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Are major advanced economies on the verge of a wage-price spiral?

Key takeaways

- Inflation has returned, reaching levels not seen in decades. Whether inflation enters a persistently higher regime will depend on labour market developments, and on whether a wage-price spiral emerges.
- To date, evidence for a broad acceleration in wage growth is mixed. Wage growth has picked up significantly in the United States, but remains moderate in most other advanced economies, despite tentative signs of a renewed sensitivity of wages to inflation in some segments of the labour market and a pickup in inflation expectations.
- But extrapolating behaviour from low-inflation periods is problematic. If inflation remains high, households may ask for higher wages to make up for lost purchasing power and firms may raise prices to protect profit margins. And stubbornly high inflation may lead to institutional changes such as automatic indexation and cost-of-living adjustment clauses.

Inflation and wages since the onset of Covid-19

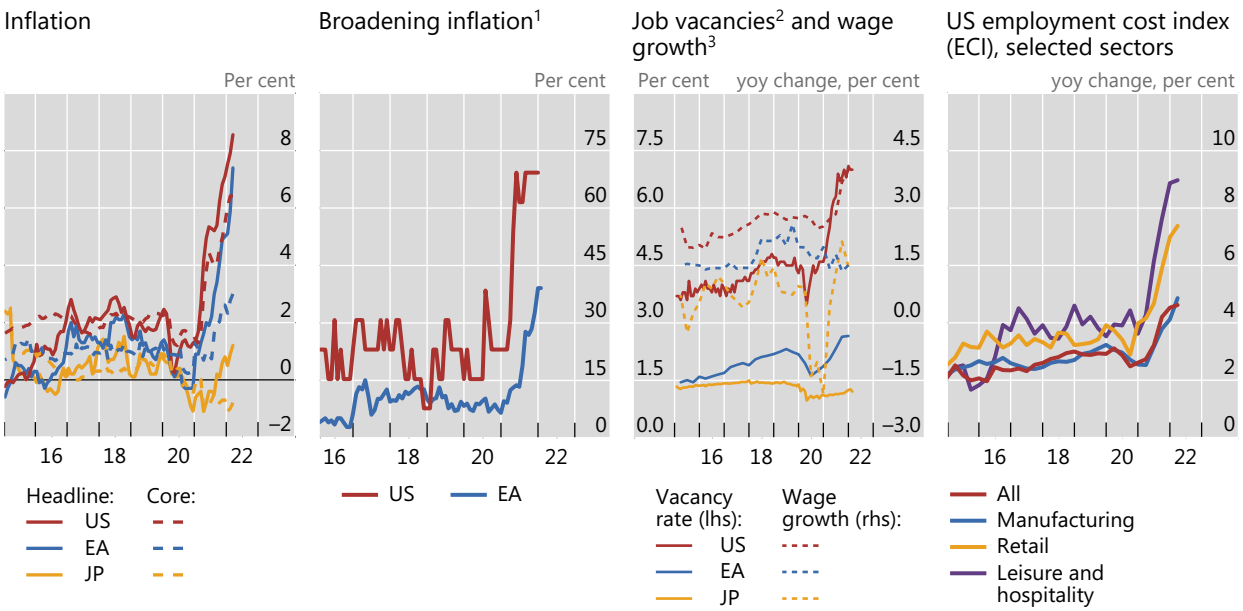
Inflation returned in 2021, rising in many countries to levels not seen in decades. Increases in the United States and the euro area were particularly striking as they followed years of below-target inflation (Graph 1, first panel). Initially, higher inflation was concentrated in spending categories hit hard by pandemic-induced supply chain disruptions and the abrupt demand rotation away from services (Rees and Rungcharoenkitkul (2021)). But inflation has broadened, with the proportion of spending categories with price increases above 3% rising from 23% in January 2020 to 69% in January 2022 in the United States, and from 9% to 39% in the euro area (second panel). The war in Ukraine is adding inflationary pressures, not least through its impact on the price of energy and other commodities.

