Inflation after the Iran war*

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Abstract

An unexpected increase in energy prices raises inflation directly through the prices of energy goods and other flexible prices. Whether that shock compounds into a larger rise in inflation that persists through time depends on its transmission through the economy. This paper examines four channels of transmission and applies them to assess the inflation outlook for 2026 and beyond in the euro area (EA), the United Kingdom (UK), and the United States (US). The first is the transmission to non-core sectors that have sticky prices. Using recent advances in menu cost models, I find that they predict that UK inflation will rise faster than some current assessments and that monetary policy's power to curb that inflation is lower than usual. The second is transmission to spending, wages, and the return on nominal assets through higher expected inflation. The recent literature on measuring inflation expectations suggests that the EA stands out as the region where the shock is most amplified. The third channel is through other aggregate demand policies, with fiscal policy at the forefront. Developments in public spending plans in the wake of the Iran conflict provide some guarded grounds for optimism. The fourth mechanism is through the credibility of the long-run inflation target. Data from market prices indicates that inflation is expected to last for longer than one year, but not much beyond. All combined, the data as of May 2026 suggests that inflation will likely run higher than initial estimates and persist well into 2027, but it will be far smaller and more short-lived than the 2021–24 disaster.

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1 Introduction

The economic impact of the military conflict pitting Iran against Israel and the United States fits into the classic description of a supply shock. A few key commodities of which the Middle East is an important producer—oil, gas, fertilizers—could no longer reach the market. The contraction of supply raised their prices steeply, but was not so large as to cause shortages. A higher price raised the costs of production of many goods directly, and many more indirectly through the supply chain. In turn, this led inflation to rise, and output to fall. While the impact on different economic areas will vary depending on whether they export or import these commodities, on their place in global supply chains, or on how much military spending or uncertainty about defense rose, almost all central banks faced similar challenges.

One of these challenges is whether to tighten monetary policy in order to bring down inflation, or to loosen it to boost output. Another is to evaluate whether the rise in inflation is large enough to try to offset, and whether the fall in output causes an output gap as opposed to a change in potential output. And a third is whether the effects of the shock will persist long enough that monetary policy should even do anything about it, given that by the time its tools have an effect those effects will be gone. Common to these challenges is an underlying question: *by how much will the initial supply shock transmit to inflation?*

Not so long ago, there was another significant supply shock when Russia invaded Ukraine in 2022. This provided data to test and calibrate old models of the transmission of supply shocks, and to inspire the development of new ones. This paper uses these recent developments to provide a preliminary answer. I am writing it only 2–3 months after the conflict, so the relevant economic data is often missing or is preliminary. Yet this will always be the case when relevant shocks hit the economy, and trying to apply economic insights in these circumstances is the ultimate test of their usefulness for policymakers.

Outline: To ask how the shock will persist, one must start with the assessment of the shock itself. Figure 1 shows that maritime transit collapsed by roughly 90% at the outbreak of the armed conflict, and remained depressed through the end of May. Oil prices jumped from the mid-$60s to a peak above $115, successive forecast curves have predicted a gradual decline yet have been repeatedly revised up. It is reasonable to treat this supply shock as significant and persistent, and—as do most macro models—this paper will take it as given.

The transmission of the energy price shock to inflation then depends on at least four

factors. First, how much and how quickly will it transmit to other prices? Section 2 discusses the predictions from the current vintage of models of sticky prices. Starting with an analysis of the 2021–24 inflation to validate these models, it notes their prediction that a set of moments from the distribution of price changes across goods determines the speed and magnitude of that transmission. Calculating those moments on UK data, it concludes that the transmission to inflation will be larger than usual, and that tightening monetary policy in 2026 will have a weaker effect on inflation as well.

The second element of transmission is through expectations of consumers and firms, as they negotiate for prices and wages, and make decisions on how much to consume and to produce. Section 3 looks at the most recent data from surveys. If expectations of inflation over the next year were to rise beyond the direct impact of the energy shock on inflation, then this could amplify its effects. Economic agents would act to keep their real prices and income in line, by bargaining for higher wages, by setting higher prices, or by moving savings away from nominal assets, in anticipation of the inflation to come. These actions would themselves cause inflation to materialize. The data shows some mild signs that this may be the case in the EA, but so far few signs that it is so in the UK or the US.

The third element is whether the shock transmits to other policies that push inflation up. At the head of these is fiscal policy, especially after the 2021–22 experience, when large deficits likely contributed to amplifying the initial impact of the pandemic and the Russian invasion of Ukraine on inflation. Section 4 inspects whether revisions of the fiscal outlook provided by the IMF show signs that the same is on its way. The answer is inconclusive as of May 2026.

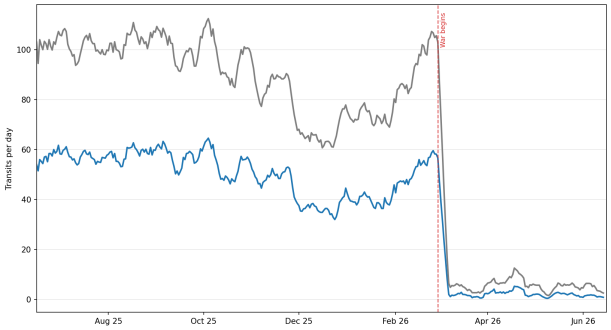
The fourth and final element is whether the combination of all the previous ones will lead the central bank to lose its long-run credibility in keeping inflation on target. What economic agents expect inflation to be is a powerful anchor to what it will end up being. Section 5 looks at market prices to measure that credibility. It concludes that inflation expectations remain anchored, but at the same time, that the consequence of the inflation shock is expected to persist beyond 2027.

Section 6 concludes by using the results to add to the long-standing debate on whether monetary policy should look through supply shocks.[1]

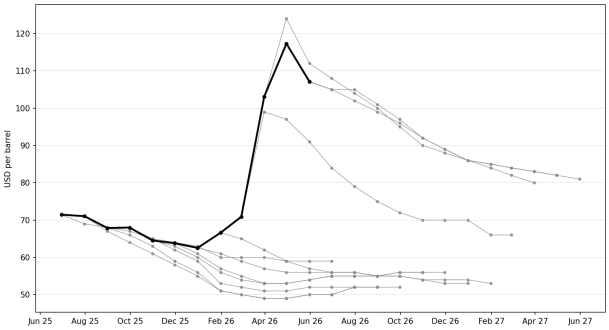
[1]For a complementary analysis, written contemporaneously, see Lane (2026).

Figure 1 The Iran war shock on energy prices

(a) Traffic through the Strait of Hormuz



(b) Brent crude: spot and forward curves



Note: Panel (a): daily vessel transits through the Strait of Hormuz, 7-day moving average, over the last twelve months. The blue line refers to oil/product tankers, and the grey line to all vessels; the dashed vertical marks the outbreak of the war (28 Feb 2026). Source: IMF PortWatch (Daily Chokepoints Data). Panel (b): Brent crude oil in USD per barrel. The black line is the realized monthly spot price, while each grey line is the forward curve published in one monthly vintage of the EIA Short-Term Energy Outlook (STEO), drawn from its last historical month forward. Source: EIA STEO archives (vintages through June 2026).

2 Transmission to other prices

A supply shock raises the cost of production. Firms that choose their prices flexibly will pass these increases to customers through higher prices. Combining the share of oil, gas, and fertilizers in final production through the input-output network, together with the share of those prices that are flexible, one finds that the impact on final-goods inflation is modest.

What matters more is the impact on firms whose prices only adjust infrequently. They create a direct impact on inflation. Moreover, because they do not want their prices to be too out of line with those of other firms, they only gradually adjust even when they do, since so many others are not adjusting. Finally, looking ahead, because these firms expect to adjust prices infrequently, their expectations of the later inflation further impel them to raise prices today. All combined, infrequent price adjustment both delays the impact of the shock on inflation and amplifies it.

While these theoretical mechanisms have long been well understood, the more recent availability of data on individual prices, on firm expectations, and on estimates of marginal costs, has allowed testing them and calibrating them.[2]

[2]This section builds on the work of Miguel Bandeira, Laura Castillo-Martinez, and Shiyuan Wang that updates Bandeira, Castillo-Martinez and Wang (2026), and which they graciously shared.

2.1 Looking back to the 2021–24 inflation

Inflation is approximately equal to a weighted average of the changes in the prices of all of the individual goods in the consumption basket. If only some of them change then, as an identity, inflation equals the fraction of prices that are changing times the average change among them. The first is a measure of the extensive margin of adjustment, and the second of its intensive margin.

