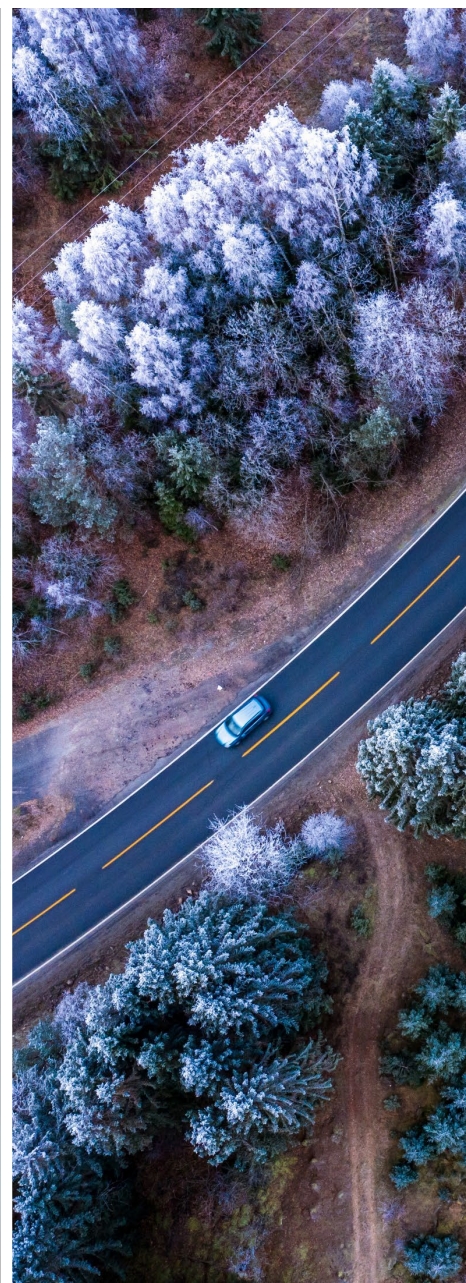


Global Credit Outlook 2023: No Easy Way Out

Dec. 1, 2022

This report does not constitute a rating action



Foreword

Dear reader,

S&P Global Ratings' Global Credit Outlook 2023 presents our macroeconomic and credit outlooks for the year ahead, including our base-case forecasts, assumptions, and key risks for what promises to be another challenging period for the global economy and markets.

This year's theme, **No Easy Way Out**, looks in detail at the shocks reverberating across economies and markets, and why finding a way through the strains weighing on credit leaves little room for error. Because governments, having piled on debt during the pandemic, largely lack the fiscal capacity to spend their way through this turn in the credit cycle, we expect credit pressures to intensify in the near term. And while we could see a stabilization of financing conditions in the latter half of the year, uncertainties remain high, with a focal point being the Russia-Ukraine war and its implications for energy markets.

This report harnesses the power of our regional and global Credit Conditions Committees (CCC), who meet quarterly to review conditions in Asia-Pacific, North America, and Europe as well as the Emerging Markets and globally. These committees define the house base case underpinning our credit ratings, in addition to identifying the key macro credit risks and their potential rating impact in various asset classes. This publication also highlights the deep resources of the broader teams of S&P Global Ratings analysts and the Credit Research & Insights group, as well as their wealth of data and expertise in covering credit markets.

Our Top Global Risks detail what could affect our baseline expectations, assessing the risk levels and forward-looking trends in a number of areas. They include the risks that:

- Tight and volatile financing conditions persist on the back of entrenched inflation, increasingly straining the debt-service capacity of more vulnerable borrowers;
- A deeper and longer recession than expected in the largest economies further dampens global growth;
- Persistent input-cost inflation and high energy prices, combined with weakening demand, squeeze corporate profits and weigh on governments' fiscal balances; and
- Geopolitical tensions intensify, roiling markets and eroding business conditions.

In parallel, we see increased structural pressure on credit from the physical and transition risks associated with climate change and the energy transition.

Aligned with these risks, we answer the pressing Questions That Matter for 2023, collected through our interactions with investors and other market participants.

Acknowledgements

We would like to thank the many colleagues who have contributed to this report to provide you with S&P Global Ratings' essential insights.

Special thanks to Ruth Yang, Molly Mintz, Joe Maguire, Yucheng Zheng, Bernadette Stroeder, Tom Lowenstein, Jennie Brookman, Rose Burke, Alison Dunn, Cathy Holcombe, and Alex Ilushik.



Alexandra Dimitrijevic

**Global Head of Analytical
Research and Development
Co-Chair, Global CCC**

London

alexandra.dimitrijevic@spglobal.com



Gregg Lemos-Stein

**Chief Analytical Officer,
Corporate Ratings
Co-Chair, Global CCC**

New York

gregg.lemos-stein@spglobal.com

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Global Credit Outlook 2023

No Easy Way Out

Key Takeaways

- As we end a year in which COVID, a war in Europe and an associated energy crisis, and high inflation roiled markets and slowed the global economy, early signs of easing of some of these pressures provide hope that credit conditions could stabilize in the second half of 2023. But finding a way out of the strains weighing on credit leaves little room for error.
- In the near term, S&P Global Ratings expects pressures on credit ratings to intensify, as corporate borrowers find it more difficult to pass through high input costs to consumers struggling with rising prices and a mild recession in some of the world's largest economies. We forecast speculative-grade corporate default rates in the U.S. and Europe to double. As major central banks remain hawkish to fight inflation, governments have diminishing fiscal options to deploy after piling on debt during the pandemic.
- Many borrowers built up enough buffers during the long stretch of favorable financing conditions to ride out a rough patch—at least for some time—supporting credit quality in many sectors. However, ratings are lower than they were prior to the pandemic, and debt levels higher, with 29% of nonfinancial corporates rated 'B-' or below.
- Risks to our base-case scenario remain firmly on the downside, given an increasingly fragmented and fragile geopolitical situation. Tighter financing conditions on the back of entrenched inflation, a deeper and longer-than-expected recession, and persistent input-cost inflation could squeeze further corporate margins and government balances, leading to sharper credit deterioration.

As we look at the global credit markets for the year ahead, some of the shocks that have reverberated across economies and markets are showing early signs of easing. While nothing is assured, our base-case scenario assumes policy rates will peak by the middle of the year in the largest economies, with the global economy slowly regaining momentum as China lifts its COVID restrictions and supply disruptions ease further. This could lead to a stabilization of financing conditions in the latter half of the year, assuming central banks succeed in trimming inflation. But uncertainties remain high, with a focal point being the unfolding war between Russia and Ukraine and its implications for energy markets.

Finding the way out of the strains weighing on credit leaves little room for error. Inflation continues to run hot in many regions, which means central bankers are likely to remain hawkish in the near term; supply bottlenecks persist as the Russia-Ukraine war rages on and China's COVID lockdowns continue; and some major economies are set to slip into recession as price pressures sap consumer demand and higher borrowing costs crimp investment. Moreover, the lag between rate hikes and their effects means that prices will stay elevated—and consumer purchasing power diminished—for some time. Additionally, governments largely lack the fiscal capacity to spend their way through this turn in the credit cycle, having piled on debt during the pandemic.

In the near term, we expect credit pressures to intensify, with a world order that's increasingly fragmented and fragile. Sectors dependent on discretionary spending such as consumer goods and retail, energy-intensive sectors such as chemicals, and rate-sensitive sectors such as housing, will likely suffer most, while others such as commodities and energy producers are benefiting from the current environment. Similarly, rising rates in most cases are boosting banks' net interest income, and they appear to be well-positioned for higher loan losses, which take time to materialize, thanks to robust capitalization and liquidity. On the other hand, sovereigns will

Contacts

Alexandra Dimitrijevic

London
+44-20-7176-3128
alexandra.dimitrijevic
@spglobal.com

Gregg Lemos-Stein

New York
+1-212-438-1809
gregg.lemos-stein
@spglobal.com

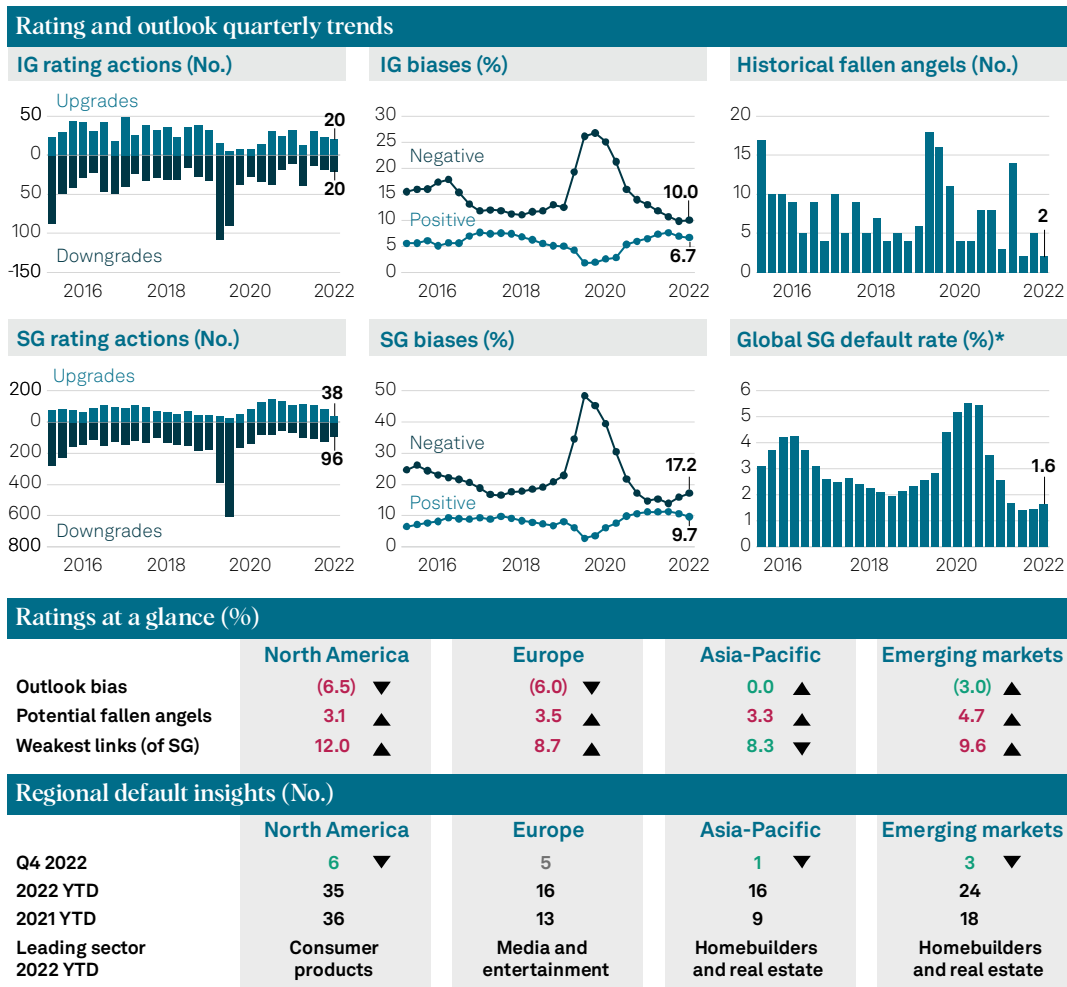
David Tesher

New York
+1-212-438-2618
david.tesher
@spglobal.com

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continue to feel credit pressures, with slower economic activity weighing on fiscal balances (and countries generally having less fiscal flexibility after the pandemic). Credit conditions in emerging markets (EMs) will remain under particular pressure from the combination of a strong U.S. dollar, high energy and food prices, and a slowdown in global demand.

Chart 1



▼▲ Quarter-over-quarter trend. Positive quarterly change. Negative quarterly change. No quarterly change.

*Global SG default rate data as of Q3 2022. All Q4 2022 data as of Nov. 24, 2022. Quarter-over-quarter trend indicates changes compared to the Q3 2022 data published in [Global Credit Conditions Q4 2022: Darkening Horizons](#). IG--investment grade. SG--speculative grade. YTD--year-to-date. Weakest links are defined as issuers rated 'B-' and below, with either a negative outlook or on CreditWatch negative. North America includes U.S. and Canada. Emerging markets include countries in Asia-Pacific, Latin America, and Europe. Default counts may include confidentially-rated issuers and are preliminary and subject to change. Net outlook bias refers to the percentage of issuers with a positive bias minus the percentage of issuers with a negative bias. All outlook bias calculations include global financial, nonfinancial and sovereign issuers. Sources: S&P Global Ratings and S&P Global Market Intelligence's CreditPro®.

Interest rates will continue to rise. Central banks' determination to bring down inflation suggests that policy rates need to go higher still. We estimate that the U.S. Federal Reserve's policy rate will peak at 5.0%-5.25% in the second quarter and the European Central Bank's at 2.25% in the first quarter. Policy makers will likely err on the side of doing too much, given that many were seen as behind the curve in the inflation battle. As a result, the chances of an economic "soft landing" have all but disappeared. We estimate that the steepest increases in policy rates in four decades, combined with ongoing geopolitical tensions and energy-supply constraints from the Russia-Ukraine war, mean a sharp slowdown is all but inevitable.

Growth is slowing almost everywhere. We now forecast a contraction in GDP of 0.1% in 2023 in the U.S., with a shallow recession in the first half; the eurozone coming in flat for the full year; and growth in China of 4.8%. And while there are signs that inflation is easing (for example, the U.S. Consumer Price Index fell to 7.7% year-over-year in October, from a peak of 9.1% in June), prices are still running well above central bank targets. Policy makers may want to see a string of declines before pausing rate hikes, even as economic activity falters. In the U.S., we think inflation will drop to 4.3% in 2023, from 8.1% this year, and continue toward 2% thereafter. Similarly, we forecast inflation in the eurozone will fall to 5.7% in 2023, from 8.3%, before easing toward 2%.

Concerns about liquidity are also growing, as central banks withdraw support at an unprecedented pace. Beyond aggressively raising its policy rate, the Fed is selling assets to normalize its balance sheet through so-called quantitative tightening, and ECB policy makers have said they will do the same starting in 2023. Most central banks in Asia-Pacific (except for China) are trailing the Fed's policy rate hikes, to stem capital outflows and suppress inflation. Japan, having kept rates flat through 2022, will likely begin hiking them to limit the yen's depreciation. Across regions, a real or perceived monetary-policy misstep (in either direction) could increase volatility in credit markets and result in an even sharper repricing of financial and real assets, higher debt-servicing costs, and tighter access to funding. This is especially concerning given high debt levels, and could particularly hurt lower-rated borrowers.

While credit ratings reflect our base-case scenario, we monitor top global risks that could derail our baseline expectations, leading to further credit deterioration. They include the risks that:

- Tight and volatile financing conditions persist amid an entrenched inflation, increasingly pressuring debt-service capacity of more vulnerable borrowers;
- A deeper and longer-than-expected recession in the largest economies further damps global growth;
- Persistent input-cost inflation and high energy prices, combined with weakening demand, squeeze corporate profits and put pressure on governments' fiscal balances; and
- Amplifying geopolitical tensions roil markets and weigh on business conditions.

In parallel, we see greater structural pressure on credit from the physical and transition risks associated with climate change, along with rising systemic risks from cyberattacks.

Credit Pressures Are Intensifying

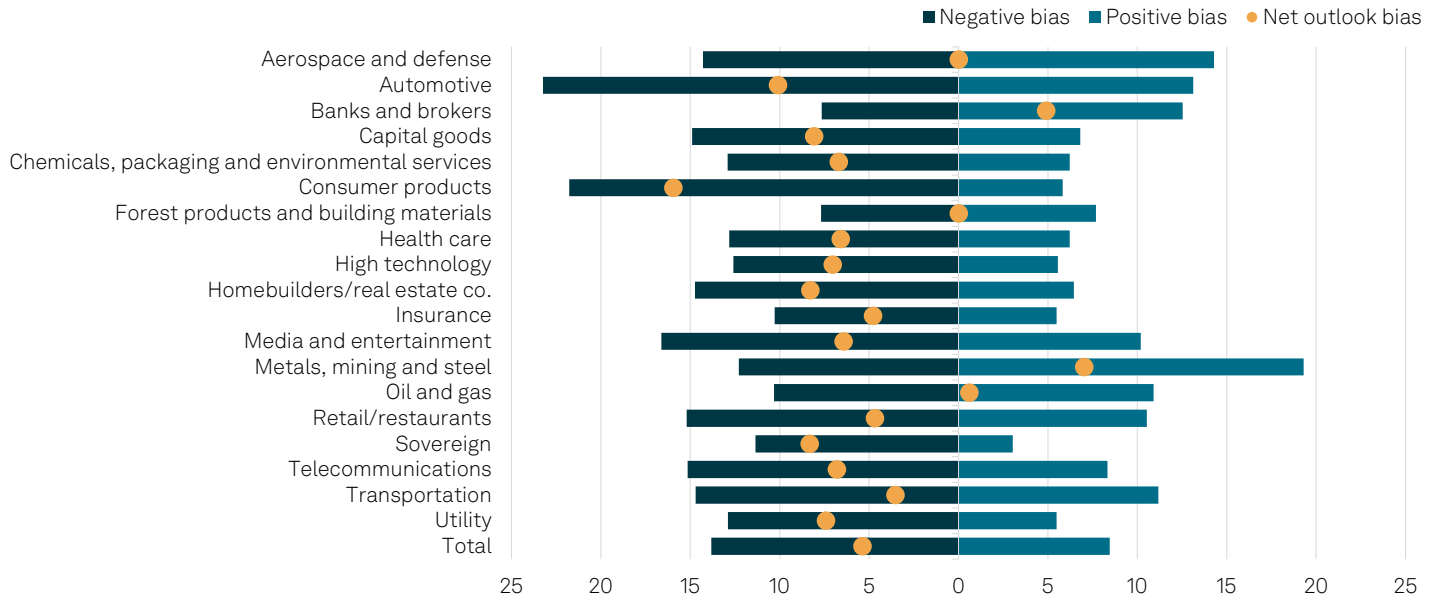
We expect credit ratings to deteriorate, as credit fundamentals—for many corporates and some sovereigns—erode further, though not in all sectors. The net outlook bias, indicating potential ratings trends in the next 12-18 months, widened to negative 5.3% as of Nov. 24 for corporate borrowers. Global corporate sectors with the highest net negative outlook bias are consumer products, autos, homebuilders/real estate, and capital goods (see charts 1 and 2).

However, not all sectors are in the same boat. In particular, commodities exporters have benefited from higher prices and a strong U.S. dollar. Global sectors with the highest net positive outlook bias are metals/mining and steel, and oil and gas.

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Chart 2

Outlook bias by sector (%)



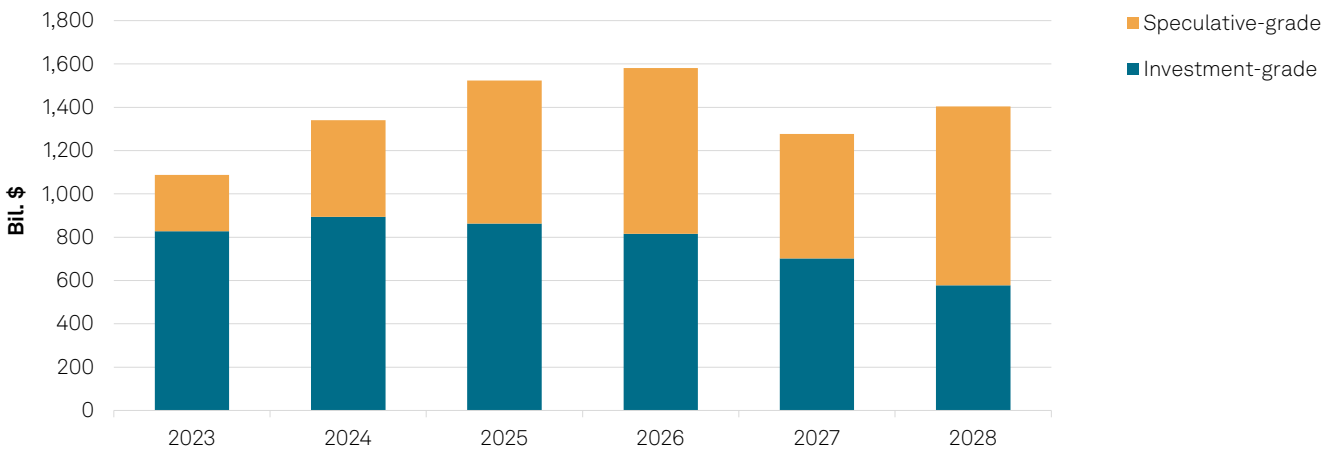
Data as of Nov. 24, 2022. Includes global financial, nonfinancial and sovereign issuers. Positive bias--Percentage of issuers with a positive outlook or CreditWatch placement. Negative bias--Percentage of issuers with a negative outlook or on CreditWatch. Net outlook bias--Percentage of issuers with a positive bias minus the percentage of issuers with a negative bias. Source: S&P Global Ratings.

Many borrowers built up buffers during the long stretch of favorable financing conditions

sufficient for them to ride out this rough patch—at least for some time. Overall, the maturity wall for nonfinancial corporate debt appears broadly manageable in the near term after many companies pushed out maturities at lower rates. Investment-grade debt accounts for 76% of total debt maturing in 2023 (see chart 3). However, corporate debt coming due rises steadily through 2026, and the share of speculative-grade grows, surpassing that of investment-grade in 2028. While speculative-grade maturities are relatively modest in the near term, those in upcoming years could pressure weaker credits that face challenging financing conditions.

Chart 3

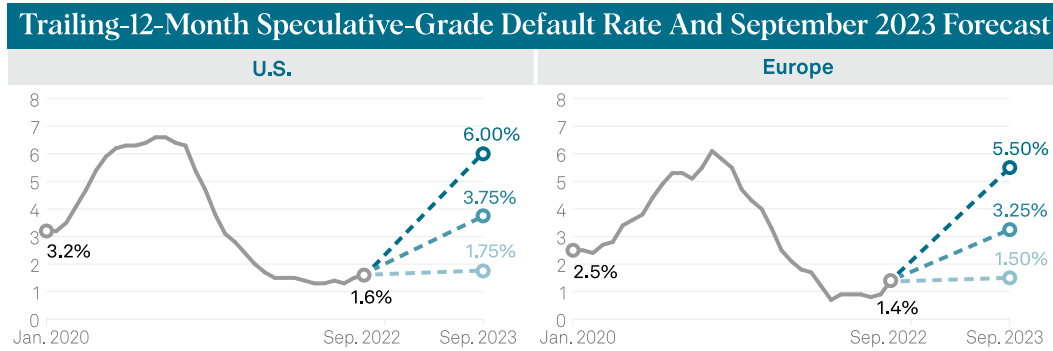
Global nonfinancial corporate debt maturities by grade



Data as of July 1, 2022. Includes nonfinancial corporate issuers' bonds, loans, and revolving credit facilities that are rated by S&P Global Ratings. Excludes debt instruments that do not have a global scale rating. Foreign currencies are converted to U.S. dollars at the exchange rate on close of business on July 1, 2022. Source: S&P Global Ratings.

Defaults are set to jump. S&P Global Ratings now expects the trailing-12-month speculative-grade corporate default rates in the U.S. and Europe to reach 3.75% and 3.25%, respectively, by September (see chart 4). These would be more than double the 1.6% and 1.4% in September 2022, bringing defaults close to their respective long-term averages. And with so much depending on the length, breadth, and depth of a potential global economic downturn, our pessimistic forecasts for default rates of 6.0% and 5.5% aren't out of the question.

Chart 4

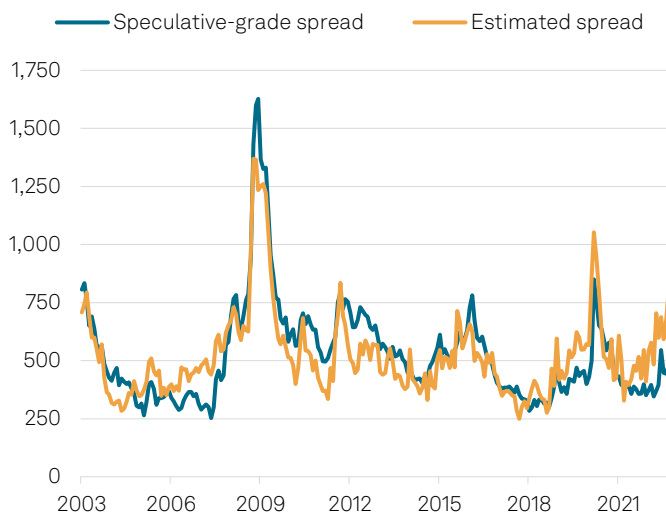


Trend lines point to our optimistic-, base-, and worse-case scenarios. Data as of Sept. 2022. Sources: S&P Global Ratings and S&P Global Market Intelligence's CreditPro®.

Meanwhile, spreads on speculative-grade debt have some room to widen—in the U.S. at least—based on the estimated spread calculated by S&P Global Ratings Credit Research & Insights, which uses a framework based on broad measures of financial market sentiment, economic activity, and liquidity. At 800 basis points (bps), our estimated spread on U.S. speculative-grade corporate debt is roughly 320 bps higher than the actual spread of 480 bps (see chart 5). This suggests fixed-income U.S. investors are too sanguine in their risk assessments, given the headwinds borrowers face. By contrast, there's very little difference in Europe, with an actual spread that is narrower by about 29 bps than our estimate of 654 bps (see chart 6).