Labour market developments will be the key determinant of whether high inflation persists. And by many metrics, labour markets look tight in the large advanced economies (AEs) where inflation has risen most. In many, unemployment rates are almost back to pre-pandemic levels and job vacancies have risen sharply (Graph 1, third panel). An exception is Japan, where core inflation and job vacancies remain low. To date, tight labour markets have had mixed effects on wage growth. US wage growth has picked up significantly, most notably in pandemic-affected sectors such as leisure and hospitality and retail trade, and has broadened in recent months (fourth panel). In other AEs, however, wage growth remains moderate.

A key concern for central banks is the possible emergence of a wage-price spiral, as this could signal a shift to a regime of persistently higher inflation accompanied by a de-anchoring of inflation expectations (Carstens (2022)). One trigger for such a shift in regime could be nominal wage increases beyond price increases and productivity gains. Such nominal wage increases are much more likely if labour markets continue to tighten, raising workers' bargaining power. But wage growth could quicken even if economic slack does not diminish further, as wage earners may seek to recoup recent losses in purchasing power and secure additional gains to guard against future inflation surprises.

Inflation and wages on the rise

Graph 1



[1] Share of CPI spending categories with year-on-year price increases > 3%, based on 13 items for the US and 174 for the EA. [2] For US, total non-farm; for EA, industry, construction and services. Job vacancy rate computed as ((number of job vacancies)/(number of occupied posts + number of job vacancies))*100. [3] Employment Cost Index (ECI) for US, indicator of negotiated wage rates for EA; OECD labour compensation per employed person for JP.

Sources: ECB; OECD; Eurostat; Datastream; national data; BIS calculations.

Pre-conditions for a wage-price spiral

A wage-price spiral entails feedback, in both directions, between wages and prices. Inflation then rises persistently on the back of such a spiral. Once the economy enters the spiral, workers bid up nominal wages more than prices, prompting firms to raise prices further.

The likelihood of an economy entering a wage-price spiral depends in part on macroeconomic conditions. Workers' bargaining power is typically greater when labour demand is strong and labour supply is tight. Similarly, firms may have more pricing power when aggregate demand is strong.

Labour market institutions also influence the likelihood of a wage-price spiral emerging. Automatic wage indexation and cost-of-living adjustment (COLA) clauses make wage-price spirals more likely. Wage agreements involving large groups of workers could also have ripple effects. For example, a minimum wage rise, motivated by a perceived need to maintain the purchasing power of wage earners, could spread to other wages. Public sector labour unions could also negotiate higher wages, with spillover effects on private sector wages.

In product markets, the degree of competition comes into play. Firms with higher markups – an indication of greater market power – could raise prices when wages increase, while those without such pricing power may hesitate to do so. Strategic considerations in price-setting are also relevant. Firms may feel more comfortable raising prices if they believe their competitors will also do so. Price increases are more likely when demand is strong. With less concern about losing sales and less room to adjust profit margins, even firms with less pricing power could pass higher costs through to customers.[1]

Monetary policy provides the backdrop against which these forces play out. A credible central bank that takes appropriate action in response to changing macroeconomic conditions and communicates

[1] Fabiani et al (2005) study the pricing behaviour of firms in the euro area, finding that cost-push shocks are the main factor underlying price increases. Financial conditions could also influence pricing behaviour: firms with poor cash flows or tighter access to credit may have to increase prices in order to preserve internal liquidity.

effectively helps to anchor inflation expectations. This in turn reduces incentives to demand higher nominal wages and set higher prices. While workers may still seek wage increases to catch up with past inflation, the feedback between wages and prices is weaker. Well anchored expectations help to ensure that wage-price feedbacks will be short-lived, since agents expect inflation to return to target.

Are the conditions for a wage-price spiral in place?