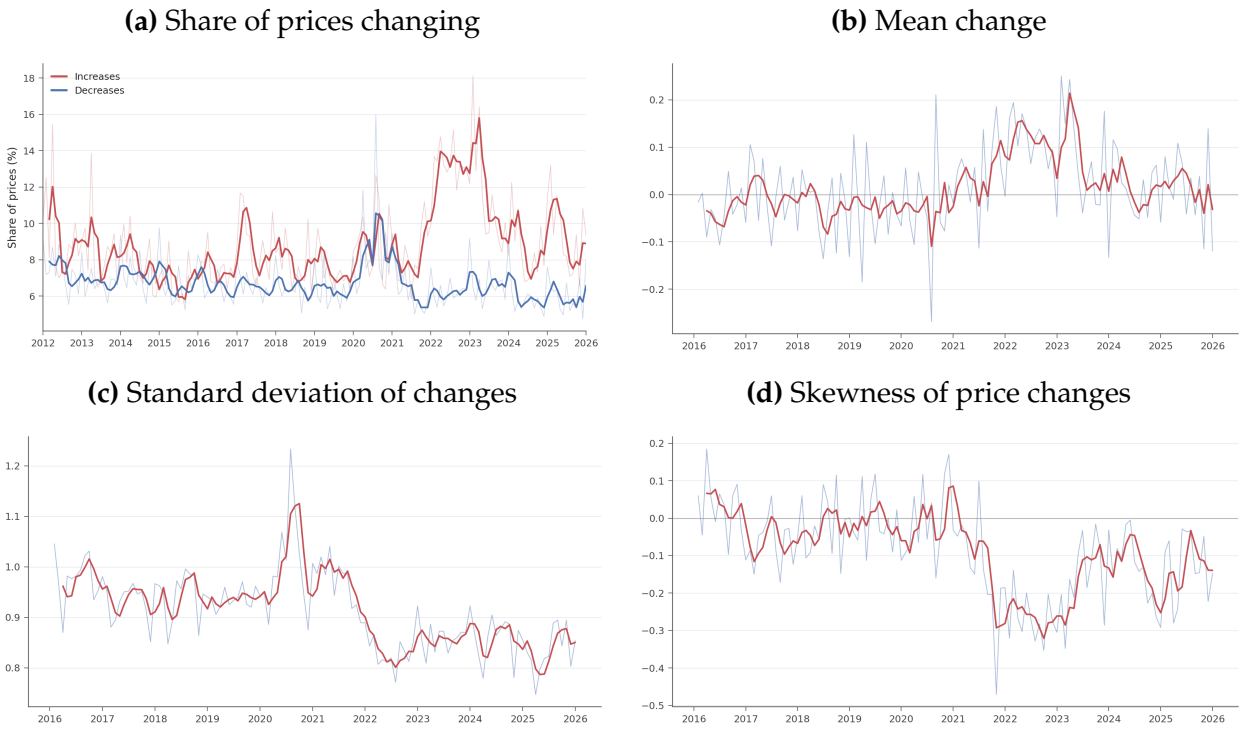
Figure 2 uses the micro price data for the UK to show the decomposition of inflation between these two components for the ten years before February 2026.[3] When inflation was stable in 2016–19, both of these components were stable with small fluctuations that were as much noise as they are signal. When inflation accelerated, both parts contributed, although with different timings. In 2020, there was a short-lived rise in the fraction of price changes, which was evenly distributed between positive and negative price changes. In 2021, the average price change increased first and was quickly followed by a steep rise in the frequency of prices changing (all of it accounted for by the frequency of price hikes). Both intensive and extensive margins played an important role in the inflation surge that followed.

The next row in Figure 2 shows two more moments of the distribution of price changes across the goods whose prices changed. Starting with the standard deviation, it rose sharply in 2020, as stock-outs made some prices rise, while overall deflation had many others fall. The pandemic affected different goods and sectors in opposite directions. Both large price hikes and falls became more frequent and so measures of dispersion rose. After staying high in 2021, the standard deviation fell in 2022–24. As inflation accelerated, most goods' prices were rising by around the same amount, as all firms were trying to keep track of the high inflation. The individual factors affecting some markets or some firms that drive prices are less important when the change in the overall price level that affects all of them the same is unusually high.

Turning to the skew, it hovered around zero before 2021. Once inflation became persistently high, this turned sharply negative. The idiosyncratic factors affecting price changes are likely evenly spread out in size. But, the elevated inflation created a concentration of large positive price changes on the right tail of the distribution. All combined, this appears as a negative skew.

[3]The data comes from the Office for National Statistics (ONS) and covers 60% of the items in the CPI, with the largest omission being housing and energy/motor fuels. Building a CPI using the available data and comparing it with the published CPI, the two series are very similar.

Figure 2 The moments behind inflation.



Note: All data comes from the UK CPI items (excluding housing). The sample goes from February of 2016 to January of 2026. Blue lines show monthly data, and red lines are 3-month trailing moving averages of the series in blue. Panel a) shows the share of items whose prices changed in that month (this includes sales, but using alternative sales filters leads to similar patterns). Panels (b)–(d) show moments of the monthly cross-section of item-level price changes. Non-zero log price changes are standardized by item-level mean and standard deviation, CPI-weighted, and winsorized at the 1% tails. Re-calculating the figure by dropping items with a sales flag, or using popular filters for sales, leads to the same patterns. Source: ONS consumer-price microdata.

This description of the evolution of the distribution of price changes across goods matches what would be predicted by menu cost models of inflation. The main idea of those models is that firms have an ideal value for the price they wish to charge. However, because of the cost of paying attention and working through what their current conditions mean for that ideal price, they may end up letting their actual price drift away from the ideal. Bringing the two together requires paying a cost, in planning or implementing a change in the plan for prices. If the gap between the actual and ideal price is not too large, the firm keeps to its price plan. Once the gap becomes large, the firm changes the price plan to bring it closer to the ideal. As a result, there is an inaction band, with different firms' price gaps distributed within it. When inflation is small and steady, that distribution

is even across positive and negative gaps. But, during periods of accelerating inflation, more prices are low relative to the ideal, and the price gap distribution starts piling near its left barrier.

We can use this theory to revisit the data. When inflation was low pre-2020, the firm-specific reasons driving the price meant that there was an even distribution, across firms, of the gaps between each firm's price and the price it would reset to. There was a roughly constant share of firms whose gap would be large enough to leave the inaction band and lead to an adjustment of price plans. An inflation shock, like what happened in 2021, at first raised the reset price, while actual prices were still the same. The firms that adjusted did so by more, as we saw in panel (b) of Figure 2. Soon, more firms started hitting the limit of the inaction band and choosing to raise their price, as happened in the data in 2022: see panel (a). Throughout the next two years of elevated inflation, as the aggregate component of the reset price dominated, more firms found themselves with a negative gap. Price adjustments all went in one direction—up—so the variance fell, and skew fell as well, as there were many large price rises to offset the large distance between actual and reset prices.[4]

2.2 Application to 2025–26, starting from a steady state

By the end of 2025, UK inflation was still above target. Correspondingly, as we see in Figure 2, the standard deviation and skewness were still slightly below their pre-2020 values, while the average price change and frequency of price changes were slightly above. Given a new inflationary shock coming from the Iran conflict, we would expect these moments of the price distribution to move in a similar direction in the coming months. By how much they move will determine how fast and how persistently inflation will rise.

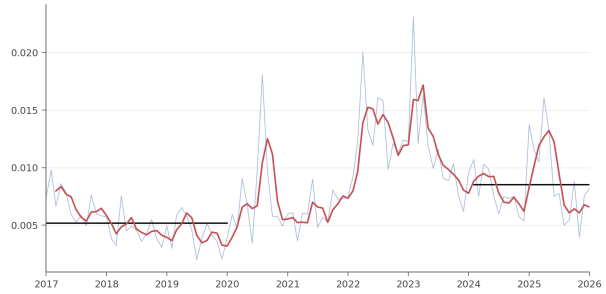
Having validated a class of models that provided a reasonable account of the recent past, one can ask them to predict what will happen in the future given the present shock. If the share of prices adjusting stays roughly unchanged, as it did at first in 2021, then the theory predicts that the higher is this share today, the faster will inflation rise. Intuitively, if more firms adjust their prices, then inflation will rise faster. More precisely, with a higher frequency of price adjustment, the Phillips curve is steeper: inflation moves by more relative to movements in output.

The left panel of Figure 3 plots one measure of this slope justified by that theory: a

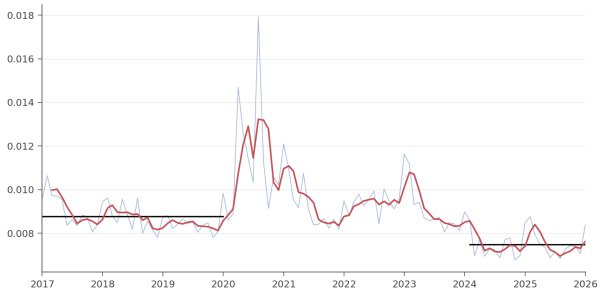
[4]See Blanco et al. (2025), Blanco et al. (2024) and Morales-Jimenez and Stevens (2025) for application of these models to the inflation episode, and Blanco (2021) using the UK micro price data.

