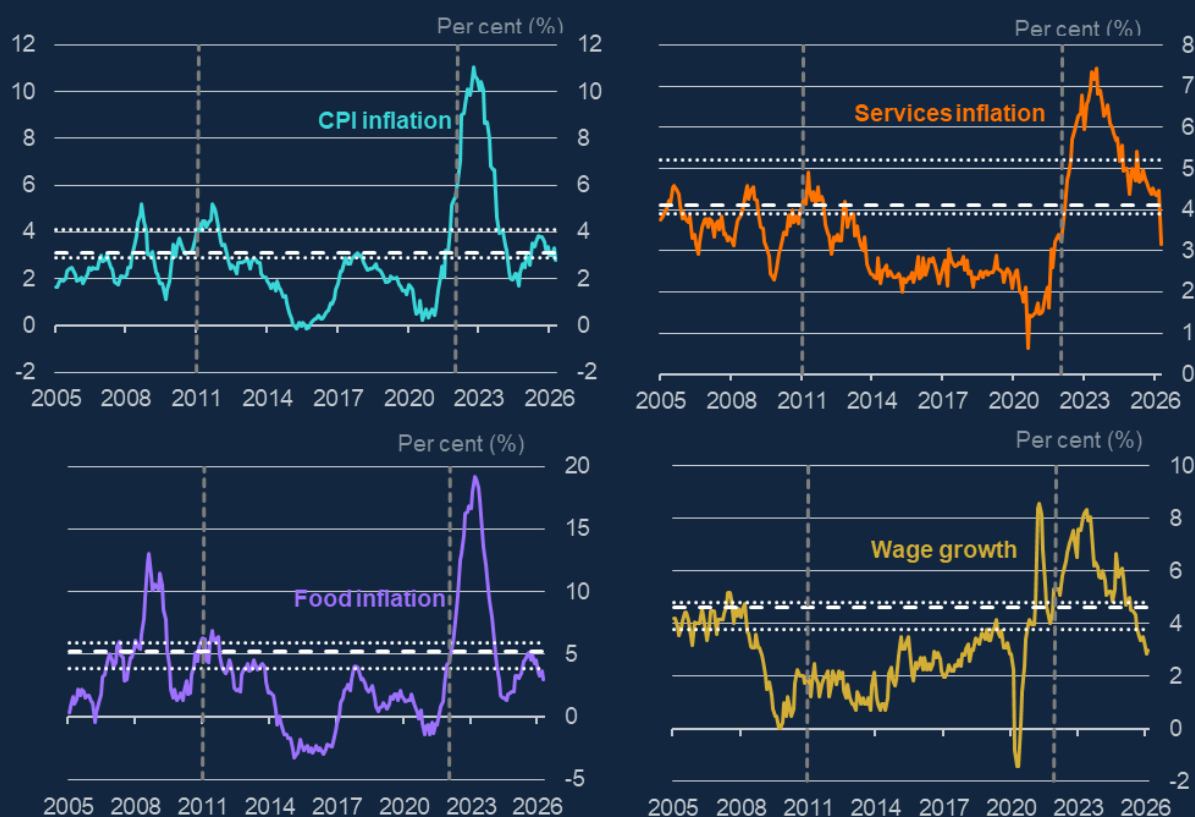
- (a) Oil and gas prices have been deflated using the GDP deflator and indexed to February 2026. For instance, the gap between the LHS chart's orange and aqua lines in 2011 shows the effect of inflation, with oil prices appearing higher when expressed in today's prices than in nominal terms at the time e.g. an oil price of £64 per barrel in February 2011 would be equivalent to an oil price of £96 per barrel in February 2026 prices. Daily prices have been converted to monthly averages. Latest data point is for May 2026. May 2026 average includes daily prices up until 26<sup>th</sup> May for oil and 28<sup>th</sup> May for gas. Vertical dashed lines at February 2011 and February 2022.

As I mentioned earlier, gas shocks tend to have a large inflationary impact in the UK – not just because gas is an important energy source used directly by both UK households and firms, but also because – as the marginal supplier – the price of gas is the most important determinant of UK electricity prices.

The economic context in which the shock hits also matters. Figure 8 shows the historical paths of several inflation measures. We consider headline inflation (in aqua), which captures the overall inflationary backdrop; food inflation (in purple), which is salient for the formation of household inflation expectations ([Anesti, Esady and Naylor, 2025](#)); and services inflation and wage growth (in orange and gold, respectively), which reflect more domestic inflationary pressures.

**Figure 8: Headline CPI, services and food inflation and wage growth with their estimated thresholds<sup>(a)</sup>**

Per cent (%)



Source: ONS and Bank calculations. Latest data point is April 2026 for inflation measures and March 2026 for wage growth.

(a) See Figure 7 for further details on the model underlying the threshold estimates. The white dashed line represents the median estimate of the threshold while the dotted lines represent the 95% confidence intervals. Vertical lines are placed at February 2011 and February 2022.

Each panel also shows the median threshold estimates and the threshold ranges<sup>6</sup> from the threshold analysis I referenced earlier in the white dashed line and white dotted lines, respectively (Gaffney & Potjagailo, 2025)<sup>7</sup>. When they hit these thresholds, the inflation measures are said to enter their individual “high regimes”. In these regimes, inflation dynamics change as households and firms show greater attentiveness to inflation,

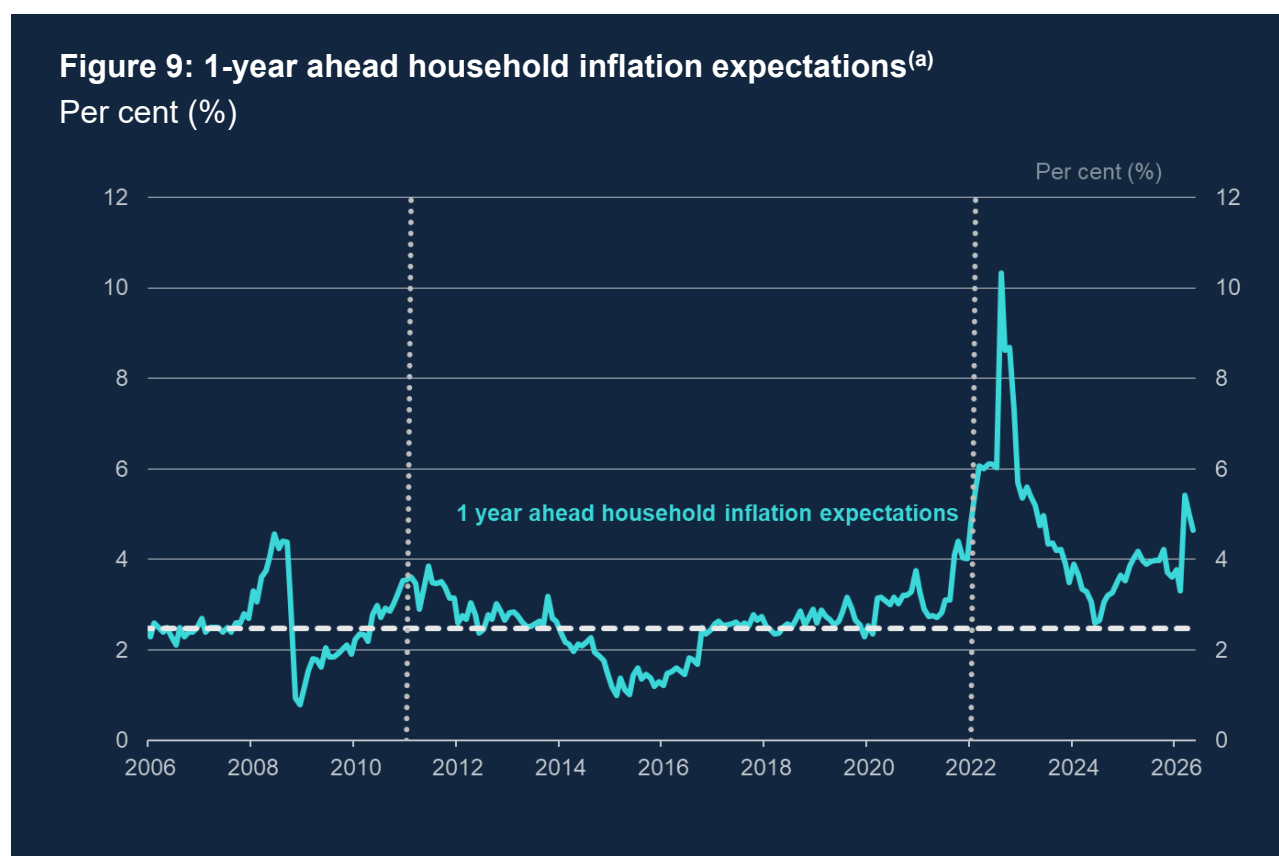
<sup>6</sup> The threshold range is defined as the 95% confidence interval of each measures’ median threshold estimate as indicated by the dotted lines in Figure 12.

