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Global Inflation and Global Monetary Policy Tightening: Implications for the Euro Area

Since the outbreak of the COVID-19 pandemic, global factors have played a much more important role in shaping inflation dynamics than over the previous two decades. As a result, global monetary tightening has been synchronised to an unprecedented degree, bringing to the fore the importance of cross-country monetary policy spillovers through aggregate demand, exchange rate and financial channels. After reviewing recent inflation developments, the article discusses how exchange rate spillovers can put upward pressure on the inflation outlook complicating the assessment of the ECB's monetary policy stance.

Global inflation

Inflation around the world has risen strongly since the reopening of the economies in the first half of 2021 (Figure 1a and 1b). Far from proving a temporary phenomenon, inflation turned out higher and more persistent than initially expected. As headline inflation appears to have peaked in several countries in late 2022, core inflation is still rising or stable. At the same time, increases in services prices have become more prominent relative to those of goods prices, indicating that inflationary pressures have become more broad-based and persistent.

The burst of inflation has been a common phenomenon across countries. Indeed, all countries responded to the pandemic in similar ways – a combination of lockdowns as well as aggressive fiscal and monetary easing. All countries saw deep falls in activity early in the pandemic and strong rebounds afterwards. All experienced the impact of supply bottlenecks, in part driven by a widespread shift from services to goods. And none were spared from the further increase in commodity prices after the Russian invasion of Ukraine.

As a result, inflationary developments have been highly correlated globally. This co-movement – measured by the variance explained by a "common factor" – reflects not only the influence of energy and food prices but also that of less volatile components, as it also holds for core inflation (Figure 1c). The panel shows that the importance of this common factor has increased recently for the euro area, as well as for other advanced economies (AEs) and emerging market economies (EMEs).

At the same time, cross-country inflation spillovers also appear to have risen sharply, although they remain below the levels prevailing prior to the early 2000s. The index shown in Figure 1d measures the extent to which shocks to inflation tend to propagate across economies over a 12-month horizon. Since it filters out the impact of the contemporaneous correlation between shocks, it suggests that the current dynamics of domestic inflation depend more on the path of inflation abroad than has been the case for the past 15 years, even after controlling for common shocks.

Global monetary policy tightening and monetary policy spillovers

Most central banks did not respond to inflation immediately. While some emerging-market central banks started raising rates in early 2021, as soon as inflation climbed above target, most central banks waited as they initially saw the increase in inflation as temporary. However, in the second half of 2021, after being repeatedly surprised by higher inflation, central banks eventually began raising rates in earnest. The ECB was one of the last to shift policy, starting to increase its policy rate only in July 2022.

The global monetary tightening cycle turned out to be the most synchronised one in the past half-century. By February 2023, more than 90% of economies had hiked their policy rates (Figure 2a). Historically, this share has

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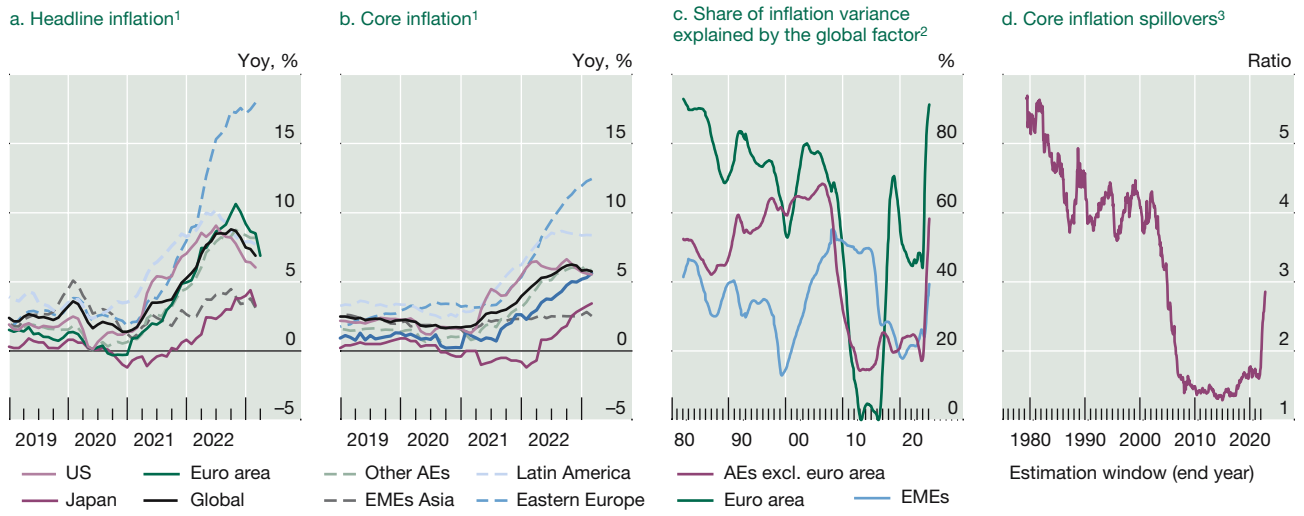
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Figure 1
Inflation around the world