Figure 3 The slope of the Phillips curve

(a) Frequency based



(b) Adjusted for distribution



Note: Panels (a)–(b) show two monthly model-based proxies for the Phillips-curve slope using the ONS CPI microdata, aggregated across sectors. Panel (a) shows a frequency-based measure: the inverse square of the expenditure-weighted average duration between price changes. If $f_{j,t}$ is the expenditure-weighted share of items whose price changed in month t from sector j that has an expenditure-weight $w_{j,t}$ (understood as one of the 67 COICOP classes in the ONS data), then an approximation to the duration of a price spell is $d_{j,t} = 1/f_{j,t}$, and the slope of the Phillips curve in a textbook Calvo model would be proportional to $1/(\sum_j w_{j,t} d_{j,t})^2$. Panel (b) shows the distribution-adjusted measure: sectoral adjustment frequency divided by six times the kurtosis of log price changes. Let $k_{j,t}$ be kurtosis of the distribution of non-zero standardized price changes, winsorized at the 1st and 99th percentile and expenditure-weighted. The figure shows the series $\sum_j w_{j,t} f_{j,t}/6k_{j,t}$. Blue shows raw monthly values, red a three-month moving average, and black segments pre- and post-pandemic averages: Jan 2017–Jan 2020 and Feb 2024–Jan 2026. This figure uses posted prices, only dropping sector-months that have fewer than ten non-zero observations for the calculation of the kurtosis, which account on average for 4–5% of expenditures. Re-calculating the figure by dropping items with a sales flag, or using popular filters for sales, leads to the same patterns. Source: ONS consumer-price microdata.

particular average of adjustment frequencies across the different sectors in the economy. On average, in the 24 months before the Iran conflict, that slope was significantly larger than it was in 2016–20. Therefore, this theory predicts that inflation will rise faster in 2026 than it would have for the same shock back at the end of 2020.

There is a plausible reason for why the slope of the Phillips curve may have risen. Perhaps people and firms, having experienced high and volatile inflation during the past 5 years, perceive a higher uncertainty on what inflation will be. Therefore, they expect their prices to stray farther from the desired price over the same period. The optimal response to a new high-volatility regime would be to narrow the inaction band. As a result, prices adjust more quickly to supply shocks.

However, there are two arguments against this prediction. First, the Iran conflict shock is not as large as the unusual combination of demand and supply shocks that hit the economy in 2021–22. In these inaction models, a larger shock is more likely to move more firms out of their inaction range and trigger an adjustment up of their prices. Inflation

decisively accelerated at the end of 2021 and start of 2022 because of an increase in the share of price adjusters that may not happen this time around.

Second, the slope of the Phillips curve depends not only on the frequency of price changers, but also on the distribution of those prices that change, as we saw in 2021–24. Alvarez, Le Bihan and Lippi (2016) show that, in this class of models, dividing the frequency of price adjustment by the kurtosis of the distribution of price changes gives a better statistic for the slope. Panel (b) of Figure 3 shows this moment in the UK data. Adjusting by the distribution, the slope is slightly lower than before 2020. This suggests that inflation would rise slightly more slowly in 2026 than it did in 2021, conditional on the shock. In spite of the past inflation, perhaps firms still trust the Bank of England to deliver the low stable inflation of the twenty years before the pandemic.

2.3 Application to 2026–27 taking the starting point into account

There are two further limitations of the previous result and prediction for 2026. Both the frequency-based moment, and the moment that uses information from the distribution of price changes as well, rely on theoretical results. Those results were derived assuming that the economy was in a steady state. However, plausibly, the economy at the start of 2026 may not have been in that illusory steady state. For instance, taking one extreme example, after a very large sudden shock to inflation, all the firms would reset and the price gaps would all be close to zero. A moderate supply shock right after this would have an unusually small impact on inflation because so many firms would be starting from well within their inaction range.

Second, the proxies for the slope of the Phillips curve in Figure 3 are relevant to judge the impact of a shock to aggregate demand, like monetary policy. Yet, the problem we face is what will happen after a shock to supply. Different shocks will move the reset price quite differently, depending for instance on how they shift marginal costs or how long they are expected to persist.

More recently, Bandeira, Castillo-Martinez and Wang (2026) takes a significant step forward for this class of models.[5] The object that directly matters for the impact of a shock is not the distribution of price changes, but rather the distribution of price gaps within the inaction range. This distribution reveals an expected future schedule of price changes and of the predictable unwinding or build up of price pressures. The paper develops an

[5]See also previous steps by Morales-Jimenez and Stevens (2025) and Gagliardone et al. (2025).

econometric method to estimate that gap between the current price and the reset price, by using the past history of price changes for every good. Moreover, it then uses historical data to estimate the response of inflation to different shocks, like monetary policy or oil prices (positive and negative), depending on the distribution of price gaps at the time of the shock.[6]

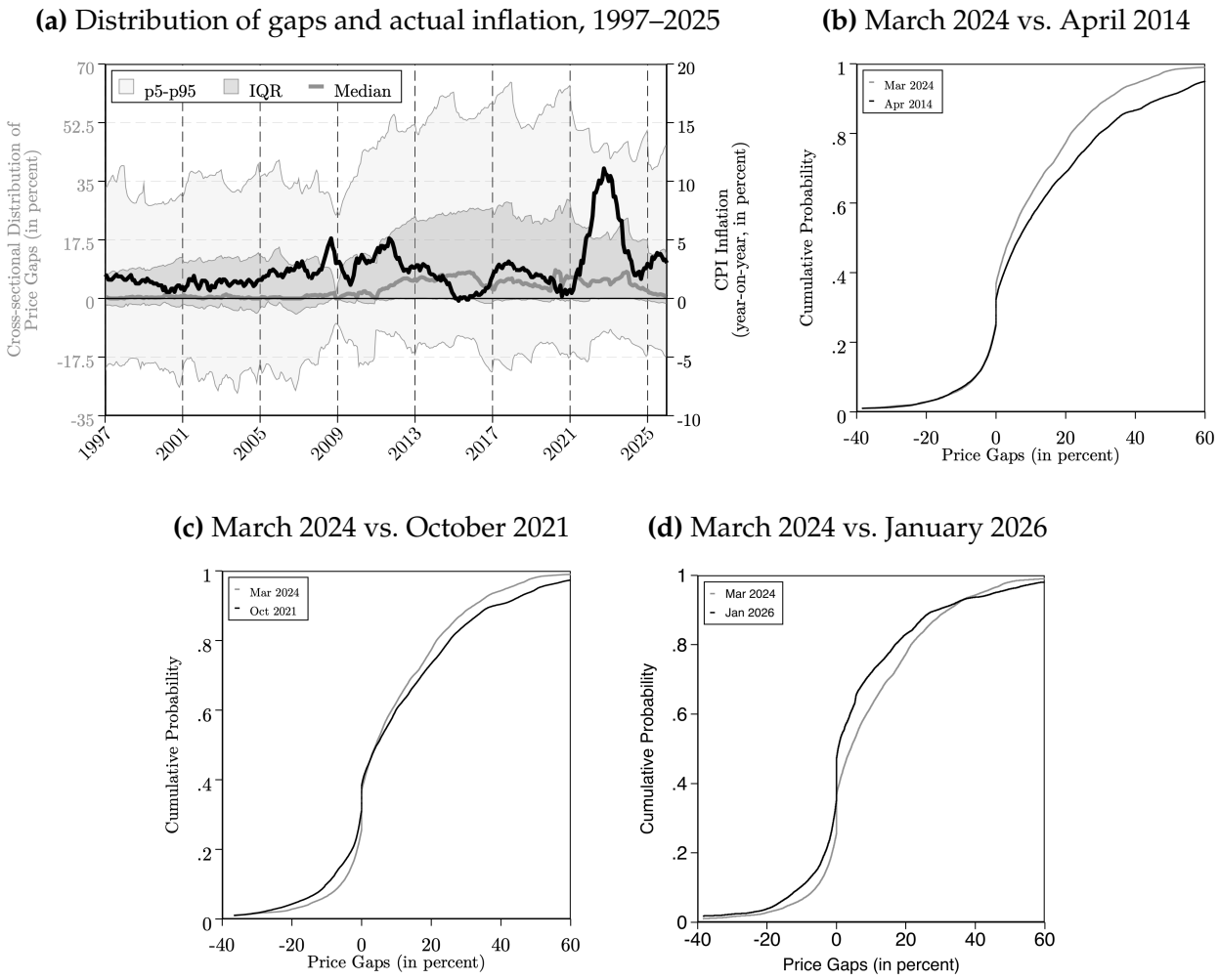
Given these estimates of that distribution in January 2026, we can more reliably infer what inflation might be in response to the Iran shock. Figure 4 shows the estimated price distribution over the last 30 years, and at some key dates. Note that it varies significantly, so that predictions based on steady state moments can be misleading. Take March 2024 as a reference point. In April 2014, the distribution had a higher share of firms with positive and large price gaps. All else equal, we would have expected this to be followed by price cuts in the near future in order to close these gaps. Indeed, in the next few years, inflation was well below target. In October 2021, instead, there was significant mass on both tails of the distribution, perhaps as a result of the large relative price adjustments coming out of the pandemic. The theory predicts that the share of prices adjusting should rise in the near future, as we saw. In response to a positive shock, the mean adjustment would also rise leading to a sharp rise in inflation, also as we saw. But if it so happened that there had been a negative shock in 2021, the theory predicts we would have seen a just-as-sharp fall in inflation.

What about now? The distribution shows a significant tilt to the left tail comparable to what is usual. With many price gaps near the edge of the inaction band, there was, regardless of what shock hit, accumulated inflation pressure in the economy. At the same time, the distribution is more asymmetric, with significantly fewer firms on the right tail. These two observations would lead to the prediction that a positive inflation shock would lead to a fast rise in inflation, while a negative shock would have little impact.

Figure 5 shows the predicted paths for inflation conditional on shocks. The left panel shows that a 10% rise in oil prices, given the state of prices in January 2026, was expected to have a quick and large impact on inflation of 0.3% within the first three months, then building to a little over 0.4% 12 months later. Depending on how it is measured, the shock to oil prices in the data has been somewhere between 35 and 50%, which leads to an impact on inflation of about one percentage point on impact, rising to 1.4% by 2027. This is a lower bound, both on the size of the shock, and because as the shocks get larger, the response of

[6] An alternative approach that relies less on theory and is more geared towards forecasting is provided by Chen et al. (2026), who use many moments of the distribution of price changes to forecast inflation.

