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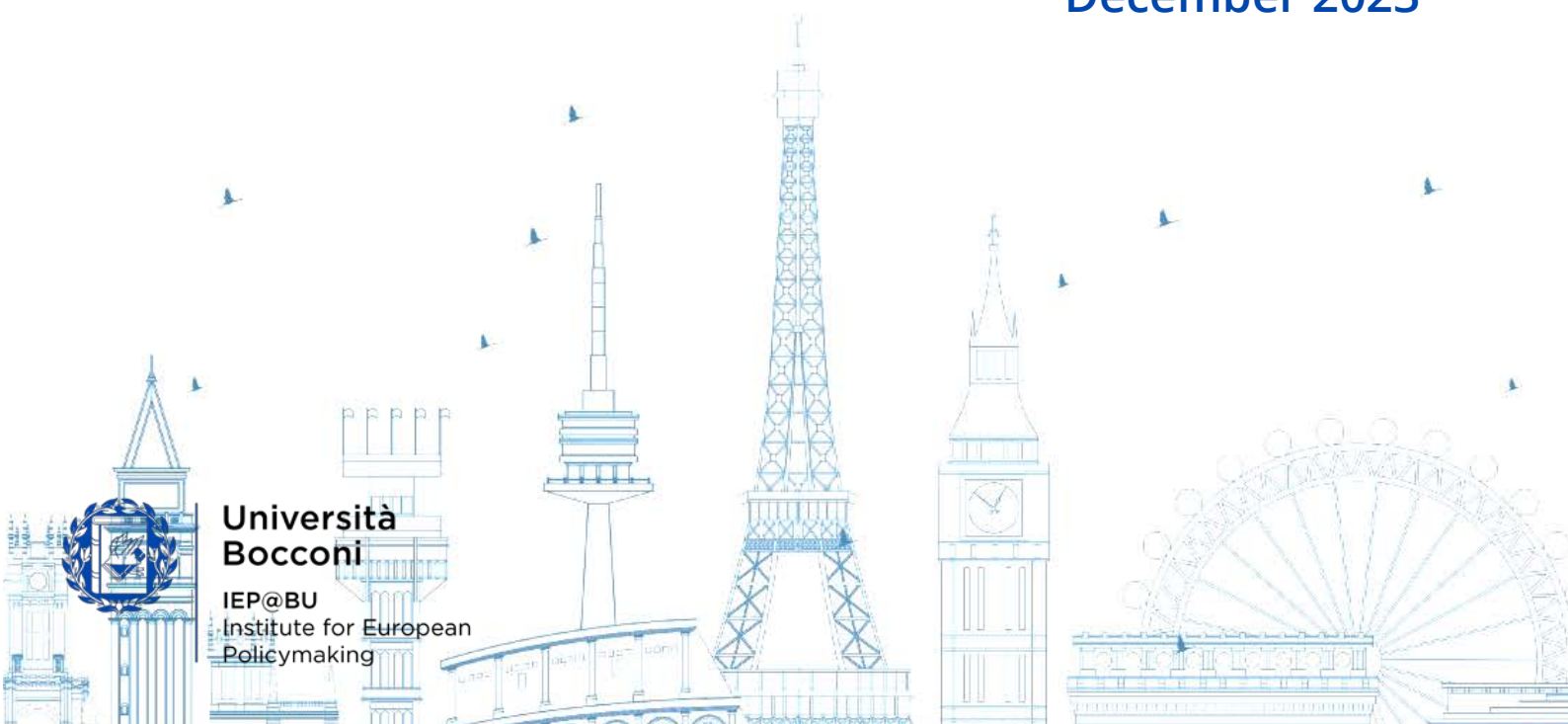
ARE CENTRAL BANKS BEHIND THE CURVE (AGAIN)?

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There is no doubt that monetary policy reacted late to the rising inflationary pressures experienced in 2021-22. The major central banks subsequently caught up rapidly and hiked interest rates at an unprecedented pace.