Chart 5

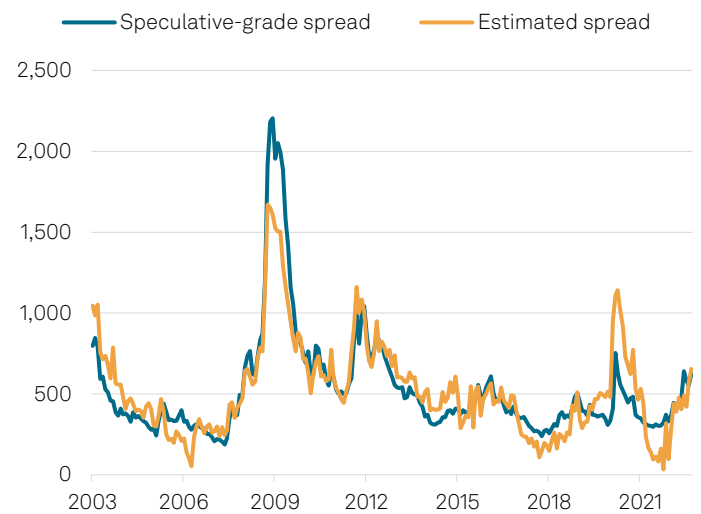
U.S. estimated spread suggests widening ahead (bps)



Data as of Sept. 30, 2022. Source: S&P Global Ratings.

Chart 6

European spread level appears largely appropriate (bps)



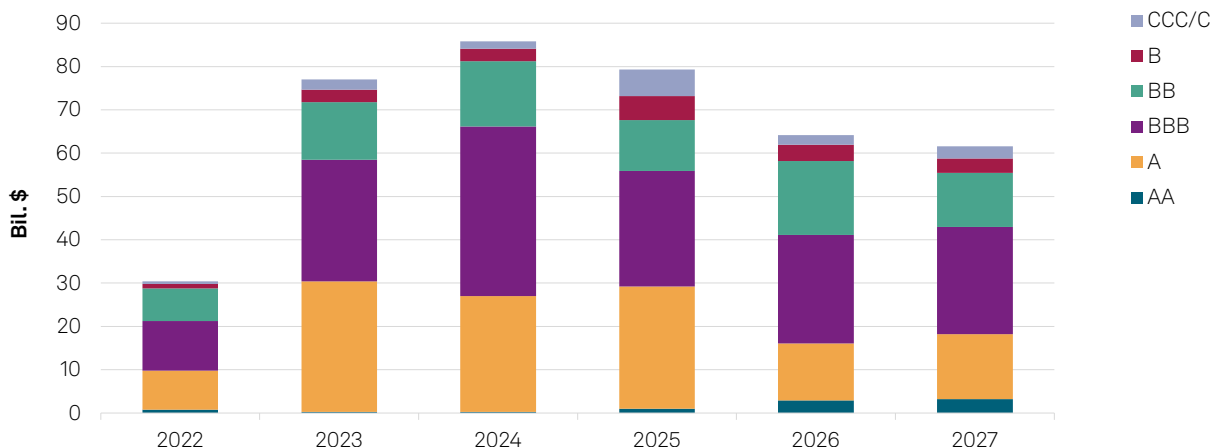
Data as of Sept. 30, 2022. Sources: ICE Benchmark Administration Limited (IBA), ICE BofAML Euro High Yield Index Option-Adjusted Spread, retrieved from FRED, Federal Reserve Bank of St. Louis, S&P Global Ratings.

U.S. Dollar Ratchets Up Pressures For Some

Strength in the dollar could complicate an already uncertain outlook for EMs, although its recent easing may relieve some pressures on the most affected borrowers. As it stands, 80% of EM corporate debt maturing in 2023 is in dollars, and about 24% is rated 'BB+' or lower (see chart 7). Continued dollar strength could trigger an increase in capital outflows and lead to a sharp rise in refinancing risk.

Chart 7

EM U.S. dollar debt maturities by rating



Data as of July 1, 2022. Near term maturities could be lower due to recent refinancing and data reporting lags. Includes bonds, loans, and revolving credit facilities that are denominated in dollars and rated by S&P Global Ratings (with a global scale rating) from financial and nonfinancial issuers. Source: S&P Global Ratings.

In Europe, dollar strength could fuel inflationary pressures. In the context of high-cost energy, which is mainly bought in U.S. dollars, depreciation of European currencies amplifies inflation and makes it more difficult for the ECB to stabilize prices. According to our models, the depreciation of the euro against the dollar added approximately half a percentage point to inflation in the eurozone and reduced household consumption by the same amount.

Overall, the prospect of higher-for-longer interest rates in the U.S. could underpin the dollar and pressure other central banks to counter with more aggressive rate hikes. At the same time, a precipitous drop in the dollar's value could also be problematic. While the recent easing of the greenback against other major currencies hasn't increased market volatility, a quick or disorderly reversal could spur swings in financial markets and spell trouble for companies and investors that are caught off guard.

For China, Business As Usual Is A Long Way Off

China's zero-COVID policy and a property-market slump are weighing on the economy. Slower consumption and still weak home sales have sapped the financial health of local governments, banks, and various corporate sectors. Any prolongation of the country's strict COVID stance will exacerbate the hit to corporate revenue and profitability. And even when China does relax its zero-COVID policy, the country's reopening is going to take some time.

While Beijing has eased some restrictions, China is hardly back to business as usual. Activity in the world's second-largest economy (and by far the leading exporter) remains stifled by recurring lockdowns and closures, given the rebound in COVID cases across major cities such as Beijing and Guangzhou. Concurrently, a full reopening could complicate efforts to limit inflation. While increased production and the loosening of bottlenecks for Chinese manufacturers should act as

a disinflationary pressure, increased domestic demand for goods and services, as well as energy and raw materials, could underpin prices.

Once the country does reopen, we expect growth momentum to pick up, but the gains will soon fade. We expect China's trend growth to slow to 4.4% in 2022-2030 and to 3.1% in 2031-2040. That's well short of the 6% in 2017-2021. While the Chinese economy continues to benefit from relatively solid productivity growth and capital accumulation, the working-age population is shrinking, rebalancing needs call for lower investment, and geopolitical tensions will impede productivity-enhancing ties with developed economies.

Geopolitical Risks Are At Their Highest In Decades

The Russia-Ukraine war seems to have entered a phase of attrition, and while the conflict hasn't yet spilled over to neighboring countries, the risk of miscalculations, mistakes, or other unexpected events is as high as it's been since the end of the Cold War more than 30 years ago.

In Europe, we expect gas and power markets to remain very tight for at least two to three years, reflecting the challenges to replace Russian energy. Europe's high reliance on Russia's pipelined gas enabled Moscow to weaponize the energy supplies, sending governments scrambling to avoid blackouts and rationing over the winter. While leaders have succeeded in easing the continent's energy crisis of late, the effectiveness of these measures is finite, and the real challenge will come to refill the reserves for the winter of 2024 without Russian gas supply amid increased competition for limited LNG stocks from reopening China. This means energy prices will likely remain high until Europe is able to develop sufficient alternative energy sources from renewables and nuclear. This will affect business models and profitability for energy-intensive industries. And with two of the world's largest agricultural exporters at war, global agricultural supplies—in particular, corn, rice, and livestock—will likely remain tight, especially as industries' growing appetite for agricultural commodities leaves little margin for error among key producing regions.

While the U.S.-China relationship remains uneasy, we don't expect a full decoupling of the world's two biggest economies. Any ratcheting up of tensions between the two countries over Russia or the South China Sea region, or an escalation of the technology race, could impede trade, intellectual property, investments, and financial transactions for both and other economies—with some sectors suffering disproportionately. Tensions regarding Taiwan are casting a pall over the island's long-term business and economic prospects—and the semiconductor sector would be the most vulnerable if cross-strait tensions worsen further. The Nov. 14 meeting between U.S. President Joe Biden and China's President Xi Jinping on the sidelines of the G-20 summit in Bali has, at minimum, kept the lines of communication open between the two economic rivals.

Sovereigns: Tight Margins Of Maneuver

High food and energy prices, along with rising financing costs, are exacerbating pressures for sovereign borrowers—especially considering their weaker fiscal flexibility after the pandemic. After inflation and solid economic activity bolstered tax revenues for much of 2022, slower economic activity will weigh on sovereigns' fiscal balances. We don't expect government fiscal support to approach pandemic levels, as their fiscal margins of maneuver have sharply tightened, and the objective will likely be more focused on aiding vulnerable households and smaller enterprises.

Against this backdrop, sovereign debt will remain high--and possibly increase--as fiscal consolidation is delayed and, in some cases, even reversed. Financing costs will remain elevated, as we expect central banks to maintain high interest rates and reduce their balance sheets to

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bring inflation under control. As many governments try to ease the burdens of higher energy and food prices on their populations, while tax revenues start reflecting a weaker economic environment, increases in debt could weigh on credit quality.

Slower global GDP growth, persistent inflation, and higher funding costs will likely outweigh countermeasures that governments take in response. Under these conditions, debt refinancing will become harder, and in some cases inaccessible, for sovereigns at the lower end of the ratings scale. This comes at a time when external funding needs are growing across many EMs that are net importers of food and energy and are exposed to foreign-currency debt. As some sovereigns increase debt burdens in response to economic downturns, this could pressure those (both with investment- and speculative-grade ratings) most exposed to these risks. As it stands, 19.2% of sovereigns we rate in Latin America, 12.1% of those in Europe, and 9.5% of those in Asia-Pacific have a negative outlook or are on CreditWatch with negative implications.

Nonfinancial Corporates: Facing A Triple Threat

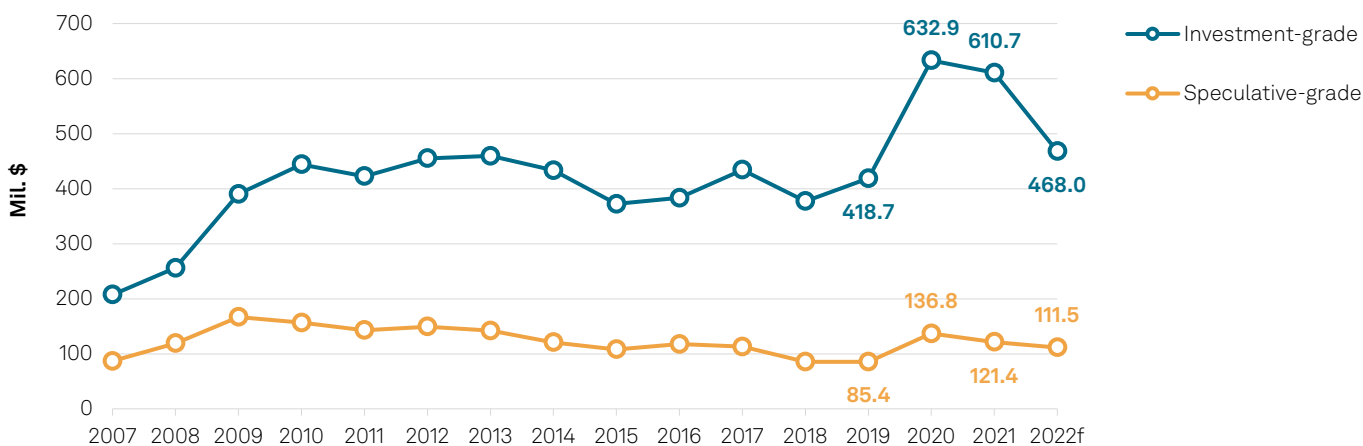
Corporations around the world are facing a triple threat of declining demand, persistently higher costs, and investors' increased risk-aversion. Still, for most borrowers, it will take time before macroeconomic and credit headwinds are fully felt in operating performance. Heading into 2022, most were well-positioned with low-cost, long-dated debt, and strong balance sheets.

In the early part of 2023, we see corporations continuing to grapple with cost pressures and comparatively tight financing conditions, on top of declining demand as consumer purchasing power erodes. As a result, the pace of downgrades will likely pick up—particularly in sectors such as consumer goods, retail and restaurants, and media and entertainment. This comes as the proportion of global issuers rated 'B-' and lower sits at 29%, slightly lower than the peak of 33% at the end of 2020, but consistent with the start of its ascent at the pandemic's outbreak in March 2020.

Chart 8

Nonfinancial corporates' cash holdings appear to be falling quickly

Global nonfinancial median cash holdings



f--Forecast. Data through Oct. 3, 2022. Source: S&P Global Ratings.

Moreover, borrowers' cash on hand is shrinking quickly. Issuance has plummeted to a degree normally associated with recessions. The largest and fastest interest-rate increases in a generation have deterred both lenders and borrowers who haven't been able to rely on markets settling down long enough to establish reliable pricing. And while cash buffers look set to remain above 2019 levels, they're falling fast (see chart 8). This decline, as well as our expectation that

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interest rates will stabilize (relative to 2022), should produce a rebound in corporate issuance levels in 2023—but at a higher cost.

At any rate, interest costs will likely trend higher. Central banks' efforts to quell inflation have put an end to the days of ever cheaper borrowing costs; we estimate that the median effective interest rate paid by speculative-grade corporate issuers on their debt will rise 1.2 percentage points to 5.3% in 2023 from the 2021 low, returning interest costs to 2014 levels and likely to trend higher as cheaper debt matures. For example, the average yield in the secondary market on 'B' category U.S. corporate debt has risen to 9.4% as of Nov. 28 from 5.2% at the beginning of 2022.

Financial Institutions: Rising Rates Boost Net Interest Income

Most banks are well positioned in a rising rate environment. After banks entered 2022 with generally strong capitalization and liquidity, we expect only a modest erosion by the end of 2023. For many lenders across regions, stimulus-boosted savings in the private sector coming out of the pandemic bolstered deposit bases. And while financial institutions, like their corporate counterparts, have lately faced sharply tighter market conditions, deposit bases and banks' strong liquidity positions have tempered their need to borrow. Also, rising rates in most cases are boosting net interest income; and while excess liquidity will gradually normalize, banks are able to pass on higher funding costs to borrowers.

Nonbank financial institutions face a different picture. These entities tend to rely more on market funding and don't benefit from access to central bank credit lines. For them, tighter financing conditions may in some cases prove more challenging even if many have used the past years of abundant market liquidity to push out debt maturities.

We expect increasing credit divergence, with rating trends across the global banking sector being tested in 2023. We have stable outlooks on about 79% of our global bank ratings, but we expect some deterioration for EM banks, nonbank financial institutions, and entities in countries most exposed to energy restrictions.

Structured Finance: Weakening But Resilient

Similarly, structured finance obligors aren't immune to worsening economic conditions, and we generally expect to see weakening of collateral pool asset quality. However, given the current strength of the labor markets in the U.S. and Europe, and with our base-case macroeconomic forecast showing only a limited increase in unemployment and a mild decline in GDP for certain countries, our structured finance ratings are poised to remain resilient, with the greater risk for negative effects on speculative-grade ratings. If macroeconomic conditions devolve considerably—especially with regard to unemployment—this would result in deeper deterioration in collateral and ratings trends.

Based on our global base-case macroeconomic forecast, elevated inflation and rising interest rates will create affordability challenges for some consumers and corporations. In particular, consumer-related securitizations that are primarily exposed to lower-income consumers and collateralized loan obligations (or CLOS, which are made up of highly leveraged corporate loans) will suffer the most negative effects on pool collateral performance. Also, commercial mortgaged-backed securities (CMBS) with high exposure to certain office, retail, and lodging properties will continue to see weakness due not only to slower growth, but also to medium- and longer-term negative trends of remote/hybrid work, e-commerce, and weak travel demand.

Global Economic Outlook 2023

Surprising Resilience Unlikely To Last

Key Takeaways

- Global activity has held up surprisingly well so far despite a torrid pace of policy rate hikes and consistently high geopolitical uncertainties. Recent outperformance will not last in our view. We see significant slowdowns ahead. Labor markets are key to determining the depth of the downturn.
- Getting inflation under control while minimizing damage to output remains the main macro policy challenge; the lagged effects of rate hikes will make assessing this difficult. Given the big inflation miss over the past two years, policymakers will err on the tough side.
- Our growth forecasts are generally higher for 2022 relative to our previous round, but broadly unchanged for 2023-2025. Inflation forecasts are higher and stickier. Risks are on the downside.
- 2023 will be a revelatory year. We will learn how much monetary tightening is needed to curb inflation, how deep any recession will be, and the early contours of the post COVID-economy. We suspect the post-COVID world will differ from the pre-COVID world across several dimensions.

Global Chief Economist

Paul Gruenwald

New York

+1-212-437-1710

paul.gruenwald@spglobal.com

Global Activity: Not Quite Dead Yet

The highly anticipated global recession has yet to arrive. The consensus view is that a sharp slowdown is all but inevitable, given the steepest rise in policy rates in four decades, ongoing geopolitical tensions, and energy supply constraints stemming from the Russia-Ukraine conflict. In line with this view, sentiment indicators such as purchasing managers' indices have been signaling a sharp slowdown for months. And an array of consumer and business confidence indicators have given similar signals.

However, activity data are not cooperating and third quarter GDP featured a swathe of upside surprises. The U.S. economy grew by 2.6% on an annualized basis as slowing but still positive consumption growth, especially in services, and exports offset weakness in the interest rate sensitive real estate sector. The Eurozone economy surprised by growing at all, with output expanding by 0.8% annualized in the flash estimate, with all major economies, including Germany, recording higher output. China surprised on the upside as well, growing 3.9% on a year-on-year basis, boosted by net exports and government spending. The property sector has remained weak due to restrictive housing sector policy and ongoing COVID-19 restrictions.

Inflation remains stubbornly high, especially in the advanced economies. While policy rates have been lifted this year by up to 300 basis points (in the U.S. and Canada, less so elsewhere), overall inflation has yet to peak. Supply-side inflation has recently begun to moderate as supply chains normalize and food and fuel prices have plateaued, at least for now. But demand-side inflation--most effected by central bank policy--has not. This suggests that more rate hikes are required.

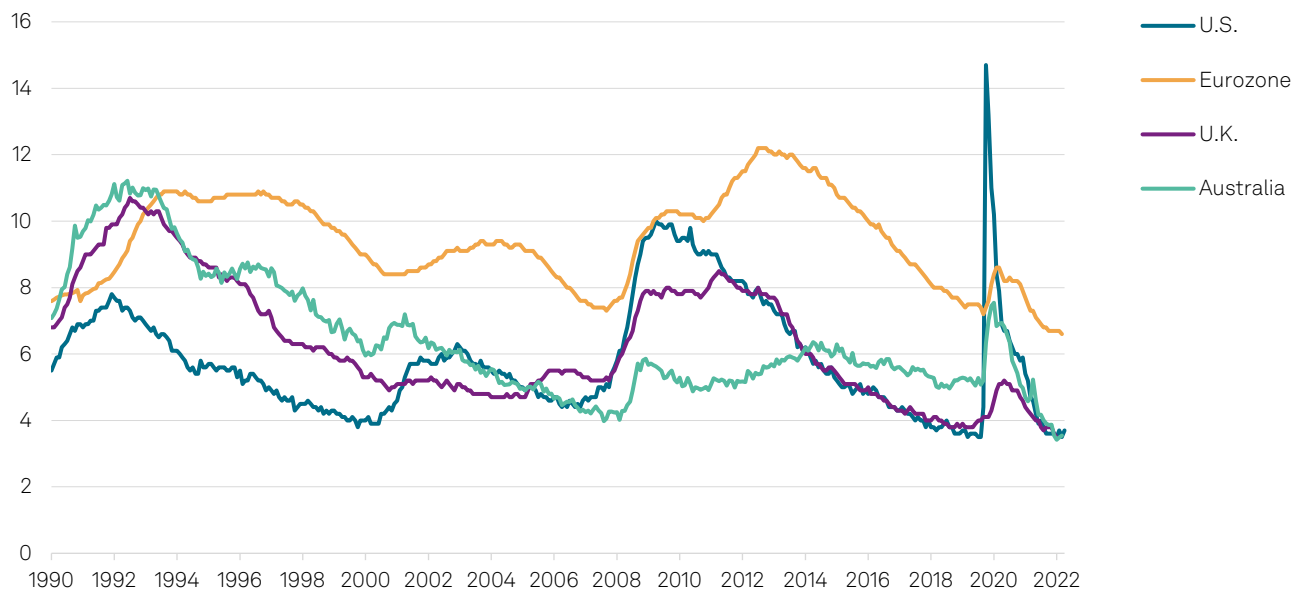
Long and varying lags of monetary policy transmission cloud the picture. As we have argued previously, the U.S. has the largest macro imbalances of any major economy and emerging markets were generally quicker to respond to inflation pressures last year and rate cycle are near completion.

Labor markets remain resilient, and in our view remain key to the slowdown narrative. While employment growth has slowed in most economies as activity growth has eased, it remains

sufficient to keep unemployment rates at or near four-decade lows. Some weakness has appeared in the more interest rate sensitive sectors such as real estate and durable goods, but services activity and employment remain robust and labor markets remain tight. The current unemployment rate in most regions remains inconsistent with low and stable inflation. And as long as economic agents have jobs – or think they will – they will continue to spend, perhaps more moderately, and support activity.

Chart 1

Unemployment rates (%)



Source: FRED.

We think this resilience is temporary. The determination of monetary policymakers to bring inflation (expectations) back to low and stable rates suggests that policy rates still need to go higher. And, given the big miss on correctly identifying last year's incipient inflation pressure as persistent means that policymakers will error on the side of doing too much rather than too little. As a result, the window for a soft, non-recession landing is closing fast: a meaningful slowdown is highly likely to come.

Inflation Fighting: Now Comes The Tricky Part

Inflation fighting has been straightforward this past year. In a perverse way this has been aided by many central banks being behind the curve. Large and frequent rate rises were needed to bring the monetary policy stance beyond neutral in order to slow activity, bring price pressures down and bolster credibility. The period of outsized rate hikes appears to be ending, but rate hikes are not finished. We are simply returning to the environment of the last few decades when central banks moved in 25 basis point increments.

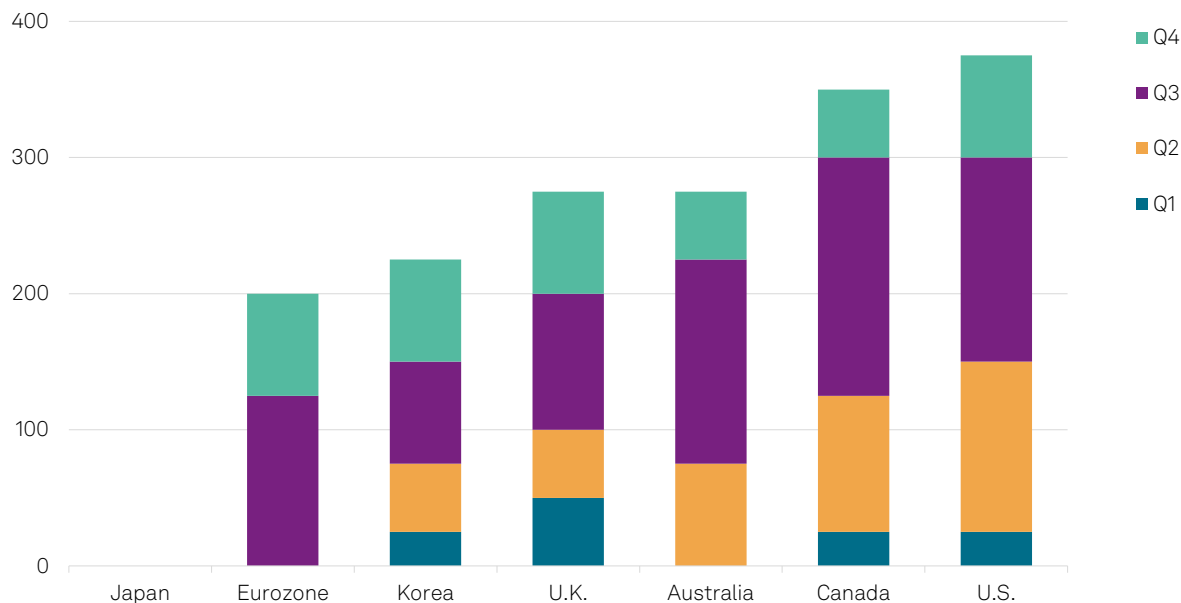
The challenge now is when to stop hiking. Milton Friedman famously said that monetary policy works with long and variable lags. The implication is that policymakers should not be targeting current inflation (which they cannot influence); rather, they should be looking at forecast inflation in the second half of 2023 and expectations. If rate rises to date suggest that demand will slow sufficiently to bring inflation back to target over that forecast period, then there is no reason to continue hiking. With growth and demand remaining resilient and inflation forecast to remain

above target, given current monetary policy settings (and financial conditions), the implication is that policy rates will need to rise further.

Complicating this challenge is the wedge between core and non-core inflation. Headline inflation (core plus non-core) has peaked or should be peaking in the coming months. However, core inflation continues to rise in many economies as labor markets remain strong and savings cushions are being deployed. Policymakers face a tricky environment where further monetary tightening is likely to be required at a time when growth and headline inflation are both falling.

Chart 2

Policy rate hikes in 2022--G20 advanced economies (bps)



bps--Basis points. Sources: Central Bank websites, S&P Global Ratings Economics.

