16 November 2022 | 10:59AM EST

# Global Economics Analyst Macro Outlook 2023: This Cycle Is Different

- Global growth slowed through 2022 on a diminishing reopening boost, fiscal and monetary tightening, China's Covid restrictions and property slump, and the Russia-Ukraine war. We expect global growth of just 1.8% in 2023, as US resilience contrasts with a European recession and a bumpy reopening in China.
- The US should narrowly avoid recession as core PCE inflation slows from 5% now to 3% in late 2023 with a ½pp rise in the unemployment rate. To keep growth below potential amidst stronger real income growth, we now see the Fed hiking another 125bp to a peak of 5-5.25%. We don't expect cuts in 2023.
- How can core inflation fall so much with such a small employment hit? The reason, we think, is that this cycle is different from prior high-inflation periods. First, post-pandemic labor market overheating showed up not in excessive employment but in unprecedented job openings, which are much less painful to unwind. Second, the disinflationary impact of the recent normalization in supply chains and rental housing markets still has a long way to go. And third, long-term inflation expectations remain well-anchored.
- The Euro area and the UK are probably in recession, mainly because of the real income hit from surging energy bills. But we expect only a mild downturn as Europe has already managed to cut Russian gas imports without crushing activity and is likely to benefit from the same post-pandemic improvements that are helping avoid US recession. Given reduced risks of a deep downturn and persistent inflation, we now expect hikes through May with a 3% ECB peak.
- China is likely to grow slowly in H1 as an April reopening initially triggers an increase in Covid cases that keeps caution high, but should accelerate sharply in H2 on a reopening boost. Our longer-run China view remains cautious because of the long slide in the property market as well as slower potential growth (reflecting weakness in both demographics and productivity).
- Several central banks in Central/Eastern Europe and Latin America started hiking rates well before their DM peers. While none has clearly achieved a soft landing yet, activity has been resilient and inflation is now coming down in some countries, especially Brazil. CEE is in a more difficult position because of its commodity exposure, high inflation, and ongoing monetary tightening.

#### Jan Hatzius

+1(212)902-0394 | jan.hatzius@gs.com Goldman Sachs & Co. LLC

## Daan Struyven

+1(212)357-4172 | daan.struyven@gs.com Goldman Sachs & Co. LLC

#### Yulia Zhestkova

+1(646)446-3905 | yulia.zhestkova@gs.com Goldman Sachs & Co. LLC

## Devesh Kodnani

+1(917)343-9216 | devesh.kodnani@gs.com Goldman Sachs & Co. LLC

# Macro Outlook 2023: This Cycle Is Different

Global growth slowed sharply through 2022 on a diminishing reopening boost, fiscal and monetary tightening, China's ongoing Covid restrictions and property slump, and the energy supply shock resulting from the Russia-Ukraine war. We expect the world to continue growing at a below-trend pace of 1.8% in 2023, with a mild recession in Europe and a bumpy reopening in China but also important pockets of resilience in the US and some EM early hikers, such as Brazil.

Exhibit 1: Slow Growth in 2023, But Above-Consensus on the US

Real GDP Growth		Annual Average					Q4/Q4	Next 4 Quarters	
Percent Change yoy	2022		2023		2024		2023	2022Q4-2023Q3	Potential
	GS	Consensus	GS	Consensus	GS	Consensus	GS	GS	GS
US	1.9	1.8	1.0	0.4	1.6	1.4	1.1	0.9	1.8
Euro Area	3.3	3.1	-0.1	-0.1	1.4	1.5	0.0	-0.5	1.1
Germany	1.8	1.6	-0.6	-0.7	1.4	1.3	-0.3	-0.9	1.3
France	2.5	2.5	0.1	0.4	1.3	1.3	0.3	-0.1	1.1
Italy	3.8	3.5	-0.1	-0.1	1.3	1.2	-0.1	-0.7	0.8
Spain	4.6	4.5	0.6	1.0	2.1	2.0	0.6	0.2	1.3
Japan	1.5	1.6	1.3	1.4	1.4	1.1	1.1	1.5	0.8
UK	4.4	4.2	-1.2	-0.5	0.9	1.1	-0.8	-1.6	1.4
Canada	3.2	3.3	0.9	0.6	1.4	1.7	0.8	0.7	1.6
China	3.0	3.3	4.5	4.8	5.3	4.9	5.5	4.2	4.2
India	6.9	7.1	5.9	5.8	6.5	6.6	7.5	7.2	6.0
Brazil	2.9	2.7	1.2	0.8	2.2	1.9	1.6	1.0	1.9
Russia	-3.3	-4.0	-1.3	-3.2	1.8	1.5	0.9	0.9	1.2
World	2.9	2.9	1.8	1.8	2.8	2.6	2.4	1.8	2.6

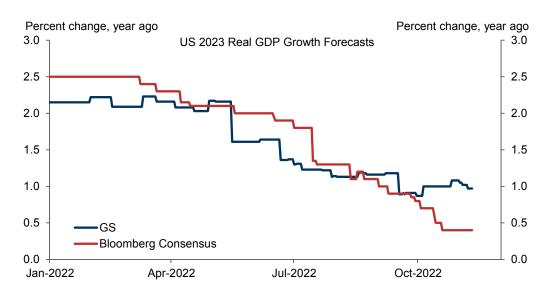
Note: All forecasts calculated on calendar year basis. 2022-2024 are GS forecasts. Potential growth is the median of GS estimates for 2023-25 for the US, Japan and Canada, our long-run estimate for the European economies and 2023 for EM economies. IMF forecasts used for India 2023 and 2024 consensus when quarters not available in Bloomberg. The global growth aggregates use market FX country weights.

Source: Bloomberg, Goldman Sachs Global Investment Research

## **US Likely to Avoid Recession**

In the past year, US growth has slowed to a below-potential pace of about 1% because of a diminishing reopening boost, declining real disposable income (driven by fiscal normalization and high inflation), and aggressive monetary tightening. In our forecast, growth remains at roughly this pace in 2023. Unlike a year ago, when our forecast for both 2022 and 2023 was below consensus because we expected a negative impact of monetary and especially fiscal tightening, our current 2023 forecast is well above consensus (Exhibit 2).

Exhibit 2: Our 2023 US Growth Forecast Is Now Well Above Consensus



Source: Bloomberg, Goldman Sachs Global Investment Research

Our disagreement with the consensus is even more visible when we focus on recession probabilities. As shown in Exhibit 3, we estimate a 35% probability that the US economy enters recession over the next 12 months, well below the median of 65% among the forecasters in the latest Wall Street Journal <u>survey</u> and toward the bottom of the range.