Notes: AEs: advanced economies; EME: emerging market economies. [1] For the regions, GDP PPP-weighted averages for eight advanced, five Latin American, 10 Asian and 11 Eastern European economies. Global is the average of 34 economies. [2] Share of variance explained by first principal component in each country group based on standardised yoy inflation rates (mean of zero and standard deviation of one) and a 15-year rolling window. Calculation based on the PC decomposition of the full sample. Core inflation based partially on estimated data to increase historical data availability. Eight AEs and 20 EMEs. [3] Nine AEs and five EMEs. Based on Diebold and Yilmaz (2014) and Lombardi et al. (2013), using a Bayesian VAR for core inflation (including oil and food prices as controls) estimated on rolling windows of 15 years (1980 refers to the window 1965-80). First, a total spillover index is calculated from forecast error variance decomposition of each variable into own variance and cross variance. The index measures the contribution of all cross variances to the total forecast error variance. The ratio between the 12-months-ahead spillover index and 0-month-ahead spillover index is used to measure spillovers that are adjusted for contemporaneous correlations.

Sources: OECD; Refinitiv Datastream; national data; BIS.

rarely exceeded 50%, reaching 70% only during the oil price shocks of the 1970s. Besides, the pace of tightening proved remarkably fast in EMEs where central banks have raised nominal policy rates at about twice their historical pace. Several central banks have also started to shrink their balance sheets (with Japan as the notable exception). That said, in AEs nominal policy rates are still far below inflation and inflation expectations, implying negative real rates (Figure 2b). In EMEs, nominal policy rates are below current inflation, but above inflation expectations (Figure 2c).

The unprecedented degree of synchronicity in monetary policy tightening makes it more difficult for individual central banks, including the ECB, to calibrate their own monetary policy. One risk, highlighted by some commentators, is that central banks may underestimate the strength of cross-country monetary policy spillovers and hence end up implementing an excessively tighter monetary policy. Such spillovers are normally considered by central banks when formulating their own monetary policy, but their magnitudes can be quite uncertain, especially when central banks face unusual circumstances.