While inflation fighting is largely a domestic affair, there is an international spillover dimension as well. This involves the U.S. dollar as the main global safe haven and U.S. Treasury as the main global reserve asset. When a central bank lifts its policy rates, one of the channels through which monetary policy works is through strengthening the currency, which lowers import prices.

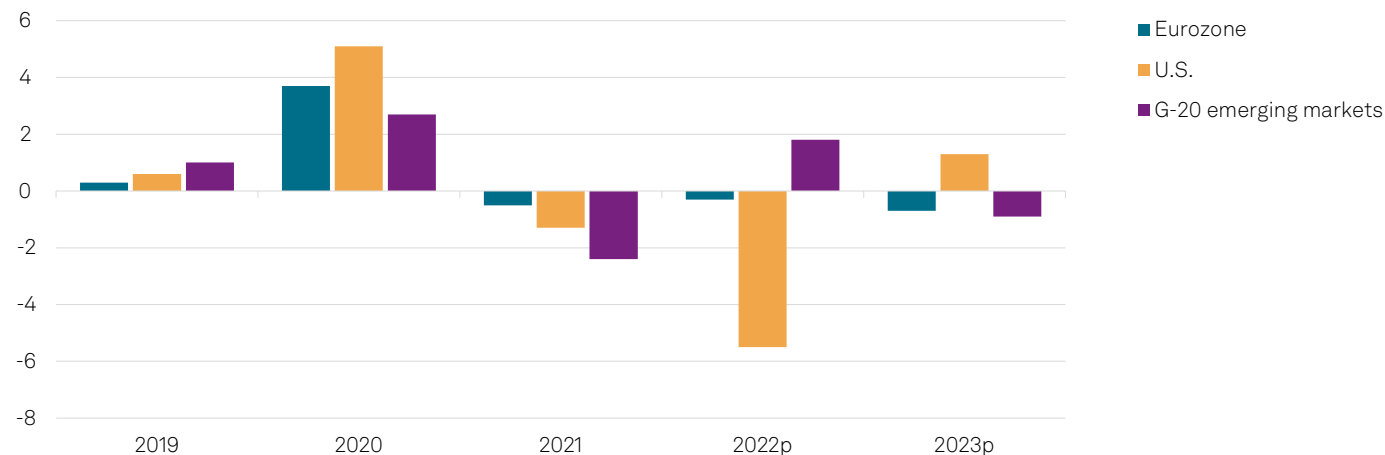
However, when the U.S. Federal Reserve is raising rates at the same time, perhaps combined with global risk aversion, then the U.S. dollar strengthens and other currencies depreciate, even when the local central bank is lifting rates. This means, in effect, that other countries import U.S. inflation through their weaker currencies and that local central banks need to do more to bring local inflation under control. On the real side, tighter monetary policy means lower output and inflation than would otherwise be required.

The macro policy mix will become an increasingly important issue as inflation remains elevated and output slows. Ideally, monetary and fiscal policy should generally be rowing in the same direction. However, with inflation still higher but employment starting to soften, monetary policy will need to remain tight while pressure will grow for fiscal policy to ease. Adding demand to the economy through fiscal stimulus will tend to push inflation higher and require more tightening by central banks. Governments will try to thread the needle and limit targeting support to the most vulnerable.

Chart 3

General government fiscal impulse

Change in cyclically adjusted deficit (% of GDP)



p--Projection. Sources: IMF Fiscal Monitor, S&P Global Ratings Economics.

Our Forecasts: Not Materially Different

Our updated GDP forecasts are not materially different from our previous round. The larger change is in 2022 since growth has held up better than we expected and upward revisions are widespread. We have marginally marked down 2023 growth, with the United Kingdom being an outlier as the recession there looks to be deeper than previously thought. Growth is unchanged for 2024-2025. Inflation forecasts are generally higher across the board because price pressures are more entrenched than before, meaning both higher rates for longer and a slower return to target rates.

U.S.

Growth momentum continues to moderate, although output in the third quarter rose at an unexpectedly high 2.6% annualized. Retail sales rebounded in October, but the latest reading for consumer and business sentiment continue to ease; both remain above the neutral level of 50. Job gains in October came in strong as well, with some pressure starting to emerge in interest rate sensitive sectors such as real estate. Inflation eased to 7.7% year over year in October, lower than expected; core inflation also came in lower at 6.3%. Nonetheless, the Fed continues to move aggressively, delivering its fourth consecutive 75 basis point rate increase in early November.

We are forecasting 1.8% growth in 2022 and fractionally negative growth in 2023 with a shallow recession in the first half of the year. Rising prices and interest rates will continue to eat away at household purchasing power and consumer confidence. Inflation should fall sharply from 8.1% this year to 4.3% in 2023 and continue toward 2% thereafter. We see the Fed Funds rate now peaking at 5.25%. For further details, see "[Economic Outlook U.S. Q1 2023: Tipping Toward Recession](#)."

Eurozone

Growth again surprised on the upside in Q3 with the Eurozone economy expanding by 0.8% on an annualized basis; all four major economies grew in the quarter. The labor market remains strong as employment expanded in the third quarter, and the unemployment rate stands at a record low 6.6%. Manufacturing production in the EU is at an all-time high, driven by a strong rebound in the automotive and the pharmaceutical sectors while energy-intensive sectors have curtailed activity due to high costs. Inflation remains extremely elevated at 10.6% in October, driven by energy

Global Credit Outlook 2023: No Easy Way Out

price inflation of more than 40%. Core inflation remains lower than in the U.S. at 5.0% in light of smaller macroeconomic imbalances. In a similar vein, Eurozone construction in Q3 was only 2.4% below the record level reached in Q1, showing a less-depressed housing sector than in the U.S. Sentiment remains weak as the composite PMI remains below 50, but edged up in November.

We now forecast GDP growth for the Eurozone at 3.3% in 2022, falling to zero next year as sticky inflation, higher interest rates and stunted hiring sharply decelerate spending. High wage growth and public investment will provide support. Germany is the weakest of the major economies and is likely to see a shallow recession during the year; other major Eurozone economies will likely escape that fate. Inflation should fall from 8.3% this year to 5.7% next year. We see 75 basis points more from the ECB. For further details, see "[Economic Outlook Eurozone Q1 2023: Reality Check.](#)"

Asia-Pacific

China's recovery in Q3, driven in part by state-financed industrial production growth, masked underlying weaknesses. Organic growth remained soft and sentiment remained weak amid a broadly unchanged COVID stance and a property downturn. While the work report coming out of the Party Congress in October suggested a broadly unchanged approach to economic policymaking, the comprehensive package of property policy easing measures announced in November should help lay the foundation for an eventual recovery.

Growth in the rest of Asia is holding up well, with the more domestically oriented economies of India and Indonesia outperforming. Tight U.S. Fed policy remains a headache for the region's central banks, given imported inflation via currency depreciation. Japan remains an outlier.

We have raised our 2022 China growth forecast by 0.5 percentage point to 3.2% and growth should pick up in 2023 as the government eases its COVID stance and the property market stabilizes; the forecast for 2023-2025 remains unchanged. Elsewhere, India's forecast has been lowered by 0.5 percentage points for the next two fiscal years on slower global demand. Regional growth remains healthy overall. For further details, see "[Economic Outlook Asia Pacific Q1 2023: Global Slowdown Will Hit, Not Halt, Asia-Pacific Growth.](#)"

Emerging Markets (EM)

EM growth is decelerating in line with our expectations, with broad divergence based on proximity to Europe, size of the domestic market, and the composition of the export basket. Headline inflation has likely passed its peak in most EMs, driven by energy prices and slowing demand, reflecting tightening financial conditions. EM central banks, which were quicker off the mark than their developed market (DM) counterparts, have in some cases stopped or paused their tightening cycles, particularly in Latin America and Eastern Europe (Brazil, Chile, Poland, Hungary). Turkey remains an outlier on the policy front. EM Asia has experienced less inflation pressures than other EMs, in line with the regional trend. High U.S. interest rates and a strong dollar pose outsized risks to EMs.

We have lowered our GDP growth forecasts for EMs to 3.8% in 2023 (from 4.1%). This revision comes from all EMs excluding China and Saudi Arabia. Most EM will expand below their trend rates in 2023. Forecasts for 2024 and 2025 remain broadly unchanged. Even as inflation should ease in most EMs next year from falls in food and fuel inflation, it's poised to remain above many EM central banks' targets. For further details, see "[Economic Outlook Emerging Markets Q1 2023: Hanging In There, But Growth Prospects Remain Tough.](#)"

Chart 4

GDP growth forecasts

Annual percentage change (%)

	New forecast				Change from previous CCC round			
	2022	2023	2024	2025	2022	2023	2024	2025
U.S.	1.8	(0.1)	1.4	1.8	0.2	(0.3)	(0.2)	(0.1)
Eurozone	3.3	(0.0)	1.4	1.5	0.2	(0.3)	(0.3)	(0.2)
Germany	1.8	(0.5)	1.0	1.3	0.3	(0.2)	(0.2)	0.0
France	2.5	0.2	1.6	1.5	0.1	0.0	(0.2)	0.0
Italy	3.8	(0.1)	1.4	1.2	0.4	0.0	(0.1)	0.1
Spain	4.6	0.9	1.9	2.5	0.1	(0.2)	(0.2)	(0.1)
U.K.	4.3	(1.0)	1.3	1.5	1.0	(0.6)	(0.1)	(0.1)
China	3.2	4.8	4.7	4.6	0.5	0.1	(0.1)	(0.1)
Japan	1.5	1.2	1.1	1.1	(0.1)	(0.2)	(0.3)	(0.2)
India*	7.0	6.0	6.9	6.9	(0.3)	(0.5)	0.2	0.0
Mexico	2.6	0.8	2.0	2.3	0.5	0.0	(0.0)	0.1
Brazil	2.9	0.5	2.0	2.2	0.4	(0.1)	0.0	0.0
South Africa	1.9	1.5	1.7	1.7	(0.1)	(0.1)	(0.1)	0.0
World	3.4	2.2	3.1	3.3	0.3	(0.2)	(0.1)	(0.1)

*Fiscal year, beginning Apr. 1 in the reference calendar year. CCC--Credit Conditions Committee.
Source: S&P Global Ratings Economics.

Main Risks: Stubborn Inflation, Geopolitics

Stubborn inflation requiring more than expected rate hikes remains our top risk. Indeed, we have already partly moved to this scenario from our previous forecast round. Policy rate projections in the U.S. are higher and the probability of a recession-free soft landing continues to decline. Higher rate hikes are not fully priced in and the higher-for-longer scenario implies a potentially sharper downturn and more pain in the interest-rate sensitive sectors of the economy.

Geopolitical developments comprise our second downside risk. The Russia-Ukraine conflict has entered its eighth month with a large degree of uncertainty around its duration. The impact on sentiment has been well documented and is a contributing factor in our forecast for a sharp growth slowdown. More directly, good and energy prices remain elevated although ongoing increases (inflation) have disappeared for now. Nonetheless, supply concerns remain for gas (heating) and food, beyond this winter for the former at least. Any escalation or broadening of the conflict would magnify this risk.

Higher Chinese growth stemming from a relaxation of COVID restrictions remains our main upside risk. Although growth has picked up recently on the back of government investment spending, the household sector is languishing and growth for the year will come in well below the official target of 5.5%. While the property sector correction is necessary in our view and will be a multi-year process, vigorous COVID-related restrictions are putting a large drag on growth. A move toward the health policy in place in most other countries would boost growth and, given China's large size, global sentiment.

Revelations And Non-Revelations In 2023

We wrap up with some likely macro revelations that are likely to occur in 2023, as well as some issues that will remain unresolved. Supply chain-related pressures that emerged as a result of the pandemic will likely be resolved in the first part of the year; however, the reconfiguration and rebalancing from efficiency to resilience will take years.

The bottom of the current economic and financial cycle will be reached, probably in the second half of the year; however, the rebound will differ across regions, complicated by nationalism and geopolitics. Finally, inflation will have peaked and will be on a downward path; however, getting inflation back down to "low and stable" and firmly re-anchoring expectations will be a long grinding. Putting the genie back in the bottle will not be easy.

Other issues will remain unresolved. The rise of geopolitics and nationalism is not transitory and will be with us for the foreseeable future; the era of "pure" textbook macroeconomics has clearly ended. The green transition will accelerate as we pay more attention to sustainability (and its proper definitions) and natural capital. In short, it is not just about economics, credit, and finance any more. We are living in a multidisciplinary world, and we are not going back to the simpler pre-COVID world of 2019.

Top Global Risks

Difficult financing conditions persist, pressuring borrowers' debt-service capacity

Risk level Moderate Elevated **High** Very high **Risk trend** Improving Unchanged **Worsening**

Sharply higher policy rates and quantitative tightening by major central banks are pressuring already-strained financing conditions—which is especially concerning against the backdrop of high debt levels, and could hurt lower-rated borrowers, in particular. A real or perceived monetary-policy misstep (in either direction) could increase volatility in credit markets and result in an even sharper repricing of financial and real assets, higher debt-servicing costs, and tighter access to funding. This also poses risks for EMs that rely heavily on foreign funding, have large external and/or fiscal imbalances, and are exposed to further strengthening of the U.S. dollar.

Slumps in largest economies deepen the global slowdown

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

As many major central banks aggressively raise interest rates, persistent high inflation eats into consumer purchasing power, and energy scarcity continues in Europe, the U.S. and Europe's largest economies could fall into deeper downturns than we expect, accompanied by a steep rise in unemployment. At the same time, China's persistent COVID policy and prolonged weakness in the property sector could hurt consumption and business confidence. A worse-than-forecast recession in the U.S. and Europe, and further slowdown in China, could further weaken global growth.

Input-cost inflation and weakening demand squeeze corporate profits, threatening credit quality

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

Hawkish central banks have yet to meaningfully bring down inflation, and economic activity is already slowing—increasing downside macro risks and the likelihood of stagflation. As input-price pressures persist, companies that have been able to pass through increased costs to maintain profit margins are now finding this more difficult as consumers' purchasing power erodes and pent-up demand after the pandemic fades. Concurrently, the strong dollar points to higher imported inflation for Asia-Pacific and EMs, compounding margin pressures.

Geopolitical tensions intensify, roiling markets and weighing on business conditions

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

As the Russia-Ukraine war drags on and the risks of escalation (potentially involving NATO allies) increase, the effects on markets and economies could deepen. While European governments have lately succeeded in easing the continent's energy crisis, the effectiveness of these measures is finite, and the conflict could keep upward pressure on energy—and food—prices. Meanwhile, tensions between the U.S. and China continue to simmer. Heightened global tensions among major countries add to "event risk" and could spur market volatility, further disrupt supply chains, depress investor confidence, and diminish global cooperation regarding environmental and public health priorities.

Structural Risks

Physical risks from climate change weigh on growth and food supplies, while energy-security concerns delay decarbonization

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

The Russia-Ukraine military conflict has forced policymakers to prioritize energy security and affordability over sustainability in the short term. In this light, the phase-out of carbon-intensive energy sources has been delayed in Europe—even as investments in some renewable energy ramp up. As other countries, too, delay decarbonization, they're exposed in variable ways to the environmental challenges, whether through physical risk, adaptation costs, or overhauling fossil-fuel industries. The dire need for policy action could disrupt industries, with potential implications for business and financial risks in energy-intensive sectors.

Cyberattacks disrupt business models, add to systemic risks

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

Amid increasing technological dependency and global interconnectedness, cyberattacks pose a potential systemic threat and significant single-entity event risk, with the Russia-Ukraine military conflict raising the prospect of major attacks. Criminal and state-sponsored cyberattacks are likely to increase; with hackers becoming more sophisticated, new targets and methods are emerging. As public and private organizations accelerate their digitalization, a key to resilience is a robust cybersecurity system, from internal governance to IT software. Entities lacking well-tested playbooks (such as active detection or swift remediation) are the most vulnerable.

Source: S&P Global Ratings.

Risk levels may be classified as moderate, elevated, high, or very high, and are evaluated by considering both the likelihood and systemic impact of such an event occurring over the next one to two years. Typically, these risks are not factored into our base-case rating assumptions unless the risk level is very high.

Risk trend reflects our current view on whether the risk level could increase or decrease over the next 12 months.

Looking Forward | After inflation, what's next?

Terry Chan
 Melbourne
 +61-3-9631-2174
 terry.chan@spglobal.com

If central banks overcome inflation in 2023, the next big challenge for borrowers will be weak demand and residual high costs. The stress will be worse for highly leveraged and emerging market issuers.

How this will shape 2023

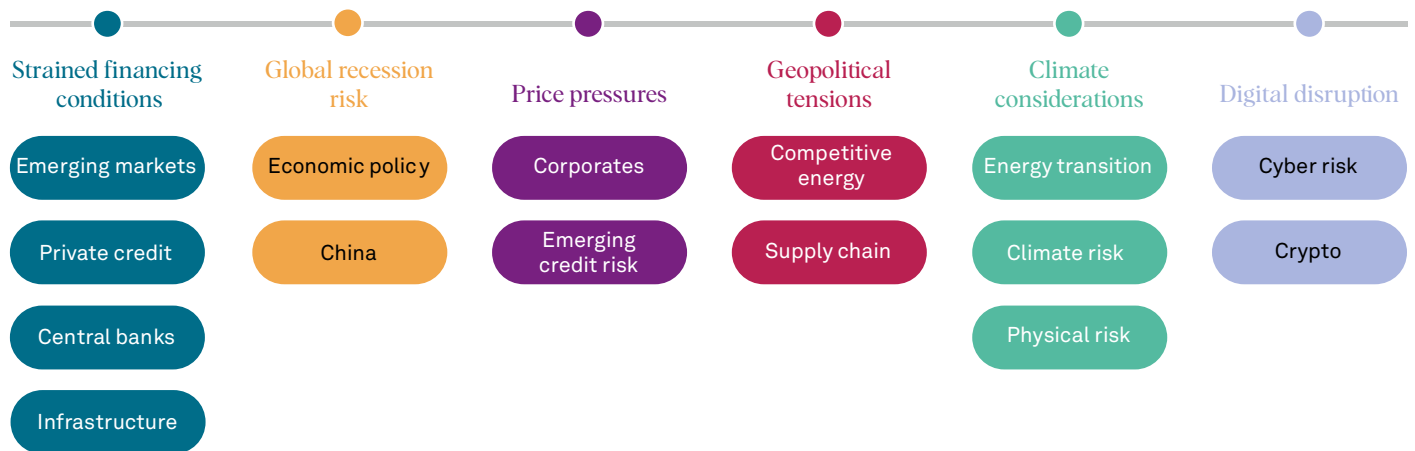
Policy, the dollar, and China will be the main drivers from a macro perspective. Balancing monetary and fiscal policy to dampen inflation without impeding growth is the trillion-dollar conundrum for policymakers. For example, the European Central Bank's (ECB's) monetary policy normalization bears risks for the eurozone's financial stability. Higher U.S. rates and investors' risk aversion have led to a stronger dollar, which mostly affects emerging markets (EM). Meanwhile, China is struggling with weak domestic demand because of COVID-19 lockdowns and highly indebted property and local government sectors.

For energy and the environment, transition risk is at the fore. The Russia-Ukraine war has highlighted the vulnerability of global energy supplies, with Europe having to cope without cheap energy. This crisis could alter the energy transition agenda and decarbonization pathway. Meanwhile, extreme weather events are the new normal, heightening economic, financial, and credit costs. Furthermore, climate change is already imposing short- and medium-term costs.

Rising borrowing costs may be detrimental for governments, corporates, and infrastructure. With governments carrying more debt because of the pandemic, higher policy rates of central banks will hit governments' interest expenses hard. Meanwhile, after nearly a decade of "lower for longer" cost of goods and interest rates, less-resilient corporates could buckle under higher inflation and borrowing costs. Current adverse conditions could further delay infrastructure investment, which has been lacking in some countries, such as the U.S.

Dampening inflation without impeding growth is the trillion-dollar conundrum.

Risk trends shaping 2023 and beyond



Source: S&P Global Ratings.

Technology risks are on the rise. Heightened geopolitical tensions and adverse economic conditions have increased technology risks. The U.S.-China strategic confrontation, exemplified recently by U.S. restrictions on semiconductor technology exports to China, threatens a bifurcation of the complex and expensive semiconductor supply chain. Meanwhile, the number state- and nonstate-sponsored cyberattacks could rise further, the former because of

geopolitical tensions, the latter as worsening economic conditions tend to trigger more desperate crimes.

Private credit and digital currencies are expanding. The private credit market has grown substantially in recent years. The ability of companies in this market to navigate an environment of high inflation and rising interest rates remains to be seen. Within the decentralized finance (DeFi) ecosystem, we expect policy work around stablecoins and central bank digital currencies (CBDCs) to accelerate. On the crypto front, differences in crypto assets and DeFi platforms point to the need for investors to do case-by-case risk analyses.

What we think and why

There will be hard choices to make on the macroeconomic front. We expect inflation fighting by central banks to take precedence, given their mandates. However, the ECB looks set to normalize monetary policy only gradually over multiple years to maintain the eurozone's financial stability. Compared with developed markets, the head start by EM central banks will help with trade-offs. That said, EMs are exposed to the stronger U.S. dollar. About 81% of rated EM corporates' debt maturing through 2023 is denominated in U.S. dollars. Defaults will still rise in China, while the government is expected to inject short-term stimulus and undertake longer-term reforms.

It will be a critical period for energy and the energy transition. We see Europe's gas and power markets remaining very tight for at least two to three years. The energy price shock makes a green economy transition even more urgent. However, global decarbonization plans have major execution risks and need massive investment. Because security of supply is now the priority, the energy transition will occur over decades. Meanwhile, the protection gap between physical climate risks and insurance coverage continues to widen. Risks will increase even if progress on decarbonization is made, due to historical emissions and the lagging effects on the climate.

Broadly, refinancing will be harder. For sovereigns, slower global growth, inflation, and higher funding costs will likely outweigh governments' countermeasures. Debt refinancing is becoming harder, and in some cases inaccessible (that is, for sovereigns at the lower end of the ratings scale). For corporates, we expect revenue momentum to fade in 2023 and cash flow to come under sustained pressure. That said, earlier refinancing has bought time, with interest expenses likely to build up only slowly. For U.S. infrastructure, the highest construction-cost inflation in decades comes just as historic levels of federal investment are beginning to erode the benefits.

The need to mitigate challenges to tech supply chains and cyber risks will persist. Diversification of technology supply chains is hard to execute. The world's complex tech-supply chains--with China at the center--took shape over decades. At the same time, government investment in cyber capabilities and defenses will rise. Although cyber insurance can mitigate the risk of cyberattacks, increasing premiums and the scope of coverage are problematic.

What a macro downturn means for private debt and the future of money. In private credit, we could see a repeat of 2020, with more sponsor interventions, if the next recession remains a short and shallow one. Private borrowers, predominantly in the middle-market space, are more vulnerable to macro downturns given their scale and scope. On digital money, stablecoins and CBDCs won't become mainstream in 2023 due to their small market size and regulatory uncertainty. Rising interest rates will raise questions regarding the calibration of the yield they should offer.

About 81% of rated EM corporates' debt maturing through 2023 is in U.S. dollars

What could go wrong

The wrong monetary policy mix could be a problem. Overly expansionary fiscal policy could prevent economies from necessary slowdowns and eventually lead to more-aggressive monetary policy responses to control inflation. This could cause a more painful downturn to wring inflation pressures out of the economy, at the cost of lost fiscal space. For EMs, there is the risk of capital-allocation shifts if regional and global growth slows too much. The risks facing China are a weak GDP rebound in 2023, re-centralization carried out too far, and worse China-U.S. decoupling trends.

For energy and environmental risks, there's a need to balance trade-offs. For Europe, the negative shock of higher energy prices is now, while the positive effects of cheaper labor and a weaker currency will only show up later. Higher energy bills over a prolonged period could result in increased social discontent. Uncertainties about implementation of new decarbonization plans, such as the European RePowerEU plan or the U.S. Inflation Reduction Act, may result in different decarbonization pathways for each industry. Policymakers also face dilemmas between transition and physical risks, where investments in one might not always benefit the other.

A wider war means slower growth. A key risk for all is a deeper-than-expected recession or downturn. This could be triggered, for example, by the Russia-Ukraine conflict spilling over to other countries, bringing NATO into the war. A capital flight to safe havens would add more pressure on EMs. The resulting supply disruptions would likely trigger higher inflation for longer, pushing the world into stagflation. Our corporate rating analysts' forecasts reflect assumptions of a mild downturn, with corporate EBITDA rising just 1% in 2023. In contrast, the five earnings recessions since 2000 saw global EBITDA fall by an average of 16%, from peak to trough.

Geopolitical tensions may further affect tech and digital disruption. Escalating geopolitical tensions add uncertainty to the technology sector's transformation. Trade tensions, pandemic-related disruptions, and a drive by some economies to be less dependent on Chinese manufacturing are complicating the country's place in global supply chains. Meanwhile, the effects of cyberattacks could spread beyond intended targets, and across sectors and geographies. States' weaponization of cyber will also bring forth harsher repercussions that could further escalate conflicts.

Higher energy bills over a prolonged period could result in increased social discontent



Emerging Markets | Is a strong dollar a concern?

The U.S. dollar's strength heightens refinancing risk, prolongs inflationary pressures, and complicates fiscal and monetary policy, adding to an already uncertain economic outlook.