However, as inflation reached its peak at the end of 2022 and has been falling since then, central banks may once again be late in adjusting their policies. This note focuses on the European Central Bank, but the same analysis could be conducted for the other major central banks.

With the benefit of hindsight, the July 2022 decision by the ECB to raise its policy rate came too late. Inflation had already been above 2% for about one year and reached 8% by mid-2022.

One of the main reasons for the delayed reaction was the underestimation of the inflation burst. Looking back at the December 2021 forecasts, the ECB projected headline inflation in the Euro area to rise to 3.2% on average for 2022 but then fall back to 1.8% one year after.

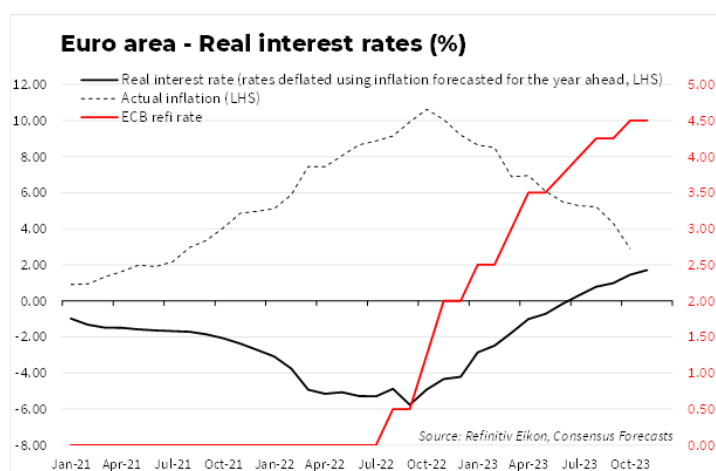
At that time inflation was expected to be temporary and fade away. To be fair, the forecast errors made by the ECB were not that different from those of other major official and private institutions. For instance, the European Commission Winter 2022 forecasts projected inflation to jump to 3.9% in 2022 and then fall back to 1.9% in 2023. In December 2021 the OECD forecasted Euro area inflation to fall back below 2% within the following 12 months. In fact, only a Christal ball would have predicted the February 2022 Ukrainian invasion and the ensuing energy crisis.

The other reason for the delayed ECB reaction was its decision to raise rates only after the end of its asset purchase program, which was brought forward to the third quarter of 2022.

As a result of policy rates being kept unchanged for such a long time, the real – ex-ante and ex-post – interest rates fell as inflation and inflation expectations were rising.

The following Figure shows that the policy rate deflated by the one-year-ahead consensus inflation forecast turned increasingly negative until the end of 2022 and remained in negative territory until the Spring of 2023. Using market rates does not significantly change the picture

Figure 1



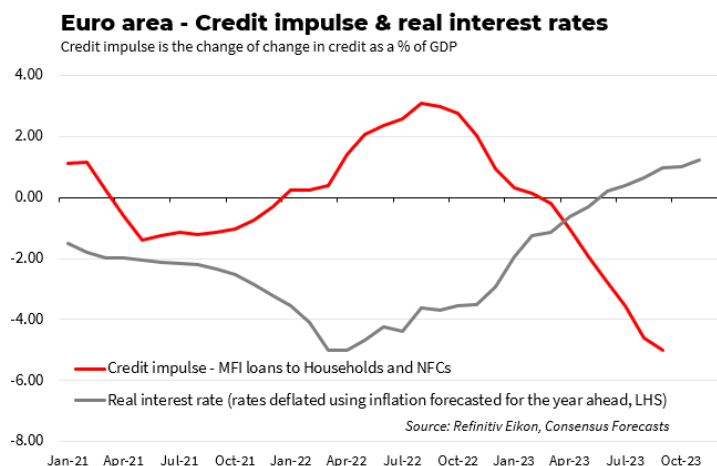
This suggests that monetary policy turned increasingly accommodating in the Euro area, even when policy rates were rising. The easing of monetary conditions contributed to transforming a



largely supply-side inflationary shock into a demand-side inflation.