<sup>7</sup> There is some uncertainty around this range. Authors run 100 specifications of the model, to test the robustness of the threshold estimates to model uncertainty. These vary in sample periods (some going back as far as 1976), frequency (monthly, quarterly), variables and the number of regimes. 70% of specifications identify a threshold below 3.6%. Around half of specifications estimate a threshold between a narrower range of 3-3.2%. Results from an extension of the self-exciting threshold Bayesian VAR (SET-BVAR) presented in Box C of the [November 2025 Monetary Policy Report](#).

increasing the risk of an energy shock giving rise to second-round effects.<sup>8</sup> The threshold is not an abrupt break-point; as with most things, there is a spectrum.

At the time of both the 2011 and 2022 shocks, headline and food inflation were within or above their threshold ranges, though these threshold ranges were subsequently exceeded to a much higher extent in 2022 than 2011. This suggests that both shocks had the potential to generate second-round effects. Services inflation fell within the threshold range in 2011 and just underneath it in 2022 – though quickly entered it in the subsequent months. The key difference between the two episodes was wage growth, which was well below the threshold in 2011 but above it in 2022.

The difference in wage growth is partly influenced by household inflation expectations in the wake of each shock (Figure 9). While they had been trending upwards for some time prior to 2011, household inflation expectations remained relatively stable over the course of that year – though above the pre-Covid historical average. Meanwhile, short-term inflation expectations were already elevated at nearly 5% in early 2022 and rose sharply from there.<sup>9</sup>



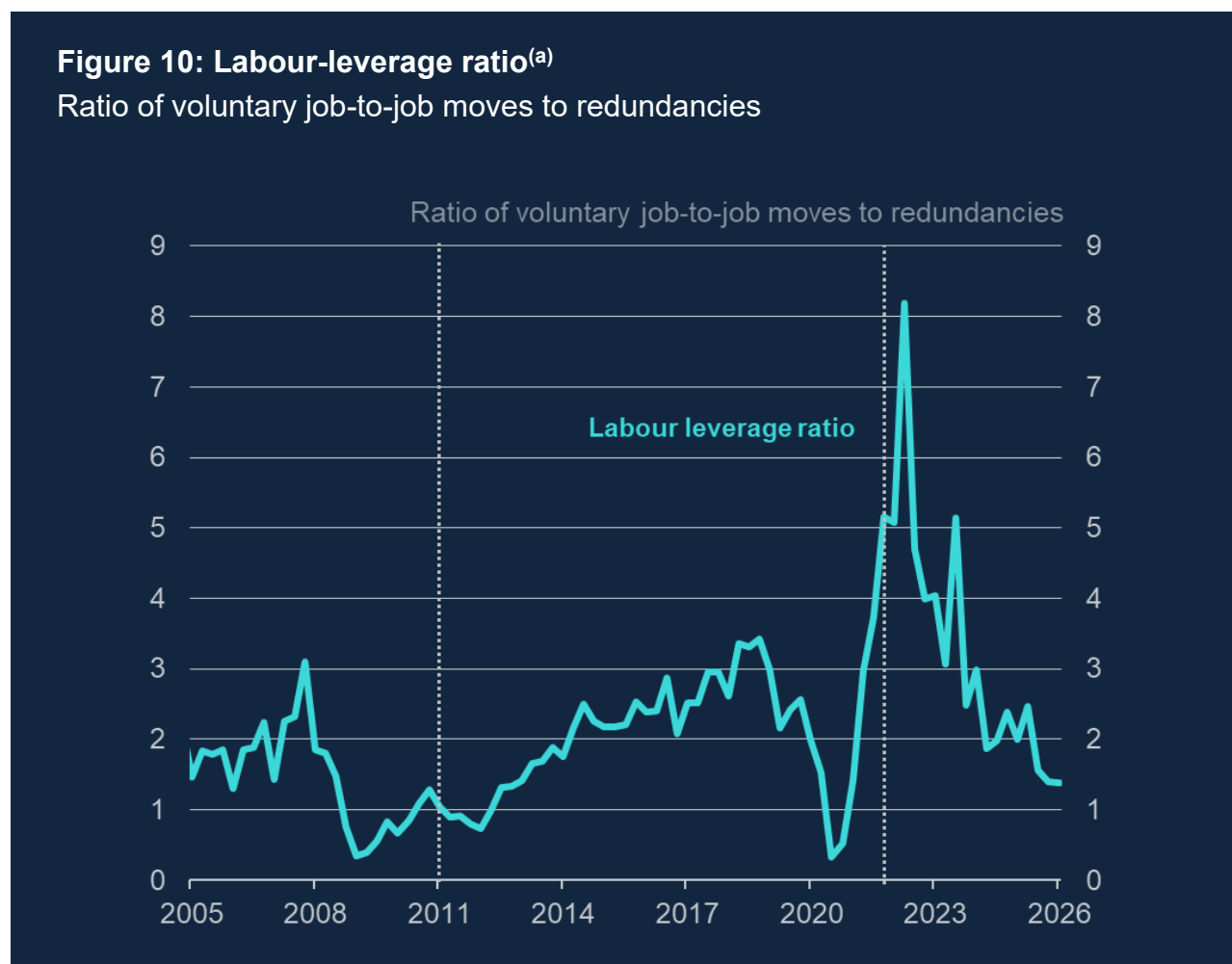
Source: Citi/YouGov and Bank calculations. Latest data point is for May 2026.

<sup>8</sup> Thresholds are informative but should not be over-interpreted. In reality, the transition is likely to be gradual.

<sup>9</sup> Since August 2022, the YouGov/Citigroup survey has been based on updated response buckets and so comparisons across time should be made with caution.

- (a) Since August 2022, the YouGov/Citigroup survey has been based on updated response buckets and so comparisons across time should be made with caution. Horizontal dashed line shows pre-Covid average. Vertical dotted lines are at February 2011 and February 2022.

