

SPEECH

Monetary policy in a world of overlapping shocks

Speech by Isabel Schnabel, Member of the Executive Board of the ECB, at the 8th Annual EC-EIB-ESM Capital Markets Seminar

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Inflation is back and weighing once again on people's everyday lives. Just as the euro area was putting the post-pandemic inflation surge behind it, new shocks have hit.

For monetary policy, this sequence of shocks poses challenges. It can affect the behaviour of households and firms, the formation of inflation expectations and, ultimately, the persistence of inflation.^[1]

The ECB has adapted to this shock-prone environment in two ways.

First, as of 2023 we have made our monetary policy framework more transparent by laying out our reaction function – that is, the factors that the Governing Council uses to determine the appropriate monetary policy stance: the inflation outlook and the risks surrounding it, the dynamics of underlying inflation and the strength of monetary policy transmission.

ECB President Lagarde has referred to this as “framework guidance”.^[2]

By clearly explaining what we are doing and why, we foster public trust in our commitment to maintaining price stability in an environment in which inflation has become more salient.

Second, based on this framework, we have taken timely action in response to the deterioration in the inflation outlook since the start of the Middle East conflict.

Since June, the Governing Council has raised the key ECB interest rates by 50 basis points, lifting the deposit facility rate from 2% to 2.5%, to ensure that inflation will return to our 2% target over the medium term (Slide 2, left-hand side).

Our decisions have been well-anticipated and are being transmitted smoothly to financing conditions.

Framework guidance was instrumental in containing excess volatility by reducing uncertainty about our reaction function, while encouraging investors to form their own assessment of the incoming data.

It thus helps mitigate the “hall of mirrors” problem – the risk that market prices no longer reflect investors' assessment of the economic outlook but rather expectations of what the central bank will do.

^[3]

In my remarks today, I will shed light on three aspects that are important for understanding how monetary policy responds to the sequence of shocks we are facing today: first, how the nature of the shock shapes the monetary policy response; second, what challenges arise when navigating

overlapping shocks; and third, how the inflation forecast and incoming data affect the policy assessment. Finally, I will explain how these aspects influence our monetary policy.

Monetary policy response depends on projected deviation from inflation target

The first aspect is how the nature of the shock determines the appropriate monetary policy response.

It is often argued that inflation targeting implies that central banks should “look through” adverse supply shocks that push up inflation and weaken output.

The reason given is that monetary policy cannot address the source of the shock.

Higher interest rates, for example, will not remove supply disruptions or reopen the Strait of Hormuz. Tightening would therefore unnecessarily weaken the economy without eliminating the underlying cause of higher inflation, which will eventually vanish by itself.

This characterisation, however, is too simple.

In the benchmark models underlying modern monetary policy frameworks, the distinction between supply and demand shocks does not alter the *direction* of the optimal policy response.^[4]

What matters instead is the effect of the shock – be it demand or supply – on the projected path of inflation over the relevant policy horizon.^[5]

If a supply shock is sufficiently large or persistent to raise the projected inflation path above target, the optimal response is to tighten monetary policy to bring the forecast back to target.

For this reason, in our June press conference President Lagarde firmly rejected the notion that the rate hike was an “insurance hike”. It rather was the optimal response to the effect the shock was having on the projected inflation path.

The underlying mechanism in the models is as follows: in the absence of a policy response, higher expected inflation lowers the real interest rate and expands demand, thereby adding to the price pressures caused by the supply shock. Tightening monetary policy counteracts this effect.

This mechanism can also be observed in the data.

Inflation expectations rose in response to the conflict in the Middle East, pushing down *real* bank lending rates (Slide 2, right-hand side).^[6] Our policy adjustment helped to stabilise these rates.

Furthermore, the strength of the economy is relevant to the risk of inflation pressures broadening beyond the initial shock: the stronger aggregate demand, the more scope firms have to pass higher input costs on to consumer prices.