How this will shape 2023

Refinancing corporate debt could become tougher. About 82% of emerging market (EM) corporate debt maturing in 2023, with a global scale rating from S&P Global Ratings, is denominated in U.S. dollars. What's more, we estimate that about 24% is rated 'BB+' or lower. This will exacerbate already rising financing costs for EM issuers with no dollar revenue or inadequate foreign exchange hedges. Refinancing could be especially difficult for lower-rated issuers already grappling with restricted or no access to primary debt markets.

A strong dollar complicates central banks' attempts to tame mounting inflation. We expect core inflation to stay above central banks' targets across EMs (excluding China, Saudi Arabia, and Vietnam) as the strong dollar and higher energy and food prices push up the cost of goods and services. Central banks' ability to adjust policy rates further to bring core inflation in line with their targets depends on the current rate of core inflation, the amount of slack in the economy, and pressure from wage costs. In some countries, the reduction of energy subsidies will make efforts to control inflation more complex. In frontier sovereigns with dollarized debt, limited domestic savings, low household incomes, and pressured domestic currencies, high energy and food inflation continue to depress growth.

What we think and why

Refinancing risk linked to dollar-denominated debt will be concentrated in certain regions and sectors. Issuers incorporated in China with our global scale rating have by far the highest amount of dollar-denominated debt due in 2023, about 47% of the EM total. Despite a slowdown of economic growth, weaker renminbi, and continued property market stress, which all heighten refinancing risk, most of the exposures in China are investment grade (rated 'BBB-' or higher). Brazil shows the second largest exposure, followed by Mexico. By sector, financial institutions have the largest amount of debt in U.S. dollars, but higher interest rates should underpin banks' net interest margins and profitability if asset quality does not deteriorate sharply. In contrast, nonbank financial institutions are more vulnerable to a disruption of funding access in difficult operating conditions, given their reliance on wholesale funding since most cannot collect deposits.

Pressure on some EM currencies will persist. The economies most vulnerable to this situation are net energy and food importers, such as Jordan and Lebanon, and those relying heavily on external financing, including Argentina and Turkey. EM currencies have depreciated not only due to rising U.S. rates but also because of worsening current account balances owing to the surge of commodity prices after the Russia-Ukraine conflict began. Energy importers' currencies have been hardest hit due to the spike in oil and gas prices and subsequent shock to their terms of trade. Among the few exceptions are commodity exporters Brazil and Peru, as well as Mexico, whose currency appreciated in the 10 months to Oct. 31, 2022.

Primary Credit Analysts

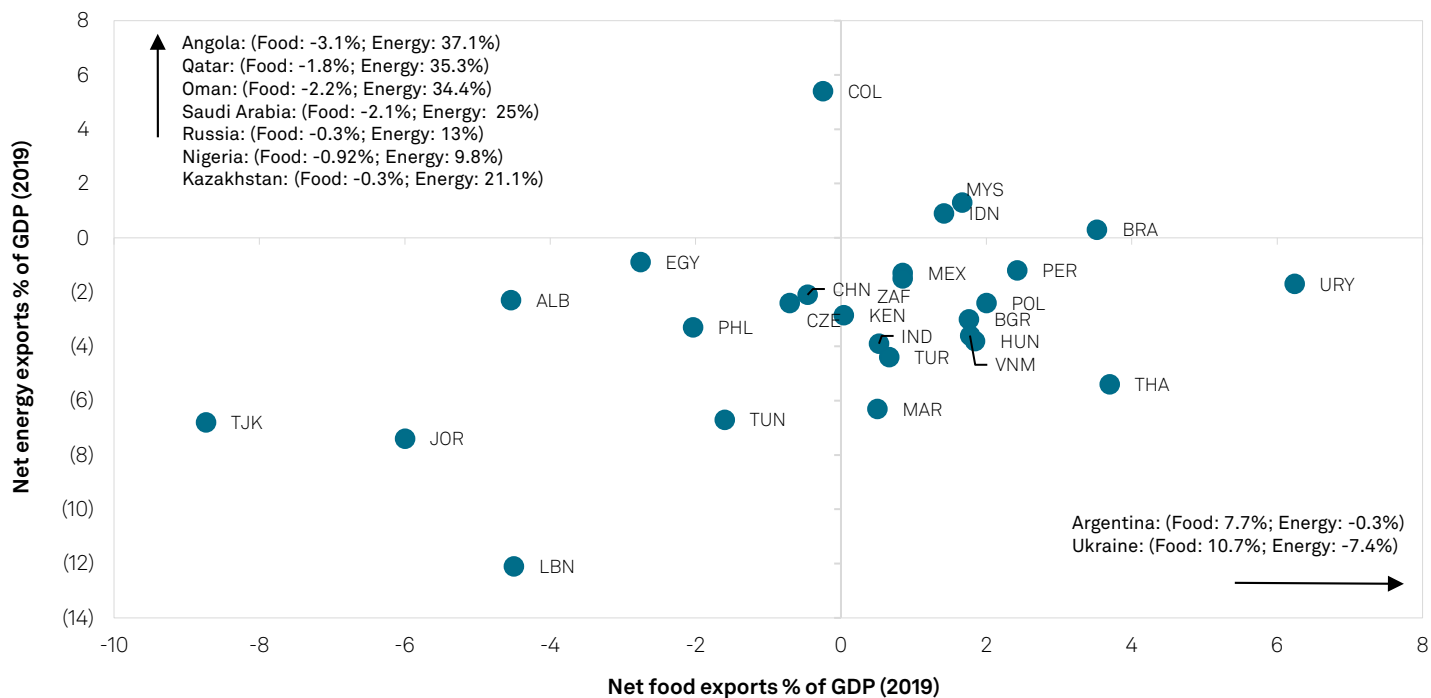
Patrick Drury Byrne

Dublin
+353-1-568-0605
patrick.drurybyrne@spglobal.com

Jose Perez Gorozpe

Madrid
+34-914-233-212
jose.perez-gorozpe@spglobal.com

Food and energy net importers are the most vulnerable to a strengthening dollar



Sources: WTO, ITC Trademap, and Oxford Economics.

What could go wrong

A prolonged global recession or more severe slowdown in the U.S. would put further pressure on EMs. Despite weathering the credit impact of the pandemic arguably better than expected, key EMs remain highly vulnerable to a severe economic downturn. A sharper slowdown in the U.S. than we currently expect would hamper economic conditions across many EMs, particularly those that have close trade links with the U.S. (such as Mexico) or receive substantial remittances from the U.S. (Honduras, El Salvador, and Guatemala). It could also trigger increasing capital outflows as investors turn toward safe-haven assets. This could exacerbate the impact of the dollar's strength, eroding the value of certain EM currencies and further increasing refinancing risk for all issuers, particularly speculative-grade entities with dollar-denominated debt.

Stubbornly high inflation could bring medium-term refinancing peaks into view. There are signs that the Federal Reserve Bank's measures may be slowing the rate of inflation in the U.S., but it's early days yet, and inflation remains elevated in other regions, most notably Europe, and is beginning to increase in EM Asia. In China, a pickup in growth will likely fuel rather than temper global inflation. If persistent inflation prevents central banks from lowering policy rates or leads to further hikes, refinancing costs will remain elevated and access potentially restricted for longer. This would put the spotlight on refinancing risk after next year, where 2024 and 2025 would represent peak years for U.S.-denominated debt.



Private Credit | How long can private credit remain the safety valve of liquidity?

Private credit kept deal flow moving in 2022, but with rising interest rates and higher inflation, its capacity to continue to be a source of liquidity is questionable--particularly for the large corporate market.

How this will shape 2023

Private credit anchored the debt markets in 2022, supporting not only the traditional direct lending market but also large corporate borrowers unable to tap the bond or broadly syndicated loan (BSL) markets. Lenders' ability to step in and support deal flow for large corporates as well as middle-market borrowers reflects the convergence between broadly syndicated and direct lending over the past decade. The result has been a private credit market with enough liquidity to fund larger and larger transactions, but also the flexibility to provide an array of financing structures--including unitranche and floating-rate notes--alongside traditional leveraged loans. However, this market is also far more opaque than the bond and BSL markets, and lacks certain infrastructure, such as standard credit agreements, a secondary market, or third-party mark-to-market pricing.

A healthy private equity market is fundamental to maintaining private credit liquidity. Private credit can continue to support broader credit markets as long as private equity remains healthy. Today's robust private equity developed primarily in a low interest rate environment. The private equity model of generating returns by investing in companies comes into question as borrowing costs rise and corporate growth stalls. If private equity fundraising falters, lenders' ability to provide liquidity to the credit markets in 2023 comes into question--and without that funding, the private credit markets may also stall.

Rising interest rates and unrelenting inflation put the traditional private credit borrowers at risk. Middle-market borrowers still represent the core of the private credit markets, and they potentially have less resilience for inflation and higher interest rates. As the global economy looks set to enter a recession of unknown duration and magnitude, the prospect of rising default rates in 2023 raises the question of how private credit will navigate that challenge.

What we think and why

Large corporate borrowers will still rely on liquidity from private credit. Although central banks are likely to ease off their aggressive rate hikes in 2023, it will take some time for public debt markets to normalize, and private credit will continue to support financing to large corporate borrowers. However, while the size of private credit transactions has risen steadily this year, the market's ability to support jumbo transactions is limited and, as a result, large corporate mergers and acquisitions may be scarce. For instance, jumbo buyouts such as Citrix (\$16 billion), Tenneco (\$7 billion), and Nielsen (\$16 billion) got hung up in 2022, all of which were announced in the first quarter of 2022 but didn't syndicate until the fourth quarter. In addition, private credit's ability to provide cross-border financing is in doubt, and both Citrix and Nielsen relied on fundraising in both the U.S. and European markets.

Traditional private credit borrowers are at risk for a default cycle. Though they generally have tighter documentation and higher pricing, middle-market transactions are still highly leveraged. S&P Global Ratings' Credit Estimates provide some insights on leverage for private borrowers,

Primary Credit Analysts

Ruth Yang

New York
+1-212-438-2722
ruth.yang2@spglobal.com

Ramki Muthukrishnan

New York
+1-212-758-2257
ramki.muthukrishnan
@spglobal.com

and the data shows that in key consumer goods, industries (such as household products, textiles, apparel, and luxury goods) are highly leveraged and poorly positioned to pass on extra costs. We estimate their median leverage at slightly higher than 7.5x, and many of these companies already have thin interest coverage, with a median of about 2.0x. Even in non-cyclical sectors such as health care, where the median leverage is lower at 6.2x, there are significant cost and operational issues, including staff shortages, a surge pricing for contract workers, wage inflation, reimbursements, and supply disruptions. All these issues increase costs and erode companies' ability to service debt.

What could go wrong

If a global recession is long and/or deep, causing a swell of defaults and restructurings in private credit, the outcome is uncertain. The direct lending market was much smaller during the global financial crisis of 2007-2008, and it's never been through a default cycle at its current size. Today's private credit market involves a lot more borrowers than large corporates; S&P Global Ratings Credit Research & Insights' analysis indicates that there are more than 5,000 individual borrowers in the business development companies (BDCs) they track, compared to approximately 1,200 issuers in the Morningstar/LSTA Leveraged Loan Index. This large number of borrowers raises the question of where the post-petition funding will come from after any bankruptcy filings, and whether there are enough advisors and workout specialists. We know that time in bankruptcy is closely related to recovery levels--the longer a restructuring takes, the lower the recovery. Will the restructuring infrastructure be able to efficiently support a large number of small borrowers, allowing the best possible outcomes and recoveries for lenders?

An alternative scenario is that we could see a repeat of 2020 with more out-of-court restructurings than bankruptcies. Squeezed borrowers are likely to make all efforts to preserve liquidity including the temporary conversion of cash interest to partial cash and payment in kind (PIK)--pushing back scheduled amortization payments to a final single bullet payment, extending near-term payment maturities, temporary deferral of interest payments, and the provision of covenant holidays--all in return for sponsor infusion and possible tightening of documentation. However, most of these liquidity-preserving transactions offer lenders less than the original promise on the securities without adequate offsetting compensation, and we would regard them as tantamount to a selective default. In both restructuring scenarios, both borrowers and lenders will take losses.

The post-recession landscape is also challenging. On an individual credit level, traditional private credit borrowers may not be able to manage the normalization to higher interest rates. Deals are primarily floating rate, and the transition to a substantially higher base rate may weigh too heavily on borrowers' margins. In addition, while spreads in the private credit market have generally been wider than those in BSL, the rising risks to credit will likely cause those spreads to widen more, further complicating the economics of raising capital in this market.

The direct lending market has never been through a default cycle at its current size



Central Banks | Will ECB normalization jeopardize eurozone financial stability?

Financial accidents could happen on the road to monetary policy normalization, but eurozone sovereigns and banks are more resilient to such events than 10 years ago.

How this will shape 2023

The ECB will continue normalizing its monetary policy in 2023. After ending net asset purchases and quickly raising the main policy rates to a neutral level, the European Central Bank (ECB) will start reducing its balance sheet. A key milestone will be repayment of €2.1 trillion of outstanding TLTRO funding: cheap, long-term, and stigma-free funding that accounts for about 8% of eurozone bank liabilities, with variations across systems (see chart 1). Furthermore, the ECB will likely clarify the timing and pace for ending the reinvestment of maturing bonds held under quantitative easing, amounting to nearly €5 trillion. While reinvestments in the Pandemic Emergency Purchase Program (PEPP) should continue in full through 2024, reinvestments in the larger asset purchase programs (APP) may start to decline from mid-2023.

This journey may pose multiple risks to financial stability. Withdrawing liquidity from the banking system and bond markets will increase yields (see chart 2). The sudden widening of spreads between eurozone government bonds in June 2022 was a reminder that financial fragmentation risks and the sovereign-bank nexus remain in Italy, Greece, and Spain (see chart 3). The ECB was quick to react, and the announcement of its transmission-protection instrument helped spreads tighten afterward. However, this antifragmentation tool has yet to be used and potential implementation might fall short of market expectations. Finally, the ECB's gradual shift toward quantitative tightening comes amid yet another external shock to eurozone economies: rising energy and food prices as a consequence of the Russia-Ukraine conflict. Fiscal space is more limited today than in the months before the pandemic, and monetary policy flexibility is also much more constrained than in early 2020.

What we think and why

We expect normalization of ECB policy to take place gradually, over many years. With the ECB encouraging banks to repay TLTROs, this position on its balance sheet will shrink first and end sometime in 2024. The reduction of bond holdings might be more gradual, even if reinvestments under the APP end in full from mid-2023. First, we believe that active quantitative tightening (selling bonds in the market) will remain an option for the ECB. Second, since the average maturity of the ECB's bond portfolio is around seven years, reducing bond holdings passively by not reinvesting their proceeds prevents any significant reduction of this balance-sheet position before 2025.

We see eurozone sovereigns as better prepared to deal with financial fragmentation than 10 years ago. Europe has tools at hand to address this risk. On the monetary policy side, the flexibility given to reinvestment in the PEPP, the full allotment procedure, and Outright Monetary Transactions are all firewalls to the risk of fragmentation. On the fiscal policy side, although not a national budgetary measure, the NextGenerationEU plan is acting as a redistributive mechanism that benefits more fragile economies in the EU. Also, the suspension of EU budgetary rules has given member states room to absorb external shocks, albeit a revised version of these rules is set to be reactivated in 2024. In addition, economic fundamentals are better today than they were a

Primary Credit Analysts

Nicolas Charnay

Frankfurt
+49-693-399-9218
nicolas.charnay@spglobal.com

Sylvain Broyer

Frankfurt
+49-693-399-9156
sylvain.broyer@spglobal.com

Frank Gill

Madrid
+34-91-788-7213
frank.gill@spglobal.com

Fiscal space and
monetary policy
flexibility are more
limited today than
before the pandemic

decade ago. For instance, in Spain and France, structural reforms, which have targeted the labor market and price markups, have helped narrow the cost-competitiveness gap to Germany. Reforms attached to NextGenerationEU should benefit European countries' competitiveness by investing in human and physical infrastructure, and mandating reforms to improve the business environment and labor flexibility. For example, Italy, under its National Recovery and Resilience Plan, is moving ahead with pro-growth reforms aimed at reducing bureaucracy and improving the efficiency of its public administration and judicial system.

Overall, higher rates will benefit eurozone banks, but some banks will struggle with more-expensive funding. A return of interest rates to neutral levels is a clear positive for eurozone banks, which will finally see net interest income grow. However, the end to TLTRO funding will be a challenge for several eurozone banks that will need to refinance with stable, long-term funding to meet regulatory requirements. Issuing long-term debt or collecting deposits will come at a high cost for eurozone banks with weaker funding franchises or perceived as exposed to weaker sovereigns, such as Greek or Italian banks. Access to inexpensive term funding will again become a key competitive advantage for eurozone banks, and potentially another source of financial and economic fragmentation in Europe.

What could go wrong

Financial markets could lose trust in the ECB's capacity to maintain a gradual approach.

Normalizing monetary policies was never going to be easy for the ECB but is being made more complex by the geopolitical risks we see materializing in Europe and implications arising from energy prices across the region, as well as the risk of fiscal missteps along the way. The financial stress experienced in the U.K. government bond market lately was a reminder of the risks involved in any uncoordinated change in the policy mix. Another risk to financial stability could materialize if the ECB starts actively selling its bond portfolio, should inflation remain far above target for longer.

There is a risk that fiscal policy tightens too quickly as a consequence of more turbulent market conditions, exacerbating risks of a more protracted economic recession. The cost of past fiscal interventions to shield households and companies from various shocks—including a global pandemic and surging energy prices in connection with the war in Ukraine—means that European governments are entering this period of rising interest rates with very limited fiscal space. As a consequence, fiscal policy, like monetary policy, will gradually tighten. Over the last year, liquidity in government bond markets has compressed, partly because nonresident participation in key markets has declined (see chart 4). Uncertainty about economic growth and inflation over the next few years will, in our view, increase the risk of volatility in government bond markets, such as we saw earlier this year for U.K. gilts. As the ECB tapers its net purchases, the market's absorption capacity will diminish further. Mindful of this, larger European sovereign issuers appear more focused on reducing net borrowing further in 2023 and 2024. But they still aim to withdraw fiscal stimulus only gradually. Worsening financing conditions would potentially force issuers to front-load procyclical cuts to public spending and potentially energy subsidies (Germany being the notable exception with its proposal of up to a €200 billion shield), leading to potentially self-defeating austerity at the national level.

Tighter funding conditions could expose the financial system's most vulnerable corners but will unlikely pose a systemic threat to eurozone banking systems. Certain nonbank actors running structural liquidity mismatches could face funding squeezes, such as open-ended investment funds, highly leveraged real estate investment funds, and finance companies relying on market funding. Also, sharp price movements could expose nonfinancial corporates transacting in derivatives (often for good risk management purposes) but facing massive margin calls. As for eurozone banks, much has been done to enhance their resilience to shocks since the

Global Credit Outlook 2023: No Easy Way Out

introduction of the Single Supervisory Mechanism. EU banks are now well capitalized (with CET1 ratios increasing by about 270 basis points to 15.2% since 2015), highly liquid, and better risk managed than 10 years ago. Financial instability could lead to some mark-to-market losses, as well as rising funding and credit costs, but also to increased client trading activity. This would dent overall profits, with winners and losers depending on the business mix and funding strength. However, a repeat of the financial crisis, with a negative feedback loop between financial instability, bank deleveraging, and economic contraction, remains a remote possibility.

Chart 1

Banks have unequal needs to refinance ECB funding
ECB funding by country

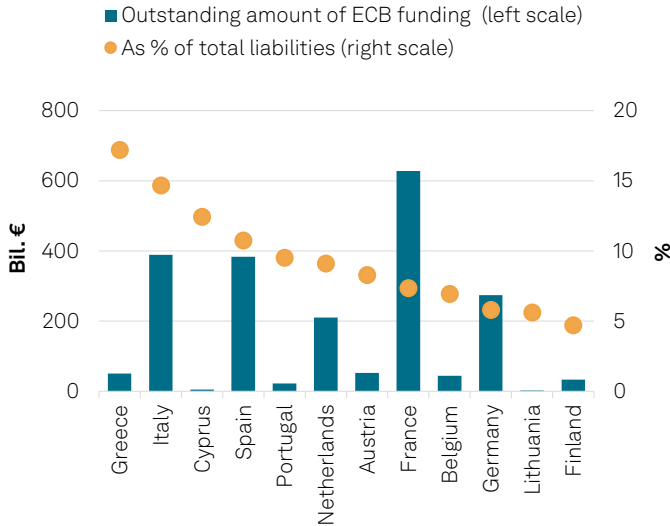


Chart 2

Less ECB bond holdings may risk financial stability
ECB purchases have reduced the term premium by 50bps

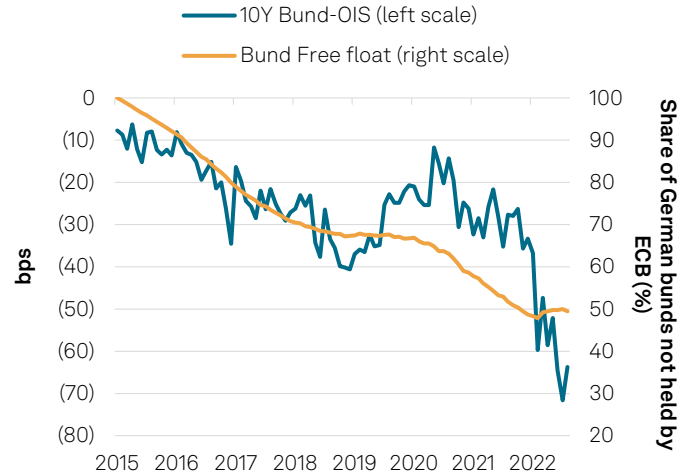


Chart 3

The bank-sovereign nexus has not weakened significantly in some countries
MFIs' holdings of domestic government debt

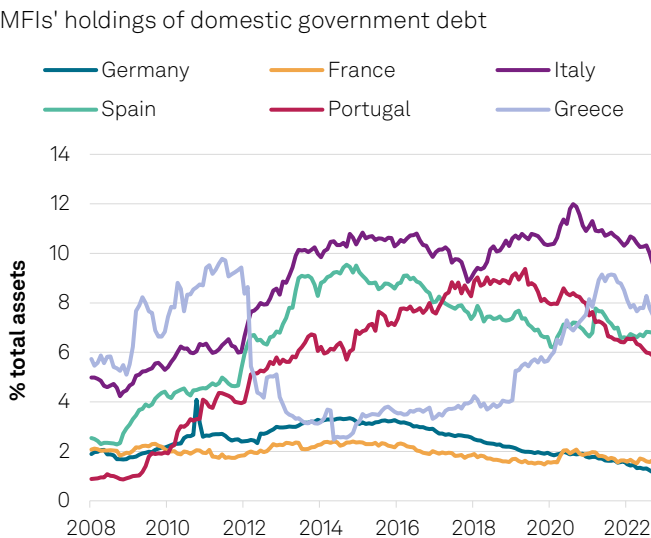
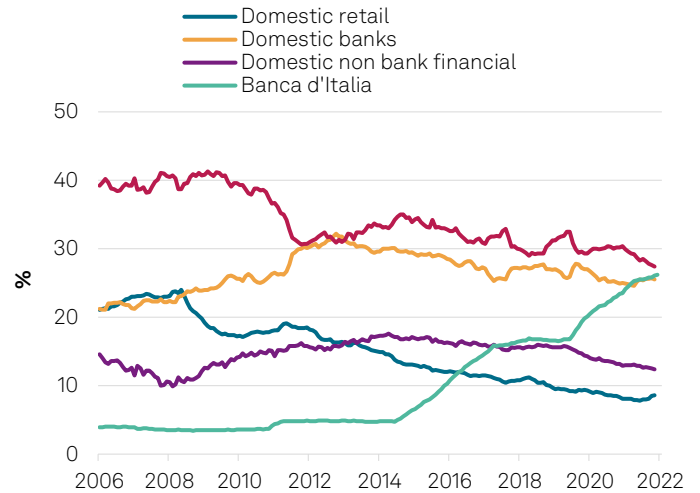


Chart 4

Non-residents have reduced their relative holdings of Italian government debts offset by central bank purchases
Italian Central Government debt by creditor



MFIs--Monetary financial institutions. Sources: ECB, Banca d'Italia, S&P Global Ratings.



Infrastructure | Will high inflation and rising interest rates derail U.S. public infrastructure investment?

As policymakers raise interest rates to fight inflation, higher prices and borrowing costs could limit much-needed infrastructure investment, with long-term economic and financial implications.

How this will shape 2023

U.S. state and local governments have shouldered an increasing share of infrastructure funding burdens. This spending decelerated in the decade following the Great Recession, due in part to slower-than-average revenue growth and increasing fixed-cost obligations, like pensions and health care (see chart). We estimate this led to underinvestment of \$1.5 trillion for states alone. A comprehensive tally of unfunded infrastructure in the U.S. is elusive, but the American Society of Civil Engineers' (ASCE) most recent assessment is \$2.6 trillion. Given persistent inflation, we expect this gap to widen.