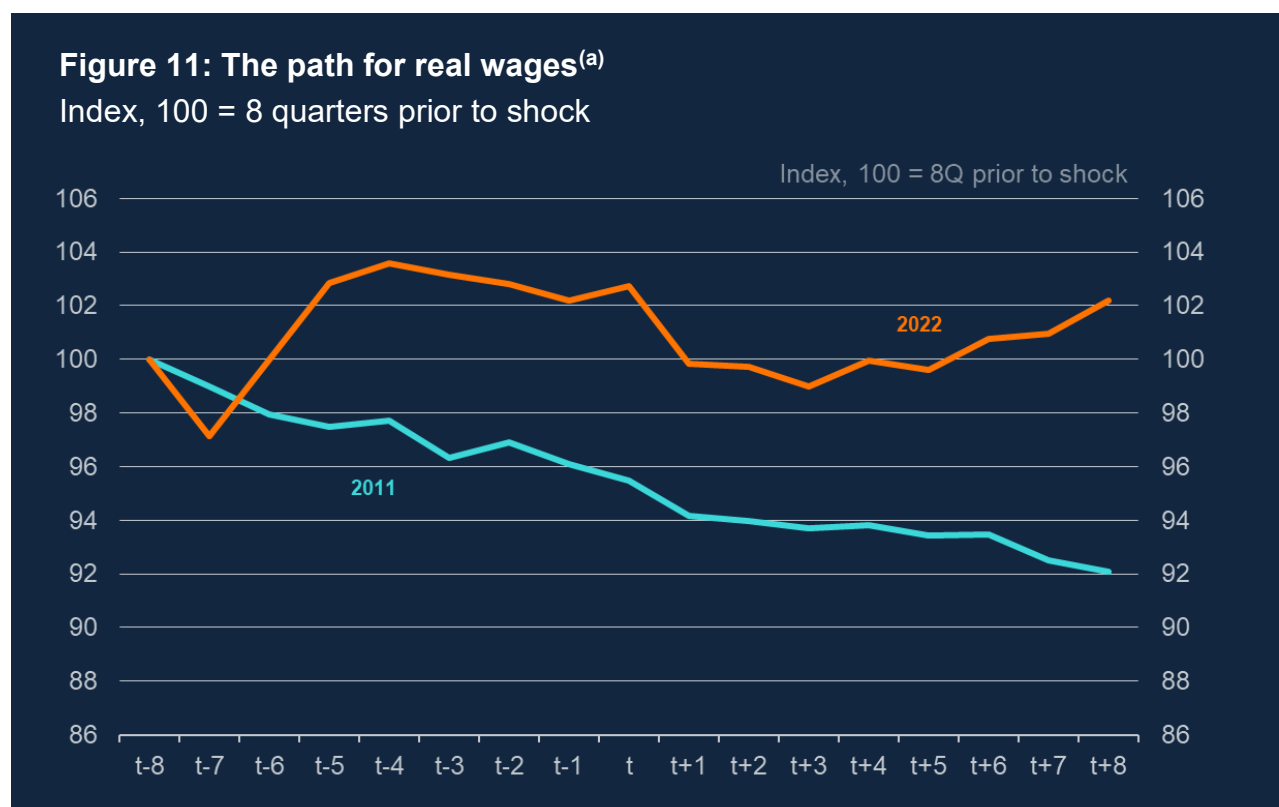
But rising household inflation expectations won't necessarily generate second-round effects: workers must also be able to bargain for the higher wages they seek. The labour-leverage ratio, reflecting the number of job-to-job moves to redundancies, is one way of assessing workers' bargaining power. As shown in Figure 10, the ratio was much higher in 2022 than 2011, indicative of stronger bargaining power.



Source: ONS and Bank calculations. Latest data point is for 2026Q1.

- (b) Based on the [methodology](#) developed by the Upjohn Institute for Employment Research, which defines the labour leverage ratio as the number of worker-initiated quits relative to employer-initiated layoffs. Vertical dotted lines are at February 2011 and February 2022.

This is reflected in the evolution of wage growth across both periods. As I showed in Figure 8, wage growth was well below the 4.6% threshold for second-round effects in 2011, and above it in 2022. Figure 11 shows that the wage setting channel of second-round effects was weak in 2011, whereas workers were able to push back against the erosion in their real wages following the 2022 shock.



Source: ONS and Bank calculation.

(a) Shock at time  $t$  is 2011Q1 (aqua) and 2022Q1 (orange). AWE: Private Sector Level (£): Regular Pay excluding Arrears deflated using the Consumer Price Index.

Materially different conditions in the labour market at the time of each shock help explain this. Unemployment had been hovering around 8% for almost two years prior to the 2011 shock (green line in LHS panel of Figure 12) while underlying employment growth had been relatively stagnant. This weakness would continue for some time. In contrast, unemployment was low at just 4% in 2022 and underlying employment growth was strong.

The difference in labour market slack between the two episodes is also exhibited in the vacancy-to-unemployment (V/U) ratio. Figure 12 plots this (in orange) against its estimated equilibrium (in aqua) ([Stelmach et al., 2025](#)). Together, these point to a sharp deterioration in labour market conditions following the large negative demand shock of the GFC that hadn't unwound by 2011. This contrasts markedly to the tight state of the labour market at the time of Russia's invasion of Ukraine.

**Figure 12: LHS: Unemployment rate and estimate of underlying employment growth<sup>(a)</sup>; RHS: V/U ratio and equilibrium V/U<sup>(b)</sup>**

Per cent (%) and Ratio



Source: LHS: Bank of England Agents, DMP Survey, HMRC, KPMG/REC UK Report on Jobs, Lloyds Business Barometer, ONS, S&P Global and Bank calculations. Latest data point is for March 2026. RHS: Advertising association/World Advertising Research Centre Expenditure Report, ONS and Bank calculations. Vertical lines are placed at February 2011 and February 2022. Latest data point is for 2026Q1.

- (a) Bank staff's indicator-based measure of underlying employment growth is constructed using a dynamic factor model following the approach of [Doz et al \(2011\)](#). The model extracts a common component from monthly survey indicators, capturing comovements across series. The common component is scaled to align with LFS employment growth between 2000–19. The shaded areas represent 95% confidence intervals.
- (b) The equilibrium V/U ratio is estimated using an error-correction model over the period 1982–2024. The real cost of vacancy posting and hourly labour productivity are included as long-run determinants for the level of vacancies. The model also includes controls for short-term movements in these variables ([Stelmach et al \(2025\)](#)).

Just as labour market conditions shape workers' ability to bargain for higher wages, firms' ability to pass-through cost increases to prices will depend on the broader economic environment. We can draw on some measures of economic slack to get a sense of this at the time of each shock.

Figure 13 shows an estimate of the historical output gap consistent with the central projection in the [February 2026 MPR](#), providing a sense of the overall balance of demand and supply in the economy and therefore spare capacity. The output gap cannot be directly observed and so there are large uncertainties around these point estimates. Taken at face value, however, this suggests the demand environment was much weaker in 2011 than 2022 relative to supply. Bank analysis suggests that firm pricing power is more muted in a cyclically weak environment.

**Figure 13: Historical central projection output gap <sup>(a)</sup>**

Per cent of potential GDP (%)



Source: Bank calculations.

- (a) A negative figure implies output is below potential and a positive figure that it is above. Given that the output gap cannot be directly observed, Staff's estimates of the output gap are informed by a range of models. These estimates of the historic output gap are consistent with the February 2026 MPR central projection. The last data point is 2025 Q4.