Percent Percent Estimated US Recession Probability (Next 12 Months), Wall Street Journal October 2022 Forecaster Survey ■GS Forecast: 35% Consensus Median Forecast: 65% **Number of Forecasters** 

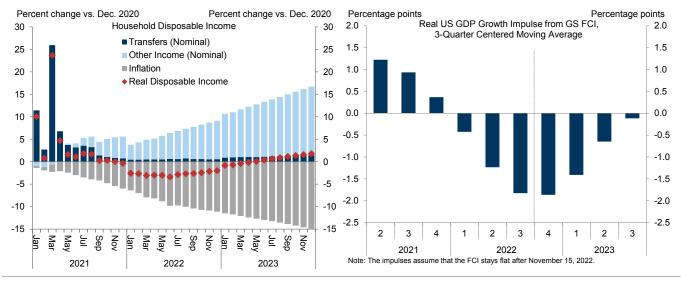
Exhibit 3: We Think That a US Recession in the Next 12 Months Is Less Likely Than Most Other Forecasters

Source: The Wall Street Journal, Goldman Sachs Global Investment Research

Why is our recession probability—while more than twice as high as the unconditional probability of entering recession in any given 12-month period—still clearly below 50%? One immediate reason is that the incoming activity data are nowhere close to recessionary. The advance GDP report showed 2.6% (annualized) growth in Q3, nonfarm payrolls grew 261k in October, and there were 225k initial jobless claims in the week of November 5.

More fundamentally, there are strong reasons to expect positive growth in coming quarters. To be sure, the tightening in financial conditions is weighing heavily on growth, to the tune of nearly 2pp at present. But real disposable personal income is rebounding from the plunge seen in H1—when fiscal tightening and sharply higher inflation took their toll—to a pace of 3%+over the next year (Exhibit 4). And while there are risks on both sides, we think the real income upturn is likely to be the stronger force as we move through 2023, especially because the financial conditions drag will likely diminish assuming Fed officials do not deliver dramatically more tightening than the rates market is currently pricing.

Exhibit 4: The Boost From the Rebound in Real Income vs. the Drag From Financial Conditions

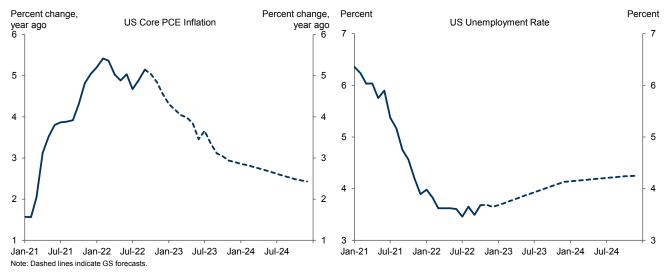


Source: Goldman Sachs Global Investment Research

But the most fundamental question is this: how can the Fed bring down inflation by 2 percentage points over the next year with only a ½pp increase in the unemployment rate (Exhibit 5)? Doesn't this fly in the face of the experience from prior high-inflation episodes—most notably the 1970s—that ended with a much bigger increase in unemployment?

Our answer is that this cycle is different from prior high-inflation periods.

Exhibit 5: We Expect Core PCE Inflation to Decline by 2pp by End-2023 With Only a 1/2pp Increase in the Unemployment Rate

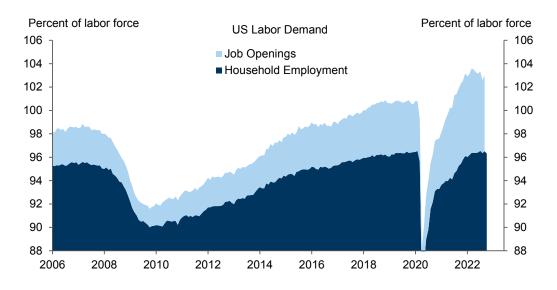


Source: Haver Analytics, Goldman Sachs Global Investment Research

The first reason why this cycle is different is that post-pandemic labor market overheating showed up not in excessive employment but in unprecedented job openings. As shown in Exhibit 6, job openings surged in 2020-2021 as employers sought to keep up with the strongest economic recovery on record amidst continuing Covid fears and exceptionally generous unemployment benefits. However, employment as a share of the labor force only rose to roughly the pre-pandemic level, not above.

(And employment relative to the working-age *population* remains below the pre-pandemic level.)

Exhibit 6: Post-Pandemic Labor Market Overheating Showed Up Not in Excessive Employment but in Unprecedented Job Openings



Source: Haver Analytics, Goldman Sachs Global Investment Research

Now, however, the environment looks very different. Demand has slowed, the pandemic has subsided, unemployment benefits have normalized, and excess savings are coming down. It is therefore not surprising that job openings and our jobs-workers gap—total labor demand minus total labor supply—are coming down quickly. Based on timely job openings measures from Linkup and Indeed, we estimate that the jobs-workers gap has declined from a peak of nearly 6 million to just over 4 million, nearly half of the way to the 2mn level required to slow wage growth to a rate compatible with the inflation target (Exhibit 7, left panel). Partly because of the reduction in the jobs-workers gap, timely measures of nominal wage growth, i.e. composition-adjusted average hourly earnings and our monthly wage survey composite, have slowed to levels consistent with 4½% wage growth (Exhibit 7, right panel).

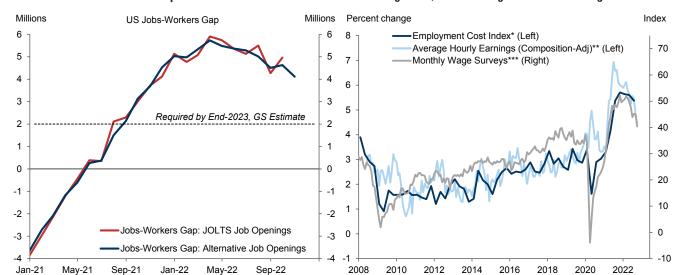


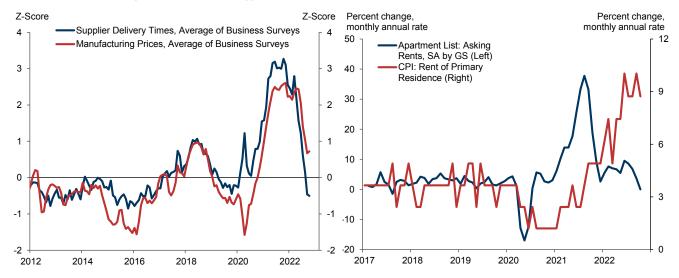
Exhibit 7: Our US Jobs-Workers Gap Measure of Excess Labor Demand Is Trending Down; Nominal Wage Growth Is Slowing

\*ECI wages and salaries private sector ex incentives (SA by Haver), qoq annual rate. \*\*6m annual rate. \*\*\*Average of Dallas Fed manufacturing, Dallas Fed services, Richmond Fed manufacturing, Richmond Fed services, NY Fed services (SA by GS), Kansas Fed services, and NFIB. Where available, we average current and expected wage changes for each survey. Values before the introduction of the more recent surveys are backcasted statistically.