By restraining growth in aggregate demand, higher interest rates can limit the extent to which a relative price shock, often originating from the energy sector, can broaden into more persistent, economy-wide inflation.^[7]

Therefore, it would often not be optimal for the central bank to do nothing in response to an adverse supply shock.

Instead, the trade-off between inflation and output that arises under an adverse supply shock is resolved by allowing inflation to return to target more gradually in exchange for avoiding a larger decline in economic activity.^[8]

In other words, the nature of the shock determines the appropriate *speed* at which inflation should be brought back to target, not the need to respond at all.

This approach is reflected in the medium-term orientation of the ECB's monetary policy strategy, where the appropriate horizon for bringing inflation back to target varies with the nature and persistence of the shock, and with the degree to which inflation expectations remain anchored.^[9]

As long as expectations are firmly anchored and backed up by a track record of delivering on the inflation target, monetary policy can tolerate a more gradual return of inflation to target. But when expectations show signs of becoming less firmly anchored, a more forceful response may be required to prevent temporary shocks from becoming more persistent.

Central banks are facing overlapping shocks

The second aspect is that monetary policy is often analysed in terms of how it should respond to a *single* shock.

However, this is not the environment in which monetary policy is operating today. Central banks are facing a sequence of *overlapping* shocks, with the effects of earlier disturbances still working their way through the economy.

Before the conflict in the Middle East, headline inflation had returned to target, inflation was developing broadly as projected and wage growth was moderating. Underlying inflation was pointing towards a sustained return of inflation to 2%.

But the new energy shock hit while the disinflation process was still in motion.

Services inflation was still running above 3%, with most items in the services basket recording inflation rates between 3% and 5% (Slide 3).^[10] Unit labour costs were also still increasing at rates above their historical average, while households' inflation perceptions were still elevated (Slide 4).

So the new energy shock did not hit an economy in which all underlying inflationary pressures had disappeared, but one with some residual domestic price pressures, reflecting the delayed adjustment to the earlier inflation surge.

Repeated episodes of high inflation make prices more salient, increasing the attention people pay to inflation and potentially influencing how households form expectations, how workers negotiate wages and how firms set prices.^[11]

At the same time, the economy is being affected by several other forces.

The rapid expansion of AI is boosting investment, raising foreign demand and driving up the prices of critical inputs; the 2025 tariff shock is fragmenting and rerouting global trade flows; and the fiscal shock from higher defence spending and the German fiscal package is stimulating demand.

Each of these shocks has distinct, and in some cases offsetting, implications for supply, demand and the output gap.

In this complex environment, it would be misleading to describe the ECB's recent policy decisions as responding to an adverse supply shock alone.

In fact, a substantial part of the analytical work of ECB staff is devoted to assessing the size, persistence and transmission of the different shocks and their implications for the inflation outlook and economic activity.

These individual assessments are ultimately brought together in the staff macroeconomic projections.

Monetary policy then responds to that comprehensive assessment: if the resulting inflation outlook is above target, policy needs to adjust to bring inflation back to 2% over the medium term.

Monetary policy needs to focus on underlying inflation to assess price stability

This brings me to the third aspect: although the ECB's inflation target is expressed in terms of headline inflation, the best way to achieve that target sustainably is, in many circumstances, to focus on the dynamics of underlying inflation.

Inflation forecasts are inherently uncertain, and forecast errors can be large, even for a central bank operating with the best information and tools available.

The experience from the pandemic is a powerful reminder of this. Inflation turned out to be both substantially higher and more persistent than anticipated (Slide 5).^[12]

The difficulty was not merely that the economy was hit by unforeseen shocks, but that the persistence of these shocks and their transmission to the economy were underestimated.

In the case of energy shocks, this partly stems from the fact that central banks typically base their inflation projections on energy price assumptions implied by futures prices.

As these futures are often in backwardation, the forecast embeds expectations of a decline in energy prices. Together with the mechanical base effects in year-on-year inflation, this will make an energy shock appear relatively short-lived and generate a drag on future projected headline inflation.

The conflict in the Middle East illustrates this.