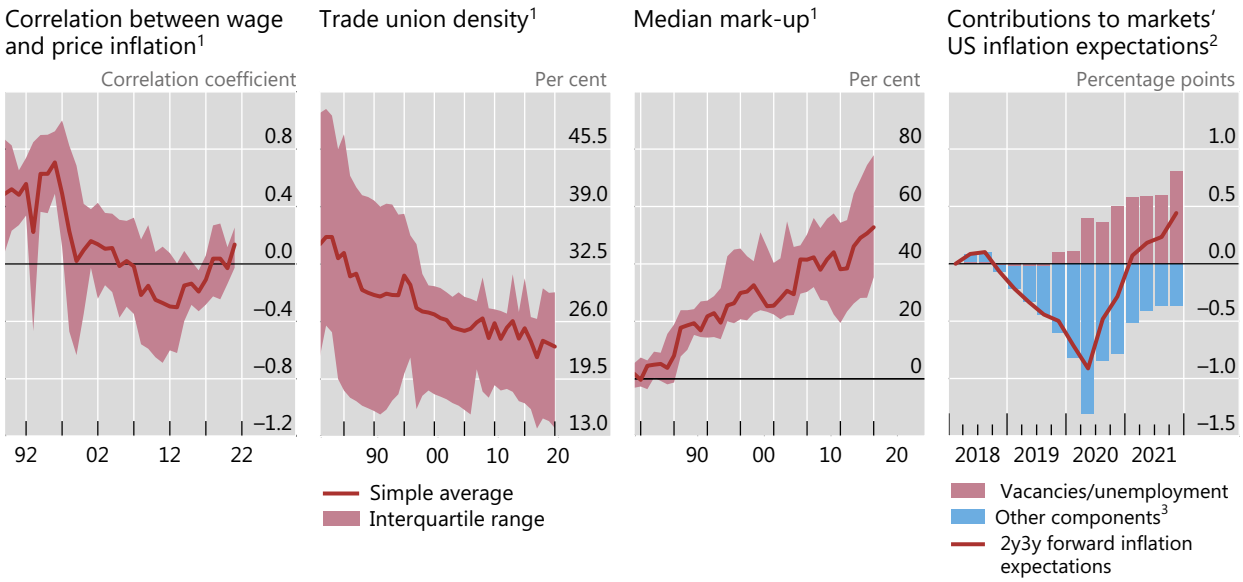
The prospect of a wage-price spiral warrants close attention from central banks.

By some measures, the current environment does not look conducive to such a spiral. After all, the correlation between wage growth and inflation has declined over recent decades and is currently near historical lows (Graph 2, first panel). It is notable, however, that this correlation has ticked up recently.

Institutional changes also hint at an environment less conducive to wage-price spirals than in the past. In recent decades, workers' collective bargaining power has declined alongside falling trade union membership (Graph 2, second panel). Relatedly, the indexation and COLA clauses that fuelled past wage-price spirals are less prevalent. In the euro area, the share of private sector employees whose contracts involve a formal role for inflation in wage-setting fell from 24% in 2008 to 16% in 2021 (Koester and Grapow (2021)).[2] COLA coverage in the United States hovered around 25% in the 1960s and rose to about 60% during the inflationary episode of the late 1970s and early 1980s, but rapidly declined to 20% by the mid-1990s.[3] These patterns point to the slow-moving yet endogenous nature of institutions. Put differently, inflation may yet create the conditions for it to become entrenched.

Co-movement of wages and prices has been low but may increase with labour market tightness driving inflation expectations

Graph 2



[1] Based on data for BE, CA, DE, ES, FR, GB, IT, NL, PT and US. [2] Contributions to the cumulative change in market-based inflation expectations at a two- to five-year horizon since Q4 2018. [3] Other components include: one-year inflation expectations, Google mobility index, freight costs and commodity prices.

Sources: J De Loecker and J Eeckhout, "Global market power", *NBER Working Papers*, no 24768, 2018; IMF, *World Economic Outlook*; OECD; ILO; Datastream; Bloomberg; authors' calculations.

[2] There are some notable differences across countries, however. Automatic wage indexation applies to a large share of private sector employees in Belgium, Cyprus, Luxembourg and Malta.