Source: Haver Analytics, Linkup, Indeed, Goldman Sachs Global Investment Research

The second reason why this cycle is different is that the recent normalization in supply chains and rental housing markets is a source of disinflation not seen in previous high-inflation episodes such as the 1970s, and it is only beginning to show up in the official numbers (Exhibit 8). On the goods side, the ongoing rotation from goods to services spending, healing supply chains, and rebounding inventory levels should put downward pressure on core goods prices. On the services side, asking rents on new leases have decelerated sharply after the one-time jump in rents related to the work from home-related increase in demand for space. The October CPI report suggests that the lagging measure of sequential monthly official CPI shelter inflation—which captures both new and continuing leases—has likely peaked too. Although year-on-year shelter inflation will likely rise through next spring as rents on continuing leases catch up to higher market rates, it is set to slow thereafter.

Exhibit 8: Disinflationary Impact of Normalizing Supply Chains and Rental Markets Still Has a Long Way to Go

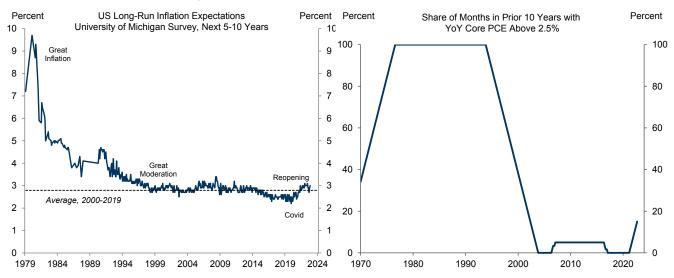


Supplier delivery times and manufacturing prices paid surveys are from ISM, S&P, ISM Chicago, NY Fed, Philadelphia Fed, Richmond Fed, Dallas Fed, and Kansas City Fed, as well as Creighton University for supplier delivery times only.

Source: Haver Analytics, Goldman Sachs Global Investment Research

The third reason is that long-term inflation expectations remain well-anchored, especially relative to the 1970s. This is true for each of the available measures, namely those based on 1) surveys of households, 2) surveys of economic forecasters, and 3) inflation-protected bonds. Measures of short-term inflation expectations remain relatively high, but much of this probably reflects the spike in commodity prices and should wane if commodity prices level off. The fact that inflation has only been high for a short and unusual pandemic period also suggests that elevated inflation is not entrenched (Exhibit 9).

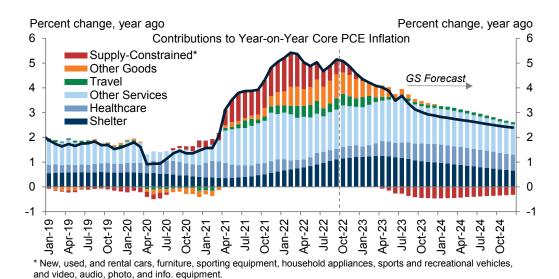
Exhibit 9: Anchored Long-Run Inflation Expectations Measures and a Short Period of High Inflation



Source: Haver Analytics, Goldman Sachs Global Investment Research

Taken together, we expect year-over-year core PCE inflation to decline from 5.1% in September to 2.9% in December 2023 (Exhibit 10). We expect supply-constrained durable goods with still elevated margins, such as used cars, to drive nearly half of the slowdown in overall core inflation.

Exhibit 10: Core PCE Inflation Will Likely Decline to 2.9% by End-2023 on Goods Disinflation and Slower Shelter Inflation in H2



Source: Haver Analytics, Goldman Sachs Global Investment Research

One might assume that our relatively optimistic inflation forecast translates into a relatively dovish Fed call. But that assumption would be wrong. The reason comes back to the interplay between real income and financial conditions. As real income recovers, a negative FCI growth impulse is required to keep growth below potential and continue rebalancing the labor market. However, the negative FCI impulse on sequential growth will likely diminish from its current drag of around 2pp annualized because it depends on the change in, rather than the level of, financial conditions (Exhibit 4, right panel). As a result, and even under our relatively optimistic inflation forecast, additional rate hikes of at least as much as markets are now pricing are likely required to keep the labor market adjustment going. Following the FCI easing over the past month, we now expect an additional 125bp of Fed rate hikes (vs. 100bp previously) with a downshift in the hiking pace to 50bp in December, and three smaller 25bp hikes in February, March, and now also May. Our new 5-5.25% peak funds rate is modestly above market pricing (Exhibit 11).

Percent Rate Hikes at FOMC Meetings Percent 5.00-5.5 5.5 25bp 5.25% 15bp 5bp 5.0 5.0 With. 54bp 50bp 4.48% 4.5 4.5 Size of 75bp //// 4.0 4.0 rate hike 3.5 3.5 75bp 3.0 3.0 FOMC Estimate of Longer-Run Rate 2.5 2.5 2.0 2.0 75bp 1.5 1.5 Actual 50bp 1.0 1.0 **IIII.** GS Forecast 25bp 0.5 0.5 Market Pricing 0.0 0.0 Mar May Jun Jul Sep Nov Mar End-23 Dec Feb May

Exhibit 11: We Expect 125bp of Additional Funds Rate Hikes and No Cuts in 2023

Source: Bloomberg, Goldman Sachs Global Investment Research

2022

With a resilient labor market and still elevated inflation, we don't see any rate cuts in 2023 unless the economy enters recession after all. In our no-recession forecast, the Fed only implements a first gentle 25bp cut in 2024Q2. This baseline of "high rates for longer" would again illustrate how different this cycle is as the first Fed cut in the median hiking cycle has historically come roughly six months after the last hike.

2023

Level

## A Mild Recession in Europe

In contrast to the US, the Euro area and the UK are probably in recession. The reason for this is the much bigger and more drawn-out increase in household energy bills, which should boost headline inflation to peaks of 12% in the Euro area and 11% in the UK, far higher than in the US (Exhibit 12, left panel).

