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Hard or soft landing?

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Hard or soft landing?

Key takeaways

- *Inflation is now at its highest level in several decades and threatens to become entrenched. Whether inflation is demand- or supply-driven, central banks have little choice but to tighten policy to lower aggregate demand and bring inflation back to target.*
- *Evidence from past tightening cycles suggests that strong growth and high job vacancies, as well as front-loaded rate hikes, can help prevent a hard landing. But rapidly increasing inflation, low term spreads and elevated debt levels raise the risk of a recession, particularly in the face of persistent negative supply shocks.*
- *Central banks need to steer a narrow course between tightening too much or too quickly, which could precipitate a hard landing, and tightening too little or too late, which could lead to inflationary pressures becoming ingrained, necessitating more costly measures down the road.*

The strong rebound in aggregate demand since the pandemic, coupled with supply constraints and related bottlenecks, has led to surprisingly high, persistent and broad-based inflation.[1] In addition, the Russian invasion of Ukraine and the ensuing negative supply shocks (mainly to food and energy) are further fuelling inflationary pressures and denting the economic outlook. Inflation currently stands at its highest level in several decades, raising the risk that it will become entrenched.

To rein in these inflationary pressures, central banks have few options but to tighten policy and restrict demand. In this context, a key question is whether they will be able to prevent a "hard landing", that is, bringing inflation back to target but at the cost of a recession.

How likely is a hard landing?

While current indicators point to positive GDP growth for 2022 in many jurisdictions, downside risks are increasing. Growth forecasts have been revised down in several advanced economies (AEs) and emerging market economies (EMEs) (Graph 1, left-hand panel), against the backdrop of soaring commodity prices, the Russia/Ukraine war and a slowdown in China.[2]

The combination of unprecedentedly high inflation and low unemployment may also indicate greater recession risks. Looking back at the last four decades, these conditions have often ushered in a recession within the next two years. In the United States, a recession has always followed periods with inflation above 5% alongside unemployment below 4% (centre panel). Moreover, such episodes have never featured the unique combination of adverse supply factors experienced by the global economy over the last two years.

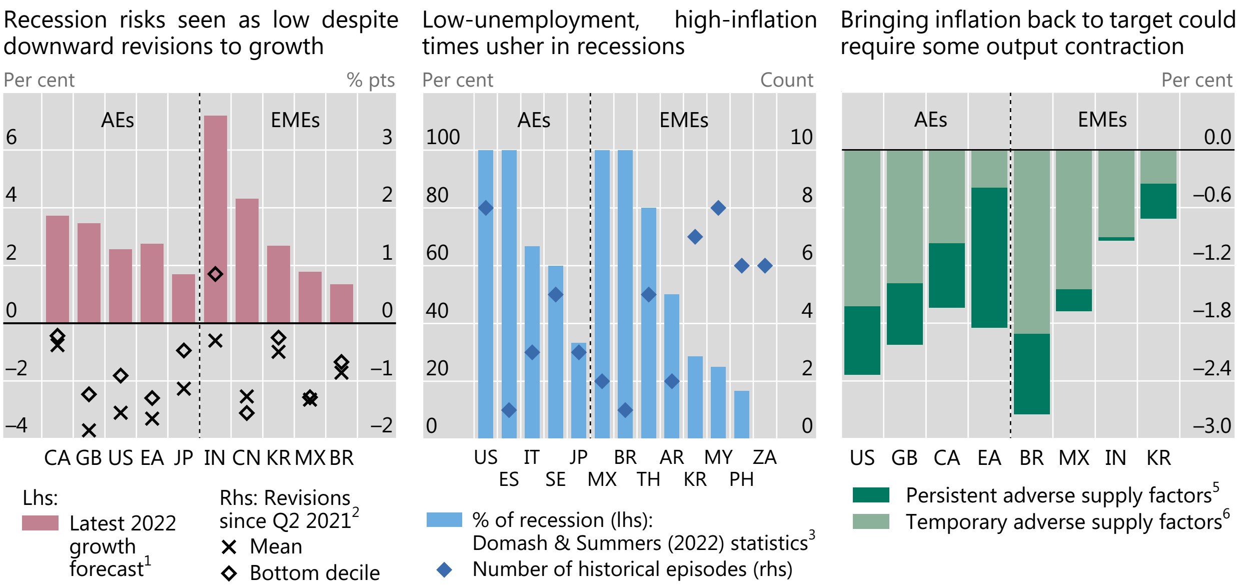
Notwithstanding its limitations and the uncertainty around its main parameters, the Phillips curve can help quantify the role of such factors and provide a yardstick for the slowdown consistent with bringing inflation down to target. Consider the case where (i) inflation is very sensitive to slack – as in high-inflation