Figure 4 The cross-sectional distribution of price gaps



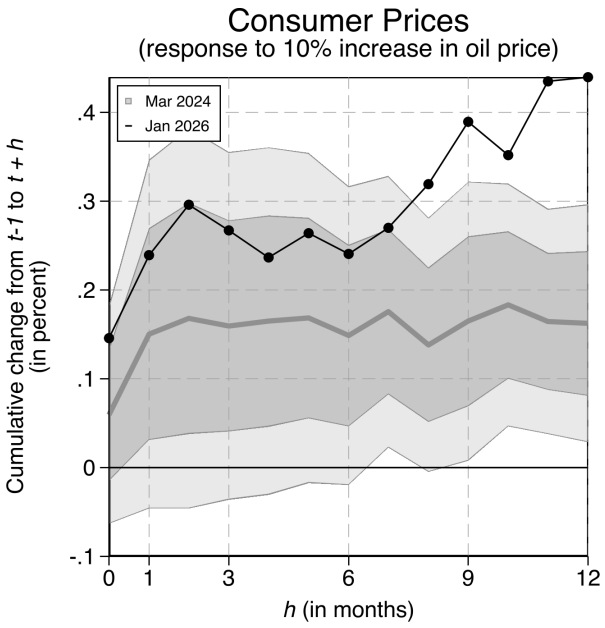
Note: Panel (a) shows the cross-section of item-level price gaps: the percentage distance between an item's current price and its reference/target price estimated by Bandeira, Castillo-Martinez and Wang (2026) in each month for the United Kingdom. The shaded bands are the p5–p95 range (lightest), the inter-quartile range (darker), and the solid line is the median. The heavy black line is headline CPI inflation, year-on-year, read off the right axis. Vertical dashed lines mark four-year intervals to ease reading. In panels (b)–(d) are the cumulative distributions of price gaps at different dates: March 2024 (in grey) as a reference point, and (in black) in April 2014, October 2021, and January 2026.

inflation rises more than proportionally in the inaction model.

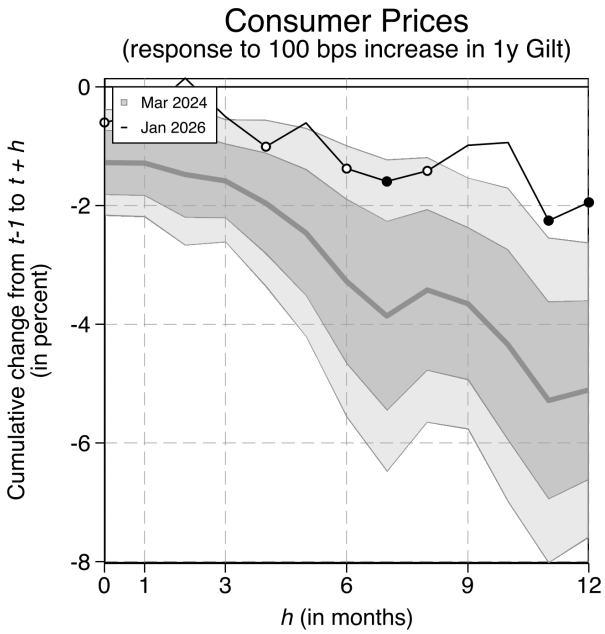
The right panel of Figure 5 further shows the impact of a hike in monetary policy. Because of the state of the distribution of price gaps at the start of 2026, hiking rates would have a smaller impact on inflation than usual. Monetary policy was less powerful. Matching the two figures, a hike of 1 to 1.5 percentage points would keep inflation steady.

Figure 5 Inflation response to a shock in January of 2026

(a) Response to a 10% rise in the oil price



(b) Response to 1pp rise in 1-year bond rate



Note: Cumulative response of consumer prices (per cent) from $t-1$ to $t+h$, h in months. The shaded bands are the p5–p95 range (lightest), the inter-quartile range (darker), and the solid line is the median. The marked line traces the response conditioning on the state of the world as of January of 2026. These responses come from estimating panel local projections of the log level of price in each sector on the change in interest rates, together with interactions of the interest rate with the first four moments of the standardized price gap distribution, for positive and negative shocks separately, together with controls for 12 lags of the interest rate, the price, GDP, the exchange rate, corporate bond spreads, the unemployment rate, a stock market index, and 1 lag of the standardized gap moments. The projections include panel fixed effects, and use as instrument the Braun, Miranda-Agrippino and Saha (2025) measure of target, path and QE surprise shocks to monetary policy. The same specification is used for oil prices, but the measure of the impulse is now the WTI spot price, and the instrument is the supply shock by Känzig (2021).

3 Transmission to expectations

After inflation rises in the first few quarters after the shock, whether it persists beyond it depends heavily on the inflation expectations of households. If households expect higher inflation, all else equal, they will anticipate their purchases, stimulating aggregate demand. If firms expect higher inflation, they will plan to raise their prices faster in order to keep their real profits. If both expect higher inflation, the result of their bargains will be higher nominal wages. All these actions serve to raise prices further into second rounds, amplifying the original shock and making it persist.

During the inflation surge of 2021–24, data measuring expectations was invaluable. It was the first data to point to the sharp rise in 2021 as well as to the fall in the second half of 2022; it was the key information needed to forecast inflation well beyond measures of slack or of supply shocks; and it has even provided some of the most useful data to distinguish the different shocks that hit the economy (Reis, 2026). At the end of 2025, that data showed that inflation expectations were anchored, in the sense of being consistent with the targets of most central banks and not showing any tendency to rise or fall. At the same time, there were also some signs that the anchor was not as deeply rooted in the ground: news seemed to have a larger impact on expected inflation than in the pre-2020 years. What do these data look like after the Iran shock?

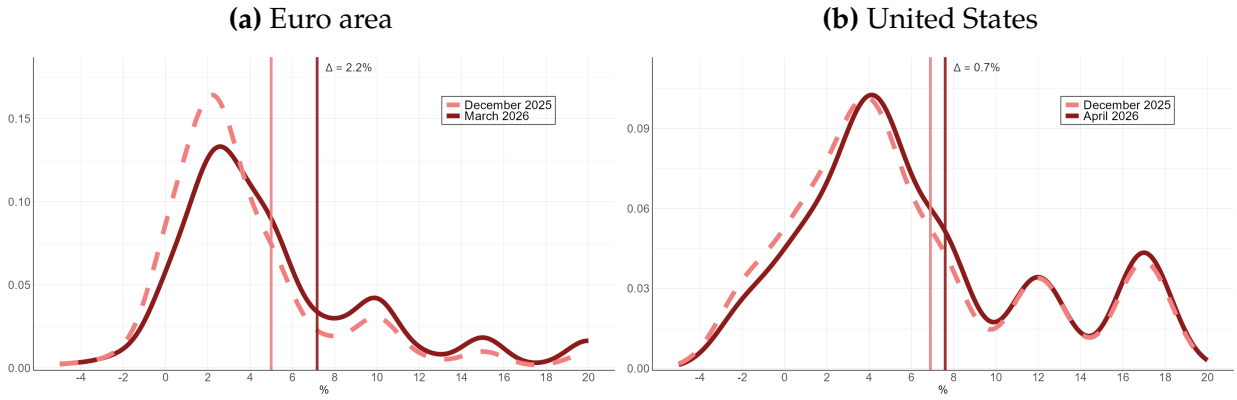
3.1 Survey expectations

Between the survey collected in the fourth quarter of 2025 and that collected in the second quarter of 2026, so before and after the conflict, respectively, average expected EA inflation stated by professional forecasters in the survey run by the ECB went up from 1.8% to 2.7% for 2026, but was roughly unchanged for 2027 (from 2.0% to 2.1%). In the US, the survey run by the FRB Philadelphia went from 2.8% to 3.5% for 2026, and stayed unchanged at 2.5% for 2027. The IMF, in its World Economic Outlook released on 14 April 2026, revised the inflation forecasts by 0.7 percentage points for both the UK and the EA, and by 0.8 percentage points for the US, relative to its October report.

The experience of 2021, however, is that these were not the right data to look at. It was surveys of consumers and firms that, in spite of all their noise and measurement difficulties, pointed to the incoming inflation disaster. Crucially, it was as much the mean in those surveys as the distribution of answers that was the leading indicator. At first, a group of households and managers raised their expectations, which left the median answer unchanged, but increased the standard deviation and especially lowered the skewness of the distribution. As more survey respondents joined the first group, the standard deviation further rose, and eventually the median rose.

Figure 6 shows the survey expectations for EA and US inflation at the end of 2025 and at the most recently available data after the conflict started. The median expected inflation increased by more in the EA (1.2%) than in the US (0.5%). The difference in the increase in the means is significantly higher because the right tail of the distribution has thickened. Qualitatively, EA household expectations after the Iran conflict resemble their 2021 pattern. In the US, the amplification of the shock via household expectations is still small.