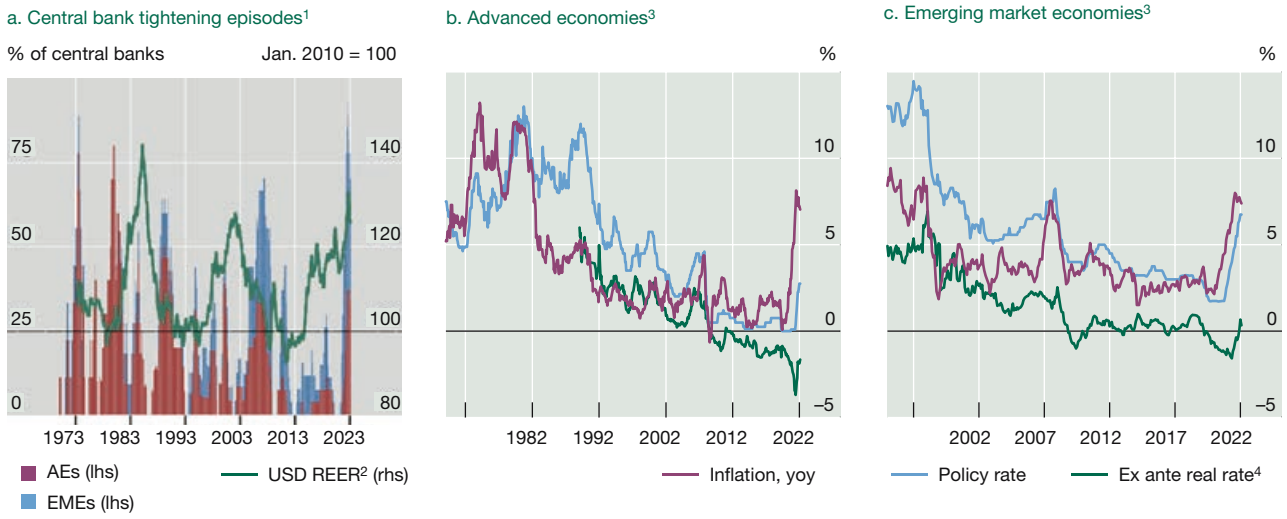
Monetary policy tightening in one country (say country A) can affect the economic conditions relevant for monetary policy in the rest of the world (say country B) through three partly overlapping channels:

- *Aggregate demand channel*. When country A tightens monetary policy, the resulting reduction in its domestic spending also dampens exports from country B. Reduced exports would then weaken output and inflation in country B. The resulting decline in global aggregate demand also lowers commodity prices, adding to the disinflationary pressures. In addition, the weakening of demand in country B may, in turn, reinforce the downward pressure on inflation in both countries through global supply chains and competition in product and labour markets.[1]

- *Exchange rate channel*. When country A tightens monetary policy, its currency tends to appreciate, which likely leads to expenditure switching from country A to country B (for a given level of income). Hence exports from country B increase, which tends to boost both

1 Consistent with this view, estimates of Phillips curves indicate that both domestic and global output gaps influence inflation across AEs and EMEs and that global value chains play a key role (eg. Borio and Filardo, 2007; Auer et al., 2017; and Jašová et al., 2020).

Figure 2
Global monetary tightening episodes



Notes: AEs: advanced economies; EME: emerging market economies. [1] For each country, tightening episodes are identified as months between the trough and peak in the policy rate around periods when the seven-month centred moving average of the policy rate is increasing. Episodes in which the policy rate increases by less than one percentage point or more than 20 percentage points, or episodes that last less than six months or more than 48 months, are excluded from the analysis. Based on data for 11 AEs and 16 EMEs from January 1970 to February 2023 (subject to country availability); 154 tightening episodes. [2] REER: real effective exchange rate. Trade-weighted real broad dollar index; an increase indicates an appreciation of the USD. [3] Median based on monthly data for 11 AEs and 23 EMEs. [4] Policy rate deflated by the weighted average of the current and next year. Consensus forecasts for year-on-year inflation.

Sources: Cavallino et al. (2022); FRED; Consensus Economics; Refinitiv Datastream; national data; BIS.

its output and inflation. In addition, the depreciation of country B's currency tends to have a direct inflationary impact by raising import prices and costs.

- *Financial channel*: This channel captures how a tightening of monetary policy in one country (country A) leads to a tightening of financial conditions in the rest of the world (country B). Here, the impacts of higher interest rates through capital flows and exchange rates loom large.

The exchange rate and the financial channels tend to be larger and more contractionary for activity when monetary tightening takes place in the United States. Since a large share of goods exchanged in international markets are invoiced in US dollars, a US dollar appreciation tends to boost import prices elsewhere, not only of imports from the United States. In addition, as trade credit is mainly US dollar-denominated, a stronger US dollar tends to tighten trade credit conditions and weigh on global trade.

An appreciation of the US dollar tends to lead to an increase in consumer price inflation abroad via exchange rate pass-through. Exchange rate pass-through of US dollar appreciation to higher inflation abroad is larger for energy and food consumer price inflation than for core inflation, since energy and food prices are often set in US dollars (Moessner, 2022).