1 See BIS, *Annual Economic Report*, June 2022, Chapter 1.

2 The most pessimistic growth forecasts (those in the bottom decile of the distribution) have also been revised down, pointing to increased tail risks.

periods; (ii) inflation expectations are backward-looking; and (iii) the adverse supply factors raising food and commodity prices persist. Then in AEs, output would need to drop by 1.6 to 2.3 percentage points below its full potential[3] over the next two years, to bring headline inflation down to central bank targets (Graph 1, right-hand panel).[4] That said, the persistence of adverse supply factors plays an important role. To the extent that non-core inflation wanes over time on its own as food and energy prices stabilise, bringing inflation back to target would imply a significantly smaller slowdown, ie output would only need to drop by 0.4 to 1.6 percentage points below potential over the next two years.

Recession risks amid still benign growth forecasts | Graph 1



[1] Consensus GDP growth forecasts as of June 2022. [2] Change in the growth forecast for 2022 between Q2 2021 and June 2022. [3] The Domash and Summers (2022) statistics represent the fraction of past episodes with unemployment and inflation respectively below and above Q1 2022 levels, that were followed by a recession within two years. Sample period: Q1 1980–Q4 2019 for all countries, except for US (Q1 1955–Q4 2019). [4] Estimates based on an accelerationist Phillips curve where inflation is a random walk with a drift proportional to the current unemployment gap, following Stock and Watson (2019), and an Okun's law parameter of 0.5 following Ball et al (2017): $\pi_t - \pi_{t-1} = -(2/3)(u_t - u^*)$ and $(u_t - u^*) = -0.5(y_t - y^*)$. Target is 2% for AEs and 4% for EMEs. [5] Headline inflation is brought back to target. [6] Core inflation is brought back to target.

Sources: IMF; OECD; Consensus Economics; national data; BIS calculations.

Comparing today's monetary tightening cycle with past ones can provide some insights into the current risks of a hard landing. Based on a comparison of 70 tightening episodes in 19 AEs and six EMEs, tightening cycles that started with high GDP growth or high job vacancies – typical of current conditions in many economies – have generally been followed by soft landings (Graph 2, left-hand panel). That said, the current readings of three (out of eight) indicators rather point to some risks of a hard landing: these are a rapidly increasing inflation rate, a low term spread and a strongly rising household credit-to-GDP ratio. Past tightening episodes also indicate that the policy rate trajectory matters. All else equal, larger increases in (nominal and real) rates that are spread over a longer period and backloaded are more likely to be associated with hard landings (Graph 2, right-hand panel). By contrast, front-loaded tightening cycles tend to be followed more frequently by soft landings.

[3] Potential output refers to the level of GDP that could be achieved if production factors were used at full capacity and prices were fully flexible.