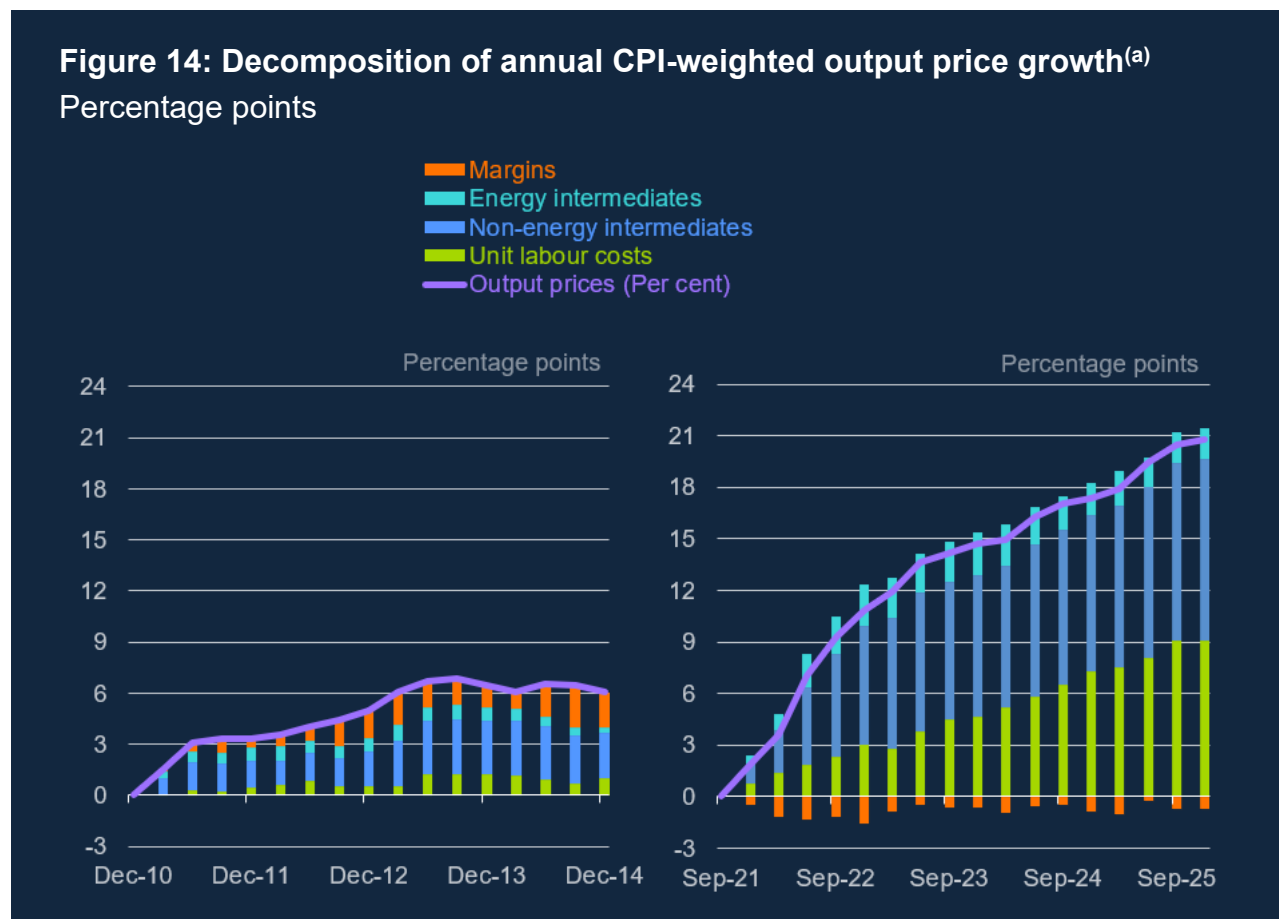
To get a sense of how these 2011 and 2022 cost shocks were reflected in firms' prices, Bank staff have decomposed cumulative changes in output prices into contributions from intermediate input costs, unit labour costs and margins (Figure 14)<sup>10</sup>.

Firms were able to raise output prices in both episodes, passing on the higher energy costs (aqua) and some indirect impacts from the cost shock (dark blue) to consumers. A key difference, however, is the role of unit labour costs (green). A tighter labour market in 2022 allowed workers to push back against the decline in real incomes from higher costs by securing higher wages, which in turn fed back into firms' costs. This is likely evidence of second-round effects. This change in the wage-setting channel also made it hard for firms to preserve margins in 2022, which (on average) have been compressed since.

By contrast, the weak demand environment in 2011 meant that workers were less able to resist higher prices and, in turn, unit labour costs played less of a role in driving up firms'

<sup>10</sup>The cost measure does not account for capital costs, which may also rise when monetary policy tightens. The output prices and cost measures also largely do not capture VAT effects, with the exception of goods sold by the retail industry. As such, the change in VAT rate in 2011 will largely not be accounted for in output prices or costs in Figure 14

costs. This exercise, while not without its caveats<sup>11</sup>, points to a greater role for margin expansion in driving price growth in 2011. This might seem surprising given the weak demand environment may have limited firm pricing power, but firms had suffered significant margin compression in the years after the GFC and were likely seeking to rebuild.



Source: ONS and Bank calculations

- (a) The estimates are produced using the dataset of industry-level costs and prices introduced in the **November 2025 MPR (Box A)**. This uses a combination of ONS supply and use tables and input-output tables for cost shares; published industry deflators that are also complemented by implied deflators calculated from low level GDP aggregates and UK trade in goods and UK trade in services data to create pricing series; the average of labour compensation per hour worked and AWE for labour costs; and output per hour worked for the productivity estimate. Industry-level costs and output prices are weighted by an estimate of each industry's contribution to the CPI basket following **Martin (2024)**. The following energy producing industries are excluded: C19 – Manufacturing of coke and refined petroleum products, and D35 – Electric Power generation and transmission/manufacture of gas and distribution of gaseous fuels.

Ultimately, the energy shocks of 2011 and 2022 had different inflation outcomes. Both the nature of the shocks and the economy they hit played a role in this, shaping the extent to

<sup>11</sup> Capturing margins is notoriously difficult and always comes with substantial caveats; margins in this exercise are the residual of costs and prices rather than a directly observable measure.

which second-round effects – either through the wage- or price-setting channel – took hold. With a smaller energy shock and weaker labour market in 2011, second-round effects were contained, and the Bank kept Bank Rate steady. In contrast, the size and nature of the energy shock in 2022 and the lack of slack in the economy precipitated a rate hiking cycle to lean against significant second-round effects.

## **What does this imply about the current shock?**

Comparing the different inflationary outcomes from previous energy shocks can provide a guide to gauge the potential for second-round effects in the current shock. Table 1 qualitatively places the 2026 shock – so far – in this context.

**Table 1: Comparison of different energy shocks<sup>(a),(b)</sup>**

	<b>2011</b>	<b>2022</b>	<b>2026</b>
<b>Real oil price at peak vs one year earlier</b>	£112 vs £78 (+43%)	£119 vs £64 (+86%)	£87 vs £54 (+63%)
<b>Real gas price at peak vs one year earlier</b>	£90 vs £65 (+40%)	£423 vs £143 (+195%)	£131 vs £91 (+44%)
<b>Number of threshold ranges within or above at onset of shock</b>	3	3	2
<b>Inflation expectations</b>	Stable	Increasing	Increasing, less anchored
<b>Labour market slack</b>	Very loose	Tight	Loose
<b>General slack</b>	Large and negative	Positive	Small and negative

- (a) While this summary is necessarily qualitative and requires judgement, it draws on the evidence presented earlier in the speech and is intended to support a visual comparison of past episodes. Evidence is drawn from the threshold analysis presented (Figure 9), household inflation expectations data (Figure 10), analysis of the sensitivity of medium-term expectations to short-term expectations (Figure 2), labour market slack as measured by estimates of the V/U gap (Figure 13) and general slack as measured by the output gap (Figure 14).
- (b) In the first two rows, real oil and energy prices are in GBP, deflated using the GDP deflator and indexed to February 2026. Nominal figures have been deflated using the GDP deflator. Peak refers to highest real price in year of shock e.g. 2011, 2022 and 2026. One year earlier refers to average real price of year prior to shock e.g. 2010, 2021 and 2025. Latest figures for May 2026 are £82 for oil and £119 for gas.

So what does this all mean for second-round effects in response to the current shock? We can't yet definitively judge the nature of the shock given it is still unfolding. The Middle East war has pushed both oil and gas prices some way above their 2025 averages. In real terms, oil prices have yet to surpass either of the two previous peaks shown while gas prices have exceeded their 2011 high and come nowhere close to reaching the historic jump in 2022. Even if the Strait of Hormuz were to open tomorrow, there will be a lasting impact of the war on energy prices given the existing damage to infrastructure and the potential for a risk premium now that it has been demonstrated that the Strait of Hormuz can be relatively easily closed.

