CHARTS OF THE WEEK

Corruption, climate change and inflation

SEPTEMBER 16, 2022

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This week's charts cover the relationship between prosperity and corruption; Germany's warming climate and natural gas use; European inflation expectations and consumer psychology; the relationship between a rising dollar and lower US earnings; the surprising disconnect between US inventories and consumer confidence; and a tight post-pandemic US labour market where some firms are hungrier for workers than others.

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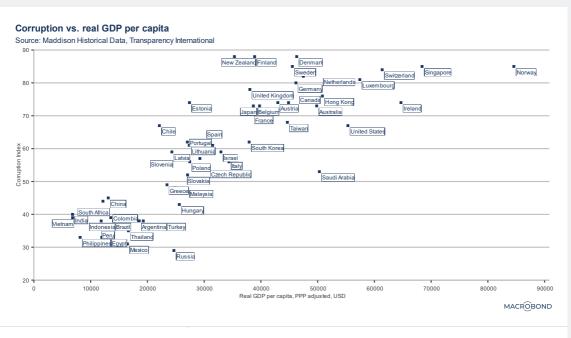
Wealthier societies are correlated with lower corruption

Institutions matter! That's the conclusion of "Why Nations Fail." The influential 2012 book by Daron Acemoglu and James Robinson linked long-run prosperity to integrity in economic and political institutions: good governance, the rule of law and rooting out corruption.

Our chart below bears witness to this linkage. It uses the well-regarded "Corruption Index" compiled by Transparency International, which assesses perceptions of a nation's public sector. (An important note: a higher value means that a country is in fact less corrupt.)

A 20-point increase to a nation's corruption index score is associated with a lift to per capita income of at least USD 10,000.

While correlation does not imply causation, many other governance indicators show an equally strong linkage to prosperity. To the extent that many emerging markets have made little progress in recent decades, the middle-income trap might simply be a bad institutions trap.



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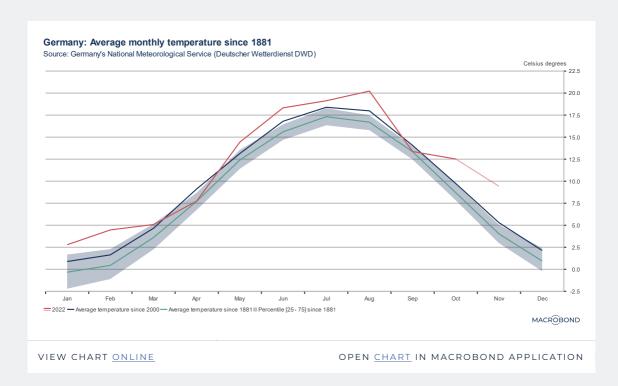
OPEN CHART IN MACROBOND APPLICATION



German summers are getting ever hotter

Europe saw its hottest summer on record this year and experienced severe droughts.

The following chart shows just how much German temperatures have exceeded even recent averages through most of 2022. It graphs the average temperature since 1881, the (hotter) average since 2000, and a "normal range" as expressed by the historic 25th to 75th percentiles in the shaded area.





German gas usage in mild versus cold winters

As Europe confronts the shutdown of the Nord Stream pipeline, limiting the supply of Russian energy as autumn begins, it's worth assessing how scenarios for natural gas use in cold and warm winters differ.

The following charts track the level of natural gas stored in Germany and the nation's average temperature. Each 12-month period is graphed from July to June, demonstrating how the peak winter season depletes stocks.

The chilly winter of 2017-18 stands out in red, showing how gas stocks were almost completely drawn down by February. The balmy temperatures and limited gas use indicated by 2019-20's light blue line are notable as well. So far, 2022-23, in green, is on track to be a relatively warm year.