Figure 6 Households' one-year-ahead inflation expectations



Note: Each panel plots the (survey-weighted) density of households' expected inflation over the next twelve months for two monthly snapshots (see the in-panel legend): December 2025, and the latest available wave (March 2026 for the euro area, April 2026 for the United States). Panel (a) uses data from the ECB CES microdata, weighted by the survey weight, while panel (b) uses data from the Michigan Survey of Consumers bin distribution. The vertical lines mark that date's mean forecast, and Δ is the change between the two.

Figure 7 shows instead surveys of firms, this time for the EA and the UK.[7] There is a clear, but small, shift of mass from around the median to around the right tail in the EA. In the UK, instead, there is a mild shift in the median but a fall in dispersion, and so no signs of a potential drift in expectations.

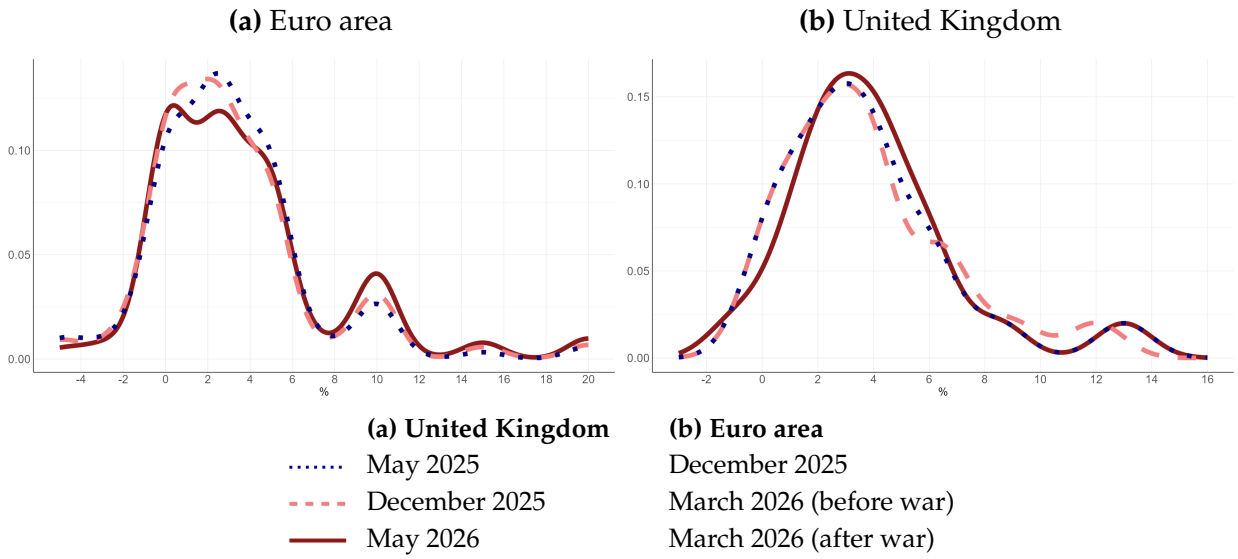
3.2 Conditional response to the shock

An increase in energy prices should raise expected inflation. This is partly because it raises inflation directly through electricity and gas prices, partly because of the transmission to other prices quantified in section 2, and partly because these prices are more salient to people who may use them as informative signals. By itself, the increase in EA expected inflation may not be a source of concern. Ideally, we would like to distill from the data the change in expected inflation that goes beyond these direct effects. This would be the worrying amplifying effect on inflation.

Patzelt and Reis (2024) uses the variation in electricity prices across EA countries, gender, education and income, and over time during the volatile years of 2020–23 to identify their impact on expected inflation. The baseline estimate is that a 100bps increase

[7]The individual answers for the US equivalent, the FRB Atlanta survey, are not publicly available, but the change in its mean is similar to the one in the EA and UK.

Figure 7 Firms' one-year-ahead inflation/price expectations.



Note: Densities of firms' expected own-price/inflation over the next twelve months (dotted navy = earliest, dashed coral = middle, solid dark-red = latest). Panel (a), UK firms (BoE Decision Maker Panel): May 2025, December 2025 and May 2026. Panel (b), euro-area firms (ECB SAFE): December 2025, and the latest round (fieldwork Feb–Apr 2026) split into firms interviewed *before* the outbreak of the war (28 Feb 2026, dashed) and firms interviewed *after* it (solid).

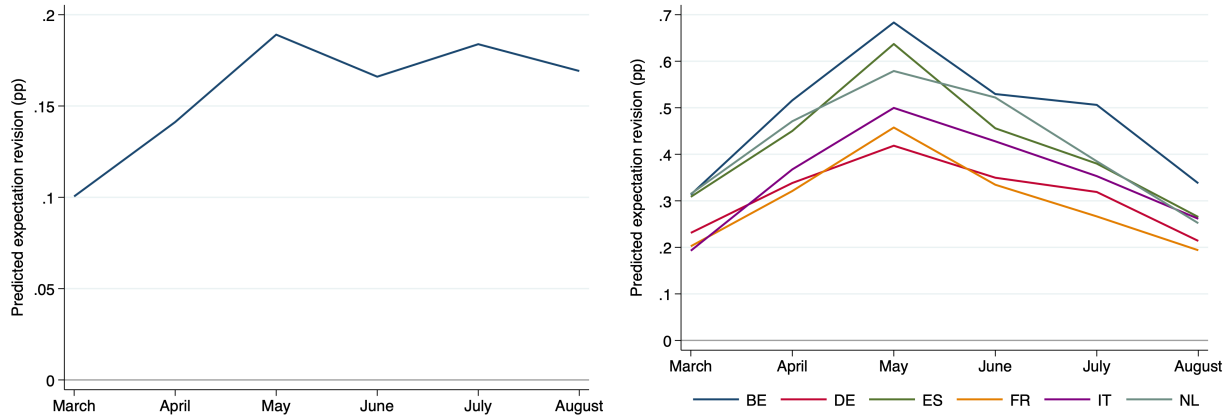
in electricity prices raises expected inflation by 1.4bps, rising to 2.0bps if expectations have become unanchored. Figure 8 applies this empirical strategy to predict the increase in expected inflation following the Iran conflict.

I use their estimated parameters, together with the update of the ECB quarterly staff projections for wholesale electricity prices 6-months ahead between December of 2025 and March of 2026. The forecasts in the left panel assume that the pass-through from wholesale to retail prices is 1. Those on the right panel instead use the ECB forecasts for EA energy prices together with an estimated pass-through coefficient from the area to each country and calculated for each country separately. Overall, the predicted increase in expected inflation as a result of energy prices alone is roughly between 0.15 and 0.5 percentage points.

Patzelt and Reis (2024) had found that in 2021–23, actual expected inflation in the EA increased by 4.4 times what the energy shock would justify. Since there is a 2.2% increase in mean expected inflation (Figure 6), the movement in expected inflation in the first half of 2026 is quantitatively similar to the one in the first half of 2022.

Figure 8 The impact of the energy shock on EA household expected inflation

(a) Aggregate with full electricity passthrough **(b)** Country with diverse energy passthrough



Note: The figure plots the difference between post-shock and pre-shock predicted revisions to one-year-ahead inflation expectations. The post shock uses the energy projections in March 2026 as well as the measure of anchoring in the March 2026 survey, while the pre-shock uses the projections and expectations anchor in December of 2025. In panel (a), I assumed that wholesale prices are passed through one-to-one to HICP electricity prices, while in panel (b), I re-estimate the Patzelt and Reis (2024) regression using HICP energy instead of electricity, and regress each country's actual HICP energy price against the euro-area HICP energy to obtain the pass-through coefficients. The Patzelt and Reis (2024) regression is $\Delta^6 \pi^e_{i,c,g,t} = \beta \Delta^6 e_{c,t} + \gamma \Delta^6 e_{c,t} \times \Delta^6 a_{c,g,t} + \alpha_c + \alpha_g + \theta y_{c,t} + \varepsilon_{i,c,g,t}$ where Δ^6 is the six-month change ending in month t, π^e is one-year-ahead expected inflation, e is the relevant energy price, and a is the group-level anchoring measure based on the three-year interquartile range of longer-term inflation expectations, while α_c and α_g are separate country and group fixed effects, and control variables $y_{c,t}$ are for past inflation and monetary policy. There are eight demographic groups g from crossing gender (male/female), income bracket (above/below 60th percentile), and education (college/below), and there are eleven countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, and Spain. Using for predictions $\hat{P}_{c,g,t} = \hat{\beta} \Delta^6 e_{c,t} + \hat{\gamma} \Delta^6 e_{c,t} \times \Delta^6 a_{c,g,t}$, then plotted in the figure is $\hat{P}^{post}_{c,t} - \hat{P}^{pre}_{c,t}$.

To conclude, there is a legitimate concern that household and firm expectations may act to amplify and propagate the shock in the EA. The shock is smaller, and the signs are still tentative as there is only limited data, so this concern is still far from what happened at the end of 2021. In the UK or US data, there is no apparent similar concern.

4 Transmission to other policies

A different transmission channel from the initial inflation impact of the energy shocks into high and persistent inflation later works through the reaction of policies. The most notable

is monetary policy. Depending on whether central banks tighten or loosen policy, and by how much they do so, one could have a variety of outcomes. Monetary policy, after all, is the ultimate driver of inflation. The goal of this article is to work through the other transmission channels to inform the monetary one, in order to understand the choices facing central banks.