Percent, Index (2019Q4 = 100) Headline Inflation Real Disposable Income (2019Q4 year ago year ago = 100)12 12 112 112 US (PCE) US 110 110 Euro Area (HICP) Euro Area 10 10 UK (CPI) UK 108 108 8 8 106 106 104 104 6 6 102 102 100 4 100 4 98 98 2 2 96 96 0 94 94 2020 2022 2023 2024 2021 2023 2021 May Sep 2022 May Sep May Sep Note: Dashed lines indicate GS forecasts

Exhibit 12: A Bigger Energy Shock in Europe Implies a Worse Outlook for Inflation and Real Income

Source: Haver Analytics, Goldman Sachs Global Investment Research

In turn, high inflation is set to weigh on real income, consumption, and industrial production. We forecast further declines in real income of 1½% in the Euro area through 2023Q1 and 3% in the UK through 2023Q2, before a pickup in H2 (Exhibit 12, right panel). The plunge in timely and forward-looking surveys of gas-intensive European industries such as chemicals and metals also suggests that rising energy costs will lower production (Exhibit 13). As a result, we look for cumulative declines in real GDP of 0.7% in the Euro area (2022Q4-2023Q2) and 1.7% in the UK (2022Q3-2023Q2).

Index European Gas-Intensive Industry Surveys Index Sector S&P PMI: Output (Euro Area) (Left) Ifo Business Climate: Expectations (Germany) (Right) Note: Shaded bars indicate German recession.

**Exhibit 13: Surveys of Gas-Intensive European Industries Have Plunged** 

Source: Haver Analytics, Eurostat, Goldman Sachs Global Investment Research

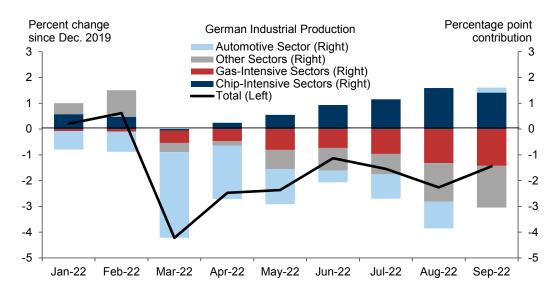
However, we don't expect a deep European downturn, barring a very cold winter that imposes more severe energy rationing on the industrial sector in order to keep people warm in their homes.

Already, Europe has cut Russian gas imports by 80% and total gas consumption by 20-25% without crushing aggregate activity. In fact, most of the hard economic data (as opposed to the surveys) continue to hold up remarkably well so far, with industrial production moving sideways, real GDP still up in the Euro area in Q3 (though down slightly in the UK), and labor markets holding up so far.

We think the reason for this resilience is that household energy savings and substitution to other energy sources have helped absorb the collapse in Russian gas imports. Along with mild weather, these savings have boosted gas storage, reduced TTF gas prices by 60% from their peak, and reduced downside risk from a very cold winter.

Moreover, Europe is likely to benefit from three similar post-pandemic sources of resilience that are helping the US avoid recession altogether. First, Exhibit 14 shows that the rise in German production of chip-intensive items and cars—where pandemic bottlenecks are still easing—has approximately offset the ongoing decline in energy-intensive production.

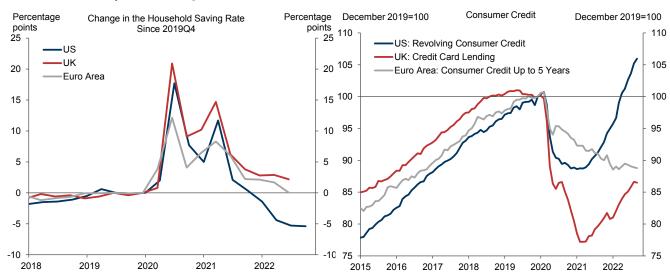
Exhibit 14: The Easing in Pandemic Supply Constraints Has Roughly Offset the Decline in Energy-Intensive German Industrial Production



Source: Haver Analytics, Goldman Sachs Global Investment Research

Second, any decline in the household saving rate would support consumer spending, as happened in the US when real income plunged in early 2022. Exhibit 15 points to room in Europe for saving rates to fall and for consumer credit growth to pick up (although likely by less than in the US because European lower-income households have relatively limited excess savings). Third, while the bulk of reopening gains are behind us, Europe is still benefiting somewhat from a rebound in the service sector.

Exhibit 15: Room in Europe for the Saving Rate to Fall and Consumer Credit to Rise



Source: Haver Analytics, Goldman Sachs Global Investment Research

While near-term risks of a deep recession have receded somewhat and our commodity strategists now look for a more limited rise in European gas prices next summer, we don't expect GDP to rebound sharply in Europe once it exits a mild recession. The main reason is that energy prices will likely stay high until sufficient new energy supply and/or

major efficiency gains materialize. Moreover, fiscal policy turns should turn into a drag from the second half of 2023 onwards.

Incorporating both the resilience in incoming hard data and our less elevated path for gas prices, we have nudged up our Euro area 2023 growth forecast to -0.1% (from -0.4% previously).

What about European core inflation? Although commodities drove the initial headline surge, price pressures have broadened significantly across core categories in both the Euro area and the UK following upside inflation surprises (Exhibit 16, left panel). In fact, UK core price pressures are now the broadest across the G10, with a perfect storm of an energy crisis (like continental Europe) and an overheated labor market (like the US).

Given this strong momentum, we expect Euro area core inflation to edge up further to a peak of 5.3% year-over-year in December, before gradually declining to just above 3% by end-2023 on goods disinflation. In the UK, we think that core inflation is peaking right around now and will also decline to 3% by end-2023.