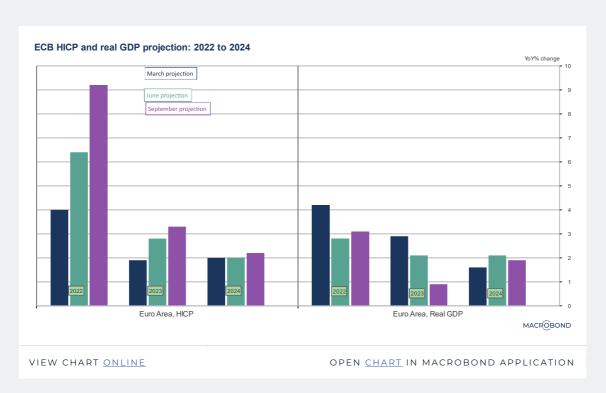
The ECB is making major adjustments to its inflation outlook

Soaring inflation prompted the European Central Bank to make its first ever 75-basis-point hike this September. The ECB also made large adjustments to its projections for inflation and growth.

The chart below graphs the ECB's revisions to its forecast Harmonised Index of Consumer Prices, or HICP, as well as gross domestic product (GDP). Comparing the March projections with the June and September revisions reveals the central bank's gradually deteriorating economic outlook. The ECB now expects inflation to surpass 9 percent this year, while the inflation forecast for 2023 has been revised upwards by more than 1 percentage point since March.

As for economic output, the ECB now expects significantly lower GDP growth both this year and next, with downward revisions exceeding 1 percentage point.

This chart can only be accessed with the Data+ license as it uses revision history data.



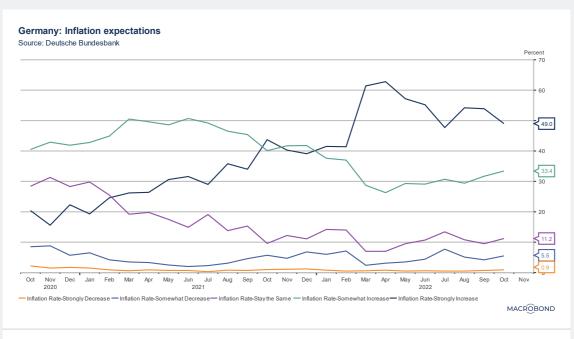


Many more Germans have become concerned about inflation

The Bundesbank compiles surveys of households to assess inflation expectations. These surveys indicate that more and more Germans expect consumer prices to surge.

As our chart shows, the share of Germans who expect inflation will somewhat or strongly increase is significantly higher than it was two years ago. This should be cause for concern at the ECB, which is increasingly worried about unanchored inflation expectations.

It's still open to debate how much inflation expectations are a self-fulfilling prophecy, and to be sure, concern about rapid inflation has eased somewhat from its peak in March. However, central banks are monitoring this measure of consumer psychology closely.



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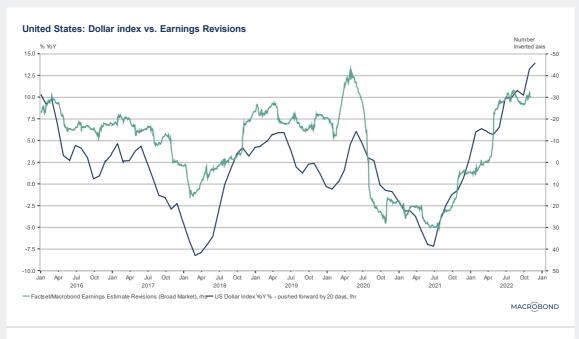
A mighty dollar but weaker profits

The dollar tends to appreciate during a global economic slowdown, usually because the Federal Reserve is in the process of tightening monetary policy. Such slowdowns often simultaneously weigh on American corporate earnings.

The following chart shows the negative correlation between US earnings revisions -- as measured by FactSet and Macrobond -- and the Dollar Index, which tracks the greenback against a basket of currencies. Note that the time series for the Dollar Index has been pushed forward by 20 days to display the most significant correlation.

The following chart uses data from <u>Macrobond/FactSet Equity Factor</u> <u>Aggregates</u> and can only be accessed by subscribers to this database.

Tip: Macrobond clients can use the "<u>change region</u>" function on this chart.



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An unusual disconnect between US inventories and consumer confidence

Usually, if companies are building up their inventories, it reflects a general confidence in the economic outlook. Firms don't stock up on goods if they're worried they can't sell them. But whether it's due to the effect of expensive gasoline on consumer psychology or companies' own concerns about disrupted supply chains, this historic correlation has been broken in the US.