Recent federal legislation represents an important shift. The Inflation Reduction Act, the Infrastructure Investment and Jobs Act, and some portions of the American Rescue Plan promised much-needed federal support and relieved some pressure on state and local governments. Combined, well over \$1.5 trillion is targeted for traditional infrastructure, including roads, bridges, airports, transit systems, water and wastewater utilities, power grids, and broadband networks. Additionally, the new laws expanded spending on resiliency preparedness against storms, droughts, and wildfires, with a broad range of provisions focused on reducing demand for fossil fuels. This is a historic shift in funding, with substantial short- and long-term economic benefits. The ability to deploy and leverage these resources will depend on macroeconomic conditions over the next several years, given the time limitation associated with most of these initiatives.

The amount of state and local government debt has been stable for the past 10 years. This contrasts with rapid growth at the national level. While this might indicate debt capacity to leverage available federal resources, the reality is more complicated. The slow pace of economic growth and fixed cost pressures due to pensions and other health care obligations limit states' discretionary spending capacity and contribute to a cautious approach to debt issuance, given balanced-budget requirements. So, despite a prolonged period of low interest rates and favorable municipal market conditions, states and many local governments have deleveraged. State and local fiscal conditions are relatively strong now. However, prospects for a recession and rapid acceleration of construction costs and interest rates could be a disincentive for state and local governments to issue debt to fund large projects.

What we think and why

Higher construction costs could force tough choices. The highest construction-cost inflation in decades comes at an inopportune time. An unprecedented amount of federal investment in infrastructure is starting to flow, but rising material and labor costs are beginning to erode some of its benefits. One broad measure of construction inflation is the Producer Price Index for building material and supplies dealers, which in September was more than 30% higher than pre-pandemic levels, with oil-price volatility (a key input to roadway and building materials and construction equipment) adding to the increase. Even if supply pressures ease, massive federal spending will increase competition, boosting prices further. Beyond fluctuating commodity and

Primary Credit Analysts

Robin Prunty

New York
+1-212-438-2081
robin.prunty@spglobal.com

Kurt Forsgren

Boston
+1-617-530-8308
kurt.forsgren@spglobal.com

Jenny Poree

San Francisco
+1-415-371-5044
jenny.poree@spglobal.com

Prospects for a recession and rapid acceleration of construction costs and interest rates could be a disincentive for state and local governments to issue debt to fund large projects

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equipment prices, a shortage of skilled labor and the corresponding growth in wages will likely be more enduring. It's possible that some projects may be downsized, delayed, or canceled as the cost of materials and labor escalates.

Rising interest rates will increase the cost of borrowing. Tax-exempt rates are up more than 250 basis points year over year, with credit spreads also widening considerably. The current MMD (Municipal Market Data) curve remains well above the 20-year average. Although macroeconomic fundamentals have influenced the curve, the main driver of spread widening is municipal bond fund outflows. With markets remaining volatile, as rates rise, the spreads on lower-rated issuers will likely follow, increasing financing risks. Higher rates imply limited refunding opportunities, already impaired following tax-law changes in 2017, and this has implications for many municipal market issuers' budgets. Furthermore, the availability of credit (both letters and lines) could shrink and subsequently push up the cost of credit if banks become more defensive ahead of an unpredictable recessionary environment and expected need to preserve capital. This dynamic will likely increase costs for issuers with variable-rate debt or those that use lines of credit for liquidity purposes.

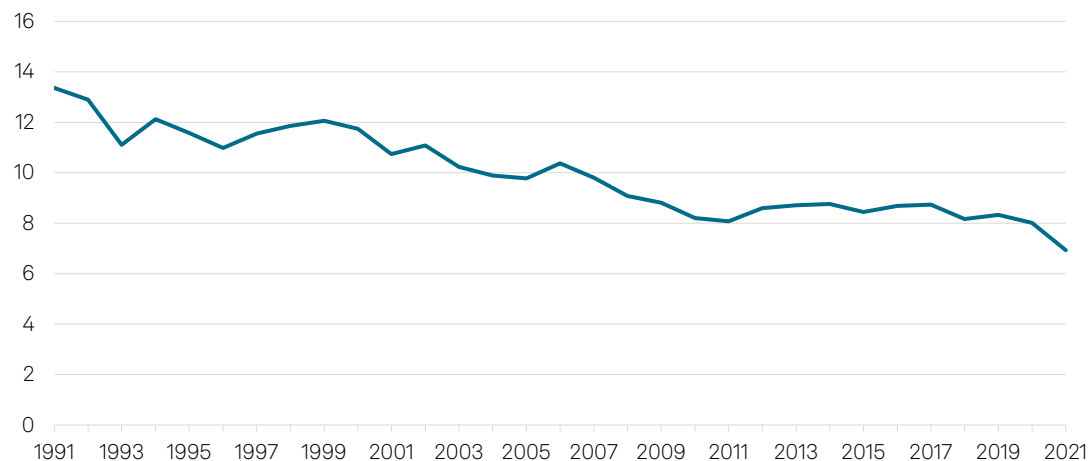
What could go wrong

The recession could be more severe, or last longer, than we currently expect. Despite the economy's recent weakening and our expectation of a recession in 2023, credit conditions in U.S. public finance have been relatively stable, largely due to strong reserves and federal stimulus. A deeper or more prolonged recession than we assume in our base case may strain budgets and possibly translate into lower capital investment.

Less investment means slower economic growth, diminished productivity, and deferred maintenance over the next 20 years. The ASCE estimates the economic opportunity cost of failing to close the infrastructure-investment gap would include the loss of \$10 trillion in potential U.S. GDP growth, more than 3 million jobs, and \$2.4 trillion in export value by 2039. Deferring critical maintenance will also increase costs in the future.

U.S. states' non-general fund capital expenditure lags other spending items

Capex as percentage of total expenditures (%)



Source: National Association of State Budget Officers; S&P Global Ratings.

Read more

[U.S. Inflation Reduction Act Emphasizes Affordability: Credit Implications Across Sectors Are Mixed](#), Aug. 18, 2022

[Construction Cost Inflation Weighs On U.S. Public Infrastructure Investment](#), April 14, 2022

[Outlook for North America Engineering and Construction And Implications For P3 and Muni Infrastructure](#), April 7, 2022

[Construction Ahead: Roughly \\$1 Trillion Infrastructure Act Tackles Backlog And Future Risks](#), Nov. 10, 2021

[Infrastructure After COVID-19: Risk Of Another Lost Decade Of U.S. State Government Capital Investment](#), Oct. 29, 2020

Macro | As global growth slows, why is the right mix of monetary and fiscal policy important?

Primary Author

Paul Gruenwald

New York
+1-212-438-1710
paul.gruenwald@spglobal.com

Monetary and fiscal policy should work in tandem for the best macro outcomes. But that's a dilemma amid low growth (calling for loose fiscal policy) and high inflation (needing a tight monetary stance).

How this will shape 2023

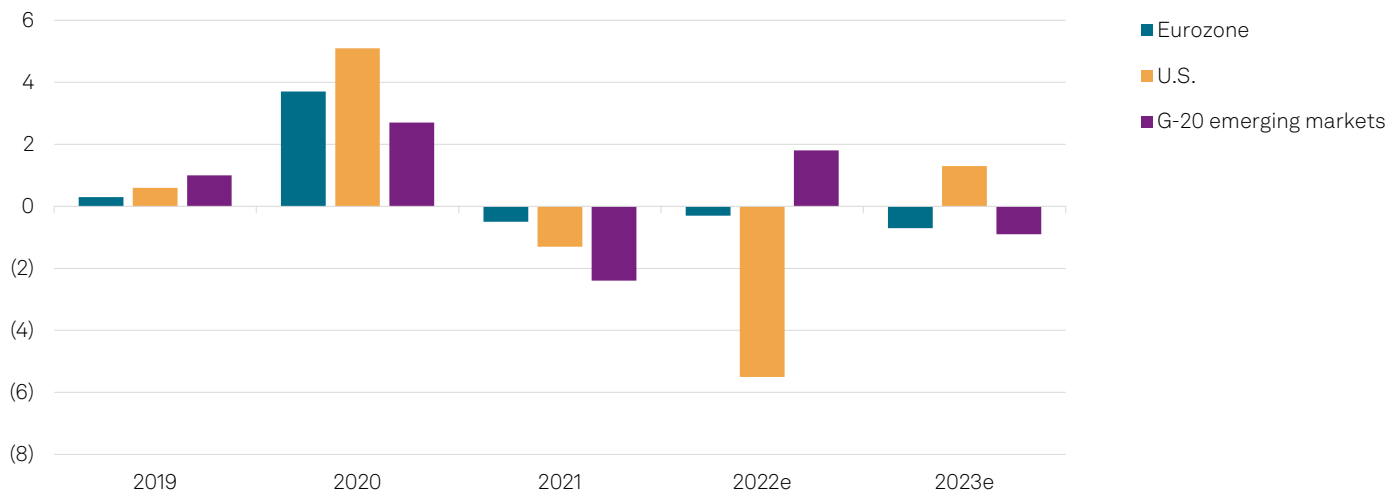
The current macro juncture is awkward for policymakers. Rising, above-target inflation and slowing, below-potential growth are not a good combination, since the two main macro policy arrows are pointing in opposite directions. High inflation calls for restrictive monetary policy to rein in demand while low growth calls for looser fiscal policy to stimulate demand.

The more fiscal policy expands, the more tightening the central bank needs to do. This trade-off is inevitable at present, but the pain and inefficiencies rise when the tug of war worsens. Rising rates cause pain across the economy--to asset holders, borrowers, and workers--while government borrowing in the context of already high debt eats up precious fiscal space.

Inflation signals remain noisy, clouding the picture. Even after a year of inflation rates not seen since the 1980s, prominent economists cannot agree on the seriousness of the challenge. Some think policymakers are raising rates too quickly, while others think that policymakers will need to do more than what is currently priced in markets. Needless to say, this lack of clarity complicates the policy response, as does the uncertain lag between policy action and economic outcomes.

General government fiscal impulse

Change in cyclically adjusted deficit (% of GDP)



e--Estimate. Sources: IMF Fiscal Monitor, S&P Global Ratings Economics.

What we think and why

Given a huge policy miss, inflation fighting will take precedence over preserving growth.

Central banks' credibility has taken a sizable hit over the past year. This is particularly true in advanced economies, where the debate over transitory versus persistent inflation raged while inflation blew past policy targets, necessitating the strongest rate hike cycle in four decades.

Read more

[Dispatch from Washington: Initial Takeaways from the IMF and IIF Annual Meetings](#), Oct. 14, 2022

[No Easy Way To Correct Outsized Dollar Strength](#), Oct. 6, 2022

Fiscal policy will likely target protection of the most vulnerable. While governments are mindful of their debt sustainability, they will not completely sideline fiscal efforts in the pursuit of price stability. There is a clear economic--and moral--case for cushioning the shocks of higher inflation and slower growth to society's most vulnerable.

Price controls should not be confused with actual inflation gains. There will be a temptation to apply policy band-aids. While capping the price tag of a particular good or service obviously lowers the price impact, it likely involves fiscal costs and does nothing to reduce underlying upward price pressures from a too loose policy stance.

What could go wrong

The wrong policy mix could make things worse. Overly expansionary fiscal policy could prevent the economy from a necessary slowdown and lead to a more aggressive monetary policy response to control inflation. This could lead to a more painful downturn to wring inflation pressures out of the economy, at the cost of lost fiscal space.

Monetary policymakers could ease up too soon, wary of causing too much short-term pain.

While largely technocratic, central bankers are not fully insulated from political pressures. In the case of a sharp slowdown with still rising inflation expectations, monetary authorities could lose their mettle, resulting in an eventually steeper path of rate rises to get inflation under control, causing a deeper recession and higher unemployment.

Central banks' independence could come into question, portending fiscal dominance. The idea of a technocratic central bank operating independently *within the government* has generated decades of relative price stability. Moves to put the central bank under control of the legislature risks politicizing monetary policy. This would likely lead to an inflation bias that artificially pumps up growth, leading to inferior economic outcomes.

There will be a temptation to apply policy band-aids

China | Will cracks break the economic wall?

Three cracks are showing in China's economic wall: low productivity growth, excessive debt, and the strained relationship with the U.S. While the central government seeks to address these long-term issues, more bad news is likely to emerge in the next 12-18 months.

Primary Credit Analysts

Eunice Tan
 Hong Kong
 +852-2533-3553
 eunice.tan@spglobal.com

Terry Chan
 Melbourne
 +61-3-9631-2174
 terry.chan@spglobal.com

How this will shape 2023

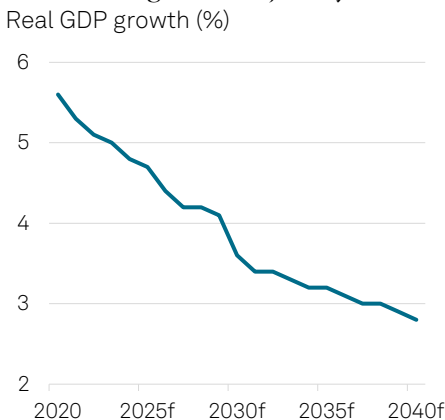
Low productivity to slow China's growth trend. COVID-19 lockdowns and a property downturn have slowed China's growth momentum. The country's investment-led growth model is debt fueled and losing steam. According to the U.N., China's share of global exports stood at 15.2% in 2021, a five-fold increase since 1995. However, other emerging markets are eclipsing China's advantage of cheap labor. Furthermore, the country's aging demographic reduces labor participation (with the retirement age unchanged). Unless these challenges are addressed, China's long-term growth trajectory is likely to be subdued (see chart 1).

Heavy debt is a burden. Some corporate sectors (e.g., property and construction) and local governments have excessive debt, while the central government has relatively low indebtedness (see chart 2). We believe Beijing is reluctant to deliver an all-encompassing bailout of overleveraged borrowers for fear of encouraging further moral hazard. Government stimulus packages are blunt instruments and funds don't always go where needed. Consequently, tighter oversight on infrastructure financing could come, to improve the viability of entities.

The U.S. tech "war" rages on. China's strained relationship with the U.S. is bad for the economy. The most recent development is the U.S. government's restriction on the export of advanced semiconductor hardware and talent to China. China is one of the world's largest importers and exporters of semiconductor chips (see chart 3). Integrated circuits are among the country's top two imports by value (the other is oil). While China has stated its intention to be a global technology leader, its advanced chip-design capability is still developing. Consequently, the U.S. action will slow progress in this subsector in 2023 and possibly the next two to three years.

Chart 1

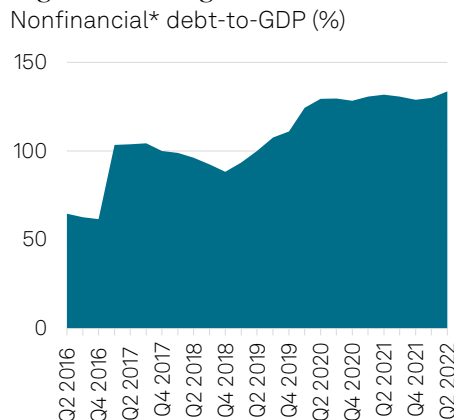
Lower GDP growth trajectory



f--Forecast. Sources: CEIC, S&P Global Ratings.

Chart 2

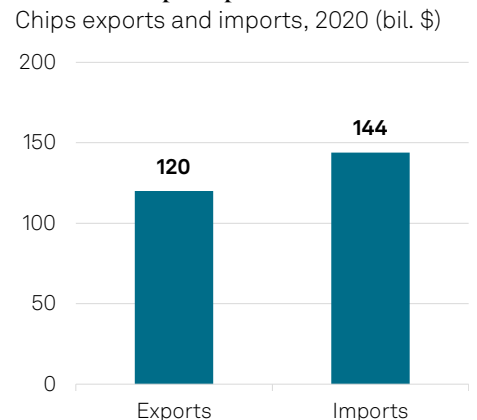
High debt leverage



*Includes government, household and nonfinancial corporate debt. Sources: Institute of International Finance, S&P Global Ratings.

Chart 3

Still a net chips importer



Sources: Observatory of Economic Complexity (OEC), S&P Global Ratings.

What we think and why

Controlled stimulus could boost 2023 growth. Although the government has reverted to infrastructure stimulus amid the tough economic situation this year, its push is unlikely to result in the kind of boom or rebound seen in the past. Authorities are cognizant of stresses on local governments and are setting reform goals to reduce off-budget financing or limit overleveraging to fund projects. Consequently, infrastructure projects face more scrutiny. The focus on more-productive investments will see greater differentiation of spending across subsectors.

Reforms will improve longer-term growth. We believe policymakers remain focused on de-risking China's credit-dependent growth. However, the pace of reforms may slow if economic stability is threatened, underpinning the delicate balance between reform and economic development. For the property sector, the government's efforts to curb house-price speculation means the "three red lines" policy will persist. With structural reforms remaining a priority, constraints across important sectors (information technology, real estate, and education) will likely persist given their politically strategic and socially impactful characteristics.

More defaults are likely. We expect defaults to rise in 2023 and after. One wave of defaults will be the fallout from mobility restrictions to contain COVID-19 outbreaks in 2022, which have also disrupted the traffic of goods. These have a direct hit on mobility-dependent sectors such as business and consumer services, media, entertainment and leisure, real estate, and transportation cyclicals. These sectors also happen to be the ones with the most negative outlook biases. Another wave ("creative destruction") is being driven by the above actions to reduce overleveraging and improve productivity in the economy.

What could go wrong

We could see a weak GDP rebound. If China delays easing COVID restrictions, the economy will take a bigger hit. We expect a more meaningful reopening after the Chinese Communist Party meetings in March. However, the overall process will likely be gradual. A prolonged strict COVID stance would exacerbate the impact on corporates' revenue and profitability. Concurrently, ongoing costs of COVID-19 containment will further drag on local and regional governments' fiscal strength.

Too much re-centralization could hurt. Policymakers have to perform a balancing act, between centralization and decentralization, to achieve desired long-term growth. Decentralization helps encourage innovation (albeit not without risks of overexuberance). While restrictions have tightened on information technology, real estate, and education, some restrictions elsewhere have eased. The country's "little giants" initiatives point to efforts to promote economic growth.

The China-U.S. decoupling worsens. Tensions between the U.S. and China raise the risk of some trade decoupling between the two. Full decoupling is unlikely over the next few years, given the complexity and interdependence of supply chains. We therefore expect China to retain its strong manufacturing position, given its well-established production and transportation infrastructure. However, an uncertain business environment and fears of sanctions could have longer-term ramifications for economic prospects, especially China's manufacturing role in the world.

A prolonged strict COVID stance would exacerbate the hit to corporates' revenue and profitability

Corporates | Will companies buckle under higher borrowing costs and inflation?

Less growth, lower margins, and rising borrowing costs suggest a more difficult 2023, but cash and refinancing buffers will buy time.

Primary Credit Analysts

Gareth Williams
 London
 +44-20-7176-7226
 gareth.williams@spglobal.com

Gregg Lemos-Stein
 New York
 +1-212-438-1809
 gregg.lemos-stein@spglobal.com

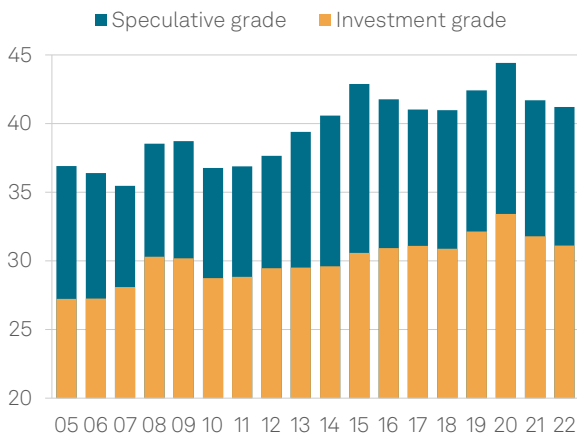
How this will shape 2023

The era of ever cheaper borrowing costs appears over. After the global financial crisis, corporate leverage underwent a structural increase (see chart 1)--and credit quality a structural decline--as the cost of borrowing fell (see chart 2) and investors focused more on yield than risk. Efforts to quell resurgent inflation are reversing this trend, with rising rates and widening risk premiums bringing higher corporate funding costs and encouraging deleveraging. We estimate that the median effective interest rate paid by speculative-grade issuers on their debt is likely to rise from the 2021 low of 4.2% to 5.3% next year, taking interest costs back to where they were in 2014, and they're likely to trend higher as cheaper debt matures.

Chart 1

Low interest rates facilitated higher leverage...

Total debt / total assets (%)
 Rated nonfinancial corporates

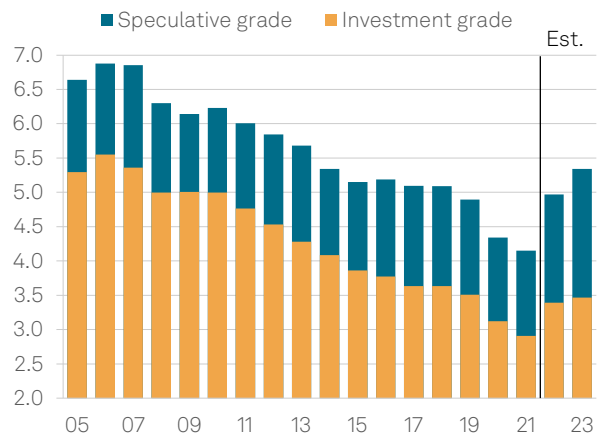


Note: 2022 data is last 12 months. Sources: S&P Capital IQ, S&P Global Ratings.

Chart 2

...But the era of falling borrowing costs is likely over

Median cash interest paid / total debt (%)
 Rated nonfinancial corporates



Sources: S&P Capital IQ, S&P Global Ratings.

Cost pass-throughs will become more difficult. Corporate credit quality--while never fully recovered from the pandemic--held up surprisingly well in 2022, bolstered by pandemic recovery momentum, surging profits for commodity companies, and a continuing ability to pass on soaring input costs to customers. This is unlikely to last, given higher borrowing costs and the cost-of-living crisis for consumers. Earnings momentum is fading, and the severity of the downturn will shape 2023 credit prospects.

Corporates could amplify an economic slump. If economic downturns are deeper than our forecasts assume, companies are likely to respond rapidly to protect cash flows. This could mean hiring freezes, job losses, and cuts to capital expenditure, potentially amplifying the recession.

What we think and why

Cash flows face pressure. Profit margins for global rated nonfinancial corporates remain elevated: EBITDA margins for the last 12 months stand at 17.6%, the same as in 2021 and a period high between 2005 and now. This is unlikely to persist in 2023, with resistance to cost increases likely to grow. Revenue momentum will fade, working capital needs remain elevated, and interest costs continue to rise, meaning that cash flows will start to come under sustained pressure.

Refinancing has bought time. Interest rate pressures are likely to build slowly. We estimate that the floating-rate share of rated debt is only 28% in the U.S., and only 9% of this is scheduled to mature in the next 18 months. Moreover, speculative-grade debt represents only 19% of this maturing debt. Pandemic-era refinancing will buffer rate pressures.

Precarious capital structures will be tested. Even so, higher leverage, faltering growth, and fragile credit markets mean considerable pressure for entities with vulnerable capital structures. Defaults are consequently likely to rise, particularly in lowly rated consumer-facing sectors.

What could go wrong

A deeper recession could unravel credit quality. Our analysts' forecasts reflect economic assumptions of a relatively mild downturn and suggest EBITDA will increase just 1% in 2023. The five earnings recessions since 2000 saw global nonfinancial EBITDA fall by an average of 16% from peak to trough. Stressing our forecasts for higher-than-anticipated interest costs and weaker EBITDA to simulate a typically more severe downturn suggests a deep recession could take average speculative-grade leverage metrics back above pandemic highs (see chart 3) and mean that more than half of these entities would have negative free cash flow (see chart 4).

Chart 3

Deeper recession could take leverage to new highs...

Global nonfinancial SG median debt/EBITDA (x)

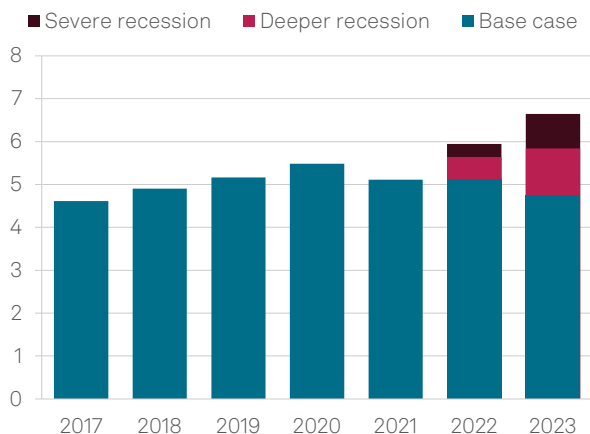
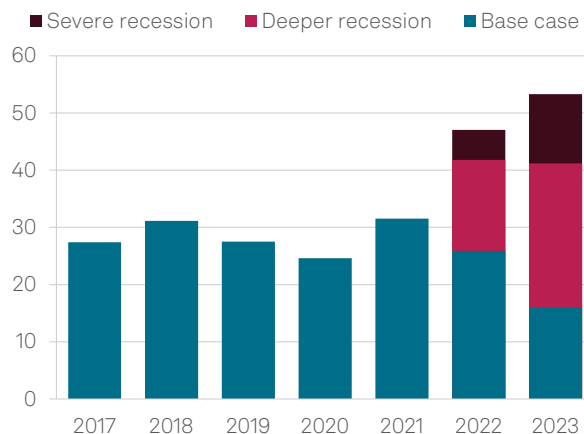


Chart 4

...And mean more entities with negative free cash flow

Global nonfinancial SG share entities with negative FOCF (%)



Source: S&P Global Ratings. SG refers to Speculative Grade. "Deeper recession" assumes interest costs higher by 2%, and haircuts base case EBITDA projections by 10% for 2022 and 20% for 2023. "Severe recession" assumes interest costs higher by 3% and haircuts base case EBITDA by 15% for 2022 and 30% for 2023. Declines are then calibrated by industry and entity cyclicalities.