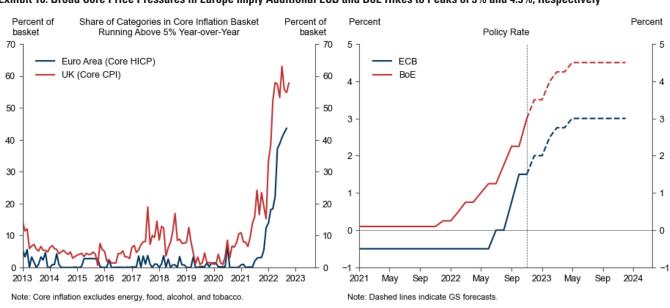


Exhibit 16: Broad Core Price Pressures in Europe Imply Additional ECB and BoE Hikes to Peaks of 3% and 4.5%, Respectively

Source: Haver Analytics, Goldman Sachs Global Investment Research

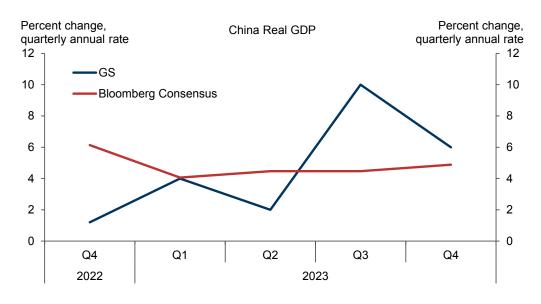
Given reduced risks of deep recession and persistent inflationary pressures, we now expect the ECB to hike through May with an additional 150bp of rate hikes to a peak deposit rate of 3% (vs. 2.75% previously). Along with the reduction in near-term headline inflation pressures from gas prices, the emphasis on substantial rate hikes so far increases our conviction that the ECB will step down the pace to 50bp in December, in parallel with the Fed. We maintain our forecast for a second 50bp hike in February but, given the firmer demand outlook, now look for two additional smaller 25bp hikes at the March and May meetings. The risks around our peak 3% ECB rate are two-sided, with upside risk from potentially more persistent core inflation and downside risk from a deeper recession or a possible flare-up in sovereign risk in Italy. Given the tight labor market, high wage pressures, and firm inflation, we expect the BoE to hike Bank Rate by an additional 150bp to a terminal rate of 4.5%.

## **China's Bumpy Reopening**

Our 2023 China outlook is a story of two halves with slow growth in the first half followed by a more pronounced rebound in the second half as the economy reopens (Exhibit 17).

We expect weak growth in Q4 and Q1 as the Zero Covid Policy (ZCP) likely stays in place during the winter. In fact, the recent sharp rise in cases led us to have a significantly below-consensus Q4 estimate of 1.2% annualized.

Exhibit 17: Weak Growth Through H1; Rebound in H2



Source: Bloomberg, Goldman Sachs Global Investment Research

Although the leadership has clearly signaled that it aims to exit ZCP, we do not expect actual reopening to start until April. The basic reason for this is that medical and communication preparations will take time. Less than 70% of the 60+ age group in Mainland China are triple-vaccinated (Exhibit 18), and data from Hong Kong show that the unvaccinated elderly remain at serious risk of severe outcomes. As a result, China will need to significantly ramp up its vaccination pace from the current 100k/day before reopening can safely begin.

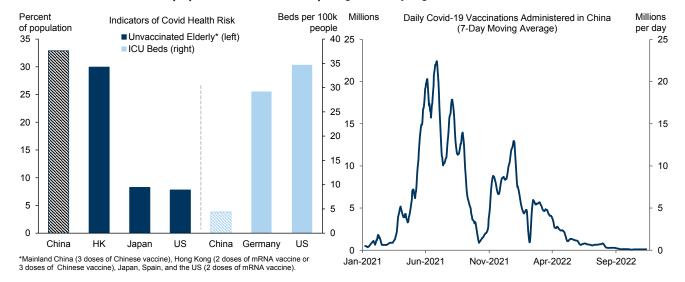


Exhibit 18: China Will Need to Ramp Up Vaccinations Before Reopening Can Safely Begin

Source: NHC, Wind, Government of Hong Kong, Goldman Sachs Global Investment Research

Despite our April reopening baseline, we forecast Q2 growth of just 2% annualized on our assumption that reopening initially triggers an increase in infections that keeps caution high. Weak growth in East Asian economies such as South Korea, Taiwan, and Hong Kong during the first quarter of exiting ZCP also supports our soft Q2 forecast.

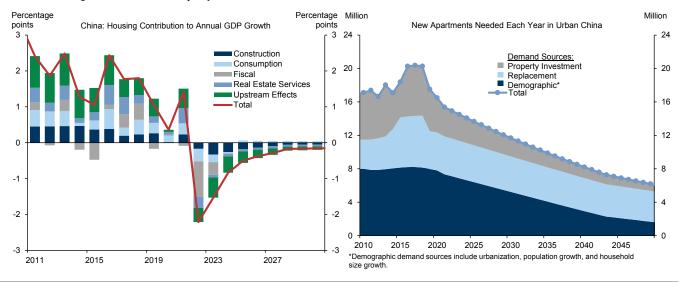
In contrast, we look for a meaningful reopening growth boost in H2, which will likely extend into 2024. As ZCP is currently still subtracting about 4-5% from the level of GDP, we see substantial room for a cyclical rebound as immunity levels rise and most households learn to live with the virus.

Although clearly above consensus, our Q3 and Q4 forecasts of 10% and 6% annualized are not spectacular relative to other international reopening experiences. This is because we expect a continued drag from Covid caution as well as other headwinds, some cyclical and some more structural.

On the cyclical side, fiscal policy is set to tighten if the domestic economy rebounds, and China's pandemic-related export boom should fade as global demand for tech, housing, and Covid-related products slows further.

On the structural side, we see the contraction of the property sector and US chip export restrictions as multi-year drags. We estimate that the ongoing slide of the property sector will subtract around -1½pp from growth next year as it continues to delever and face demographic headwinds (Exhibit 19).

#### **Exhibit 19: A Long Slide for China's Property Sector**



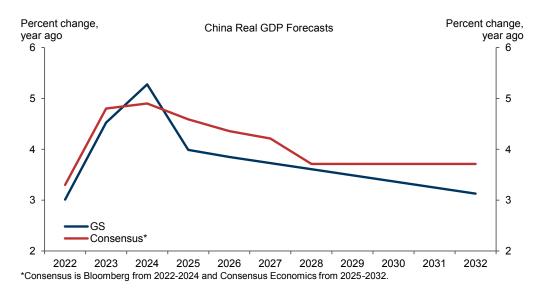
Source: Haver Analytics, Wind, Goldman Sachs Global Investment Research

We recently also estimated that the new US restrictions on exports of advanced chips (and the equipment and software to produce them) to China will subtract about ¼pp from China growth next year and 1.7% from the 2026 level of GDP, assuming US policymakers are serious about implementation. This reflects reduced production in China of both chips and goods using advanced chips, such as smartphones and computers.

The relatively muted rebound in aggregate demand—coupled with the relatively limited rise in inflation during reopening in other Asian economies—also drives our benign forecast for 2023 inflation and monetary policy. Specifically, we expect core CPI to pick up only slightly from 0.7% to 1.2% next year, and the policy rate to stay flat at just 2%.