As our chart shows, inventories are surging as the widely watched University of Michigan consumer sentiment index sinks – a record divergence. That's at odds with historic data, and as a recent ECB note argues, inventories tend to be <u>pro-cyclical</u>.

One theory is the <u>bullwhip effect</u>, which posits that companies hoard inventories in an environment of high demand and uncertain supply. Given the importance of gasoline prices to American drivers, pricier oil is likely responsible for the depressed confidence figure – a disconnect to the real economy, given the US labour market has remained very strong.



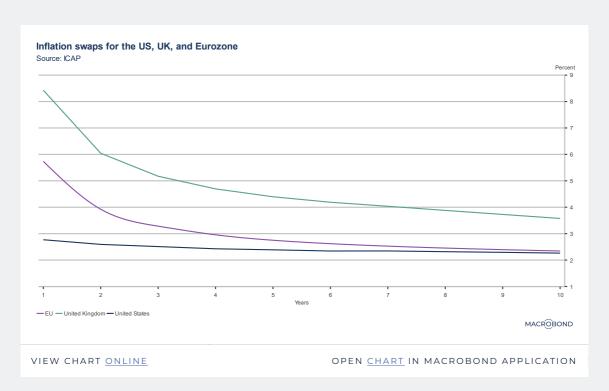
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Inflation swaps show the UK and Eurozone have a problem the US is likely to avoid

The eurozone and the UK likely have a bigger long-term inflation problem than the US does.

The chart below shows the inflation expectations curve for the three economies. Financial markets are seeing considerably higher inflation in the UK for years to come. The euro area is expected to fare better than Britain, but is still likely to have much higher inflation than the US for the next two years.

The following chart uses <u>ICAP</u> market data available only for subscribers to Macrobond's premium data sets.

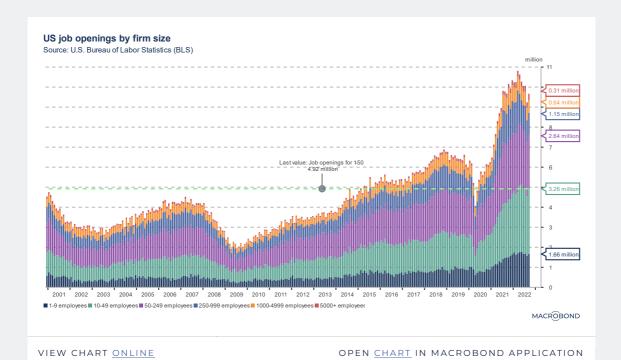




US job openings show an attempted hiring frenzy by smaller companies

The US labour market is very tight, with job openings surging to a record high in the aftermath of the pandemic. The vacancy ratio is at its highest level in history versus the employment rate.

As the chart below shows, a massive share of the increase in job openings is driven by firms with fewer than 49 employees. The number of total vacancies at those small firms is so large that it currently exceeds the total number of vacancies for all firms pre- 2015.



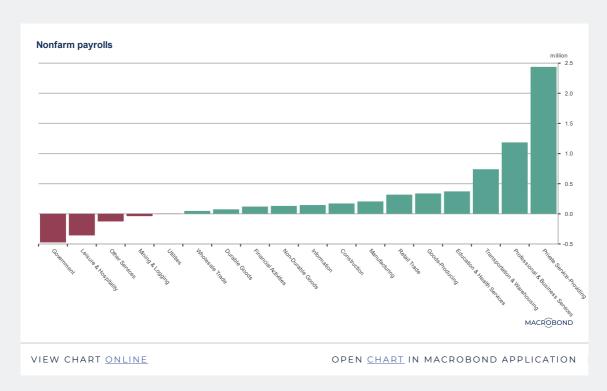


Job gains and losses by industries in the pandemic era

The US economy has regained all 20 million jobs lost during the early days of the pandemic. But the employment picture has been significantly reshuffled across industries.

The chart below shows job gains and losses by industry since March 2020, when Covid-19 became a global pandemic.

Leisure and hospitality employment shrank enormously and has yet to snap back. Transportation, warehousing and professional and business services have added close to a million jobs.







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