The other major policy driving the transmission of shocks to inflation is fiscal policy. After an energy shock there is a case for targeted fiscal policies that help some groups in the economy respond to the shock. It is often hard, or impossible, for people to insure beforehand against aggregate external shocks. The government can step in ex post to provide the transfers that incomplete private markets could not. If they are well designed, these policies can raise welfare a great deal, especially for those less fortunate (Reis and Velasco, 2025).

These same fiscal policies, however, can also have a persistent impact on inflation. Assessing the impact of each individual policy requires a fine country-specific analysis. One way to aggregate them is through their impact on elevated public deficits and public debt. These spur rises in private consumption and aggregate demand, and they require devaluation of the debt through surprise inflation. Looking at revisions in expected deficits and debt provides a broader take on whether fiscal stimulus can enhance the impact on inflation.[8]

4.1 Revision of forecasts during the Russian invasion of Ukraine

The best forecasts of the stance of fiscal policy for countries all over the world come from the IMF. Through its country surveillance teams, the IMF monitors fiscal developments and, twice a year, it combines its fiscal forecasts with those for inflation and output in the World Economic Outlook (WEO). A virtue of these forecasts is that they respect the government budget constraint, so that future debt is connected to current debt through internally consistent forecasts of its different drivers.

More specifically, the WEO forecasts future inflation rates, interest payments on the public debt, economic growth, and public deficits at a particular reference date. The law of motion for public debt aggregates each of these forecasts together with the initial debt to provide a forecast for the level of public debt at a future target date. Afterwards, when the future realizes, the actual debt is also a result of the actual levels of these four determinants

[8]The analysis in this section relies on work in progress with Nicholas Tokay.

using the same formula for the government budget constraint. Therefore, differencing actual and forecast—by including or excluding each of the four economic determinants of public debt in turn—provides a decomposition of which of them led the public debt higher or lower than was anticipated.

In practice, there are two further determinants of the surprise changes in debt. The first is ex post revisions to what initial debt was back in the reference period. Often, off-balance sheet debts and proper consolidation of central and regional governments' accounts are recognized and included with delay, sometimes only many years after. The second is mismatches between the actual future debt and the one that follows from using the government budget constraint. This results from the non-linearities in the law of motion for debt creating cross-effects between the four macro determinants, and, more importantly, from asset sales by the government and valuation changes in the stocks behind net debt.

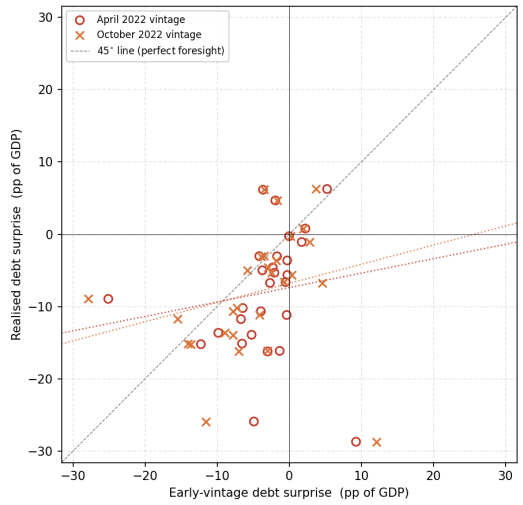
Panels (a) and (b) of Figure 9 study the link between public debt and inflation during the period of the Russian invasion of Ukraine. The baseline date is October 2021, when the WEO recorded the current general-government debt-to-GDP ratio, and made its forecasts for its target value in 2023. It also has the forecasted primary surpluses, interest payments, inflation rate and output growth rates until 2023 (and beyond). After Russia's invasion, the IMF revised its forecasts in April 2022. One can calculate what the surprise revision for the public debt of each country would be at the end of 2023. A new revision was made in the October 2022 WEO.

Panel (a) plots the revision for each OECD country against the actual realized public debt in 2023 (as reported in the 2026 WEO), for each of the two vintages of revisions. A positive number indicates that debt forecasts were revised upwards. In 2022, there was a general revision down of the expenses associated with the pandemic together with upward revisions to growth and inflation during the recovery. Overall, public debt was revised downwards. Comparing the predicted revisions and the actual revisions to public debt, the relation is weak. Lines fit by ordinary least squares have slopes of 0.20 and 0.27, for each of the vintages (and $R^2 = 0.02$ and 0.06). This weak forecasting performance is not surprising. Forecasting the impact that the Ukraine war would have, as well as other events during that 6-month period, is not easy. Moreover, after October of 2022, many more economic unforeseen events drove the public debt until the end of 2023.

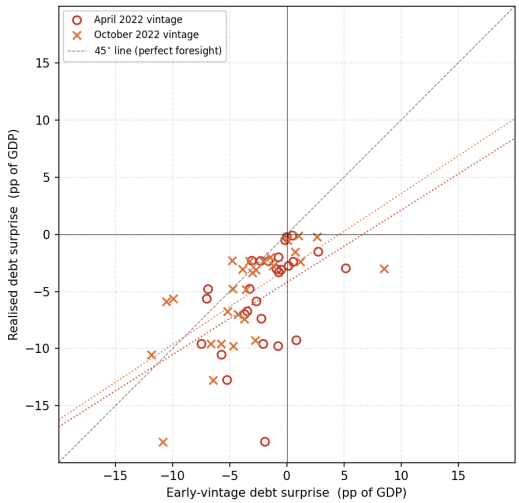
However, panel (b) repeats the exercise but keeps only the revision of debt attributable to the four macro drivers. It therefore discards the residual from updates to the initial

Figure 9 The 2022 Russia-Ukraine war and the link between fiscal policy and inflation

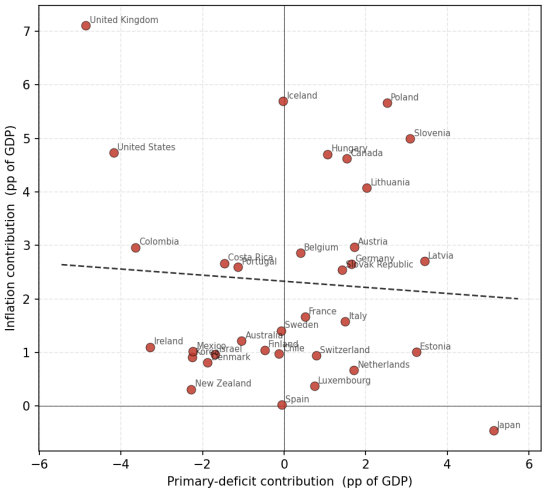
(a) Revisions to public debt in 2022



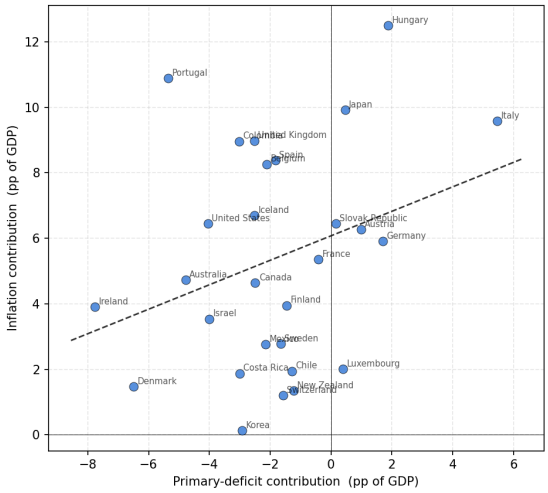
(b) The macro-driven component of revisions



(c) Predicted deficits vs. inflation



(d) Actual deficits vs. inflation



Note: The baseline is the October 2021 WEO and the target year is 2023. The surprises are from the perspective of three vintages: April 2022, October 2022, and April 2026, by which point 2023 is realized and revised. Panel (a) plots, for each country, the 2022 estimates of the total debt surprise on the horizontal axis, where open circles are the April-2022 vintage, and crosses are the October-2022 vintage. On the vertical axis is the realized surprise using the April-2026 vintage. The dashed 45° line marks perfect foresight and the dotted lines are OLS fits. Panel (b) repeats this keeping only the part attributable to the four macro drivers. Panels (c) and (d) plot two drivers of the public debt against each other across countries — the primary-deficit contribution (horizontal) against the inflation contribution (vertical), with an OLS fit. The sample is all OECD countries, excluding Norway and Greece as outliers. Source: IMF WEO issues.

stock of debt or to the stock of final debt. These estimates track the realized revision far more closely: the slopes are now 0.64 and 0.67, and the R^2s are 0.18 and 0.45. This shows the value of the IMF projections. They can be used as signals of how macroeconomic developments in primary surpluses, interest payments, inflation, and economic growth can affect future debt.

The second row of estimates focuses on the link between primary deficits and inflation. Panel (c) calculates the deficit and inflation contributions to the revision of projected 2023 public debt implied by the April 2022 forecasts relative to the October 2021 initial forecast. There is no relation. That is, for the countries for which the IMF revised its forecast of primary deficits up by more, it did not revise its forecast of inflation by more as well.

Panel (d) instead calculates the same components but by using the actual realized values (measured in April of 2026) instead of the April 2022 forecasts. This shows a positive relation with a slope of 0.37. Surprises in primary deficits caused by the Ukraine war and other events that occurred between October of 2021 and the end of 2023 are strongly associated with unexpectedly high inflation. But, when assessing the impact of higher primary deficits in April of 2022, the WEO did not anticipate this strong relation.