The expansionary monetary policy at a time of rising inflation largely explains the strong bank credit dynamic recorded until end-2022, in the midst of a gradually slowing economic growth (Figure 2).

Figure 2

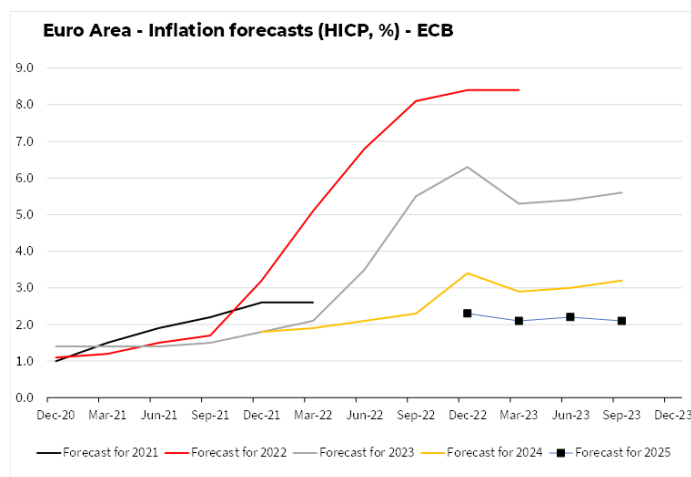


This also shows that, had the central bank not raised its policy rates, the real rate would have been even more negative, further stimulating credit and thus fueling even higher inflation down the road.

To sum up, the ECB was right to raise rates, but did it too late and thus had to catch up by speeding up the pace.

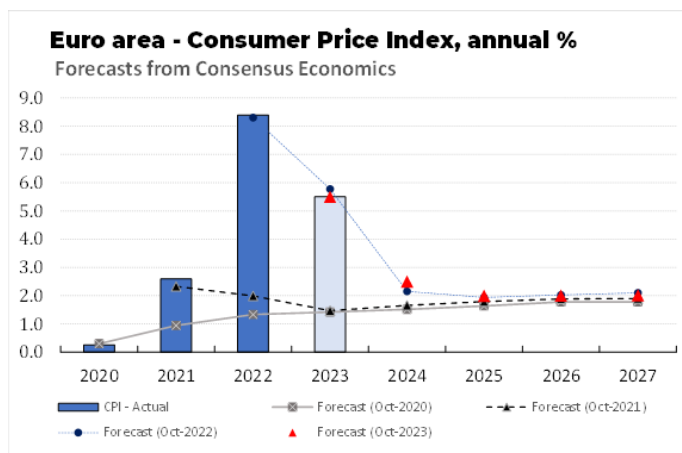
The situation has slightly changed since inflation started to fall, by the end of 2022. The interesting difference is that the reduction of inflation has been largely in line with expectations. There were no more big surprises on the inflation front. Figure 3 shows how the ECB revised its inflation forecasts over time. Until the end of 2022, the forecasts for the years 2022, 2023 and 2024 were systematically revised upwards. From end-2022, instead, the inflation forecasts have remained relatively stable, showing a reduction of the average inflation, year after year, to reach 2% in 2025.

Figure 3



This is consistent with the forecasts of other institutions. Since the end of 2022, the Commission forecasts have been quite accurate, projecting a fall in inflation in line with realized inflation, as seen in Figure 4.