Following the outbreak of the conflict, futures prices implied a swift decline in energy inflation over the projection horizon, which mechanically dragged down future projected headline inflation (Slide 6).

A monetary policy framework that would have mechanically followed the headline inflation forecast would have risked drawing the wrong policy conclusions.^[13]

Since there is no reliably better forecast for energy prices, the ECB has sought to reduce the risk of being wrong-footed in two ways.

First, we have complemented the baseline with scenario analysis, exploring alternative assumptions about the intensity and persistence of the energy shock and its transmission to the economy (Slide 7).

Second, as per our framework guidance, we are placing greater emphasis on measures of underlying inflation in both our communication and analysis.

These measures are not only less volatile than headline inflation and less distorted by base effects, but they also contain more information about where headline inflation is likely to be in the medium

term.^[14]

This is also why there is no one-to-one relationship between the evolution of energy prices and policy rates. What matters for monetary policy is how energy prices translate into underlying price pressures.

Monetary policy cannot wait for indirect and second-round effects to materialise

Given this framework, raising interest rates twice since June was an appropriate policy decision.

The September staff macroeconomic projections for the euro area foresee HICP inflation dropping from 3.0% this year to 2.1% in 2028.^[15] Since the projections' cut-off date, oil and gas prices have moved closer to the adverse scenario, implying a larger and more persistent deviation of inflation from our 2% target.^[16]

The projections also foresee an increase in core inflation. HICP inflation excluding energy and food – one measure of underlying inflation – is expected to rise to 2.6% in 2027 before falling to 2.3% in 2028, hence remaining above 2%.^[17]

This profile reflects the assumption of a gradual build-up of indirect effects and some second-round effects owing to persistently higher energy prices, as firms seek to pass at least part of those costs on to consumers to protect their profit margins.

The global impact of the conflict in the Middle East amplifies this mechanism, as rising input costs ripple through globally integrated production chains.

This can be seen in the increase in import and producer price inflation, especially for intermediate and capital goods (Slide 8). The AI boom is further contributing to the rise in import price inflation, as manifested in the price increases of semiconductors.

These trends offer first evidence that higher input costs are being passed through successive stages of the production chain, although this is not yet visible in core inflation.

Overall, compared with pre-conflict projections, ECB staff have revised up projected HICP inflation excluding energy by a cumulative one percentage point owing mainly to indirect effects and, to a lesser extent, second-round effects, as employees are expected to ask for some compensation for their loss in purchasing power (Slide 9).^[18]

Pass-through effects also show up in higher projected food price inflation, which has additionally been affected by the summer heatwave and the potential impact of El Niño.

Central banks cannot wait for these effects to materialise. If policymakers waited for firms to visibly raise prices and wage negotiations to conclude, they would be acting too late.

Central banks must form a judgement about the transmission of shocks to underlying inflation and calibrate their policy accordingly.

Assessing the projections against incoming data

These assumptions must now be checked against the incoming data to assess whether the anticipated pass-through is materialising as expected, or whether the outlook needs to be revisited.

Three factors deserve particular attention.

The first is how the more persistent rise in energy prices will affect inflation expectations, especially after the long, post-pandemic period of high inflation.

After the start of the conflict, medium- and longer-term household inflation expectations moved up and continue to stand above pre-conflict levels (Slide 10).^[19] A more pronounced and persistent increase in energy and food prices could make the shock more salient for households and firms.

At the same time, most measures of long-term inflation expectations remain in the vicinity of our 2% target, supported by the timely action we have taken to preserve price stability.

The second factor is whether aggregate demand will continue to prove as resilient as it has in recent months despite the further increase in energy prices.

Consumption in particular has held up well, and sentiment indicators suggest that the underlying momentum is improving in both manufacturing and services (Slide 11).

The durability of this resilience will depend on the extent to which supportive demand-side factors, particularly the AI boom and the increase in defence spending, can offset the loss of real income associated with the deterioration in the euro area's terms of trade caused by the energy shock.