And although we have focused today on the impact of the shock on energy prices, other commodities have been – and will continue to be – affected as well, including aluminium, fertiliser, helium, and naphtha, which could result in various supply chain disruptions with a lag.

We know more about the state of the economy when the shock hit. The most benign reading of the evidence is that, in both 2011 and 2022, it was more likely that second-round effects would be set off based on the number of inflation measures were within or above their threshold ranges (Figure 8). On the face of it, that could provide some comfort. However, households' and firms' attentiveness to inflationary dynamics is likely to be elevated in the current episode.

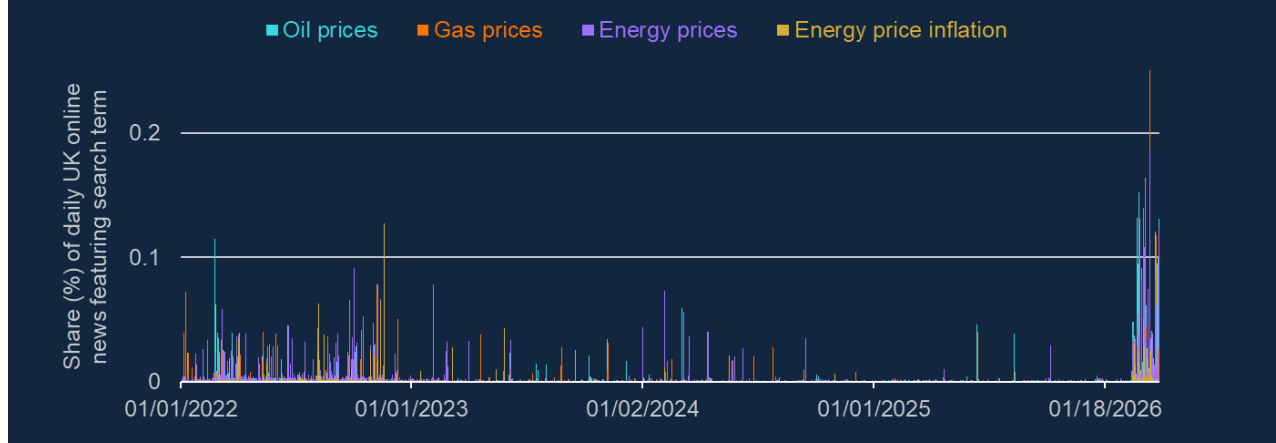
Inflation expectations since the outbreak of the war give cause for concern as well. Household inflation expectations rose sharply from 3.3% in February to 5.4% in March. They have since fallen to 4.7% in May though remain elevated and are likely to be buoyed when the Ofgem energy price cap rises for households in June. Having lived through multiple successive negative supply shocks and a few years of above target inflation, it may well be that households are more attuned to the inflationary environment now than they were in 2011 or 2022. Bank staff analysis shows that media coverage of energy prices is also at a higher level now than in 2022 (Figure 15)<sup>12</sup>, suggesting expectations are likely to be more sensitive to energy price changes.

---

<sup>12</sup> Unable to compare with 2011 as data only available from 2017.

**Figure 15: Daily online news coverage of energy prices<sup>(a)</sup>**

Share (%) of daily UK online news featuring search term



Source: [GDEL Project Online News Comparer](#) and Bank calculations. Latest data point is for 14/04/2026.

- (a) The chart depicts the proportion of all GDEL-monitored online UK-based English language articles featuring the specified search term, and with a negative tone.

How likely are higher household inflation expectations to feed through the wage setting channel into second-round effects? Labour market conditions today appear somewhere between what we had in 2011 and 2022. The V/U ratio and unemployment rate (Figure 12) suggest the labour market is materially looser now than in 2022. This should limit workers' ability to resist reductions in real income and thus reduce the risk of further feedback loops into firms' costs and prices. In line with this, firms' wage expectations are little changed since the start of the year. However, the current environment looks less benign than in 2011. Labour market slack was materially more pronounced in that episode than it is now, both in terms of unemployment, the V/U gap and the broader output gap (Figure 13).

Given the current state of the economy, I think we face a larger risk of second-round effects emerging through the price-setting than the wage-setting channel. Firms' inflation expectations have also risen materially in response to the current shock. According to the DMP survey, firms' year-ahead own-price growth expectations increased from 3.4% at the start of the year to 4.4% in April. Moreover, the share of firms that adjust prices in response to changing economic conditions as opposed to a schedule has increased in recent years. This indicates that prices may rise faster than was historically the case.

Firms already appear to be passing on some of their increasing costs, as indicated by the sharp rise in the composite PMI output price index since the start of the year. This increase reflects the breadth of firms affected rather than just the magnitude of price increases. The rise in the score for output prices has been lower than that for input prices, suggesting some of the cost rises are being absorbed into margins. This is reflected in the

latest DMP as well, in which 64% of firms said they expect to increase their prices in response to the energy shock and 68% expect their margins to be squeezed.

But firms cannot endure margin compression forever. Agents' intelligence already suggests that margins have been compressed for some time – and remain below their pre-Covid level. This is reminiscent of 2011, when evidence suggests that firms' capacity for further cost absorption was limited and margins were rebuilt.

A direct comparison of the current economy to either 2011 or 2022 is not straightforward – few things in economics ever are. Given the size of the energy shock so far and the prevalence of slack in the economy, I think we are looking at second-round effects somewhere between what we experienced in 2011 and 2022. It is reassuring that a repeat of the 2022 inflationary trajectory seems unlikely. But I take little comfort in that. To my mind perhaps the most significant difference between this shock and the previous two episodes is that this is the third negative supply shock we've had in six years, and inflation has exceeded the target for nearly all of that time.

## Monetary policy implications

What does this tell us about how monetary policy should respond to this shock? The conventional response of monetary policymakers to an energy shock is to look through it. But, as I have argued in the past ([Greene, 2025](#)), a more nuanced view is necessary given successive negative supply shocks.<sup>13</sup> The key question is whether second-round effects will lead to a sustained period of above target inflation in the absence of monetary policy tightening.

Much uncertainty still surrounds the severity and duration of the conflict, and therefore the propagation of the shock through the UK economy. Scenarios presented in the [April 2026 Monetary Policy Report](#) (MPR) can provide a lens through which to consider different states of the world and assess the implications for policy. Each scenario consists of two key elements: a path for global energy prices and a view on the strength of second-round effects in domestic price and wage-setting. All scenarios are conditioned on market interest rates in the 15 days to 22 April. I expect there will be some second-round effects from the current shock, and so will focus on the two scenarios from April that incorporate them.

These two scenarios embed materially different assumptions about the future path for energy prices, and therefore about the evolution of the conflict. In our so-called Scenario B, energy prices remain higher after 6 months than is priced into the futures curves.<sup>14</sup> This represents a roughly similar shock to 2011, though smaller than 2022. Our so-called

---

<sup>13</sup> For a formalisation of this idea, see [Beaudry et al.](#) (2026).

<sup>14</sup> Oil prices reach \$108 a barrel and gas 114 pence per therm, remaining high over the scenario.

Scenario C is more akin to the level nominal oil prices reached in 2022, with the gas price lower at its peak than in 2022 but remaining elevated for longer. This is consistent with a renewed deterioration of the geo-political situation in the Middle East, continued damage to production and storage facilities, and a sustained disruption to the transit of energy supplies.