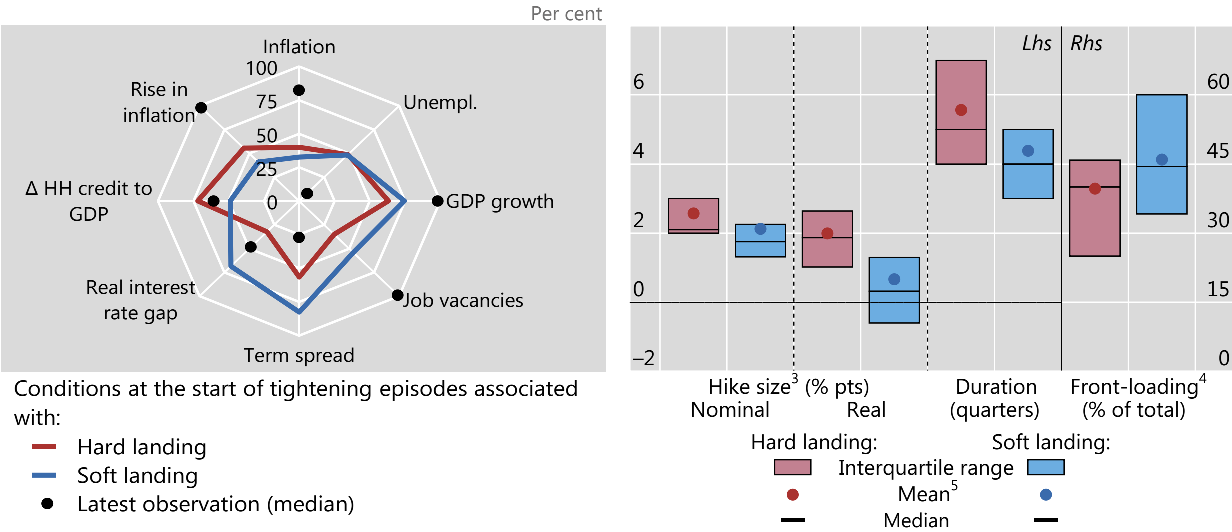
[4] In a less favourable scenario, where inflation is only be mildly sensitive to slack, these numbers could be up to four times larger.

Low unemployment and high inflation point to material recession risks

Graph 2

Rising inflation and low rates herald hard landings[1, 2]

Soft landings involve smaller, shorter, and more front-loaded rate hikes[1]



[1] Statistics based on a sample of 70 tightening episodes (41 with a hard landing and 29 with a soft landing) for 19 AEs (AT, AU, BE, CA, CH, DE, DK, ES, FI, FR, GB, IE, IT, NL, NO, NZ, PT, SE, US) and 6 EMEs (BR, CN, HK, IN, KR, MX) over the period 1980–2019. Tightening episodes are defined as periods of a rising nominal policy rate for at least three consecutive quarters and ending when the policy rate peaks. The sample does not include "tail" episodes, ie tightening cycles that feature an increase in the policy rate of less than 1 or more than 20 percentage points, or that last more than 12 quarters. Hard landing is a recession (two consecutive quarters of negative GDP growth) within three years after the interest rate peak; otherwise, the episode is classified as a soft landing. [2] The grid refers to the percentiles of the variable's country-specific historical distribution. Black dots show the median across countries for the latest data point available. The red (blue) line corresponds to the sample median for each variable taken in isolation for tightening episodes that end in a hard (soft) landing. [3] Overall increase in the nominal (real) policy rate throughout the tightening cycle. [4] The degree of front-loading is measured as the percentage of the overall hike that happens within the first two quarters of the tightening cycle. For example, if the policy rate increased by 6 percentage points in total over a tightening cycle of, say, five consecutive quarters, but by 3 percentage points in the first two quarters, then the front-loading statistics would be 3/6=50%. [5] The differences in the sample means between hard and soft landings are all statistically significant at the 10% threshold.

Sources: IMF; Refinitiv Datastream; national data; BIS calculations.

Inflation persistence and recession risks

How long the current high inflation spell persists will determine how much aggregate demand has to be restrained to bring inflation back to target. In many countries, inflation is currently running at its highest level in several decades, and inflationary pressures have proven surprisingly long-lasting and broad-based. Inflation is forecasted to remain generally above target next year, despite some expected moderation (Graph 3, left-hand panel). But, given the great uncertainty surrounding the drivers of inflation, and considering that forecasts have underestimated inflation since 2021 (right-hand panel), one cannot rule out that inflation for 2023 will remain further above target than currently expected.

Whether inflation persists will depend on several factors. One is the persistence of bottlenecks especially if we see new lockdowns of the type recently imposed in China. Another would be additional increases in energy and food prices (Graph 4, left-hand panel). To the extent that they reflect exogenous factors, such as the legacy of the Covid recession or the war, supply chain bottlenecks and increases in commodity prices may gradually wane over time. By contrast, to the extent that they reflect global demand pressures, they will persist as long as demand remains robust.