This matters directly for the inflation outlook, since the pass-through of higher input costs to consumer prices tends to be stronger the more resilient the economy.

The third, and related, factor concerns the impact of the repricing of short- and long-term interest rates on the economy.

This repricing reflects a range of factors, one of which is a reassessment of the inflation path as the energy shock intensifies. But it also reflects a rise in real rates.

To the extent that the repricing reflects spillovers from expectations of a tighter monetary policy abroad, it will dampen global aggregate demand and contribute to tighter financial conditions in the euro area. This should help to contain the broader pass-through of the energy shock to inflation.^[20]

The magnitude of the effect depends on the sensitivity of output and inflation to changes in interest rates. These are subject to considerable uncertainty, also because policy transmission can vary with the state of the economy.

Some models imply stronger transmission than the elasticities used in the staff projections, especially with respect to the impact on GDP (Slide 12).

It is therefore possible that the economy responds more to the recent tightening than currently assumed, which would dampen medium-term inflationary pressures compared with the baseline projection.

At the same time, there is also uncertainty about the level at which policy becomes restrictive.

In recent years, real interest rates at distant horizons have increased (Slide 13, left-hand side). This is happening at a time when the global economy is facing substantial demand for funding from both the public and private sectors, as fiscal deficits remain elevated across many countries and the AI buildout advances.

To the extent that these forces raise the rate that equilibrates savings and investments, they would also raise the natural rate of interest, r^* , in line with recent staff estimates (Slide 13, right-hand side).

[\[21\]](#)

In any case, the recent robust credit dynamics suggest that financial conditions are not yet restrictive or that parts of lending – particularly related to AI investment – have become less sensitive to interest rates as expected returns have risen. The marked increase in lending to ICT companies and large conglomerates is consistent with this interpretation (Slide 14).

Conclusion

Let me conclude.

We are living in a world of overlapping shocks, affecting both the demand and the supply sides of our economies and putting upward pressure on inflation.

With public attention to inflation rising with each shock, the task facing central banks today is to maintain trust in their commitment to the price stability target.

This is what the ECB is doing. Faced with a renewed deterioration in the inflation outlook, we adjusted policy rates in a timely manner to limit the pass-through to underlying inflation and bring inflation back to target.

The coming months will provide a clearer picture of the extent to which current pipeline price pressures will start to feed through to underlying inflation and inflation expectations. And they will show how the economy is responding to the interest rate increases already delivered.

These developments will inform us in calibrating our monetary policy stance to ensure that the current shocks do not become embedded in broader and more persistent inflation.

Thank you.

Annexes

30 September 2026

[Slides](#)

1.

For a generation born around the turn of the millennium, for example, high inflation has become part of their formative economic experience. It will shape how they feel and think about price stability for years to come. See Malmendier, U. and Nagel, S. (2016), “Learning from Inflation Experiences,” *The Quarterly Journal of Economics*, Vol. 131, No 1, pp. 53-87.

2.

Lagarde, C. (2025), “[A robust strategy for a new era](#)”, speech at the 25th “ECB and Its Watchers” conference organised by the Institute for Monetary and Financial Stability at Goethe University in

Frankfurt, Germany, 12 March; and Lagarde, C. (2026), "[Back to basics in an uncertain environment](#)", speech at the ECB Forum on Central Banking 2026 "Shaping Europe's future: innovation, growth and stability" in Sintra, Portugal, 29 June.

3.

Morris, S. and Shin, H. (2002), "Social Value of Public Information", *American Economic Review*, Vol. 92, No 5, pp. 1521-1534.

4.

The primary insight is delivered by Clarida, R., Gali, J. and Gertler, M. (1999), "The Science of Monetary Policy: A New Keynesian Perspective", *Journal of Economic Literature*, Vol. 37, No 4, pp. 1661-1707. See also Bodenstein, M., Erceg, C. and Guerrieri, L. (2008), "Optimal monetary policy with distinct core and headline inflation rates", *Journal of Monetary Economics*, Vol. 55, Supplement, pp. 18-33; and Karadi, P. et al. (2025), "[Strike while the iron is hot – optimal monetary policy under state-dependent pricing](#)", *Working Paper Series*, No 3068, ECB.