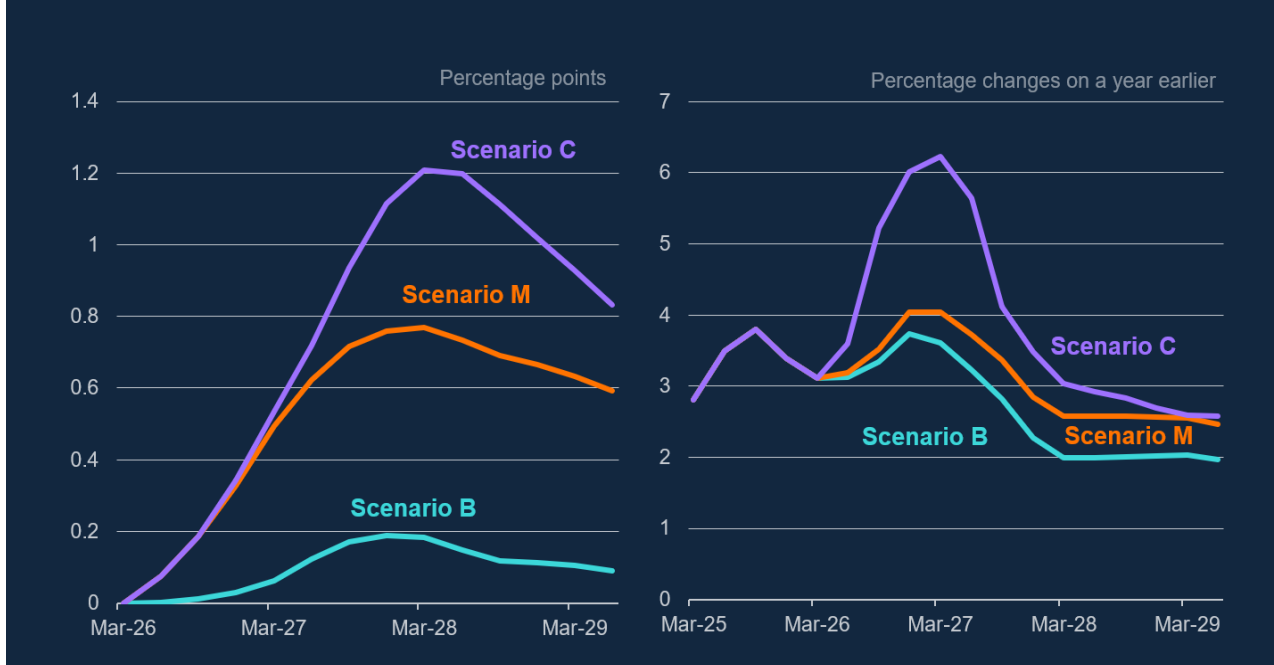
Appropriately, the extent of the second-round effects also differs across the two scenarios (Figure 16). Scenario B incorporates modest second-round effects, calibrated using the model in a paper by [Bernanke and Blanchard \(2023\)](#) applied to the UK by my former colleague Jonathan Haskel and co-authors ([Haskel et al., 2025](#)). Second-round effects in Scenario B are driven largely by short-run inflation expectations affecting wage bargaining and then prices, consistent with worker bargaining power and firms' ability to pass-through costs being in line with their historical averages. There is no further amplification of second-round effects through the price-setting channel. By contrast, Scenario C embodies larger second-round effects, both because of the larger energy shock, and because this scenario allows for further amplification via long-run inflation expectations, which feed back into wage and price setting. This amplification captures the idea that longer-term expectations were already elevated at the time of the shock and that the recent period of high inflation has made households' and firms' expectations more sensitive to rising inflation. Because Scenario B does not include this amplification channel, I see it as a likely lower bound for second-round effects.

I can't pretend to have any special information about the size of this ongoing energy shock. But I think it's most likely that we'll end up with second-round effects somewhere between Scenarios B and C: let's call it Scenario M for Megan. To be clear, you should not interpret this as my central case just because I've named it after myself. I simply had to call it something for ease of reference. I do however believe it represents one reasonable interpretation of how the economy may evolve.

To generate Scenario M, we take the same energy paths underpinning Scenario B but incorporate the additional second-round effects channel reflecting the heightened sensitivity of long-run expectations from Scenario C. The resulting inflation path, relative to Scenario B, is entirely driven by the differences in how second-round-effects are modelled (Figure 16). Inflation in Scenario B returns to target by the end of the horizon, while it remains around 2 ½ % in Scenarios M and C.

### Figure 16: Estimates of second-round effects (LHS)<sup>(a)</sup> and CPI inflation across Scenarios (RHS)

Contribution of second-round effects to annual CPI inflation stemming from the new energy shock; Annual CPI inflation



Source: Bank calculations

- (a) Larger second round effects in Scenario C (LHS) are driven by the amplification from already elevated long-run inflation expectations at the start of this shock, the impact of the larger shock assumed in the scenario on short run-expectations, as well as a further increase in long-run expectations as a result of the new shock. At peak, second round-effects from higher short run expectations contribute around 0.5pp to inflation, while 0.7pp are because of amplification from long-run inflation expectations. This roughly compares to 0.2pp because of short-run expectations and 0.6pp due to long-run expectations in Scenario M.

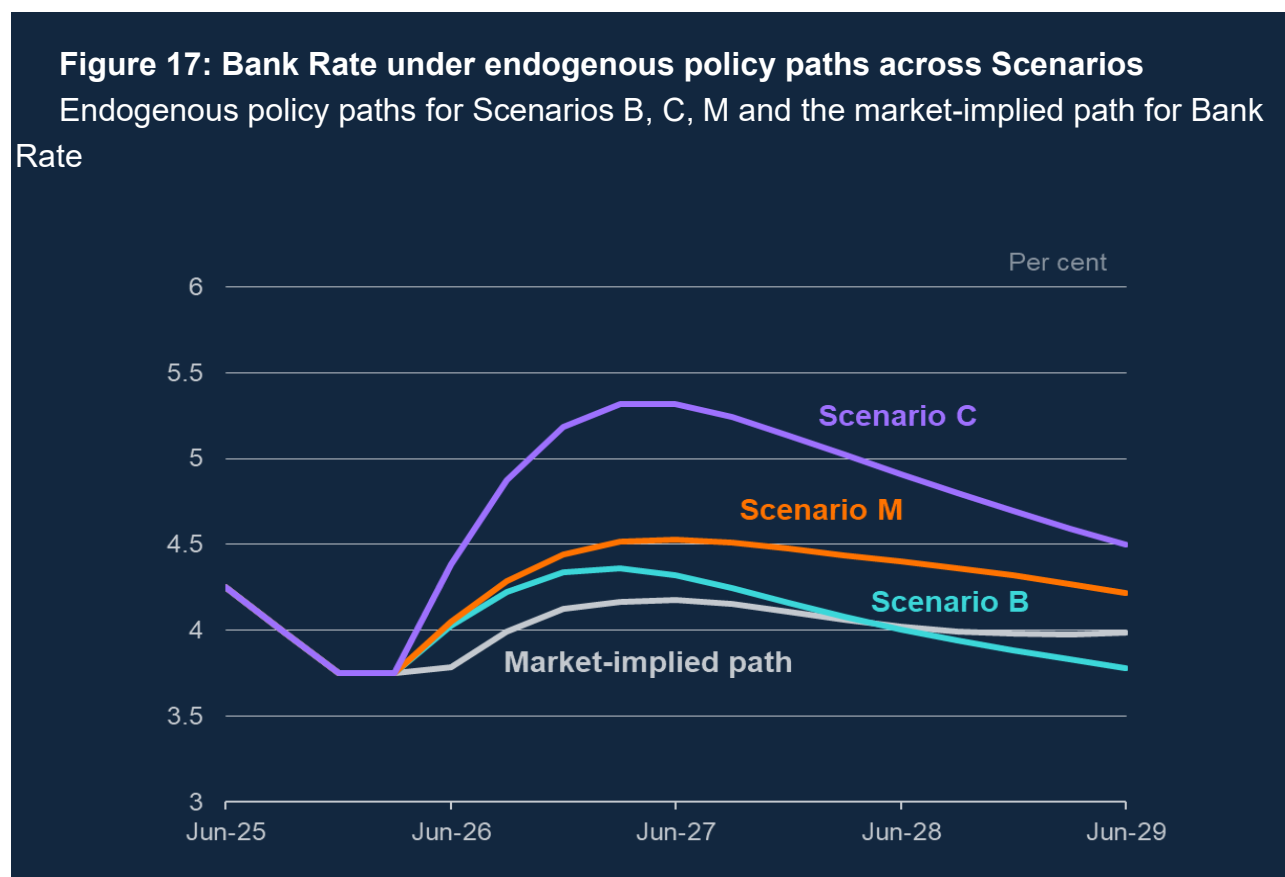
So, what does this imply for policy? To explore this, we can use endogenous policy paths for each Scenario. These endogenous policy paths minimise deviations of inflation from target and growth from potential given a policymaker's preferences around interest rate smoothing and trade-off management ([Alati et al., 2025](#))<sup>15</sup>. These are neither a reflection of the MPC's preferred path for Bank Rate nor even my own.