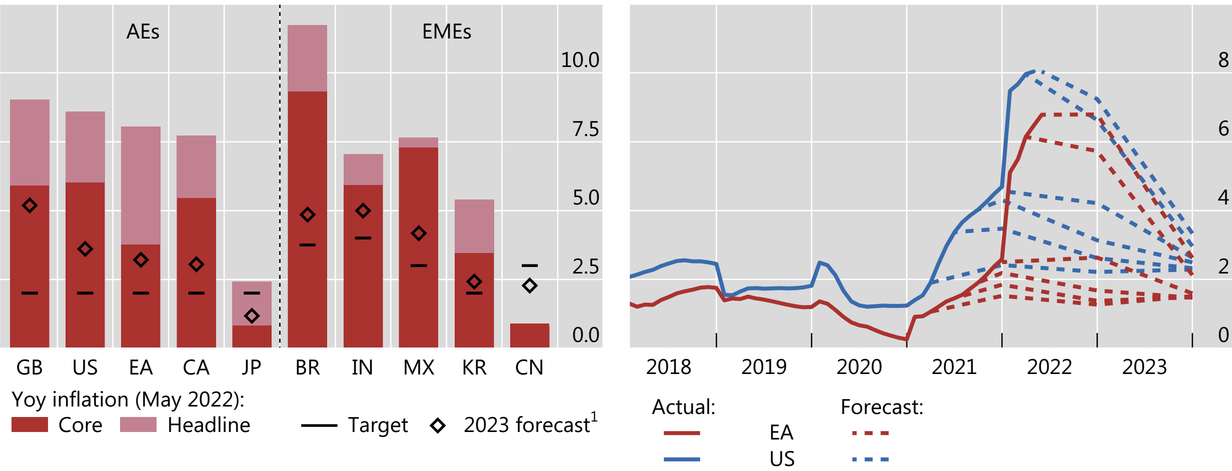
A third factor is wage developments. Since inflation started rising, workers have incurred significant losses in purchasing power (Graph 4, centre panel). Looking ahead, attempts to recoup these losses could prolong inflationary pressures. Higher inflation could, in turn, lead to behavioural changes that may entrench it. Such a shift would happen if, for example, workers sought to strengthen their bargaining power, eg through greater centralisation of wage negotiations, or if indexation clauses became more widespread, as appears to be already the case in some countries.[5]

Inflation expected to moderate after a string of upward surprises

In per cent — Graph 3

Inflation forecasted to recede by end of next year

Forecasts have underestimated inflation since 2021[2]



[1] Consensus forecasts of average annual headline inflation (except for MX and BR, year-end yoy inflation). [2] Consensus forecasts of average annual headline inflation made around the end of each quarter of 2021 and 2022 and corresponding realised values.

Sources: Consensus Economics; national data; BIS calculations.

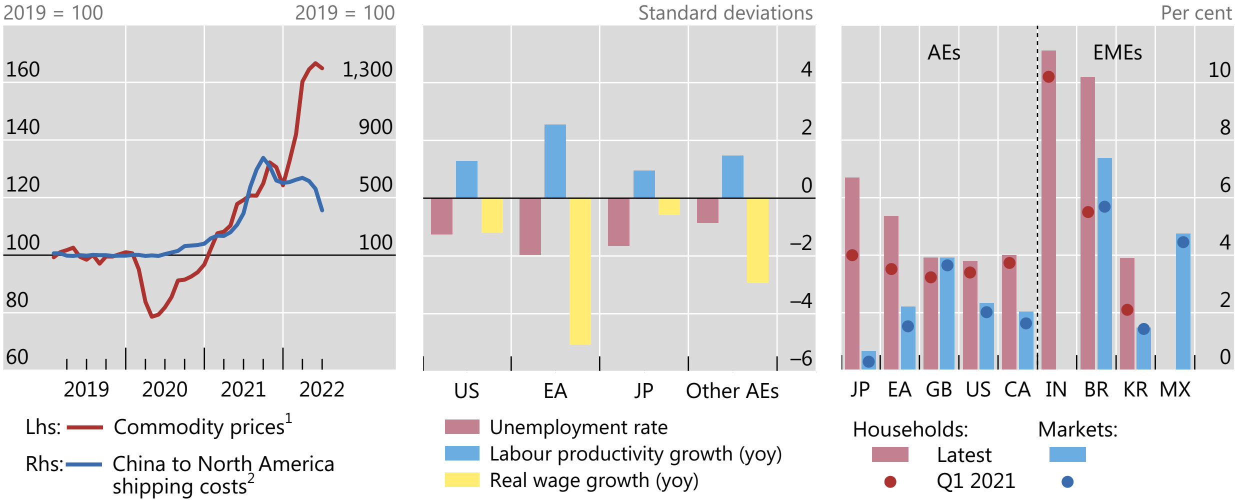
Some factors affecting inflation persistence