[3] Holland (1988) shows that COLA coverage is positively related to the responsiveness of wages to price level shocks and suggests, based on this finding, that COLA coverage is a suitable proxy for the overall prevalence of wage indexation in the US economy. Reporting of COLA coverage was discontinued in 1996.

But other forces may increase the likelihood of a wage-price spiral. Firms' pricing power, as measured by the markup of prices over costs, has increased to historical highs (Graph 2, third panel). In the low and stable inflation environment of the pre-pandemic era, higher markups lowered wage-price pass-through (eg Heise et al (2022)). But in a high inflation environment, higher markups could fuel inflation as businesses pay more attention to aggregate price growth and incorporate it into their pricing decisions (see Schwartzman and Ravindranath Waddell (2022)). Indeed, this could be one reason why inflationary pressures have broadened recently in sectors that were not directly hit by bottlenecks.

In addition, there are tentative signs of inflation expectations unmooring. This is clearest for medium-term expectation measures. Professional forecasts point to inflation of over 4.5% in the United States and much of Europe over the next two years, and above 3.5% in many other AEs. In countries such as the United States where labour markets have tightened the most, job vacancies have become an increasingly important driver of medium-term financial market inflation expectations (Graph 2, fourth panel). As job vacancy rates have substantial predictive power for wage inflation (Domash and Summers (2022)), this could mean that market participants have already priced in the inflationary effects of future wage increases.[4]

Risk of wage pressure spillovers

In the light of the heightened risks described above, it is natural to ask whether the larger wage increases that have already occurred could trigger a wage-price spiral. Of particular note in the United States is the rapid wage growth in sectors such as leisure and hospitality, and retail trade. In the euro area, calls for large increases in minimum and public sector wages warrant attention.

In the United States, past experience suggests that some recent large wage increases in specific sectors are unlikely to spill over to others. Historically, wage increases in leisure and hospitality have been short-lived and spillovers to wages in other sectors limited (Graph 3, first panel). Spillovers from retail trade wages to other sectors are somewhat more persistent, yet still small (second panel).[5] The recent increase in manufacturing wages may pose greater risks, as wage growth in this sector has historically had large spillovers (third panel).[6]

That said, higher job-to-job transition rates could lead to unusually large cross-sector wage spillovers in countries where the pandemic has induced a "Great Reallocation" on the labour market, as in the United States.[7] The high number of quits with job switching could force some sectors, like manufacturing, to respond by raising nominal wages faster than in the past.

In several countries, calls for large public sector and minimum wage increases have not yet led to significant actual increases in these wages. With the exception of Germany,[8] the minimum wage increases planned for 2022 are generally modest and will not fully compensate for inflation. Moreover, such increases have historically exerted somewhat limited spillovers to other wages (Graph 4, left-hand panel) and, based on past relationships, they appear unlikely to set off a wage-price spiral. Similarly, public wage increases have generally had few systematic spillovers (right-hand panel) and are currently lagging those in private wages. In the United States, the pay gap between private and public wages has actually widened since before the pandemic (Morrissey and Sherer (2022)).

[4] The impact of increasingly tight labour markets on inflation expectations has so far been largely offset by negative base effects, ie the expectation that the inflationary pressures due to pandemic-related supply shortages will revert over time.

[5] These limited wage spillovers can be explained by the fact that the leisure and hospitality and retail trade sectors are at the end of the supply chain and have a relatively high share of low-wage workers.

[6] This appears consistent with the fact that COLA clauses have historically been more prevalent in manufacturing. See Devine (1996). Automatic price indexation could increase the attractiveness of manufacturing employment, raising wages elsewhere.

[7] In most European countries, in contrast, job protection schemes have muted this phenomenon.

[8] In Germany, a 25% increase is being phased in by Q4 2022.

In the US, significant cross-sectoral spillovers for manufacturing wages

VECM impulse response functions[1] Graph 3

[1] Impulse response functions based on a VECM of order 4.

Sources: Federal Reserve Bank of St Louis; authors' calculations.