Figure 4

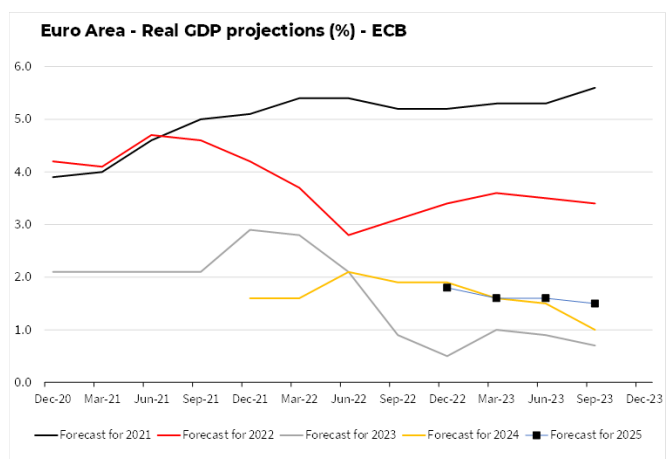


In spite of the falling inflation rate and inflation expectations, the ECB continued to hike rates, until September 2023. This implies that the real – ex-ante and ex-post – interest rates increased more than the nominal rates. In other words, monetary policy became increasingly restrictive as inflation was falling.

The tighter monetary policy has had a strong impact on bank credit conditions, as shown in Figure 2 above. The flow of bank lending to households and non-financial institutions started to slow down towards the end of 2022 and became negative in the Spring of 2023. The ECB bank lending survey indicates that more tightening is expected over the next months.

The impact of the monetary tightening on economic activity has been gradually felt. Euro area GDP growth has slowed down since mid-2022. The ECB systematically revised its growth forecasts down, by over 1.5 percentage points for 2022 and nearly 2 points for 2023 growth, as seen in Figure 5.

Figure 5



Going forward, monetary conditions are expected to tighten further in the first half of 2024, as the ECB indicated that policy rates will remain “high for long”, while inflation is expected to continue its downward trend.

This raises a series of questions: What are the reasons for continuing to tighten monetary conditions if inflation is projected to fall towards the 2% target? Isn't the ECB getting behind the curve by producing an excessively restrictive monetary policy, leading to a “hard landing”?

There might be several answers to these questions.

The first is that the ECB is subject to “money illusion”, not distinguishing between real and nominal variables. There are some indications that this may be the case, at least reading from its recent communication. The ECB's monetary policy stance is generally described by the nominal level of the interest rate, rather than the real rate.

The argument according to which the so-called “last mile” of the disinflationary process is the hardest to achieve is based on the assumption that the last tightening move took place in September 2023, with the 25 basis-points hike, whose effects are bound to fade over the following 18-24 months horizon¹. It ignores the fact that the tightening will instead continue over the next few months, even if the policy rate remains unchanged, given that the real interest rate will increase further (see Figure 1 again) and economic activity weakens.

The second answer that the ECB gives to the above questions is that policy rates need to be kept “higher for longer” because “inflation is still expected to stay too high for too long”².

This argument is not easy to understand. First, it's not clear what is meant by “too long”. The ECB indicated that it is satisfied with the fact that inflation is expected to “return to target by 2025” and did not suggest that the target should be achieved earlier. Second, it is not clear either what is meant by “too high”. If inflation is continuing to fall towards 2%, from a level which has reached 2.9% in October 2023 and 2.4% (flash estimate) in November, why is it considered too high? If the projected pace of inflation reduction is consistent with what is desired and consistent with a soft landing of the economy, why should monetary conditions be further tightened going forward?

This contradiction is illustrated by the fact the ECB forecasts use as technical assumptions the prevailing yield curve, which incorporate the expectation of a reduction in the short-term rates from the spring of 2024. If these forecasts are consistent with achieving the inflation target over the medium-term horizon, why should the policy rate be higher than markets expectations?

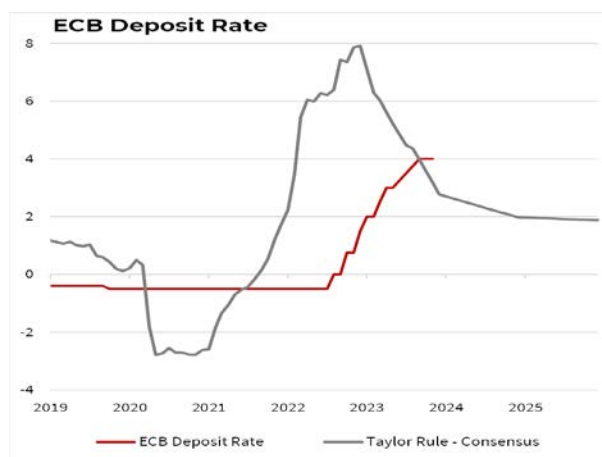
The dilemma is well illustrated by Figure 6, which compares the ECB policy rate with the outcome of a Taylor rule calculation, which defines at each point in time the interest rate consistent with achieving price stability, given the underlying inflation and growth.