Graph 4

Bottlenecks persist and commodity prices soar

Real wages take a big hit amid tight labour markets[3]

Long-term inflation expectations increase modestly[4]



[1] Bloomberg Commodity Index tracking exchange-traded contracts of physical commodities (energy, metals and food). Monthly average. [2] Containerised freight rate index. Monthly average. [3] Standard deviation of latest observation from 2000–19 mean. Other AEs = AU, CA, DK, GB, NZ and SE, weighted averages based on GDP and PPP exchange rates. [4] Based on data from financial markets – five-year, five-year-forward break-even inflation – and household surveys of five-year-ahead (AEs) or one-year-ahead (EMEs) expected inflation. EA household inflation expectations refer to Germany.

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

[5] See BIS, *Annual Economic Report*, June 2022, Chapter 2.

Finally, such behavioural changes could be a sign of yet another development that would entrench inflation further, ie long-run inflation expectations becoming unmoored and more responsive to short-term increases in inflation. If so, even temporary price shocks could feed into persistent increases in inflation. Despite marked increases in short-term inflation expectations, to date long-term ones have remained relatively well anchored in most AEs (Graph 4, right-hand panel). But the longer the current surge in inflation lasts, the higher the odds that expectations will de-anchor.

A narrow path to a soft landing

The policy response to the current rise in inflation involves difficult trade-offs, and the path to a soft landing is narrow. Tightening too much or too quickly could result in financial stress and a hard landing, inflicting unnecessary damage to the economy. But tightening too slowly could let inflationary pressures become ingrained, requiring more forceful and costly action down the road.

At the current juncture, two factors may increase the odds of a soft landing. For one, the shift towards durable goods consumption in many countries since the pandemic (Graph 5, first panel) could increase the responsiveness of aggregate demand to monetary policy. To the extent that excess demand is concentrated in these interest rate-sensitive sectors, less tightening would be required to bring about the necessary slowdown in aggregate demand. This would help trim inflation where needed, without harming other sectors. In addition, it would reduce the likelihood of outsize and unexpected reactions (eg in financial markets) as well as moderate the repercussions in the rest of the world (see below). That said, this mechanism will weaken as households resume their pre-pandemic consumption patterns and demand rebalances towards services, as has already happened in the euro area and, to a lesser extent, in Japan and the United States.[6]

In addition, in some jurisdictions, tight labour markets have come with subdued participation rates and historically high vacancy rates (Graph 5, second panel). Even though job vacancies and unemployment usually move in opposite directions, a moderate tightening could, this time round, trim excess labour demand without major contractions in employment. The resulting lower wage and price pressures could pave the way to a soft landing.

However, uncertainties surrounding the persistence of inflation complicate the task of central banks. For instance, broadening inflationary pressures and relatively stable inflation expectations send conflicting signals about whether inflation will persist. Moreover, as many countries have not seen persistently high inflation since the adoption of inflation targeting, there is a chance that seemingly stable macroeconomic relationships of the recent past will break down. Nominal wage growth is a case in point. In several jurisdictions, nominal wages have increased only moderately so far but, for countries where wages are renegotiated at long intervals, the bulk of the increases may lie ahead.

The strength of the transmission channels is also hard to gauge. The prospect of policy rate hikes has started to percolate quickly through to global financial conditions (Graph 5, third panel).[7] And higher policy rates could have unintended consequences. Elevated asset prices, notably those of real estate, and high non-financial sector debt levels (fourth panel) could amplify the reaction to monetary policy. A tightening could trigger an outsize reaction, not least through higher debt-servicing costs. This risk is especially relevant in countries where floating rate loans are more common.