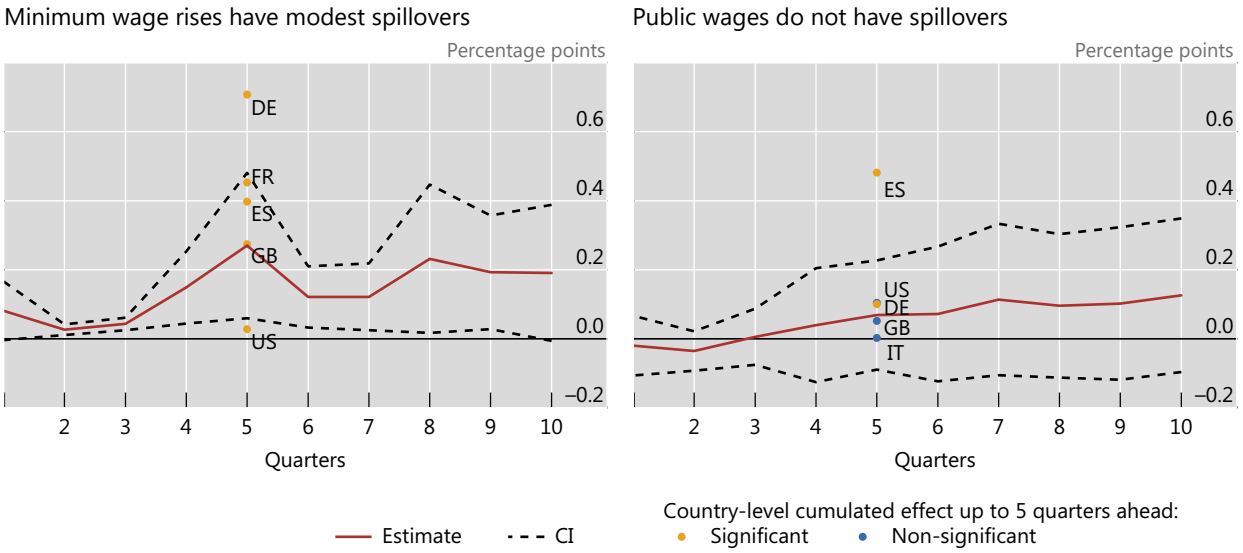
Nevertheless, the key question is whether the empirical regularities observed under low inflation will prove durable as inflation rises. Anecdotally, calls to make up for lost purchasing power in 2021 have been increasing. In the United Kingdom, for example, unions have recently pushed for pay rises of approximately 10%, while in France some unions have called for a 25% increase in the minimum wage. In the United States, several large companies have agreed to include COLA clauses in multi-year wage contracts following strikes in late 2021, and calls to unionise have risen. Pressure to increase minimum wages could rise, following the example of several states that have already done so in 2022, as inflation remains elevated. Public wages, which are set by collective bargaining in some countries and tend to have COLA clauses, could set the benchmark for private sector negotiations. And, if these wage rises do occur, their spillovers to other wages and prices could be larger today than when inflation was low.

Conclusion

To date, there is limited evidence that most AEs are entering a wage-price spiral. Nonetheless, the prospects are greater than they were pre-pandemic and the risk should not be underestimated. Wage growth has picked up significantly in some countries. Even where wages have grown less than prices, inflation could broaden if firms set prices while taking into account higher inflation and their competitors' behaviour, with possible feedback effects into higher wage growth. Policymakers should be attuned to shifts in inflation expectations and to potential pressure to reinstate institutional structures that made economies more prone to wage-price spirals in the past.

Minimum and public wage increases have limited spillovers on average total wages[1]

Graph 4



[1] Cumulated effect over 10 quarters of a 1% increase in the nominal minimum (LHP) and public (RHP) wages on the average nominal wage; based on a panel regression analysis for CA, DE, FR, GB, IT and US since 1Q 2000.

Sources: OECD; ILO; Datastream; authors' calculations.

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