Although we do see a sharper reopening boost in 2023H2 and 2024H1 than other forecasters, our long-run China views remain structurally below consensus (Exhibit 20). We estimate that much of the slowdown in actual China growth in recent years corresponds to a slowdown in potential growth to only 4.2% in 2023. We estimate that trend growth will slow further to just above 3% over the next decade on weakness in both demographics and productivity, and the long slide in the property market.

Exhibit 20: A 2023-2024 Pickup but a Long-Term Slide in China's Trend Growth



Source: Bloomberg, Consensus Economics, Goldman Sachs Global Investment Research

## **Pockets of Resilience in EM Early Hikers**

A number of economies in Latin America as well as Central and Eastern Europe (CEE) started hiking rates well before everyone else. Among the nine EM early hikers, the policy rate has increased by an average of over 800bp (Exhibit 21, left panel) while our GS Financial Conditions Index (FCI) has tightened by an average of 450bp.¹ Where are these economies headed and what can we learn from their experience for the broader global outlook?

While no early hiker has clearly achieved a soft landing yet, activity has generally held up better than expected. A majority of early hikers are probably still expanding, based on GDP growth, PMIs, and labor market indicators. In particular, unemployment rates remain low in all economies, although they have edged up in several economies (Exhibit 21, right panel).<sup>2</sup> We have found that elevated job openings, reopening, and strong private sector balance sheets—again unique characteristics of this different cycle—help explain this resilience.

Percent Basis points Basis points Percent Change in the Policy Rate Since March 2021 Unemployment Rate in Average EM Early Hiker 1000 10 10 1000 Average EM Early Hiker 900 900 US 800 800 9 9 700 700 600 600 8 8 500 500 400 400 7 300 300 200 200 6 100 100 n 5 Jul-22 Mar-21 Jul-21 Nov-21 Mar-22 Nov-22 Jul-19 Jan-20 Jul-20 Jul-21 Jan-22 Note: EM early hikers are Brazil, Chile, Colombia, the Czech Republic, Hungary, Mexico, Peru, Poland, and Romania

Exhibit 21: The Policy Rate Has Increased by 800bp Since March 2021 for the Average EM Early Hiker, but Unemployment Remains Low

Source: Haver Analytics, Goldman Sachs Global Investment Research

Encouragingly, sequential core inflation and wage growth have begun to moderate across most early hikers, although they remain very high. The moderation in core inflation is most notable in Brazil, where we expect rate cuts to start in 2023Q2 and growth to pick up back to a potential-like pace of 2% in the second half of the year (Exhibit 22, left panel).

In contrast, the CEE economies are in a more difficult position. This reflects CEE's exposure to the surge in European gas prices, as well as continued high, broad, and in the cases of Hungary and Poland still-rising inflation. We therefore expect the Czech and Polish central banks to resume their rate hike campaigns before long (Exhibit 22,

<sup>&</sup>lt;sup>1</sup> We define an "early hiker" as a country under our coverage that began to increase the policy rate by October 2021 with a cumulative increase in the first six months of at least 100bp.

<sup>&</sup>lt;sup>2</sup> Our classification suggests that Chile is likely in a mild recession, while the Czech Republic and Poland are close calls.

right panel), and look for moderate declines in GDP in most CEE economies.

Percent change, Percent change, Percent Percent Core CPI Inflation Policy Rate 3m annual rate 3m annual rate 14 14 12 12 12 12 10 10 10 10 8 8 8 8 6 6 6 6 4 4 Brazil Brazil 4 2 2 Czech Republic, Hungary, Czech Republic, Hungary, Poland Romania Poland Romania 0 2021 Jul Oct 2022 Apr Jul Oct Q1 Q2 Q3 Q4 Q1 Ω2 Q1 Q2 Q3 Q4 Apr 2021 2022 2023

Exhibit 22: Inflation and Policy Rates Are Set to Rise Further in CEE While We Expect Rate Cuts in Brazil from 202302 Onwards

Note: Regional aggregates use market FX country weights. Dashed lines indicate GS forecasts. The aggregate policy rate for Latin America also excludes Ecuador.

Source: Haver Analytics, Goldman Sachs Global Investment Research

Overall, the resilience of activity in several EM early hikers so far supports our view that the current high-inflation period does not need to end in deep recession.

## Some Progress, But Still an Uncertain World

The key economic question for 2023 is whether central banks will be able to bring down inflation to more acceptable levels without a recession, or at least without a deep recession. We are reasonably optimistic, but there are substantial risks to our view.

One risk is that inflation pressures simply remain pervasive enough that central banks have no choice but to keep tightening aggressively. If so, a recession might become unavoidable, not just in Europe but also in the US. The recent news flow has reduced this risk slightly in the US, as the labor market continues to adjust and inflation has begun to slow. But the picture is not uniform. Central banks in Europe and those EM economies where inflation is still increasing may be forced into further tightening in an environment of exchange rate depreciation and rising inflation expectations.

The other main risk is that underlying inflation does come down, but central banks are late in recognizing the improvement because they are too focused on lagging indicators of inflation such as CPI shelter inflation. In the US, we have recently become a little less concerned about this risk as well. Fed officials have made it clear that they are not exclusively focused on the CPI rent numbers but also on more leading indicators such as asking rents on new leases, which have slowed sharply in recent months. Moreover, many central banks have either already slowed their hiking pace or signaled that they will do so soon. This reduces the risk of overtightening as it will allow for more time to assess the impact of higher rates on the economy.

Beyond the core inflation dynamic, we remain concerned about political and geopolitical

shocks, which could affect the global economy via higher uncertainty, tighter financial conditions, or negative effects on commodity supply. Some of these risks have diminished slightly as well. The Italian, Brazilian, and US midterm elections have come and gone without major market disruptions. Spreads on Italian government debt have diminished, Brazil may be headed toward a soft landing, and there is even a possibility that the US debt limit—arguably the biggest potential source of market disruption emanating from DC in 2023—will be resolved in the "lame-duck" session of Congress between now and year-end 2022. Moreover, the latest meeting between Presidents Biden and Xi promises to defuse at least some of the tensions between the US and China, which might also help to achieve a negotiated solution to the Russia-Ukraine war.