As regards the financial channel, the US dollar is the pre-eminent funding currency and therefore the currency most associated with leverage. Hence, a stronger US dollar tends to go hand in hand with deleveraging and tighter global funding conditions.[2] More generally, long-term interest rates and asset prices tend to be highly correlated across countries as they track US rates and prices.[3] A tightening of US monetary policy therefore leads to a tightening of global financial conditions.

2 Currency mismatches can exacerbate such effects through balance sheet constraints of borrowers with net US dollar debt ("original sin") or through the retrenchment of global investors with unhedged exposures to foreign assets ("original sin redux").

3 For example, Kearns et al. (2022) find that surprises in US monetary policy decisions would have a significant impact on long-term interest rates in more than 80% of advanced economies and 60% of emerging market economies.

Implications for inflation and monetary policy in the euro area

Spillovers that operate through a stronger US dollar are particularly important for the euro area inflation outlook. As noted above, an appreciation of the US dollar tends to drive up energy and food consumer price inflation in local currency. Moreover, energy and food consumer price inflation are generally salient for consumers' decisions and therefore affect household expectations of inflation strongly. There is some evidence that long-term consumers' inflation expectations in the euro area have risen as euro area inflation increased strongly above the central bank's inflation target, initially driven by high energy and food prices (Nagel, 2023; and Galati et al., 2022). This channel has been very relevant for the euro area recently. Ider et al. (2023) find that the ECB can affect euro area inflation by affecting domestic and global energy prices with monetary policy via the effect of policy rate changes on the euro-dollar exchange rate. They find that this "energy-price channel" of monetary policy plays an important role in the transmission mechanism of monetary policy in the euro area.

The inflation outlook is further complicated by the re-opening of the Chinese economy, after prolonged lockdowns, in early January 2023. The timing and pace of reopening surprised the market whose consensus as of early November 2022 was that a gradual reopening would take place from March 2023. Notwithstanding a sharp increase in COVID-19 cases immediately after the reopening, mobility improved, and activity indicators bounced back to pre-COVID-19 levels by around March and April 2023.

China's reopening can potentially generate significant spillovers to global inflation given the important role that China plays in the global economy. For one, China's strong growth could increase the demand for commodities and drive up their prices, contributing to global inflation. In addition, China's strong recovery could stimulate economic activity of countries in the upstream and downstream of supply chains, leading to upward price pressures in these countries.

That said, such inflation spillovers from China to the euro area may be limited this time. The magnitude of the spillovers discussed above hinges on the composition of China's growth, not just its overall level. For example, growth in construction and manufacturing activities is likely to have larger spillovers than that in services. This is because construction and manufacturing require imports of raw materials and intermediate goods from other countries. In contrast, services are less tradable and more dependent on domestic markets. China's recovery this time around is generally expected to be driven by consumption, especially services consumption, rather than investment, at least in the short run. While recovery in services consumption may have some spillovers to countries that are heavily dependent on Chinese tourism such as Thailand, its impact on other regions, the euro area included, may be limited.

The initial US dollar strength was partly driven by US monetary policy tightening ahead of other economies. As other central banks followed suit and monetary policy became more globally synchronised, the US dollar has dropped from its peak in October 2022. While a weakening of the US dollar can reduce the inflationary pressures discussed above, synchronised global tightening may increase the risk of having an excessively tighter monetary policy, which would slow economic activity more than anticipated. On the other hand, indirect effects on inflation from earlier increases in energy and food prices in local currency due to earlier US dollar appreciation, which take longer to pass through than direct effects, could lead to euro area inflation staying higher for longer. Ultimately, the assessment of these risks needs to consider the broader macroeconomic environment. In the euro area, inflation is well above the central bank target and is expected to remain above target for some time (ECB, 2023). If global monetary policy spillovers are much larger for activity than central banks currently expect and central banks "overtighten", inflation would return to target more quickly, but at the risk of a larger slowdown in economic activity. It is also possible that those spillovers for activity are smaller than anticipated, in which case inflation would be higher for longer, increasing the risk of transiting to a persistent high-inflation regime.

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