All together, this experience of 2022 suggests first that the WEO forecasts of the macro determinants of the evolution of public debt following a shock at the start of the year are quite good, especially by their October vintage. Forecasting public debt is of course difficult, but the IMF staff seems to have forecasted the macro impact of the events in the first half of 2022 reasonably well. Second, there was an association between the contribution of inflation and primary deficits to the public debt that the first vintages of the WEO forecasts missed.

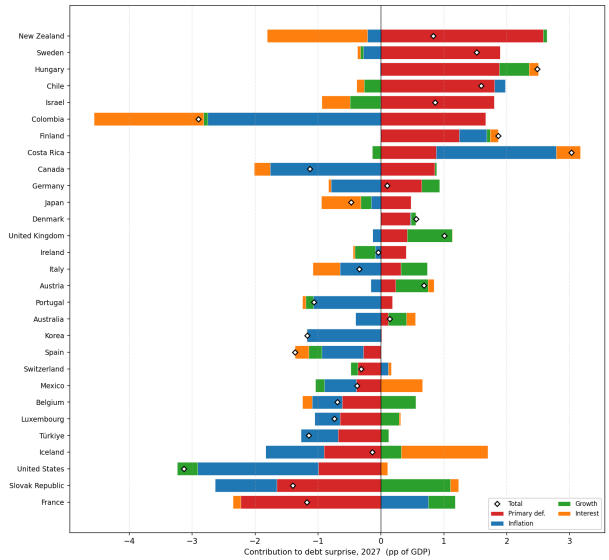
4.2 Current revisions following the Iran conflict

Of all the macro developments between its previous October forecasts and its April forecast in 2022 and 2026, a war with implications for energy prices was perhaps the largest such development on both occasions. This was likely the largest driver of the revisions by the IMF staff, and the revisions to deficits, inflation and, ultimately, public debt, were significant.

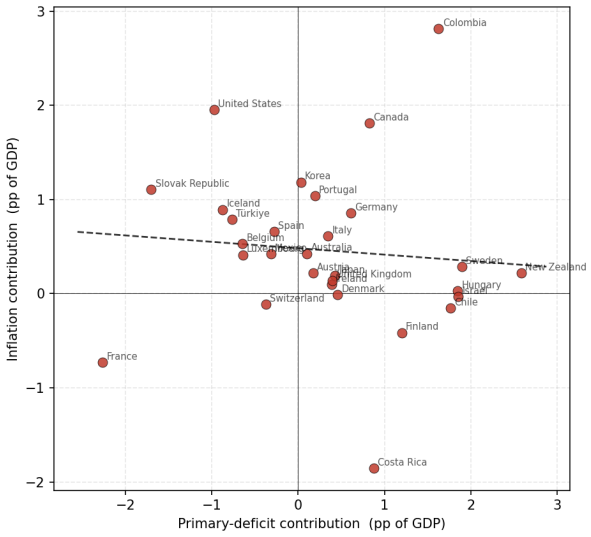
Panel (a) of Figure 10 starts by looking at the revisions of the public debt for each country. This is the equivalent of what was plotted on the horizontal axis of panel (b) of Figure 9. The four macro components are broken down per country. Overall, there is a revision upwards on the expected public debt although, as in 2022, with great dispersion

Figure 10 Early assessment of the impact of the 2026 Iran war

(a) Macro determinants of the debt surprise



(b) Surprises to the deficit vs. inflation



Note: This figure compares the October 2025 WEO forecasts with the April 2026 forecasts to calculate the surprises. The target is the public debt in 2027, so surprises are the differences between the April-2026 and the October-2025 projection of 2027 debt in percentage points of GDP. Panel (a) calculates the surprise to public debt and its macroeconomic determinants. Each horizontal bar is one OECD country, and its stacked colored segments show how much each force adds to, or subtracts from, that country's debt surprises. The four macro forces are the primary deficit (red), inflation (blue), economic growth (green), and interest payments (orange). The white diamond marks the total, which equals the sum of the plotted segments. Countries are sorted from the largest debt-raising primary-deficit contribution (top) to the most debt-reducing (bottom). The sample is all OECD countries, excluding Norway and Greece as outliers. Source: IMF WEO issues.

across countries. The revisions to the deficit are large and positive in some countries, like Sweden, which ended up announcing large fiscal packages in response to the conflict, and large and negative in some other countries, like France, that have exerted fiscal restraint. In turn, the IMF revised upwards its forecasts of inflation after the war, especially in Europe, and this effect had a negative contribution to the debt, albeit a not very large one. The figure suggests that, at least as of April, there was no clear sign of a further transmission from fiscal policy to inflation.

Panel (b) in Figure 10 replicates, for the April 2026 issue of the WEO, what was done in panel (c) of Figure 9 with the April 2022 issue of the WEO. In both instances, the revisions to deficits and inflation were approximately uncorrelated. The IMF staff's implicit models do not associate a higher deficit in a country with higher inflation. Perhaps, as happened

in 2022, recalling panel (d) of Figure 9, that association will turn out to be strong.

5 Transmission to the anchor

Perhaps prices, expectations, and fiscal policy transmit the initial impact of the energy shock into a prolonged period of high inflation. Perhaps monetary policy fails in its response and is unable to stop the inflation surges. Perhaps a second inflation disaster, so close to the 2021–24 one, leads the public to lose trust in the ability of central banks to deliver the promised inflation target. Perhaps governments do away with central bank independence as a result. The combination of all of these would be a loss of the inflation anchor. Economic agents would no longer expect long-run inflation to be 2%, and this would serve to transmit this 2026 shock into a permanent new regime.

There are many "perhaps" along the way to end there. Judging their joint future risk is hard in the present. At the same time, long-run investors have to consider them and act to buy insurance against even unlikely tail events. Their behavior in financial markets will affect prices of some securities. We can therefore use those prices to assess whether this risk is real.[9]

5.1 The long-run inflation anchor

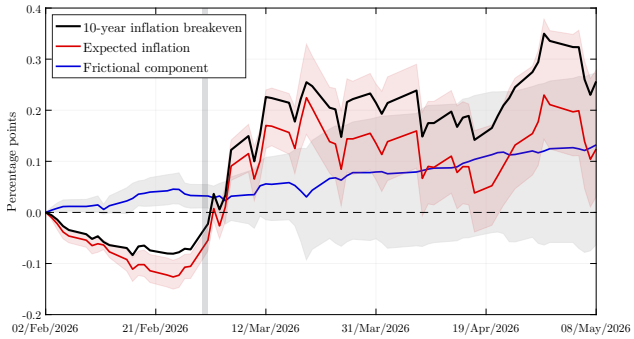
Pension funds, life insurers and other institutions have to hedge long-run inflation risk in order to meet their long-run commitments. As a result, they hold large net positions in long-dated inflation swaps and have large holdings of inflation-indexed government bonds. The prices in these markets reflect their beliefs and those of other traders as to how credible is the 2% inflation target in the long run. Two virtues of these prices are that they continuously respond to new information, and they are traded at multiple horizons.

Figure 11 plots in black the raw price of inflation swaps for the UK, US, and EA (in rows) at a 10-year horizon around the start of the Iran conflict. The 10-year swap rate increased the most in the EA, by around 0.25 percentage points, followed by the UK at around 0.15–0.20 percentage points, and by close to nothing in the US. This is somewhat puzzling given that the EA had the lowest inflation to start with of the three, and the

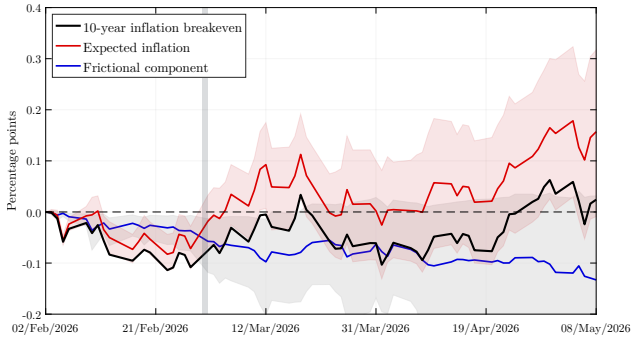
[9]The analysis in this section relies on work with Saleem Bahaj, Robert Czech, and Sitong Ding, as reported in Bahaj et al. (2026), and in an update of the estimates from work with Jens Hilscher and Alon Raviv, which are made available in `https://r2rsquaredlse.github.io/web-inflationdistributions/`.

Figure 11 10-year expected inflation from market prices

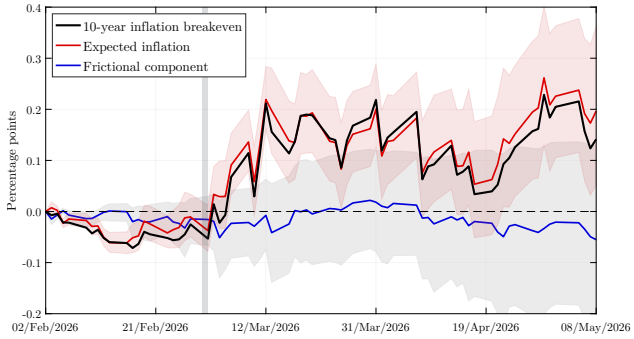
(a) Euro area



(b) United States



(c) United Kingdom



Note: The plots start four weeks before the Iran conflict (February 2nd) and ends 10 weeks into it (May 8th), with the 28th of February marked by a vertical grey bar to denote the start of the active conflict. I normalize the value on the 2nd of February to zero, to focus on the changes that followed. Each figure shows for one country the price of a 10-year inflation swap contract, and then its split into a fundamental expected inflation, and a frictional component using the methods in Bahaj et al. (2025). Confidence bands for each estimate are shown as shaded grey areas to reflect the uncertainty in the statistical method behind the decomposition.

independence of its central bank and commitment to the inflation target are arguably the highest.