But there are still plenty of risks that could return us to the exceptionally volatile environment of the first half of 2022. So far, a settlement in the Russia-Ukraine war does not seem close at hand, and the impact of the price cap on Russian oil is uncertain. The political instability in the Middle East—while far from a new feature of the geopolitical order—also has the potential to deal another blow to energy markets at a time when the supply-demand balance is already precarious. Thus, our cautiously optimistic global economic outlook remains fraught with substantial risks.

## Disclosure Appendix

## Reg AC

We, Jan Hatzius, Daan Struyven, Yulia Zhestkova and Devesh Kodnani, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

## **Disclosures**

## **Regulatory disclosures**

## Disclosures required by United States laws and regulations

See company-specific regulatory disclosures above for any of the following disclosures required as to companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; for equity securities, market making and/or specialist role. Goldman Sachs trades or may trade as a principal in debt securities (or in related derivatives) of issuers discussed in this report.

The following are additional required disclosures: **Ownership and material conflicts of interest:** Goldman Sachs policy prohibits its analysts, professionals reporting to analysts and members of their households from owning securities of any company in the analyst's area of coverage. **Analyst compensation:** Analysts are paid in part based on the profitability of Goldman Sachs, which includes investment banking revenues. **Analyst as officer or director:** Goldman Sachs policy generally prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director or advisor of any company in the analyst's area of coverage. **Non-U.S. Analysts:** Non-U.S. analysts may not be associated persons of Goldman Sachs & Co. LLC and therefore may not be subject to FINRA Rule 2241 or FINRA Rule 2242 restrictions on communications with subject company, public appearances and trading securities held by the analysts.

## Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, except to the extent already made above pursuant to United States laws and regulations. Australia: Goldman Sachs Australia Pty Ltd and its affiliates are not authorised deposit-taking institutions (as that term is defined in the Banking Act 1959 (Cth)) in Australia and do not provide banking services, nor carry on a banking business, in Australia. This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act, unless otherwise agreed by Goldman Sachs. In producing research reports, members of the Global Investment Research Division of Goldman Sachs Australia may attend site visits and other meetings hosted by the companies and other entities which are the subject of its research reports. In some instances the costs of such site visits or meetings may be met in part or in whole by the issuers concerned if Goldman Sachs Australia considers it is appropriate and reasonable in the specific circumstances relating to the site visit or meeting. To the extent that the contents of this document contains any financial product advice, it is general advice only and has been prepared by Goldman Sachs without taking into account a client's objectives, financial situation or needs. A client should, before acting on any such advice, consider the appropriateness of the advice having regard to the client's own objectives, financial situation and needs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests and a copy of Goldman Sachs' Australian Sell-Side Research Independence Policy Statement are available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. Brazil: Disclosure information in relation to CVM Resolution n. 20 is available at https://www.gs.com/worldwide/brazil/area/gir/index.html. Where applicable, the Brazil-registered analyst primarily responsible for the content of this research report, as defined in Article 20 of CVM Resolution n. 20, is the first author named at the beginning of this report, unless indicated otherwise at the end of the text. Canada: This information is being provided to you for information purposes only and is not, and under no circumstances should be construed as, an advertisement, offering or solicitation by Goldman Sachs & Co. LLC for purchasers of securities in Canada to trade in any Canadian security. Goldman Sachs & Co. LLC is not registered as a dealer in any jurisdiction in Canada under applicable Canadian securities laws and generally is not permitted to trade in Canadian securities and may be prohibited from selling certain securities and products in certain jurisdictions in Canada. If you wish to trade in any Canadian securities or other products in Canada please contact Goldman Sachs Canada Inc., an affiliate of The Goldman Sachs Group Inc., or another registered Canadian dealer. Hong Kong: Further information on the securities of covered companies referred to in this research may be obtained on request from Goldman Sachs (Asia) L.L.C. India: Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (India) Securities Private Limited, Research Analyst - SEBI Registration Number INH000001493, 951-A, Rational House, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India, Corporate Identity Number U74140MH2006FTC160634, Phone +91 22 6616 9000, Fax +91 22 6616 9001. Goldman Sachs may beneficially own 1% or more of the securities (as such term is defined in clause 2 (h) the Indian Securities Contracts (Regulation) Act, 1956) of the subject company or companies referred to in this research report. Japan: See below. Korea: This research, and any access to it, is intended only for 'professional investors" within the meaning of the Financial Services and Capital Markets Act, unless otherwise agreed by Goldman Sachs. Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (Asia) L.L.C., Seoul Branch. New Zealand: Goldman Sachs New Zealand Limited and its affiliates are neither "registered banks" nor "deposit takers" (as defined in the Reserve Bank of New Zealand Act 1989) in New Zealand. This research, and any access to it, is intended for "wholesale clients" (as defined in the Financial Advisers Act 2008) unless otherwise agreed by Goldman Sachs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests is available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. Russia: Research reports distributed in the Russian Federation are not advertising as defined in the Russian legislation, but are information and analysis not having product promotion as their main purpose and do not provide appraisal within the meaning of the Russian legislation on appraisal activity. Research reports do not constitute a personalized investment recommendation as defined in Russian laws and regulations, are not addressed to a specific client, and are prepared without analyzing the financial circumstances, investment profiles or risk profiles of clients. Goldman Sachs assumes no responsibility for any investment decisions that may be taken by a client or any other person based on this research report. Singapore: Goldman Sachs (Singapore) Pte. (Company Number: 198602165W), which is regulated by the Monetary Authority of Singapore, accepts legal responsibility for this research, and should be contacted with respect to any matters arising from, or in connection with, this research. Taiwan: This material is for reference only and must not be reprinted without permission. Investors should carefully consider their own investment risk. Investment results are the responsibility of the individual investor. United Kingdom: Persons who would be categorized as retail clients in the United Kingdom, as such term is defined in the rules of the Financial Conduct Authority, should read this research in conjunction with prior Goldman Sachs research on the covered companies referred to herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risks warnings, and a glossary of certain financial terms used in this report, are available from Goldman Sachs International on request.

**European Union and United Kingdom:** Disclosure information in relation to Article 6 (2) of the European Commission Delegated Regulation (EU) (2016/958) supplementing Regulation (EU) No 596/2014 of the European Parliament and of the Council (including as that Delegated Regulation is implemented into United Kingdom domestic law and regulation following the United Kingdom's departure from the European Union and the European Economic Area) with regard to regulatory technical standards for the technical arrangements for objective presentation of investment recommendations or other information recommending or suggesting an investment strategy and for disclosure of particular interests or indications of

conflicts of interest is available at <a href="https://www.gs.com/disclosures/europeanpolicy.html">https://www.gs.com/disclosures/europeanpolicy.html</a> which states the European Policy for Managing Conflicts of Interest in Connection with Investment Research.