5.

See also Schnabel, I. (2024), "[The future of inflation \(forecast\) targeting](#)", keynote speech at the thirteenth conference organised by the International Research Forum on Monetary Policy, "Monetary Policy Challenges during Uncertain Times", at the Federal Reserve Board, Washington, D.C., 17 April; and Svensson, L. (1997), "Inflation forecast targeting: implementing and monitoring inflation targets", *European Economic Review*, Vol. 41, No 6, pp. 1111-1146.

6.

Using headline inflation to deflate nominal rates can exaggerate the decline in real rates when the initial shock is concentrated in energy prices. Firms' selling price expectations provide a more forward-looking gauge of the inflation pressures relevant for financing conditions.

7.

For evidence of how oil supply shocks feed through to the economy, see Känzig, D.R. (2021), "The Macroeconomic Effects of Oil Supply News: Evidence from OPEC Announcements", *American Economic Review*, Vol. 111, No 4, pp. 1092-1125.

8.

Even a central bank with a single inflation mandate will not find it optimal to close the projected inflation gap as quickly as the transmission mechanism would allow, as doing so would impose output costs disproportionate to the gain in faster disinflation. See, for example, Erceg, C., Henderson, D. and Levin, A. (2000), "Optimal Monetary Policy with Staggered Wage and Price Contracts", *Journal of Monetary Economics*, Vol. 46, No 2, pp. 281-313.

9.

ECB (2025), "[The ECB's monetary policy strategy statement](#)".

10.

At the same time, HICP excluding energy and food was being held down by subdued non-energy goods inflation, partly reflecting low import price inflation from China.

11.

See also Waller, C.J. (2026), "[One transitory shock after another](#)", David Kaserman Memorial Lecture, Auburn University, 17 April.

12.

Chahad, M. et al. (2024), "[The empirical performance of ECB/Eurosystem staff inflation projections since 2000](#)", *Economic Bulletin*, Issue 5, ECB.

13.

Research shows that by stabilising core inflation, central banks can provide a closer approximation to the welfare-maximising response to an energy shock. See Bodenstein, M., Erceg, C. and Guerrieri, L. (2008), op. cit.; and Aoki, K. (2001), "Optimal monetary policy responses to relative-price changes", *Journal of Monetary Economics*, Vol. 48, No 1, pp. 55-80.

14.

Bañbura, M. et al. (2023), "[Underlying inflation measures: an analytical guide for the euro area](#)", *Economic Bulletin*, Issue 5, ECB.

15.

ECB (2026), [ECB staff macroeconomic projections for the euro area, September 2026](#).

16.

The cut-off date for the technical assumptions was 19 August 2026.

17.

The ECB monitors a range of underlying inflation measures, including exclusion-based measures and model-based measures. Most measures of underlying inflation have been broadly stable in recent months but remain above 2%. See ECB (2026), *Economic Bulletin*, Issue 6.

18.

This is in comparison with the [December 2025 Eurosystem staff macroeconomic projections for the euro area](#).

19.

The mean has risen more strongly than the median, suggesting that the right tail of the distribution has become more pronounced, with a growing share of households expecting inflation to remain above our target for a prolonged period.

20.

See also Lagarde, C. (2026), Hearing of the Committee on Economic and Monetary Affairs of the European Parliament, Brussels, 28 September 2026.

21.

Such estimates, however, are surrounded by a high degree of uncertainty and should therefore be interpreted with caution. The bands in the charts only illustrate model uncertainty; estimation uncertainty is not shown.

CONTACT

European Central Bank

Directorate General Communications

- > Sonnemannstrasse 20
- > 60314 Frankfurt am Main, Germany
- > [+49 69 1344 7455](tel:+496913447455)
- > media@ecb.europa.eu

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Media contacts

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