In addition, the greater the tightening in AEs, the bigger the impact on EMEs. So far, high commodity prices have helped to shield some EMEs, where financial conditions have tightened mainly on the back of higher domestic interest rates – at both short and long maturities (Graph 5, third panel). A monetary policy

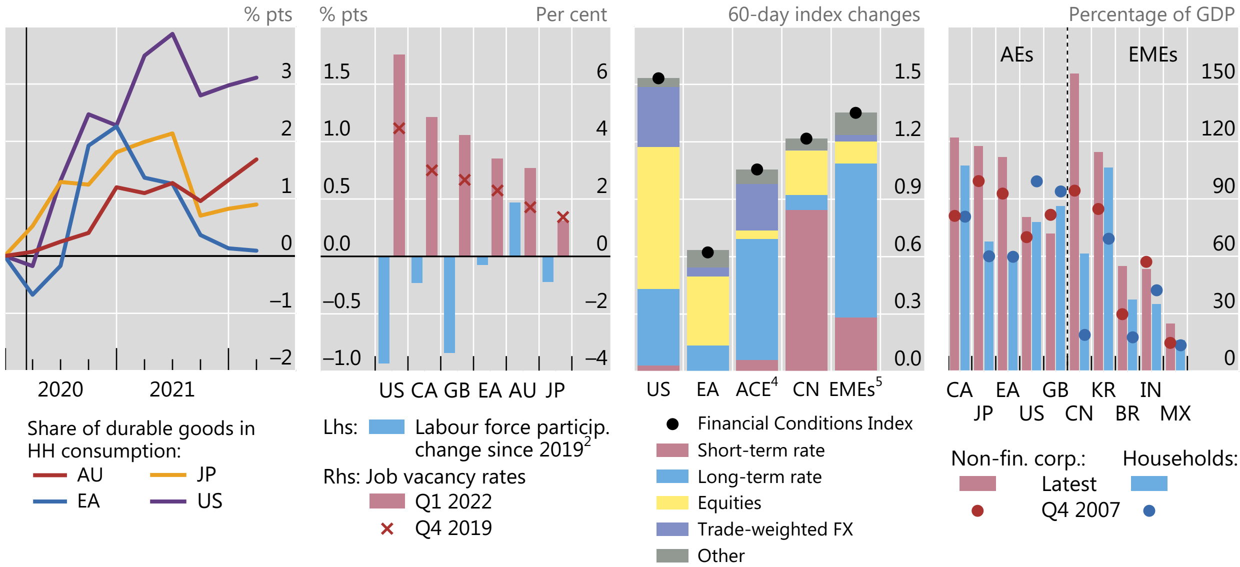
6 In addition, a shift towards some services, such as travel, that are highly exposed to energy costs and insensitive to interest rates would probably serve to make inflation less responsive to a tightening.

7 For instance, the Goldman Sachs Financial Conditions Index (FCI) has risen steeply since early 2022, to levels not seen since the Great Financial Crisis.

tightening cycle that has run ahead of those in AEs, coupled with the previous withdrawal of foreign investors, have also made EMEs more resilient to external conditions. Even so, with the global economy cooling down, EMEs could be tested, especially if their currencies come under pressure. Heightened vulnerabilities could worsen the trade-offs for policymakers.

Current conditions sketch out a narrow path for a soft landing Graph 5

Households' consumption patterns are changing[1] | Vacancies and participation still far off pre-Covid levels | Financial conditions tighten globally[3] | Household and corporate debt levels are elevated



[1] Calculated as the share of durable goods in the consumption of durable goods and services. Changes relative to the Q4 2019. Based on quarterly national accounts data for households. Vertical line marks the start of the coronavirus pandemic. [2] Labour force participation rate changes between Q4 2019 and Q4 2021 (for EA) or Q1 2022 otherwise. [3] 60-day windows between 1 March and 17 May with the largest change in the Goldman Sachs nominal Financial Condition Index. [4] Advanced Commodity Exporters = AU, CA, NO and NZ. [5] EMEs = BR, CL, CZ, HU, IN, ID, IL, KR, MY, MX, PH, PL, RO, TH, TR and ZA.

Sources: ILO; OECD; Bloomberg; Refinitiv Datastream; national data; BIS; BIS calculations.

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