Structural pressures persist. Beyond cyclical concerns, deglobalization could reverse many trends that have been favorable to corporate financial performance, particularly in relation to free trade, supply chains, and labor costs. Allied to rising borrowing costs, this could bring structurally lower profit margins and necessitate a more sustained period of deleveraging.

Read more

[Industry Top Trends Midyear 2022: Relapse, Recession, Resilience.](#)
July 25, 2022

Refinancing has bought time, but precarious capital structures will be tested by weaker growth and rising borrowing costs



Emerging Credit Risks | In an extremely dynamic risk environment, how does S&P Global Ratings evaluate emerging risks?

Inflation and slowing economies will continue to challenge borrowers in 2023, but our analytical frameworks and expertise enable us to quickly assess and quantify emerging risks, such as cyber and DeFi.

How this will shape 2023

New risks are constantly emerging, and well-known risks will evolve. Our analytical frameworks enable us to consider the effects of such risks, even those that are unique or uncommon, across a sector or asset class and provide transparency. Our credit ratings are informed by an entity or structure's current and past performance, are forward-looking, include both qualitative and quantitative factors, and typically incorporate our quantitative financial forecasts. We may address key, well-known risks (such as supply-chain vulnerabilities or interest rate volatility) explicitly in our methodologies, while other emerging risks--related to decentralized finance (DeFi) or cyber risks, for example--may have unique features but can be assessed through a familiar lens, such as a review of a company's governance or liquidity. Together, our credit methodologies, analytical judgement, cross-practice credit conditions, economic research groups, and ongoing credit-risk surveillance are central to understanding current and emerging risks.

What we think and why

The crypto ecosystem is evolving rapidly, raising risks for the entities operating within it. This includes new companies whose primary business is crypto, or traditional ones dipping their toes in the water. Not all crypto assets or DeFi platforms are created equal. Therefore, a case-by-case analysis of their impact on credit risk is essential. Emerging risks include the convertibility of cryptocurrency into fiat currency, the interaction between a DeFi protocol's activities inside and outside a blockchain, or the uncertain and rapidly developing regulatory environment. To date, we have captured these risks by applying the flexibility built into our rating criteria through factors like capital, liquidity, or operational and competitive risks.

ESG risks can be uncertain and long term. We factor them into our analysis through sector-specific criteria when they are, or may be, relevant and material to our credit ratings. Our long-term issuer credit ratings don't have a predetermined time horizon. Financial forecasts are for the period over which we believe we have a sufficiently clear view of an entity's potential financial performance, considering the asset class, capital structure, and potential impact of relevant credit factors, including ESG. Those forecasts exclude the potential cost of events that aren't sufficiently visible, such as extreme weather or a policy decision to levy carbon taxes. If risk factors are sufficiently visible but likely to crystallize outside the forecast horizon, we may factor them in qualitatively. Risks with significant uncertainty limit our ability to incorporate specific

Primary Credit Analysts

Michelle Brennan

London
+44-20-7176-7205
michelle.brennan@spglobal.com

Andrew Palmer

Melbourne
+61-3-9631-2052
andrew.palmer@spglobal.com

Russell Bryce

Charlottesville
+1-214-871-1419
russell.bryce@spglobal.com

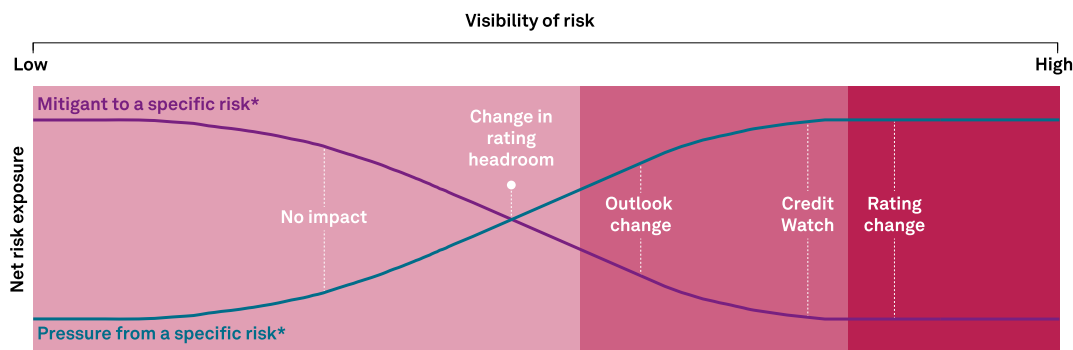
Read more

[Exploring Crypto and DeFi Risks In Credit Ratings](#), June 30, 2022

[Credit FAQ: How We look At Corporate Hybrid Call And Replacement Decisions](#), June 8, 2022

[How Cyber Risk Affects Credit Analysis For Global Corporate Issuers](#), March 30, 2022

Visibility of risks: Impact on ratings



*Both the pressure from the risk and the mitigants to the risk can change or stay the same over time. This chart shows how the influence of a specific ESG risk--or opportunity--may change over time as visibility increases. Source: S&P Global Ratings.

What we're watching

Supply disruptions are contributing to credit pressures. These disruptions range from production falling short of demand, supply disruptions due to legal and geopolitical events, and shipping and cargo logistics and availability, to workforce, raw materials, equipment, and inventory shortages. We seek to understand a supply chain's dynamics to assess the key drivers of risks: for example, how a sector's production cycle works, including any interconnectivity with other key supply chains; and how an entity's inventory supply chain management addresses capacity. Other risks stem from the locations and alternate sources of supply, transportation and logistics dependencies, use of data and information systems, interconnectivity between supply chains, and the degree to which a specific production or supply chain model has built-in spare capacity and backup.

Cyber risk is pervasive, and the materiality of its impact varies. We primarily view cyber risk by examining an entity's governance. We typically engage with the company's management to better understand how it prepares for, responds to, and recovers from cyberattacks. We assess preparedness based on principles like those in the National Institute of Standards & Technology's framework, among others. We then incorporate that into our view of an entity's overall risk management. Cyber risks are also considered in the context of a given sector and the entity's relative vulnerability within it, as well as in other parts of our analysis, such as the assessment of an entity's financial risk profile or a structured finance transaction's operational risk.

Rising interest rates make it harder for issuers to refinance hybrid capital instruments. Hybrids are now more widespread in some sectors and regions and, in recent years, issuers have typically called hybrids on the first optional call date because it was cheap and easy. Issuers therefore face balancing the financial impact of refinancing, at higher costs, against investors' desire for hybrids to be redeemed on call dates. The optional nature of a call is a key feature underpinning our treatment of instruments as equity-like in our financial metrics, since a call provides issuers with the flexibility to manage capital and the timing of redemptions or refinancing. We expect more cases where issuers don't redeem hybrids on call dates or do so despite not being able to replace the hybrids. We see non-call cases as typically credit supportive, particularly when they stem from economically rational financing decisions and do not signal specific credit strains. While we typically expect corporate issuers to replace hybrids they redeem, our criteria give us the capacity to review cases where a hybrid has been redeemed without replacement to assess whether we see that as altering an issuer's intentions to use other hybrids to absorb losses or conserve cash in times of stress.

We primarily view cyber risk through the lens of an issuer's governance

Energy | Can Europe compete without cheap energy?

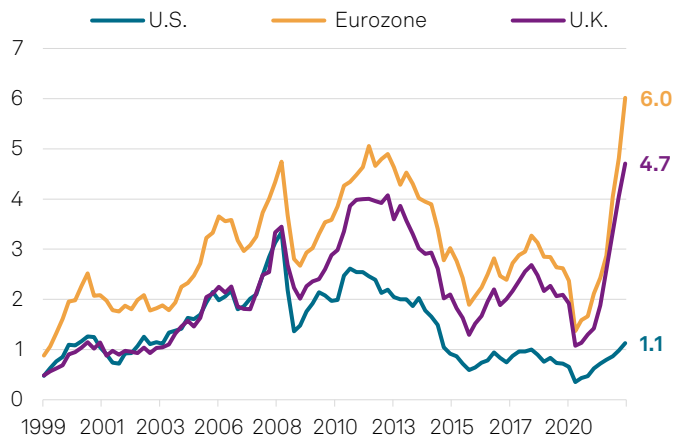
High energy prices are reducing the EU's trade competitiveness. Its industrial base could hollow out if markets are slow to rebalance.

How this will shape 2023

Soaring energy costs could accelerate the deindustrialization of Europe. They have already weakened Europe's cost competitiveness with the U.S. by as much as 4 percentage points of GDP growth (see chart 1). If energy markets are slow to rebalance and this competitiveness gap persists, European economies risk hollowing out their industrial base, which would involve the offshoring of energy-intensive activities, particularly in the manufacturing sector. This would continue the deindustrialization of Europe that began several decades ago, reflected in the decline in industrial employment, which however remains relatively high in Eastern Europe, Germany, and Italy (see chart 2).

Chart 1

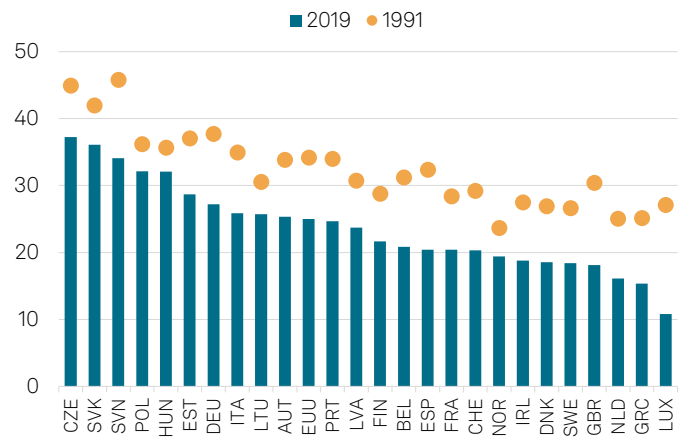
Europe faces an unprecedented shock from energy
Value of energy imports as percentage of nominal GDP (%)



Source: Refinitiv, S&P Global Ratings.

Chart 2

Eastern Europe, Germany, and Italy remain the most industrialized economies in Europe
Employment in industry (% of total employment)



Source: World Bank, S&P Global Ratings.

This competitiveness shock is unevenly affecting countries and sectors. Economies feeling the most pain have high energy intensity and bigger shares of fossil fuels in their energy mix (see chart 3). They are less oriented toward services and have a greater weight of energy-intensive sectors, such as the metals and chemicals industries. Through this prism, Nordic and big economies appear to be less exposed than small economies in the eastern part of the EU.

Export competitiveness is already suffering. Sectors that manufacture tradeable goods and rely most on natural gas as a feedstock or for heat, as well as related downstream value chains, have already suffered big cuts to domestic production (see chart 4) and foreign trade. For instance, EU exports (outside the bloc) of petrochemical products most reliant on natural gas fell 6%-8% in recent months. Meanwhile, imports grew by double-digit rates in some segments, helped by the easing of global supply chains (see chart 5).

Primary Contacts

Sylvain Broyer

Frankfurt
+49-69-3399-9156
sylvain.broyer@spglobal.com

Paul Watters

London
+44-20-7176-3542
paul.watters@spglobal.com

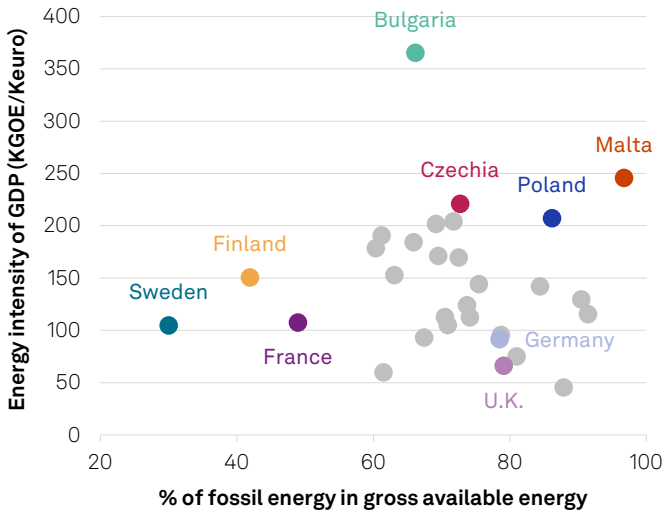
Aude Guez

Frankfurt
+49-69-3399-9163
aude.guez@spglobal.com

Germany's industrial complex is front and center of the energy crisis. Five industries consume 76% of the country's industrial energy (see chart 6), equivalent to almost 20% of its energy use, while producing 21% of industrial gross value added (GVA) and employing almost one million people. Of these, the chemicals sector has the largest weight in GVA and consumes almost 37% of the natural gas that German industry uses.

Chart 3

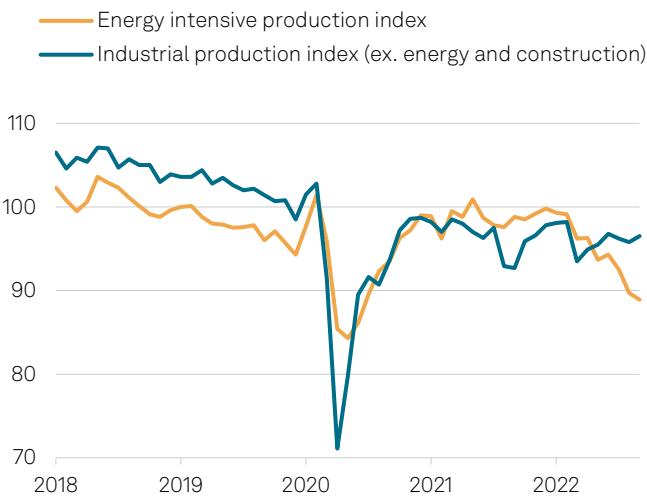
European economies have highest sensitivity to energy shock given energy intensity and energy mix
Energy intensity and fossil fuel use



Sources: Refinitiv, S&P Global Ratings.

Chart 5

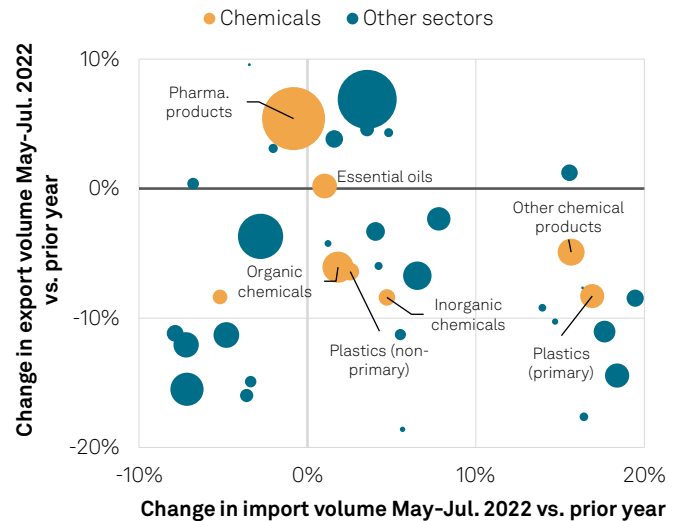
German production of energy-intensive industries fell 10% more than the industry average in 2022
Production index, 2015=100



Sources: Destatis, S&P Global Ratings.

Chart 4

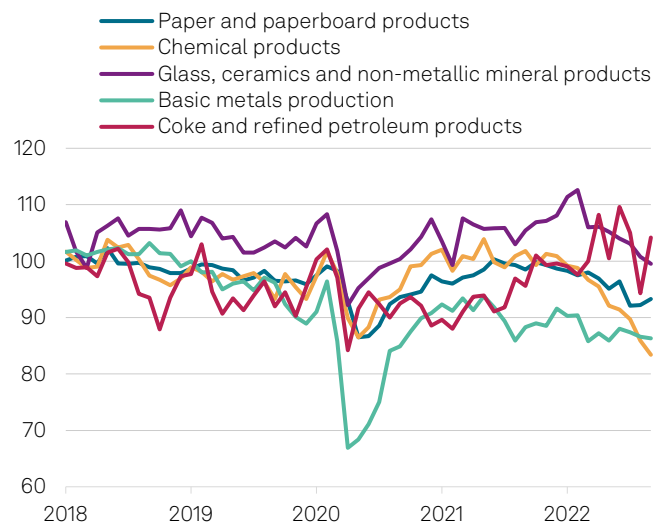
EU-27 energy-intensive sectors are losing competitiveness and market share
Recent change in extra-EU 27 trade volumes by sector



Bubble size represents Jul. 2022 export value. Sources: Eurostat, S&P Global Ratings.

Chart 6

...With German chemicals (-17%) and glass, ceramics, and other mineral production (-8%) hardest hit
Production index 2015=100



Sources: Destatis, S&P Global Ratings.

What we think and why

European gas and power markets are likely to remain tight for at least two to three years, reflecting the challenges of replacing Russian energy. This will alter business models and profitability for energy-intensive industries. The costs of regulation could exacerbate the situation if, for instance, the proposed carbon border adjustment mechanism doesn't adequately address carbon leakage, especially once the free allocation of emission permits phases out after 2026. That would further undermine the international competitive position of energy-intensive European industries.

Currency valuation and labor costs also matter to cost competitiveness. Since European economies are export oriented, the sustained strength of the U.S. dollar relative to European currencies may offset some of the continent's lost cost competitiveness. Also, labor costs have risen more slowly in the European manufacturing sector than in the U.S. in the past decade. The millions of refugees from Ukraine and the conflict region may help contain wage pressures amid tight European labor markets and as the working population ages.

The energy shock adds urgency to the energy transition. Under its policy (NextGenerationEU) to foster the green transition and decarbonize its economy, Europe is sending money to member states and public investment is on the rise--something not seen in the past decade in Europe. For instance, the EU is leading the way to decarbonize its cement industry. It has also drafted a plan--called REPowerEU--to save energy, produce clean energy, and diversify energy supplies. Some countries have national programs to shield their industrial fabric from soaring energy prices. But the reality is the global economy will remain heavily dependent on fossil fuels for many years, with demand increasing until at least 2030, in our view.

What could go wrong

Time is an important aspect to the risk of restructuring the industrial base. The negative shock of higher energy prices is here and now, while the positive effects of cheaper labor and a weaker currency will only show up later. The terms of trade for some European economies could take a long time to recover, and deindustrialization could be difficult to reverse.

Europe's energy-intensive industries will have to make some tough choices. Facing a structural, geopolitically induced energy shock, low-growth environment, and regulation to accelerate the energy transition, industries might migrate even more to higher value-added products. Producers of more-commoditized products, such as base chemicals, with balance sheet strength are likely to expand investment in plants closer to expanding markets and in locations, such as the U.S., that can provide cheaper, more secure energy, as well as the necessary labor. Smaller, domestic, and less-diversified manufacturers unable to switch to cheaper energy sources are clearly most vulnerable to a deterioration of credit quality, especially in a slow growth environment.

Deglobalization and slow global growth could wipe out the benefits of currency depreciation and cheap labor. Today's geopolitics aren't conducive to openness, and Europe is the largest economic region most reliant on international trade. What's more, the economic slowdown in the U.S. and China, Europe's two largest trading partners, isn't helping Europe gain significant export benefits from currency depreciation.

Read more

[The Underbelly of Germany's Export Prowess](#), Sept. 7, 2022

[Europe Braces for a Bleak Winter: A Downside Scenario Assuming A Russian Gas Cutoff](#), Aug. 29, 2022

The negative shock of higher energy prices is here and now, while the positive effects of cheaper labor and a weaker currency will only show up later

Supply Chains | Will the U.S.-China semiconductor dispute split the chip industry?

U.S. efforts to restrict China’s access to high-end semiconductor technology threaten to divide the global chip industry. But such a rift would cost trillions of dollars and take up to a decade.

Primary Credit Analysts

David Teshler
New York
+1-212-438-2618
david.teshler@spglobal.com

Terry Chan
Melbourne
+61-3-9631-2174
terry.chan@spglobal.com

David Tsui
San Francisco
+1-415-371-5063
david.tsui@spglobal.com

How this will shape 2023

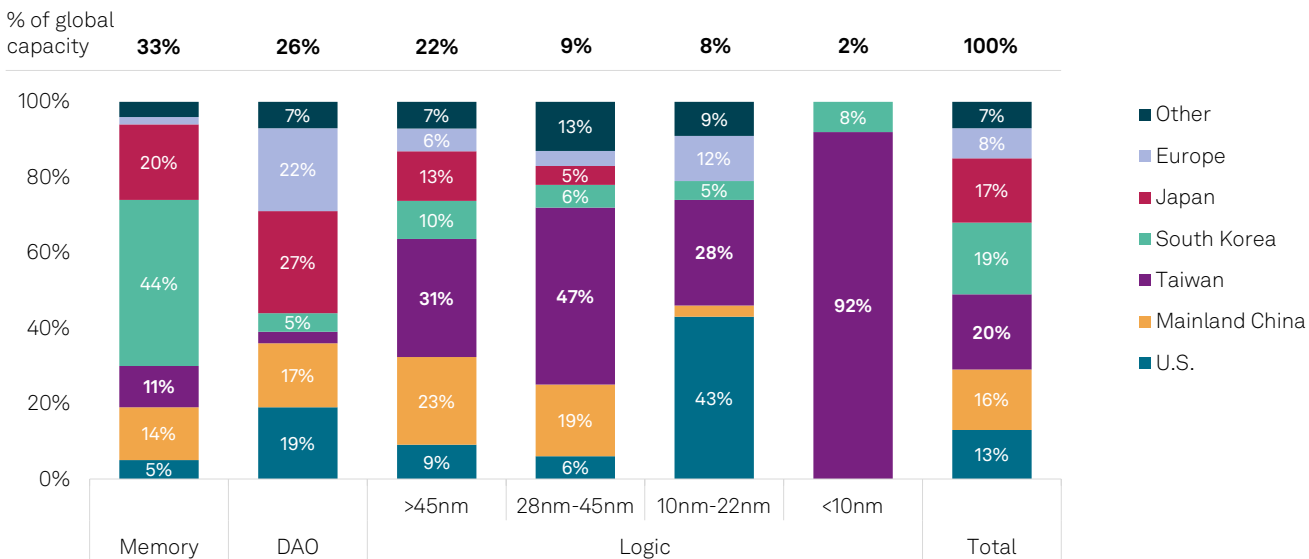
Semiconductor supply chains could be reconfigured. Tensions between the U.S. and China could result in a bifurcation of the global chip industry, which could be quite costly and slow, raising quality, reliability, and cost concerns all along the supply chain. Disruptions will mean less efficiency, with greater uncertainty and profit-margin compression weighing on companies’ creditworthiness, given an increasingly fragmented supply chain with more embedded risks.

The U.S. is pushing to become a global player in chip manufacturing. The U.S. took a big step toward this end with the CHIPS and Science Act. The legislation, and the \$53 billion it provides for manufacturing incentives and R&D over the next 10 years, is critical to promoting semiconductor production in the U.S. Subsidies could spur investment, like Idaho-based Micron Technology’s plan to invest \$20 billion in a mega fabrication plant in New York, and more importantly keep domestic manufacturers from expanding elsewhere. This would help reverse years of decline in the U.S. share of global chip manufacturing capacity to about 12% from more than three times that (around 37%) in 1990. But to truly transform the industry, much more investment—public and private—is needed, given that a state-of-the-art foundry typically costs at least \$10 billion and takes three to five years to build. Moreover, the Semiconductor Industry Association and Boston Consulting Group estimate that each region would need \$1.2 trillion to localize supply chains to match 2019 production.

China may need to shift from trailing-edge to leading-edge manufacturing to continue to compete effectively

U.S. strong at high (but not highest) end of chip manufacturing; China at lower end

Breakdown of the global wafer manufacturing capacity by region, 2019 (%)



DAO--Discretes, analog and optoelectronics and sensors. nm--Nanometers, i.e. length of transistor gates—smaller gate implies greater processing power. Sources: Semiconductor Industry Association, Boston Consulting Group, S&P Global Ratings.

China will likely accelerate its tech-innovation efforts. We anticipate that China will become more aggressive in encouraging the domestic sourcing of chips and tech products to satisfy its needs, rather than sourcing externally. Already a major manufacturer of lower-level, "trailing-edge" processors, China has a strong incentive to build up its leading-edge manufacturing to compete effectively (see chart). While China's tech firms have a long road ahead to close the gap with their U.S. rivals, progress has come from the country's "national champions," including Semiconductor Manufacturing International Corp., a partly state-owned contract manufacturer; Yangtze Memory Technologies, a state-owned NAND flash memory chipmaker; and ChangXin Memory Technologies, a partly state-owned DRAM flash memory chipmaker. We think China will subsidize these state-backed companies to become dominant players in their respective areas.