Unsurprisingly, just as there is a significant difference in the paths for inflation in Scenarios B and C, there is also a noticeable difference in the endogenous policy paths (Figure 17). In Scenario B, the endogenous path is slightly higher than the market curve in the short-term but ends the outlook period below the market curve. In contrast, Scenario C

<sup>15</sup> In the April MPR these were referred to as illustrative model-based projections. In [Alati et al. \(2025\)](#) these were referred to as Optimal Policy Projections (OPPs).

would require a more forceful response, with the endogenous policy path implying that Bank Rate would have to peak at 5.3%.

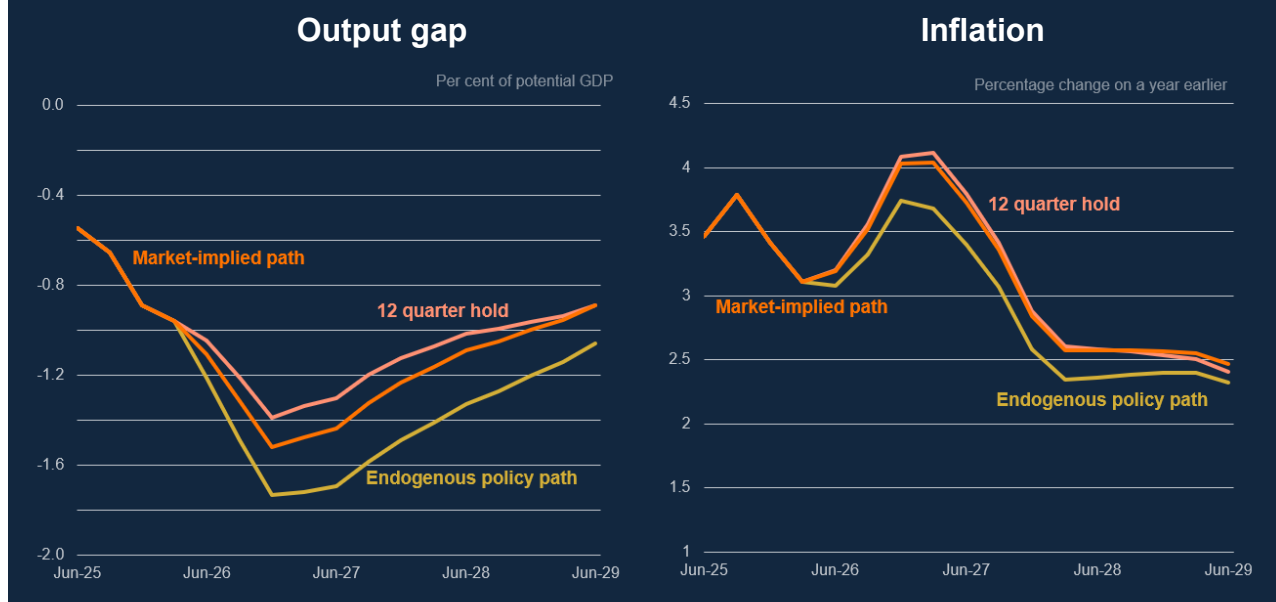
For Scenario M, the endogenous path implies that more tightening would be required than is embodied in the market curve or Scenario B. This gives some indication of how policy might need to respond if greater second-round effects were to emerge given higher attentiveness by households and firms to rising inflation.



Source: Bank calculations and Bloomberg Finance L.P.

In practice, the monetary policy response will hinge in part on our approach to managing the trade-off we face between stabilising inflation and stabilising the output gap. Relative to the market-implied path for Bank Rate, the endogenous path for Scenario M would result in a more negative output gap (Figure 18), which in turn would weigh on inflation. Even then, inflation would remain above target at the end of the projection.

**Figure 18: Output gap and inflation under different Bank Rate assumptions**  
Scenario M under market-implied path for Bank Rate and endogenous policy paths



Source: Bank calculations.

But what if policy makers prefer to hold Bank Rate for a prolonged period of time, rather than raising and then cutting policy? Holding Bank Rate for 12 quarters in Scenario M would result in a smaller output gap than that implied by the endogenous policy path. But inflation would peak 0.4 percentage points higher at peak and 0.2 percentage points higher on average over the outlook horizon.

In addition to having a worse inflation outcome, I think a prolonged hold strategy lacks credibility in Scenario M. It would require the MPC to hold Bank Rate steady even as inflation falls back towards our target, which I don't think is tenable. Given the lags in transmission, it makes sense to cut Bank Rate as inflation seems to be approaching the target sustainably. More generally, monetary policy makers rightly tend to avoid unconditional promises, given the high degree of uncertainty involved in forecasting 3 years into the future. A more credible strategy is to hike Bank Rate in Scenario M to lean against second-round effects.

## Conclusion

Central banks traditionally look through negative supply shocks – there's nothing the Bank of England can directly do to address energy prices. But given successive supply shocks, I have argued before ([Greene, 2025](#)) that this approach may not serve us very well. The crucial question for my policy strategy is whether second-round effects from the current energy shock will set in, and to what degree. We can use history as a guide here – negative energy shocks occurred in 2011 and 2022, with vastly different implications for

inflation and monetary policy. The difference lay mainly in the nature of the shock and the state of the economy as the shock hit. We can't yet conclude what the nature of the current shock is given the war is ongoing, but we can compare the current state of the economy with that in 2011 and 2022 to see how likely second-round effects are. Broadly, we find ourselves somewhere between 2011 and 2022 in terms of tightness of the labour market and slack in the economy.

But one of the biggest differences between the three episodes is that the current one is the third successive negative supply shock the UK economy has experienced in the past six years. Consequently, households and businesses are arguably more sensitive to a rise in inflation. This is evident in households' and firms' inflation expectations being less anchored than in 2011 or 2022 (Figure 3). Household inflation expectations have risen since the war broke out, as have firms' year-ahead own-price expectations.

Second-round effects played a part in driving inflation up in 2011 and 2022 to very differing degrees, and are likely to do so in the current episode as well. I've therefore only considered scenarios with second-round effects. In my view, Scenarios B and C bookend the set of most likely outcomes given their assumptions about energy prices and second-round effects.

I have also added a scenario – Scenario M – to represent a state of the economy in which energy prices evolve in line with Scenario B but second-round effects take into account greater attentiveness of households and firms to rising inflation. This scenario suggests rate hikes are required in order to minimise the deviation of inflation from our target and output from potential. A strategy to hold Bank Rate constant not only results in a worse inflation outcome, but in my view also lacks credibility.

The difference between Scenario B and Scenario M lies entirely in the extent of second-round effects. Frustratingly, we will not have definitive evidence of changes in wage-setting in particular until next spring when the next big round of pay settlements occur in April. Given monetary policy only impacts the economy with a lag, we will be too late if we wait to have evidence to address second-round effects. We therefore must make a judgement now about whether to lean against second-round effects and how much.