A severe limitation of these raw data is that market prices move not just in response to fundamentals but also in response to frictions that shift the demand and supply of the underlying financial contracts. Around large shocks and elevated uncertainty, this problem may be worse. Bahaj et al. (2025) propose a method to use data on both the prices and the quantities of traded inflation swaps to separate "fundamental" inflation expectations from financial frictions. This fundamental inflation is defined as the one that moves both demand and supply for inflation protection, as all sides of the market update their expectations of inflation. Frictional price movements are instead those that result from only demand or only supply shifting, perhaps because some institutions became more constrained or more eager to trade. The fundamental includes both what people expect inflation to be as well as an inflation risk premium, the compensation in the price for the uncertainty behind those expectations. To judge whether the anchor is in place, and the inflation target is still credible, both movements in expected inflation and in the risk premium are relevant.

Figure 11 shows also the fundamental (in red) and frictional components (in blue). The frictional component was significant during this time in the EA and the US. Taking it into account, the movement in fundamental expected inflation turns out to be rather similar in both regions, at around 0.15–0.2 percentage points. The UK is closer to the upper bound of this range. Since this is an average over ten years, it corresponds approximately to a cumulative increase in inflation of 2 percentage points as a result of the Iran conflict. This is in line with the model predictions in section 2 and with the EA household and firm surveys (but not for the US and UK) in section 3: a significant rise in inflation in 2026 and 2027, but not much beyond.

Doing a similar exercise using 1-year swaps gives a rise in fundamental 1-year-ahead inflation expectations of 0.84pp in the UK and 0.4pp in the EA and the United States. Subtracting the 1-year from the 10-year numbers gives expected inflation over years 2 to 10. This is 0.16 percentage points across the three jurisdictions. This is consistent with a moderate amount of persistence of the initial shocks into 2027 and maybe 2028. It is also consistent with no change in the anchor.

5.2 Risk around the anchor

Associated to the inflation swaps market is a market for options on those swaps. These "swaptions" allow the financial institutions that buy swaps to complement those positions with insurance against tail events via put and call options. Their prices provide further

information on whether the anchor remained in place after the Iran conflict started.

On the one hand, combining the price of swaps with different strike prices provides estimates for the entire probability density of future inflation. Hilscher, Raviv and Reis (2025) develop methods to translate these prices into the probabilities. On the other hand, this market is less liquid than the one for the swaps. The volume of transactions is two orders of magnitude smaller. Therefore, a high frequency analysis would be suspect. At the same time, a change in the prices that persisted for months would likely signal a clear shift.

Figure 12 shows the distributions for the US and the EA at two horizons: 5 years ahead and 10 years ahead, for a set of weeks before the Iran conflict and during it. Note that these refer again to risk-neutral inflation—they combine both actual expectation of inflation and the inflation risk premium—and that they are not adjusted for the frictions that we found important in the swap market. Matching what happened with the unadjusted swap prices for the US, there is no change in the whole distribution. That is, both means and probabilities of tails stayed the same.

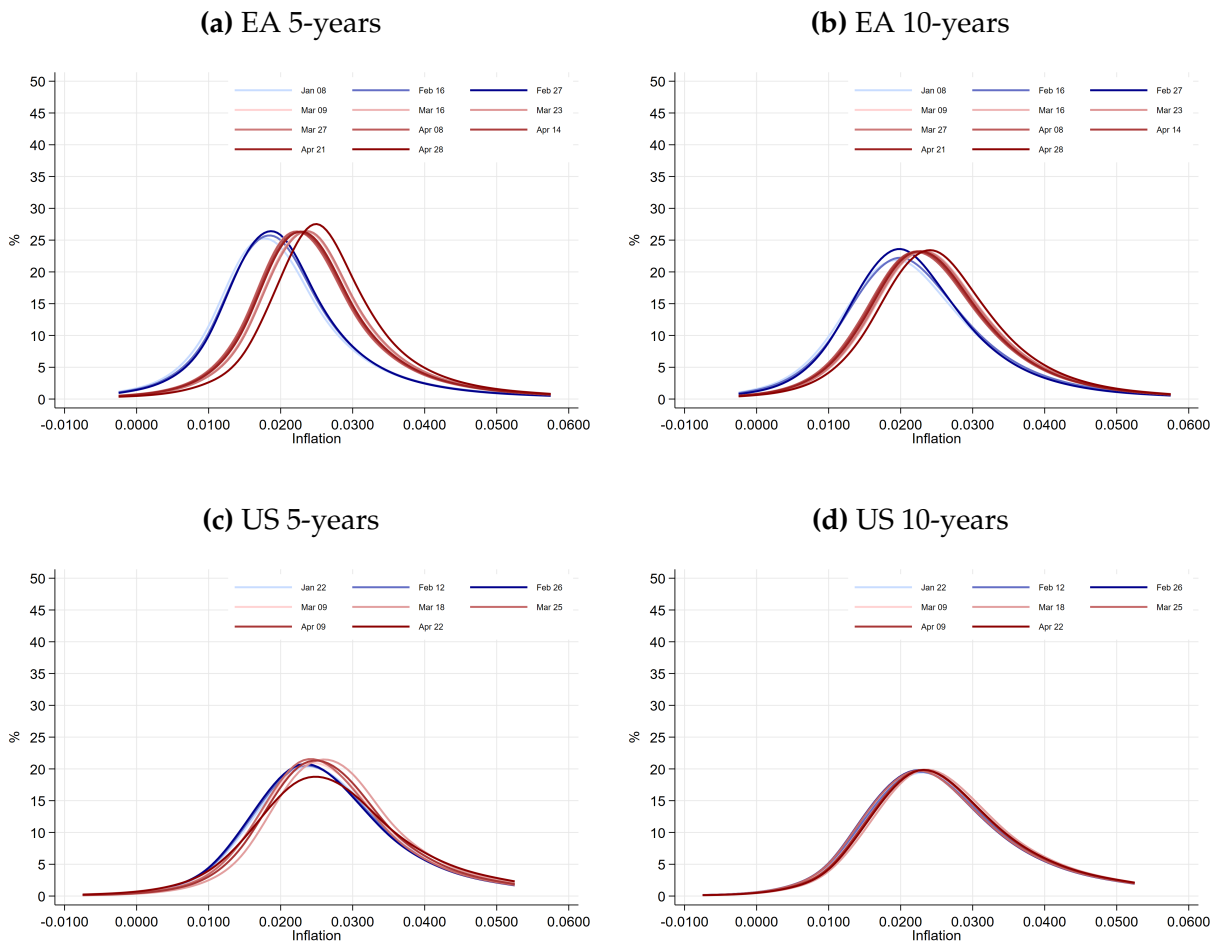
Looking instead at the EA, the change in the mean of expected inflation that we documented in Figure 11 came with a shift of the distribution to the right. Interestingly, this shift was close to horizontal. That is, there is no thickening of the tail of the distributions. A thickening of the tail would signal greater fear that there is a change in the inflation regime. As of now, we see none.

6 Conclusion: looking through or not?

Should monetary policy look through the 2026 energy shock caused by the war involving Iran, Israel, and the United States? Looking at the size of the increase in oil prices, and how they are expected to revert, the answer ten years ago would likely have been yes. In the EA, US, and UK, the central banks had a large capital of credibility, fiscal policy was tilted towards austerity, and the distribution of price gaps showed deflationary pressures. The conventional wisdom, supported by theories, evidence, and experience, was that inflation would only be temporarily higher, and tightening monetary policy would only have an effect too late.

Fast forward to 2026, and the scars of the 2021–24 inflation surge have led to a re-evaluation of this conclusion. There is a legitimate fear that inflation expectations are not as solidly anchored as they were. The stock of public debt is higher, as may be the

Figure 12 Risk-neutral distributions for inflation outcomes from market prices



Note: This plot shows probability distributions for inflation 5-years ahead and 10-years ahead at different dates in 2026, just before and just after the Iran conflict started. The distributions come from using the methods in Hilscher, Raviv and Reis (2025) that use data on options contracts on inflation with different strike prices to back out the implicit distribution in those prices.

proclivity for fiscal support packages given the experience during the pandemic. Estimates of the Phillips curve slope have been revised upwards. The ECB's 2025 strategy review laid out the case for responding swiftly to supply shocks in the future.

This article used some of the developments in the academic literature to assess whether the initial inflation shock from the Iran conflict will amplify and persist. Overall, it found some evidence that inflation will persist into 2027 and raise the price level by at least 2 percentage points. It also found some signs of possible amplification through expectations, especially in the euro area. The evidence on fiscal policy providing an extra boost to

inflation was inconclusive, while the data showed that the long-run credibility of central banks and their inflation target has been preserved.

All together, there is weak support in the data for an aggressive tightening that would mirror 2022. At the same time, the size of the inflation increase and its persistence into 2027 would justify not entirely looking through the shock. Ultimately, the monetary policy decision must weigh the different risks and the balance of inflation against other goals.

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