What we think and why

Diversifying tech supply chains away from China is easier said than done. The world's complex tech supply chains took shape over decades, and U.S. tech firms will have to tread carefully when shifting or adding a manufacturing presence outside China to avoid alienating an important customer base. Meanwhile, China's share of global exports has surged in recent years and now exceeds 20%. S&P Global Ratings believes China's record of maintaining and building on its central role in global production underscores the resilience of its export engine and the pull it continues to exert on manufacturing supply chains.

For the U.S., a shift from design to fabrication would be a giant leap. For roughly 30 years, the U.S. semiconductor industry has focused on design and marketing, outsourcing manufacturing to foundries (also known as a "fabs" or fabrication plants) and back-end assembly and testing to other service providers, mostly based in Asia. Only a handful of U.S. semiconductor companies have a significant manufacturing presence in the U.S.: Intel, Micron Technology, Texas Instruments, Analog Devices, and GlobalFoundries.

Changes are afoot in a fast-growing industry. Diversification efforts, which have been underway since the trade and tech dispute between the U.S. and China started in 2018, are important because the semiconductor market is huge and booming, expanding more than 20% to about \$600 billion in sales in 2021, according to McKinsey. Driven by the automotive, data center, and wireless industries, the global chips market could expand by 6%-8% annually, on average, through 2030, when it would reach \$1 trillion in sales globally. Taiwanese foundries account for most of the global market, the biggest being Taiwan Semiconductor Manufacturing Corp., which makes microchips for Apple, Advanced Micro Devices, and Qualcomm, among others.

What could go wrong

Escalating geopolitical tensions add uncertainty. Trade tensions, pandemic-related disruptions, and some economies' efforts to become less dependent on Chinese manufacturing are complicating China's place in global supply chains. The relationship between the U.S. and China remains strained. Tensions regarding Taiwan are casting a pall over the long-term business and economic prospects of the territory. The semiconductor sector would be the most vulnerable if cross-strait tensions worsen further.

A global recession could weigh on demand. While the global IT market has proved resilient through (and in many ways benefited from) the pandemic, a global recession could play out differently. This is especially true given persistently high inflation and lingering supply chain concerns. And while it seems unlikely that the expansion in global IT spending would reverse course, growth could stumble enough that new investment in manufacturing plants could slow.

Read more

[Technology And Geopolitics: What If The Semiconductor Industry Bifurcates?](#), Nov. 13, 2022

[U.S. Chips On A New Block With Expanded China Restrictions](#), Oct. 19, 2022

[Asia-Pacific Tech Firms Face Long-Term Risk From China Chip Restrictions](#), Oct. 13, 2022

Energy Transition | How has the decarbonization pathway changed as access and affordability move up the energy transition agenda?

The energy trilemma of decarbonization, supply security, and affordability is rebalancing as the energy crisis in Europe, global supply-chain bottlenecks, and emerging-market growth limit greenhouse-gas-emission reductions worldwide, despite countries implementing more decarbonization policies.

Primary Credit Analysts

Pierre Georges
Paris
+33-14-420-6735
pierre.georges@spglobal.com

Simon Redmond
London
+44-20-7176-3683
simon.redmond@spglobal.com

Karl Nietvelt
Paris
+33-14-420-6751
karl.nietvelt@spglobal.com

How this will shape 2023

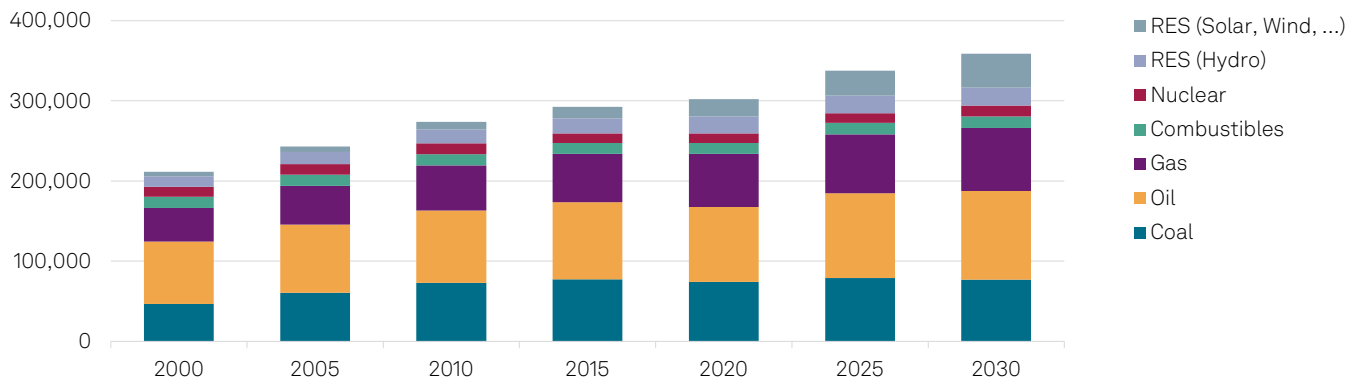
As many countries have expanded their decarbonization ambitions, we expect energy transition investments to keep increasing during 2023. Economies, including major global players like China, the U.S. and EU, mainly aim to achieve their targets through the greater inclusion of renewables, hydrogen, and electrification into their energy mixes and through technological solutions, such as a faster roll-out of offshore wind and carbon capture.

Access to energy and security of supply are crucial for maintaining healthy economies. The European energy crisis and related Russia-Ukraine conflict show that a rapid shift away from fossil fuels is far from easy. The resulting temporary delay in fossil-fuel phaseout will make it harder for Europe to curb carbon emissions in 2023, since Russian gas will mainly be replaced by more polluting coal, LNG, oil, and other combustibles. Developing markets' growing economies, especially China and India, also require more energy, and the pace of renewables growth is in most cases insufficient to meet this incremental demand.

Given these existing and shifting dynamics, the global economy will remain heavily reliant on fossil fuels. Global primary energy demand depends on fossil fuels for more than 75% of the total energy mix. Carbon emissions in 2022 should already exceed pre-COVID-19 levels. And under current policies and economic growth prospects, we expect global demand for fossil fuels will increase until at least 2030, eventually denting any substantial global carbon-emission reduction. Nonetheless, even as hydrocarbons are indispensable to the global economy, climate policies and incentives increasingly tip the investment balance toward new renewables and low-carbon applications.

Global fossil fuel demand will continue to increase

Primary energy demand by energy source (MBOEPD)



MBOEPD--Thousand barrels of oil equivalents per day. Source: S&P Global Commodities Insights.

What we think and why

Decarbonization plans face major execution risks. Colossal decarbonization ambitions translate into a huge rise in investment needs, notably for renewables. But the shift toward greener energies faces growing supply-chain bottlenecks for some components and materials, as well as local opposition to entire projects. This will likely continue to delay the rapid deployment initially envisaged, even if governments seek to reduce administrative hurdles for permitting. We see a risk that returns could be less attractive for power developers, due to higher upfront outlays.

Security of supply has become the priority in the immediate term. Increasing the share of renewable power in the energy mix and overall production of electric vehicles certainly is a key pathway to reduce reliance on fossil-fuel imports, notably for Europe. But transition will evidently spread across decades. At the same time, the conflict has immediately made clear how important other domestic fuel sources, like coal, are to certain economies. This is notably the case for China, where coal demand may decrease to below 50% of primary energy by 2030 but still increase in absolute terms.

A faster energy transition could further raise cost inflation in 2023. As global competition for new renewables increases, their construction costs are going up. For instance, the cost of solar activities will likely rise by about 4% in 2023, according to S&P Global Commodity Insights, after going up by about 8% this year. Yet energy from existing renewable sources remains much cheaper than fossil fuels in the current environment. Ensuring energy supply could add even more to the cost of inflation, with tight LNG supply conditions likely remaining prevalent until at least 2025 and likely resulting in volatile and historically high LNG gas prices globally.

What could go wrong

Higher energy bills for a long period may be hard to sustain and could heighten social discontent. This is especially a concern in Europe and several emerging markets. Managing the affordability and social inequalities of the energy transition were already high on the agenda at COP27 and elsewhere but may also play a greater role in the design of future transition policies.

Uncertainties regarding implementation details of new decarbonization plans may result in significantly different outcomes for decarbonization pathways and costs for each industry. Market participants will be watching the detailed outcomes of Europe's RePowerEU plan and the U.S. Inflation Reduction Act. While both promise to inject billions in the energy transition, details are still missing on how these will be applied and under which conditions. The resulting changes could be accelerated or delayed as a result, while affordability, security of supply, as well as the potential for resulting stranded assets will be key considerations in the ongoing negotiations.

Greater gas demand destruction in Europe and changes to consumer behavior would support decarbonization but could have some negative credit effects. The energy supply gap in Europe is forecast to require gas demand destruction of an estimated 15% in 2022-2023, notably for industries, which may lead to business disruption. However, the energy demand decline may be temporary, or mask shifts to other energy sources or substitution with imported goods. A successful energy transition will ultimately also require a change in consumer behavior or policy changes that influence the demand side (and could therefore weigh on credit quality). But signals are not clear, while material behavioral and adoption shifts are not occurring yet. For example, industry data point to a full recovery of U.S. and European air traffic by 2023 and 2024, respectively, to pre-COVID-19 levels. The area to watch here is how customer awareness may alter travel habits and whether future environmental taxes could significantly raise the cost of air travel. Energy companies will have to contend with market volatility in 2023, but these current events are shaping and speeding these industries' structural shifts for the long term.



Climate Risk | What are the short- to medium-term costs of climate change?

Most sectors face costs from climate transition, while preparing for, and adapting to, ever increasing exposure to physical risks.

How this will shape 2023

Climate risks continue to crystallize and are increasing. Aligned with recent trends, 2023 will likely see more instances of damaging and costly climate hazards (hotter and longer heatwaves, droughts, more severe floods, and damaging storms), solidifying how investments in adaptation and resilience are critical to help entities cope with the rising threats posed by physical risks. As global warming accelerates and the possibility of reaching net zero by 2050 becomes increasingly challenging, we expect the operational and financial implications associated with disruption and damage will increase as extreme weather becomes more common.

Against the backdrop of more frequent and severe weather-related events, governments' focus on climate transition policies will continue to increase. Carbon pricing regulation will spread to additional jurisdictions and sectors. For example, the EU is set to cover the maritime, transportation, building, and road sectors with Emissions Trading Schemes (ETS), and China's ETS is set to cover industry in its next phase. Additionally, policymakers are likely to increase green public spending and/or regulatory measures to encourage a switch to lower-carbon-emission technologies, as seen in recent budgets. This will continue to increase the amount of economic activity affected by recent climate-related public investment packages.

But the current energy crisis will reshape physical and transition climate-related risks, affecting efforts to limit emissions worldwide. Energy importers that are moving away from Russian energy supplies are likely to rely more on carbon-intensive energy in the short term. However, ongoing high energy prices and energy security concerns could fuel public- and private-sector investment in renewables and improvements in energy efficiency, which we believe will ultimately speed up the energy transition. Already, the current crisis has resulted in increased support for a faster roll-out of renewables and is likely to bring significant efficiency gains on the demand side. The EU, U.S., Japan, Korea, China, and India have all increased their clean energy ambitions as a response to the crisis according to the International Energy Agency (IEA). The IEA estimates that these new measures will lead to a 50% increase in clean energy investment, from today, to more than \$2 trillion a year by 2030.

What we think and why

Transition risks are higher in the short to medium term as climate policies increase, potentially leading to some market repricing and divestment. Regulators and central banks are pushing financial actors to account for the financial impact of climate change, especially in developed markets. We believe greener policy agendas will move further into the mainstream and may have cross-border implications. The implementation of policies such as the U.S. Inflation Reduction Act, and further development in 2023 of the EU's Fit For 55 roadmap (e.g. the carbon border adjustment mechanism), may begin to reshape markets by making green business models in certain regions relatively more attractive in terms of returns than their less environmentally friendly counterparts, thus driving new patterns of investment globally. In response, mitigation efforts may also include divesting high-emitting assets, but also increasing borrowing costs for issuers that fall behind on the transition.

Importantly, physical risks will continue to intensify over time, even if significant progress on decarbonization is made. Due to historical emissions and the lag in the climate system, even if current pledges are implemented, we estimate that physical risks are set to increase by at least

Primary Contacts

Marion Amiot

London
+44-20-7176-0128
marion.amiot@spglobal.com

Terry Ellis

London
+44-20-7176-0597
terry.ellis@spglobal.com

Paul Munday

London
+44-20-7176-0511
paul.munday@spglobal.com

In 2021, adaptation and resilience accounted for only 4% of green bond spend

Global Credit Outlook 2023: No Easy Way Out

one-third by 2050, putting 4% of global GDP at risk, compared to 3.3% under the Paris Agreement. Even today, more vulnerable regions--in particular South Asia, Sub-Saharan Africa, and Central Asia--are experiencing sizeable and rising GDP losses from physical climate risks, but are also the least ready to adapt to those risks since they often comprise lower- and lower-middle-income countries (see chart). Finding solutions to manage loss is thus already contemporary and will remain a focus, with international cooperation being part of the debate.

South Asia, Central Asia, and Sub-Saharan Africa will see more worsening of climate conditions

Percentage of GDP at Risk under RCP 4.5 (%)



Source: S&P Global Ratings.

What could go wrong

Current policies do not do enough to limit global warming to 1.5 degrees. According to the U.N., while progress has been made, current commitments are not on track to meet the well-below 2 degrees objective of the Paris Agreement, or the more ambitious net-zero pathways.

Implementation challenges remain sizeable after setting targets. At a time of a complex economic and geopolitical environment, short-term focus might be given to other priorities, which could exacerbate decarbonization and adaptation costs in the medium term. Energy security concerns represent this complexity, highlighting that transition takes time and entails economic trade-offs and redistributive considerations.

Decision-makers also face potential dilemmas between transition and physical risks, where investments in one might not always benefit the other. In many instances, we observe that countries more exposed to physical risks have tighter budget constraints than their less exposed developed peers, and often do not have the means to tackle physical and transition risks at the same time as ongoing domestic issues. Meanwhile, infrastructure initiatives that fund resilience might also lead to increased energy use and put more pressure on entities' transition strategies. Yet more people, homes, and companies will be left exposed to physical risks without sufficient investment. Wider co-benefits might be achievable but may need thinking at the system level, not just the asset scale.

Global climate finance for adaptation remains scarce compared to mitigation. We observe that issuance of green, social, sustainability, and sustainability-linked bonds (GSSSB) has increased to 12% of total issuance (see "[Global Sustainable Bond Issuance: Likely To Fall In 2022](#)," published Sept. 20, 2022). To date, these have largely focused on and funded climate transition, with limited use of proceeds applied to address physical risks. Questions remain about who should pay for the interventions needed to adapt to physical risks. As this investment imbalance continues in 2023, it will further expose those most at risk from irreversible physical risks locked into the climate system.

Physical Risk | If extreme weather events become the norm, how might individuals, companies, and governments manage the costs?

Primary Credit Analysts

Dennis Sugrue

London
+44-7795-832-367
dennis.sugrue@spglobal.com

Nora Wittstruck

New York
+212-438-8589
nora.wittstruck@spglobal.com

Paul Munday

London
+44-20-7176-0511
paul.munday@spglobal.com

As global temperatures rise, the costs of extreme weather events are increasing. While insurance can help manage these costs, investment in adaptation and mitigation measures will not only reduce the impact of climate hazards but also assist in preserving their insurability.

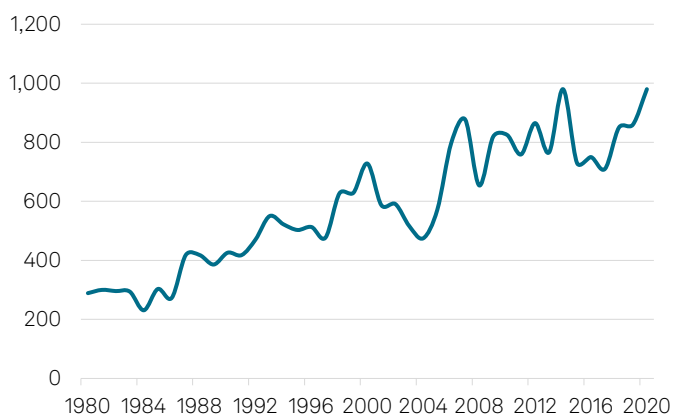
How this will shape 2023

The frequency and severity of extreme weather events are increasing, a trend we expect will continue as global temperatures rise. Although seasonal variability can lead to fluctuations in the number of extreme events annually, the long-term trend is clear (see chart 1). Rising global temperatures are contributing to the increasing frequency and severity of extreme weather events, particularly so-called secondary perils, like wildfires, floods, and droughts. The proliferation of these secondary events exposes a wider swathe of the global economy and international society to climate hazards that may have not yet experienced primary perils, such as hurricanes or windstorms.

The costs of these events will also continue to rise. The financial impact of extreme weather will remain on an upward trajectory (see chart 2). In addition to a greater number of areas that will be exposed to extreme events, other factors like urbanization; increasing economic interconnectivity, including through global supply chains; aging infrastructure; and fewer natural defenses will drive up the costs.

Chart 1

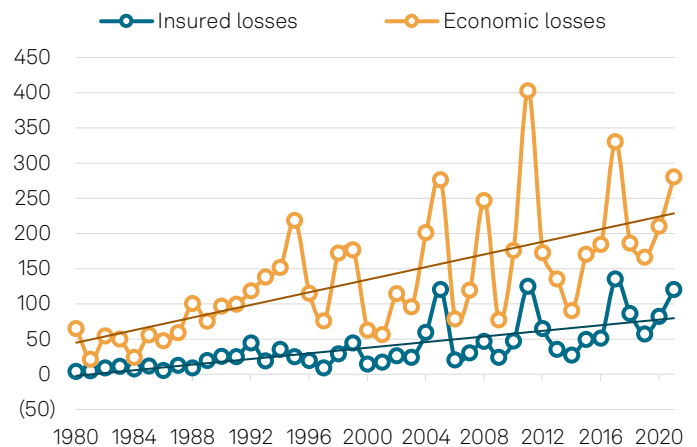
Natural disasters are on the rise: The growth of secondary perils is bringing extreme weather around the world
Number of extreme weather events



Source: Munich Re NatCatSERVICE.

Chart 2

The disaster protection gap is widening: Economic losses are outpacing insurance coverage
Insured and economic losses (bil. \$)



Source: Munich Re NatCatSERVICE.

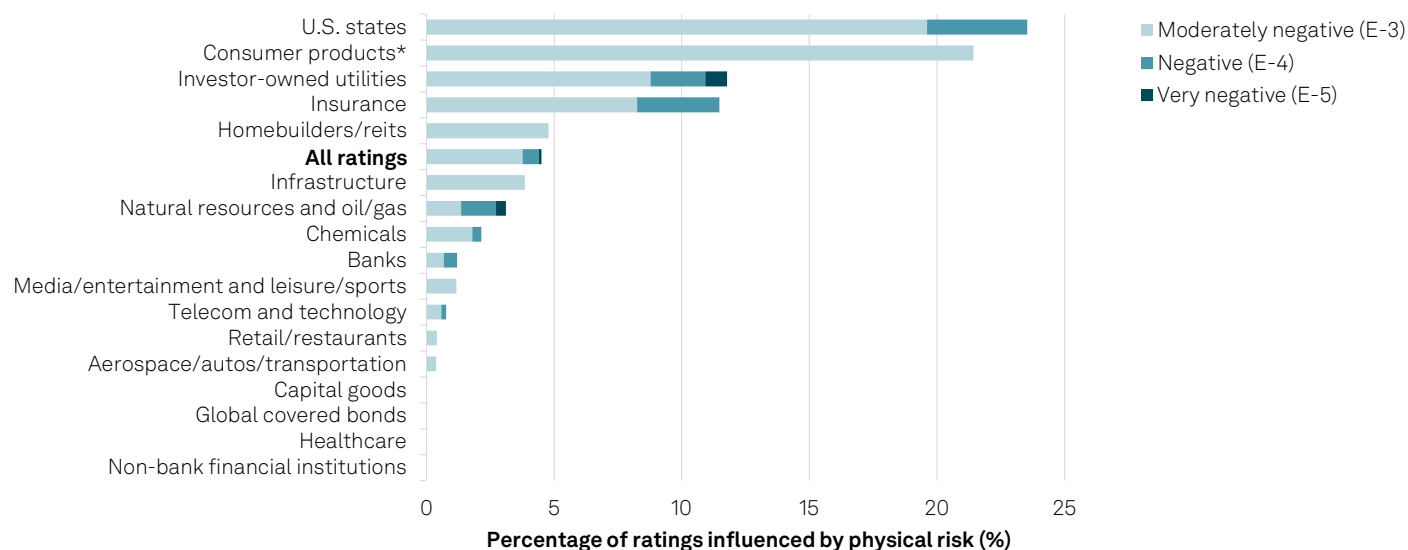
What we think and why

Physical risks can have negative implications for credit. We have identified physical risks as one of the environmental credit factors that can affect creditworthiness. Our "Environmental, Social, And Governance Principles In Credit Ratings," criteria, published Oct. 10, 2021, articulates the principles we apply to incorporate environmental, social, and governance (ESG) credit factors, including physical risk factors, into our credit ratings analysis. For example, costs associated with damage or lost revenue due to temporary shutdowns or supply chain disruptions can affect corporate issuers' cash flows. Rising exposure to extreme weather events can also adversely affect the cost of insurance and property valuations, which can reduce revenue collections for government entities or increase repayment risk for banks' mortgage books and mortgage-backed securities. To date, the impact of physical risk on credit quality varies by sector (see chart 3). For example, looking at the sectors where we've published ESG Credit Indicators, we observe that physical risk has had a negative influence on the credit rating analysis of 25% of U.S. states, but only 1% of telecommunications entities. For more information on our ESG Credit Indicators, please see "[ESG Credit Indicator Definitions And Application](#)," published Oct. 13, 2021.

Chart 3

The impact of physical risk on credit rating analysis varies by sector

Physical risk influences credit analysis for nearly 5% of issuers where we've assigned an ESG Credit Indicator



*Includes agribusiness and food companies. Source: S&P Global Ratings.

Insurance can play an important role in helping issuers manage physical climate risk. Insurance against physical risks is a key mitigant for many sectors, which explains why it is comparably more of a significant credit risk for the sector than others, influencing the credit analysis of 11% of insurance ratings. To manage that credit risk, we have observed insurers taking steps to improve underwriting standards and the understanding of physical risk. This is helping insurers to raise policyholders' awareness and advance mitigation efforts of physical risk, which may help reduce losses when events occur. In addition, timely claims payments can help stabilize cash flows and enable a faster response, recovery, and reconstruction, which can bolster economic activity following an event.

Nevertheless, the protection gap will continue to widen. The amount of insured losses from extreme weather is increasing more slowly than economic losses, leading to a protection gap in the economy. We have observed that some insurers are increasingly managing their exposure to catastrophe risks by raising premiums, screening out hazards, and reducing coverage or exiting highly exposed regions, which could exacerbate this trend.

Investments in adaptation and resilience can help the global economy manage the risk of uninsurability potentially closing the protection gap. We believe physical risks from climate change, and the associated financial and economic costs, will keep rising even if significant progress is made on decarbonization in the coming years, due to the impact of historical emissions that have already affected the atmosphere. In our view, at some stage, the cost of extreme weather and physical risk could lead to unaffordable, or unavailable, insurance coverage. We have observed significant insurance rate hikes in areas habitually experiencing weather-related losses, and some insurers have withdrawn from certain markets--for example, Florida or California, with respective losses from hurricanes and wildfires--where writing new business or renewing policies is unattractive. We believe investments in adaptation and resilience measures could help offset some of the rising economic costs, helping to mitigate losses associated with extreme weather events, encourage the ongoing availability and affordability of insurance coverage, and perhaps promote further insurance penetration.

What could go wrong

Affordability and availability of insurance could deteriorate. Although widespread insurer exits are unlikely in 2023, we believe insurers will demonstrate pricing discipline and monitor exposure growth by actively controlling risk accumulations, which will potentially limit how physical risks influence their credit fundamentals. However, higher premiums and policy non-renewals could lead to affordability and operational pressures in other segments of the economy, including corporations, banks, households, and local governments. This could also change the composition of communities if insurance protection gaps widen in areas most exposed to climate hazards.

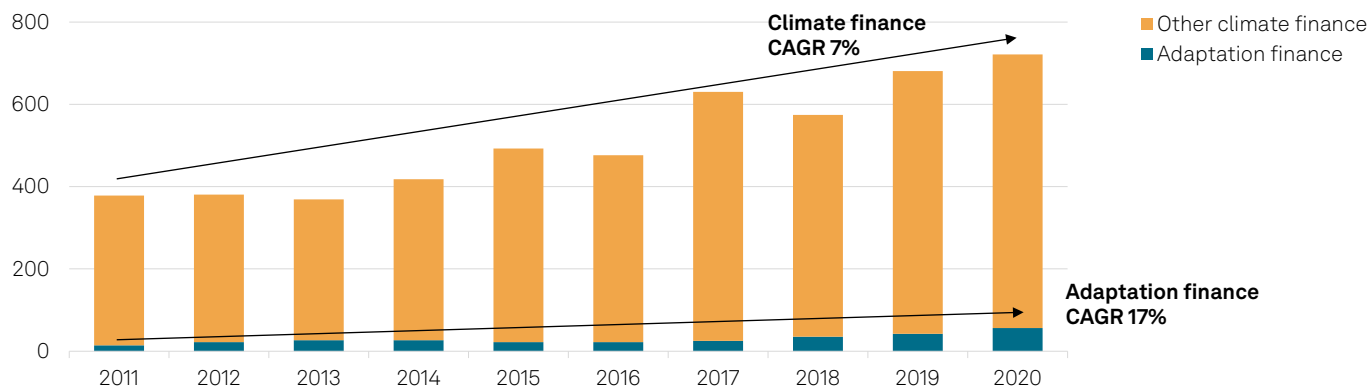
Continued lack of supply and demand for investment in adaptation and resilience could increase corporations, households, and governments' vulnerability to climate change.