**Japan:** Goldman Sachs Japan Co., Ltd. is a Financial Instrument Dealer registered with the Kanto Financial Bureau under registration number Kinsho 69, and a member of Japan Securities Dealers Association, Financial Futures Association of Japan and Type II Financial Instruments Firms Association. Sales and purchase of equities are subject to commission pre-determined with clients plus consumption tax. See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

## Global product; distributing entities

The Global Investment Research Division of Goldman Sachs produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; Public Communication Channel Goldman Sachs Brazil: 0800 727 5764 and / or contatogoldmanbrasil@gs.com. Available Weekdays (except holidays), from 9am to 6pm. Canal de Comunicação com o Público Goldman Sachs Brasil: 0800 727 5764 e/ou contatogoldmanbrasil@gs.com. Horário de funcionamento: segunda-feira à sexta-feira (exceto feriados), das 9h às 18h; in Canada by Goldman Sachs & Co. LLC; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman Sachs & Co. LLC. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom.

Effective from the date of the United Kingdom's departure from the European Union and the European Economic Area ("Brexit Day") the following information with respect to distributing entities will apply:

Goldman Sachs International ("GSI"), authorised by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA, has approved this research in connection with its distribution in the United Kingdom.

European Economic Area: GSI, authorised by the PRA and regulated by the FCA and the PRA, disseminates research in the following jurisdictions within the European Economic Area: the Grand Duchy of Luxembourg, Italy, the Kingdom of Belgium, the Kingdom of Denmark, the Kingdom of Norway, the Republic of Finland, the Republic of Cyprus and the Republic of Ireland; GS -Succursale de Paris (Paris branch) which, from Brexit Day, will be authorised by the French Autorité de contrôle prudentiel et de resolution ("ACPR") and regulated by the Autorité de contrôle prudentiel et de resolution and the Autorité des marches financiers ("AMF") disseminates research in France; GSI - Sucursal en España (Madrid branch) authorized in Spain by the Comisión Nacional del Mercado de Valores disseminates research in the Kingdom of Spain; GSI - Sweden Bankfilial (Stockholm branch) is authorized by the SFSA as a "third country branch" in accordance with Chapter 4, Section 4 of the Swedish Securities and Market Act (Sw. lag (2007:528) om värdepappersmarknaden) disseminates research in the Kingdom of Sweden; Goldman Sachs Bank Europe SE ("GSBE") is a credit institution incorporated in Germany and, within the Single Supervisory Mechanism, subject to direct prudential supervision by the European Central Bank and in other respects supervised by German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and Deutsche Bundesbank and disseminates research in the Federal Republic of Germany and those jurisdictions within the European Economic Area where GSI is not authorised to disseminate research and additionally, GSBE, Copenhagen Branch filial af GSBE, Tyskland, supervised by the Danish Financial Authority disseminates research in the Kingdom of Denmark; GSBE - Sucursal en España (Madrid branch) subject (to a limited extent) to local supervision by the Bank of Spain disseminates research in the Kingdom of Spain; GSBE - Succursale Italia (Milan branch) to the relevant applicable extent, subject to local supervision by the Bank of Italy (Banca d'Italia) and the Italian Companies and Exchange Commission (Commissione Nazionale per le Società e la Borsa "Consob") disseminates research in Italy; GSBE - Succursale de Paris (Paris branch), supervised by the AMF and by the ACPR disseminates research in France; and GSBE - Sweden Bankfilial (Stockholm branch), to a limited extent, subject to local supervision by the Swedish Financial Supervisory Authority (Finansinpektionen) disseminates research in the Kingdom of Sweden.

#### **General disclosures**

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. The information, opinions, estimates and forecasts contained herein are as of the date hereof and are subject to change without prior notification. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by our Global Investment Research Division. Goldman Sachs & Co. LLC, the United States broker dealer, is a member of SIPC (<a href="https://www.sipc.org">https://www.sipc.org</a>).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, principal trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

We and our affiliates, officers, directors, and employees, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research, unless otherwise prohibited by regulation or Goldman Sachs policy.

The views attributed to third party presenters at Goldman Sachs arranged conferences, including individuals from other parts of Goldman Sachs, do not necessarily reflect those of Global Investment Research and are not an official view of Goldman Sachs.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research is focused on investment themes across markets, industries and sectors. It does not attempt to distinguish between the prospects or performance of, or provide analysis of, individual companies within any industry or sector we describe.

Any trading recommendation in this research relating to an equity or credit security or securities within an industry or sector is reflective of the investment theme being discussed and is not a recommendation of any such security in isolation.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options and futures disclosure documents which are available from Goldman Sachs sales representatives or at <a href="https://www.theocc.com/about/publications/character-risks.jsp">https://www.theocc.com/about/publications/character-risks.jsp</a> and

https://www.fiadocumentation.org/fia/regulatory-disclosures\_1/fia-uniform-futures-and-options-on-futures-risk-disclosures-booklet-pdf-version-2018.

Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

Differing Levels of Service provided by Global Investment Research: The level and types of services provided to you by the Global Investment Research division of GS may vary as compared to that provided to internal and other external clients of GS, depending on various factors including your individual preferences as to the frequency and manner of receiving communication, your risk profile and investment focus and perspective (e.g., marketwide, sector specific, long term, short term), the size and scope of your overall client relationship with GS, and legal and regulatory constraints. As an example, certain clients may request to receive notifications when research on specific securities is published, and certain clients may request that specific data underlying analysts' fundamental analysis available on our internal client websites be delivered to them electronically through data feeds or otherwise. No change to an analyst's fundamental research views (e.g., ratings, price targets, or material changes to earnings estimates for equity securities), will be communicated to any client prior to inclusion of such information in a research report broadly disseminated through electronic publication to our internal client websites or through other means, as necessary, to all clients who are entitled to receive such reports.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For research, models or other data related to one or more securities, markets or asset classes (including related services) that may be available to you, please contact your GS representative or go to <a href="https://research.gs.com">https://research.gs.com</a>.

Disclosure information is also available at <a href="https://www.gs.com/research/hedge.html">https://www.gs.com/research/hedge.html</a> or from Research Compliance, 200 West Street, New York, NY 10282.

#### © 2022 Goldman Sachs.

No part of this material may be (i) copied, photocopied or duplicated in any form by any means or (ii) redistributed without the prior written consent of The Goldman Sachs Group, Inc.