I think it is plausible that we get some form of Scenario M, with greater household and firm sensitivity to rising inflation requiring more decisive action to anchor expectations ([Beaudry et al., 2026](#)). I also put a relatively high weight on stabilising prices relative to output. This is partly because we have had successive negative supply shocks that have kept inflation above target in recent years. Furthermore, there is a benefit in acting sooner; the speed of the response is arguably just as important as its size when trying to ensure that expectations remain anchored ([Bullard et al., 2026](#)). Evidence also suggests that

higher uncertainty about the trajectory of inflation may call for a more, not less, forceful response ([Söderström, 2022](#)).

In my view, the risk of acting, even if inflation proves to be less persistent, is less severe than the risk of failing to act. Inflation has exceeded our target in 7 of the past 10 years. Should inflation remain above target now, there is a risk that households and firms come to see this as a ‘new normal’ and adjust their behaviour accordingly. This would ultimately require an even bigger monetary policy response to bring inflation sustainably to target. The old adage “a stitch in time saves nine” applies to monetary policy.

Given this, I considered voting for a rate increase at our April meeting. Ultimately, I judged that I might have considered that a mistake if the conflict ended immediately; the tightening in the curve following the outbreak of the conflict could arguably have offset the second-round effects already set in motion. I believed it was worth waiting to learn more about the evolution of the shock, even if we wouldn’t learn much more about second-round effects. Of course, we cannot rely on the tightening of the curve to do our work for us – absent a hike in Bank Rate soon, the curve will likely fall.

Needless to say, we have learned over the past six years how quickly conditions can shift – in weeks, days, or even hours. I think the case for hiking rates grows as the conflict wears on and believe a tightening in monetary policy over the next few weeks or months may be necessary.

## Acknowledgements

The views expressed in these remarks are not necessarily those of the Bank of England or the Monetary Policy Committee. Opinions and all remaining errors and omissions are my own.

I would particularly like to thank Emma Hatwell, Stephen Nelson-Clarke and Teresa Wukovits-Votzi for their help in the preparation of this speech.

The text has also benefitted from helpful comments, data and analysis from Andrew Bailey, Huw Pill, Fergal Shortall, Rebecca Maule, Josh Martin, Krishan Shah, Tim Willems, Matthew Naylor, Jack Page, Hannah Copeland, Simon Lloyd, Sumer Singh, Ivan Yotzov, Michal Stelmach, Galina Potjagailo, Boromeus Wanengkirtyo, Tomas Key, Mridula Duggal, Gaspar Montenegro Calvimonte, Ozgen Ozturk, Matthew Tong, Jeremy Martin and Ambrogio Cesa-Bianchi for which I am grateful.

## References

- Alati, A., Arazi, M., Barrdear, J., Gimber, A., Haberis, A., Hughes, E., Laureys, L., Lloyd, S., Ozturk, O., Page, J., Reinold, K., Tong, E., Tong, M. & Waldron, M. (2025) '[Tools for endogenous monetary policy analysis: optimal projections and instrument rules](#)', Bank of England Macro Technical Paper No. 4.
- Anesti, N., Esady, V., & Naylor, M. (2025). '[Food prices matter most: sensitive household inflation expectations](#)', Bank of England Staff Working Paper No. 1,125.
- Bank of England (2025). '[Monetary Policy Report – November 2025](#)'
- Bank of England (2026). '[Monetary Policy Report – April 2026](#)'.
- Beaudry, P., Carter, T.J., Lahiri, A. (2023). '[The Central Bank's Dilemma: Look Through Supply Shocks or Control Inflation Expectations?](#)', International Monetary Fund Working Paper No 2026/097.
- Buckmann, M., Potjagailo, G. & Schnattinger, P. (2025) '[Blockwise Boosted Inflation: Non-linear determinants of inflation using machine learning](#)' Bank of England Staff Working Paper No. 1, 143.
- Bullard, J., Grimaud, A., Salle, I., & Vermandel, G. (2026). '[Soft landing and inflation scares](#)', *Journal of Monetary Economics*, 157.
- Carvalho, C., Eusepi, S., Moench, E., Preston, B. (2023). '[Anchored inflation expectations](#)', *American Economic Journal: Macroeconomics* 15(1): 1-47
- Chan, J., Diz, S. & Kanngiesser, D. (2024). '[Monetary policy in a gas-TANK](#)', Bank Underground.
- Copeland, H., Brandt, L., Burr, N. & Wanengkirtyo, B. (2025) '[What happens to inflation when we put a price on carbon?](#)', Bank Underground.
- Doz, C., Giannone, D., Reichlin, L. (2011). '[A two-step estimator for large approximate dynamic factor models based on Kalman filtering](#)', *Journal of Econometrics* 164(1): 188-205.
- Friedman, M. (1961). '[The Lag Effect of Monetary Policy](#)'. *Journal of the Political Economy*, 69(5), 447-466.
- Gaffney, A., Petrova, K., Potjagailo, G. & Sisko, A. (2026). When inflation is high: Inflation thresholds and oil shock transmission in the UK. Bank of England Macro Technical Paper. Forthcoming.

Gargiulo, V., Matthes, C. & Petrova, K. (2026). '[Monetary policy across inflation regimes](#)', *European Economic Review* 185.

Gáti, L. (2023). '[Monetary policy & anchored expectations – An endogenous gain learning model](#)', *Journal of Monetary Economics* 140: S37-S47

Ghassibe, M. & Nakov, A. (2025). '[Business Cycles with Pricing Cascades](#)', European Central Bank Working Paper No. 3123.

Gilchrist, S., Schoenle, R., Sim, J. & Zakrajšek, E. (2017). '[Inflation Dynamics during the Financial Crisis](#)', *American Economic Review* 107(3): 785-823.

Greene, M. (2025). '[The supply side demands more attention](#)', speech given at the Adam Smith Business School, University of Glasgow, 24 September.

Haskel, J., Martin, J. & Brandt, L. (2025). '[What explains recent UK inflation? An application of the Bernanke-Blanchard model](#)', ESCoE Discussion Paper.

Känzig, D.R. (2021). '[The Macroeconomic Effects of Oil Supply News: Evidence from OPEC Announcements](#)', *American Economic Review* 111(4): 1092-1125.

Krystov, O. & Midrigan, V. (2012). '[Inventories, Markups and Real Rigidities in Menu Cost Models](#)', *The Review of Economic Studies* 80(1): 249-276.

Layard, R. & Nickell, S. (1986). '[Unemployment in Britain](#)', *Economica*, 53(210): S121-S169.

Patzelt, P. & Reis, R. (2026). '[Estimating the rise in expected inflation from higher energy prices](#)'.

Powell, J. (2021). FOMC Press Conference [[Transcript of Chair Powell's Press Conference](#)], The Federal Reserve, 22 September.

Söderström, U. (2002). '[Monetary Policy with Uncertain Parameters](#)', *Scandinavian Journal of Economics*, 104: 125-145.

Stelmach, M., Kensett, J. & Schnattinger, P. (2025). '[What can 40 years of data on vacancy advertising costs tell us about labour market equilibrium?](#)', Bank Underground.

Van der Ploeg, F. & Willems, T. (2024). '[Battle of the markups: conflict inflation and the aspirational channel of monetary policy transmission](#)', Bank of England Staff Working Paper No. 1,065.

Weber, M., Candia, B., Afrouzi, H., Ropele, T., Lluberas, R., Frache, S., Meyer, B.H., Kumar, S., Gorodnichenko, Y., Georgarakos, D., Coibion, O., Kenny, G. & Ponce, J. (2023). ['Tell me Something I Don't Already Know: Learning in Low and High-Inflation Settings'](#), NBER Working Paper No. 31485.

Yotzov, I., Bloom, N., Bunn, P., Mizen, P. & Thwaites, G. (2025). ['The speed of firm response to inflation'](#), Bank of England Staff Working Paper No. 1,085.