¹ Isabel Schnabel, *The last Mile*, St Louis, 2 November 2023.

² ECB Monetary Policy Decisions, Press Release, 26 October 2023



Figure 6



The chart shows that the ECB's policy rate remained well below the rate implicit in the Taylor rule until mid-2023, confirming that the ECB raised rates too late. However, going forward the Taylor rule indicates that the policy rate should be cut over the coming months.

Keeping policy rates higher would imply an excessively tight monetary policy that would bring inflation below target and possibly produce a hard landing of economic activity.

An alternative answer is that the ECB does not entirely trust its own forecasts, given the high level of macroeconomic, financial, and geopolitical uncertainty. These forecasts may be biased on the downside concerning inflation.

This was certainly the case until 2022, as the ECB had to systematically revise its inflation projections up. However, since end-2022 the inflation forecasts have been much more accurate, as pointed out above.

On the other hand, the forecast accuracy has been achieved while interest rates have increased more than market expectations. In other words, it looks as if the ECB's inflation forecasts have been systematically biased on the downside and the ECB decided to ignore them by raising rates. With the benefit of hindsight, this was the right decision to take.

The key issue is to understand the reasons for the underestimation of inflation by the ECB's forecasting models. One hypothesis is that exogenous supply-side factors turned out to be more inflationary than expected.

This was certainly the case until the end of 2022, but not thereafter. Comparing the exogenous technical assumptions underlying the December 2022 ECB forecasts with the subsequent developments, energy prices, such as natural gas and wholesale electricity prices, turned out to be substantially lower than expected. Oil prices have been more or less in line with projections. Non-energy commodity prices fell more than expected. Furthermore, wages grew broadly in line with the projections made one year ago.

The overall fiscal stance of the Euro area turned out to be slightly tighter than previously expected in 2023 and is more or less confirmed for the next few years. In sum, the reason for the bias is not in the exogenous variables.

An alternative hypothesis involves the transmission mechanism of monetary policy. In particular,



it may have taken longer than expected for economic conditions to feel the impact of the higher interest rates. As seen above, real interest rates have remained in negative territory until Spring 2023, in spite of the interest rate hikes (Figure 1).

This is consistent with the data coming from the bank lending survey, showing that credit has continued to grow until end-2022. This suggests that most of the tightening has still to be felt and will produce its full effects over the coming months. In this hypothesis, the next forecasts might err on the opposite side and overestimate inflation.

A final argument for keeping rates (a bit) higher for (a bit) longer, which is hardly mentioned in central bank communication, relates to the way expectations are formed. In an ideal world with independent and identically distributed random variables, forecast errors in one direction do not affect subsequent forecasts, if the behavioral model is correct and well understood by all agents. However, if this assumption is not correct, in light of the high prevailing uncertainties, expectations tend to be formed in a Bayesian way.

Forecast errors do matter and affect agents' priors. Systematically erring on the same side is likely to affect expectations permanently. Applied to monetary policy, central banks are likely to lose credibility if they systematically err on one side, which would dis-anchor inflation expectations.

This creates the incentive to avoid at all costs repeating forecast errors of the same sign, which - by definition - leads to a higher tolerance for making errors of the opposite sign.

In practice, central banks are bound to attach less weight to the risk of implementing an excessively tight monetary policy after a period of excessively loose policy. In other words, it's preferable that a central bank is late in cutting rates after having been late in raising rates, rather than cutting rates too early and facing the risk of raising them again. Central banks are ultimately judged by whether they have won the war on inflation.³

³ Ben Bernanke, *21st Century Monetary Policy*, Norton, 2022.