Investment in climate adaptation is lagging (see chart 4), accounting for less than 8% of climate finance globally. According to the Climate Policy Initiative, adaptation finance has expanded faster than mitigation finance over the last 10 years, but there is still a long way to go before investment in adaptation meets the \$140 billion-\$300 billion annual cost of adaptation that the United Nations Environment Program estimates the world will incur by 2030. A number of technical hurdles may constrain investment in adaptation, including the difficulty of predicting and measuring results and returns, uncertainty of the impact and efficacy of responses of adaptation projects, lack of data and standardization, and lack of consensus on how to consider positive externalities created by resilience investments. If investment in adaptation and resilience is insufficient to contain the risks posed by extreme weather within insurers' risk appetites, it could accelerate insurer exits or lead to steep price increases, widening the protection gap and pushing the risk back to corporations, households, and governments.

Chart 4

Adaptation finance is growing, but is still a modest share of global climate finance

Annual adaptation and other climate finance (bil. \$)



Source: Climate Policy Initiative.

Read more

[Global Reinsurers Part Ways On Natural Catastrophe Risk--Even As Prices Rise](#), Aug. 29, 2022

[Storm Clouds Or Clear Skies Ahead: How Rising Insurance Premiums From Environmental Physical Risks Could Affect U.S. Local Government Credit Ratings](#), May 10, 2022

[Storm Clouds Or Clear Skies Ahead: How Rising Insurance Premiums From Environmental Physical Risks Could Affect U.S. RMBS And CMBS](#), May 3, 2022

[Weather Warning: Assessing Countries' Vulnerability To Economic Losses From Physical Climate Risks](#), April 27, 2022



Cyber | How will cyber warfare shape credit risk?

In an increasingly volatile geopolitical environment, cyber risk is a growing threat, and entities with weaker cyber governance and risk management will be more exposed to rating implications in 2023.

How this will shape 2023

Cyber is embedded in nation-state conflict. Amid the continuing Russia-Ukraine war and strategic confrontations between China and the U.S. and regional neighbors, we may see increased use of cyber capabilities accompanying military actions and foreign policy. The low deployment costs of cyberattacks relative to conventional military tactics, challenges in attributing them, and the potential scope for retaliation will help governments achieve foreign policy goals through espionage or sabotage of critical infrastructure.

Cyberattacks with geopolitical motives will aim to create maximum economic and financial impact or disruption. Entities providing critical infrastructure, public services, and financial services are likely key targets for state or state-backed attackers. Other entities could easily become caught in the cyber crossfire. The more time attackers linger inside systems, the more ammunition they can muster for financial and reputational damage. Rating actions following cyberattacks tend to be in cases where it took time for entities to detect the breach or where the response was slow or insufficient.

Cyber warfare will continue to evolve, necessitating more sophisticated insurance underwriting. There is a huge gap between the mounting economic and financial losses associated with cyberattacks and the size of the cyber insurance market, where coverage is less than 1% of economic losses. A growing number of (re)insurers are hesitating to underwrite larger risks, and some have decreased their risk appetite as the frequency and severity of cyberattacks increased and systemic vulnerabilities to geopolitical risk have grown.

What we think and why

Governments will increase their investment in cyber capabilities and defenses. As cyberattacks become increasingly sophisticated, governments will likely improve cyber preparedness through better risk and governance frameworks and detection and response strategies. Spending on cyber as part of defense and military priorities will increase in importance. For instance, the U.S. has budgeted an 11% increase in federal cyber security spending to \$11 billion for 2023 and dedicated another \$11 billion to the Department of Defense for cyber defense. We also expect growing cooperation between allied governments and international agencies to support states with weaker financial resources and cyber expertise. Significant international funding, technical assistance, and collaboration, including by the U.S. government and large American technology providers, such as Amazon and Microsoft, are thus far limiting the disruption caused by Russian cyberattacks on Ukraine.

Cyber insurance can mitigate cyberattack risks, but rising premiums and the limited scope of coverage are dampening demand. Clear policies with precise wording are key to the sustainable development of the cyber insurance market, as highlighted by the contractual treatment of cyber warfare in the wake of the Russia-Ukraine war. We will continue to watch the evolving credit implications of cyberattacks due to any potential shortfalls in coverage for policyholders and for insurers' underwriting results, given many insurance policies' still-ambiguous "act of war" exclusion clauses.

Primary Credit Analysts

Zahabia Gupta

Dubai
+971-43-727-154
zahabia.gupta@spglobal.com

Manuel Adam

Frankfurt
+49-693-399-9199
manuel.adam@spglobal.com

Simon Ashworth

London
+44-207-176-7243
simon.ashworth@spglobal.com

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[Cyber Threat Brief: How Worried Should We Be About Cyber Attacks On Ukraine?](#), Feb. 22, 2022

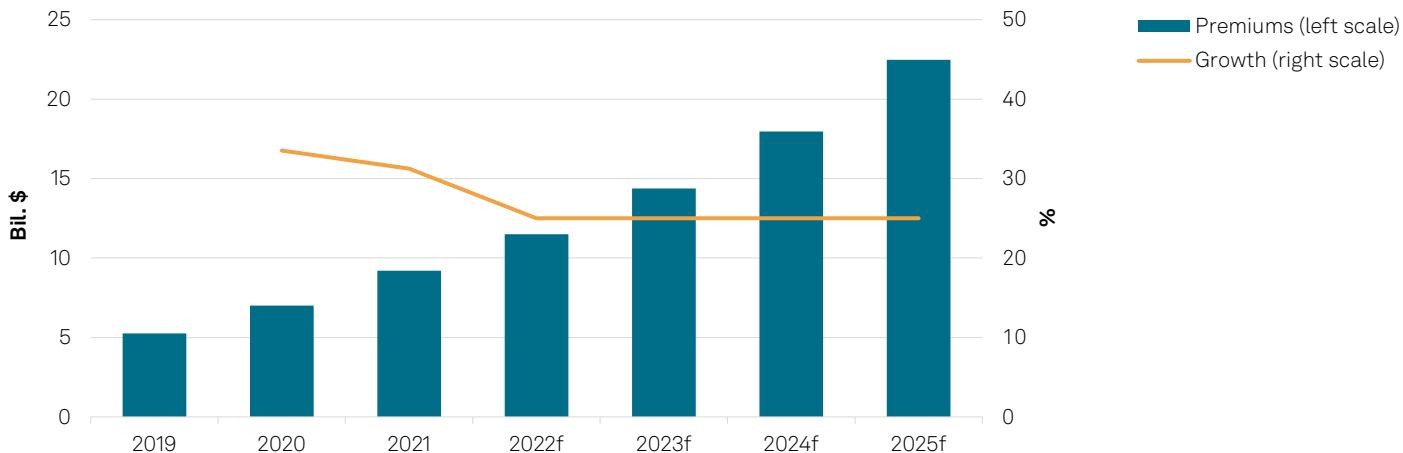
[Cyber Risk In A New Era: Let's Not Be Quiet About Insurers' Exposure To Silent Cyber](#), March 2, 2021

Cyber insurance market coverage is less than 1% of economic losses associated with cyberattacks

Nevertheless, cyber insurance is still the fastest-growing subsector of the insurance market.

We expect global cyber insurance premiums to increase by 25%, to over \$14 billion, in 2023 (see chart). However, much of this recent growth stems from substantial price increases rather than underlying growth in the size or volume of contracts. The cyber insurance industry is in a period of portfolio optimization, leading to large rate increases, adjustments in coverage and conditions, and a greater focus on risk differentiation. Entities with more resilient cybersecurity strategies will receive more attractive insurance rates, which could encourage better cyber hygiene. Still, cyber insurance is only one element of cyber risk management. The risks will never be entirely avoidable or removable, and there is no replacement for good security practices.

Global cyber insurance premiums are set to expand by 25% per year



f--Forecast. Sources: Munich Re, S&P Global Ratings.

What could go wrong

The impact of cyberattacks could spread beyond the intended targets, and across sectors and geographies.

Given increased interconnectedness, digitalization, and concentration of third-party vendors, cyberattacks by states or state-sponsored actors could create knock-on credit implications for corporations, financial institutions, and other entities across the globe. In 2017, the NotPetya campaign--attributed to operatives allegedly working on behalf of the Russian military acting against assets in Ukraine--led to the spread of the attack worldwide.

States' weaponization of cyber will trigger retaliation that could further escalate conflicts.

Explicit retribution for cyberattacks, thus far fairly limited, will likely evolve. Responses by targeted state entities and international organizations could include severing of diplomatic ties (as recently between Albania and Iran) or the imposition of sanctions that could affect the perpetrators' access to international and financial markets.

"Silent cyber" could pose credit risks both for insurance policyholders and insurers.

Policies that do not explicitly address cyberattack coverage, or carry cyber warfare exclusions through force majeure clauses, can lead to insurers facing losses to settle unexpected cyber-related claims or expose policyholders to risks they thought were covered. Insurers may move to comprehensively exclude systemic and nation-state attacks from insured claims. But stricter underwriting may also mean more denials of cyber insurance to protect policyholders' balance sheets, or more costly policies. This may potentially leave entities exposed to cyber threats without sufficient liquidity to deal with the aftermath of a cyberattack.



Future Of Money | Will stablecoins and CBDCs become mainstream?

Although work on policy regarding stablecoins and central bank digital currencies (CBDCs) will speed up in 2023, their widespread adoption--and the attendant disruption--are still far off.

How this will shape 2023

A key question is when dedicated legislation for stablecoins will pass in the U.S. This will be critical to the future progress of stablecoins--cryptocurrencies whose market value is tied to an external indicator--since 95% of stablecoins globally are linked to the U.S. dollar. The causes of the recent failure of crypto exchange FTX and other protocols vary, and the timing of stablecoin regulations remains uncertain. But these events will sharpen the overall regulatory focus in 2023, which should ultimately lead to restrictions on algorithmic stablecoins (after the collapse of Terra and Luna in 2022) and on who can issue stablecoins. In Europe, the Markets in Crypto-Assets (MiCA) regulation proposed in 2022 should clarify the framework but wouldn't take effect before 2024, even if the European Parliament passes it by the end of this year or early in 2023.

While we expect another flurry of announced CBDC pilots, most initiatives will remain targeted in scope. In 2023, European authorities will likely discuss the possibility of launching a digital euro. But even if an agreement is reached, the launch is unlikely to occur until 2026 or later. That said, we expect further targeted wholesale use of CBDC (rather than retail experiments) in the region, typically involving mainly central banks and financial institutions (see chart). In the U.S., recognizing the potential risks and rewards, the White House has encouraged the Federal Reserve Bank to continue its ongoing research, experimentation, and evaluation of a U.S. CBDC, but there are no commitments to time frames or implementation at this stage. Examples outside Europe and the U.S. continue to thrive, with pilot programs--like the cross-border CBDC transactions between the Central Bank of the United Arab Emirates and the Hong Kong Monetary Authority, the Bank of Thailand, the Digital Currency Institute of the People's Bank of China, and the Bank for International Settlements--likely to continue.

More private-sector entities will trial novel payment mechanisms. In 2023, we foresee a number of payment firms announcing new initiatives, including stablecoin-supported transactions. As payment companies like Worldpay from FIS, Checkout.com, and Stripe have added payment options based on USDC (USD Coin), we expect the volumes of such payments to remain marginal in 2023 until stablecoins and/or CBDCs enjoy widespread adoption.

What we think and why

Stablecoins and CBDCs won't become mainstream in 2023 due to the small market for them and regulatory uncertainty. With the market capitalization of all stablecoins totaling less than \$150 billion as of Nov. 18, 2022--the two largest being Tether (at \$68 billion) and USDC (at \$44 billion)--the total market is just a fraction of the \$5.4 trillion U.S. monetary base. Much broader stablecoin adoption will be predicated on greater regulatory clarity, and the impetus behind stablecoins is also prompting authorities to accelerate work on CBDCs. But even though authorities in certain markets have declared CBDCs to be operational, their scope for now often remains specific to wholesale only, that is, between the central bank and financial institutions, and for certain market activities in particular. In certain countries, the launch of CBDCs has failed to curb the popularity of cryptocurrencies.

Primary Credit Analysts

Alexandre Birry

London
+44-20-7176-7108
alexandre.birry@spglobal.com

Paul Gruenwald

New York
+1-212-437-1710
paul.gruenwald@spglobal.com

Mohamed Damak

Dubai
+971-43-727-153
first.last@spglobal.com

Harry Hu

Hong Kong
+852-2533-3571
harry.hu@spglobal.com

Read more

[Regulating Crypto: The Bid To Frame, Tame, Or Game The Ecosystem](#), July 13, 2022

[Stablecoins: Common Promises, Diverging Outcomes](#), June 15, 2022

Rising interest rates will raise questions about the calibration of yields on cryptocurrencies.

Because central bank rate hikes will dampen some of their appeal, stablecoins and CBDCs will likely be designed as a payment tool rather than a store of value. As rates rise, currency issuers will get seigniorage, which will boost their revenue. Whether they offer those higher rates to currency holders is a different question. But this doesn't change the premise that stablecoins should be safe and simple in their design, and that any offering returns above the risk-free interest rates should be viewed with caution.

What could go wrong

Stablecoin risks can be sensitive to external events and spread to the wider financial system.

We expect the main stablecoins to be backed by low-risk liquid reserves (like cash and Treasuries). However, technical issues, market rumors, or other external events could still spark a run on stablecoin deposits, which would have material implications for the decentralized finance (DeFi) ecosystem, where stablecoins are a key component. Concentration across a small number of key stablecoins could magnify this impact and also lead to a sell-off of assets held as reserves. Conversely, limits to the volume of available safe assets that can be held as reserves may, to some degree, cap the size that certain crypto assets such as stablecoins may be able to reach.

The assessment of risk, as well as many traditional financial institutions' business models, would need to adjust to a broader adoption of stablecoins.

One consideration is understanding risks in stablecoin exposures. For example, stablecoins, which are minted by corporate entities, also embed the credit and operational risk of the minting entity, even if regulations will likely aim to reduce this risk. A material rise in the use of stablecoins and, by extension, DeFi applications could also have other credit implications through changes in the competitive dynamics underpinning various sectors.

CBDCs will affect banks' business models. Our base-case scenario is that most authorities will go for an intermediated model, where commercial banks still have a key role to play. Even under that model, we expect some of the banks' revenue streams may come under pressure, for instance payment transactions. Equally, the underlying technology may offer some efficiencies. The calibration of the CBDC model will also be critical, since the amounts that can be deposited and their remuneration could also change banks' funding profiles.

Stage of development in key banking systems for CBDC



Estimates based on public information including central bank announcements and CBDCTracker.org. CBDC--Central bank digital currency. Source: S&P Global Ratings.

Credit Conditions North America

Worse Before It Gets Better

Key Takeaways

- Sharply rising and higher-for-longer borrowing costs and the prospect of a U.S. recession in 2023 may further strain credit conditions.
- Credit rating trends have turned negative, and we now expect the U.S. speculative-grade corporate default rate to more than double, to 3.75%, by next September.
- The effects of high food and energy prices on discretionary spending are making it harder for corporate borrowers to pass through increased costs. And market liquidity--or the lack thereof--is a growing risk for many lower-rated borrowers.

Regional Credit Conditions Chair

David Tesher

New York

+1-212-438-2618

david.tesher@spglobal.com

Editor's Note: S&P Global Ratings' North America Credit Conditions Committee took place on Nov. 21, 2022.

Already-strained credit conditions for borrowers in North America look set to worsen as we head into 2023, amid the prospect of a recession in the U.S. and sharply rising borrowing costs. S&P Global's economists now expect U.S. GDP to contract 0.1% in 2023, with a mild recession in the first half and below-trend growth for the remainder of the year. And while there are signs that inflation is easing, it's still running well above the Federal Reserve's target. Any perceived monetary-policy misstep (in either direction) could push financing costs even higher and tighten liquidity further, straining borrowers' debt-service capacity.

Credit rating trends have turned negative. Downgrades have outpaced upgrades since August, and the negative outlook bias began to increase in the third quarter. **Defaults, too, look set to tick up.** S&P Global Ratings now expects the U.S. trailing-12-month speculative-grade corporate default rate to reach 3.75% by September 2023, from 1.4% a year earlier.

Inflation is outpacing wage gains, squeezing consumer purchasing power, particularly among lower-income households. As high food and energy prices weigh on discretionary spending, companies may find it even more difficult to pass through increased costs. If cost pressures don't abate soon, profit erosion could worsen, which could harm credit quality.

Liquidity--or rather the lack of it--poses a rising risk, as well. Borrowers and investors face a prolonged period of elevated interest rates. With the high likelihood of a recession ahead and structural changes afoot--from decreased Treasury market liquidity to the retirement of LIBOR--market liquidity could dry up in earnest. With a historically large number of corporate borrowers in the 'B-' rating category and lower, sensitivity to this risk is significant.

Slumps in the U.S. and Canadian housing markets are adding to pressures. While housing supply remains constrained in the U.S., the combination of economic uncertainty and higher mortgage interest rates is halting price growth, and even causing declines, in many markets. In Canada, too, home sales have slowed significantly, and prices have fallen for seven straight months. Any further correction of house prices could weaken the prospects of sectors such as homebuilders, residential mortgage-backed securities, and local governments.

Geopolitical concerns, too, are at the forefront. Most North American borrowers remain insulated from the direct impact of the Russia-Ukraine war, but as the conflict continues and risks of escalation increase, the effects on markets and growth could deepen. Meanwhile, with the U.S. and China in co-opetition, they may cooperate in some areas (e.g. global climate change) but compete in others (e.g. technology); any worsening tensions between the two over the South China Sea region, or an intensifying technology race, could impede trade, supply chains, intellectual property, investments, and financial transactions for both and for other economies.

Top North American Risks

Higher borrowing costs erode debt-service capacity and hinder funding access

Risk level Moderate Elevated **High** Very high **Risk trend** Improving Unchanged **Worsening**

Investors are demanding higher returns for the risks they're assuming amid sustained elevated inflation and prospects of a recession. Any perceived monetary-policy misstep (in either direction) could roil credit markets and result in higher debt-servicing costs and tighter financing conditions. As some lower-rated borrowers begin to feel liquidity strains, this is especially concerning against the backdrop of high debt. Rising policy rates and uncertainty regarding the effects of the Fed's quantitative tightening could also lead to significant repricing of financial and real assets, including a further correction of the U.S. and Canadian housing markets.

The U.S. economy suffers a deeper-than-expected recession and rising unemployment, amid global headwinds

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

Sharply higher borrowing costs could cause a pullback by American consumers, dampen confidence, and push the U.S. into a deeper recession than we expect, with a steep rise in unemployment. After U.S. GDP contracted for consecutive quarters to start the year, the 2.6% growth in the third quarter (and any expansion fueled by holiday shopping in the fourth) may prove to be the last hurrah for the world's biggest economy before it slips into recession. And with inflation still historically high, fears of a protracted period of stagflation are growing. Any worsening of economic momentum elsewhere, such as a further slowdown in China or contraction in the eurozone, could exacerbate a U.S. downturn.

Sustained cost pressures squeeze profit margins and threaten credit quality

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

High input costs and supply-chain disruptions, exacerbated by elevated energy and commodities prices amid the Russia-Ukraine conflict, continue to plague companies in a number of sectors. Labor markets remain tight (notwithstanding some high-profile layoffs in the tech industry) and wages continue to rise. Many borrowers have relied on their ability to pass through increased costs to maintain profit margins, but this has become more difficult as high food and energy prices erode consumers' purchasing power and weigh on discretionary spending. If cost pressures don't ease soon, profit erosion could become more widespread and steeper than we expect. This, in turn, could harm credit quality.

(Geo)political tensions roil markets, weighing on growth and business conditions

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

While most borrowers in North America have limited direct exposure to the Russia-Ukraine conflict, the turmoil in the food, energy, and commodities markets continues to weigh on growth prospects. As the war drags on and the risks of escalation (potentially involving NATO allies) increase, the effects could deepen. Meanwhile, the U.S. and China are in co-opetition. Any worsening tensions between the two over the South China Sea region, or an intensifying technology race, could impede supply chains and disrupt investment and financial flows for both countries and other economies.

Structural risks

Cyberattacks disrupt business operations and hurt credit quality

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

Cyberattacks pose a systemic threat and significant single-entity event risk as new targets and methods emerge, with geopolitical tensions raising the prospect of major attacks. As organizations accelerate their digital transformations, a key to resilience is a robust cyber security system, from internal governance to IT software. Entities lacking well-tested playbooks (such as active detection or swift remediation) are the most vulnerable.

Climate risks and the energy transition affect business operations

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

Larger and more frequent natural disasters increase the physical risks public and private entities face and threaten to disrupt supply chains such as for agriculture and food. At the same time, the global drive toward a "net-zero" economy also heightens transition risks (e.g., policy, legal, technology, market, and reputation risks) across many sectors, and will likely require significant investments. The energy market disruption resulting from the Russia-Ukraine conflict, and concerns about energy supply and security, are adding uncertainty to this transition. In the U.S., we see transition risks as less acute currently than in Europe, since U.S. legislative policies focus more on subsidies and incentives rather than on carbon taxes and trading. But policy, and hence transition risks, can shift over time.

Source: S&P Global Ratings.

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Risk trend reflects our current view about whether the risk level could increase or decrease over the next 12 months.

Credit Conditions Europe

Time To Face The Music

Key Takeaways

- Credit prospects appear dimmer in 2023 as Europe grapples with a rapidly changing world order as war, energy transition, and supply chain vulnerabilities create a more volatile economic environment, notably with inflation soaring to multi-decade highs.
- Extended rate rises to rein in inflation, even as a shallow recession takes hold in the region, could continue to expose hidden risks as liquidity shrinks, and make refinancing difficult for more stretched households, companies, and even governments.
- Further escalation of the Russia-Ukraine war, energy supply shocks, stubborn inflation, and volatile and illiquid markets all present credit risks that, in various combinations, could trigger a deeper, more prolonged, recession than we currently anticipate.

Regional Credit
Conditions Chair

Paul Watters, CFA

London
+44-20-7176-3542
paul.watters@spglobal.com

Editor's Note: S&P Global Ratings' Europe Credit Conditions Committee took place on Nov. 21, 2022

The credit quality of energy-intensive, consumer discretionary, and leveraged corporate sectors will likely be hit hardest in 2023. Broadening input cost pressures, rising funding costs, and potential contractions in demand will increasingly weigh on earnings, particularly in more competitive sectors lacking pricing power. Vulnerabilities are expected to surface among companies rated 'B-' and lower, either unable to refinance or extend maturities on a timely basis, or overly exposed to variable rates, leading to a moderate increase in the default rate (including distressed exchanges) to 3.25% by autumn next year under our base case. Retail, media and entertainment, capital goods, and consumer products are the sectors most exposed on this basis.

The rating outlook for European banks remains relatively stable. Despite a weakening macro environment, higher interest rates mean improving net interest margins, underpinning earnings. We expect asset quality to deteriorate (unevenly by region and sector), but the resulting rise in credit losses will be manageable and absorbed by earnings. Weak growth and inflation pressures will primarily affect lending to small and midsize enterprises and consumers. Residential mortgage performance will hold up, even if property prices slip, thanks to high employment, low loan-to-value ratios and banks managing risk more proactively by offering some flexibility of terms to borrowers in difficulty. Furthermore, banks face 2023 with solid capital and liquidity. A more severe, spread-out recession in Europe, however, could lead to more negative outlooks emerging.

European sovereigns' ability to bail out the real economy is reaching its limit. The ability of economic authorities to pay for the cost of yet another global economic emergency (the energy price shock from the Russia-Ukraine war) has become restricted by central banks refocusing on their core price-stability mandates. Most European governments' post-pandemic debt is high, implying a withdrawal of fiscal policy commencing in 2023 and accelerating in 2024, with some notable exceptions.

A higher cost of living and increased financing costs will be in the spotlight for structured finance. As European consumers feel the strain of rising living costs, we anticipate deteriorating collateral performance will first appear in asset-backed securities (ABS) backed by loans to non-prime borrowers or unsecured receivables. For residential mortgage-backed securities, borrowers in the nonconforming sector typically have well-seasoned loans with low balances, making rate rises less onerous than for borrowers with higher leverage. The labor market's strength is likely to remain a key credit factor underpinning the collateral performance in consumer-related structured finance sectors. Investment-grade tranches in securitizations are generally well positioned to weather a potential rise in underlying delinquencies or defaults, benefitting from strong built-in protections.

Top European Risks

Impact of higher financing costs weigh on financial risk profiles

Risk level Moderate Elevated **High** Very high **Risk trend** Improving Unchanged **Worsening**

Over and above rising energy costs, food prices, supply bottlenecks, and the post-pandemic recovery of demand have contributed to broader price pressures and high core inflation. Against the backdrop of a still tight labor market, monetary authorities remain under pressure to tighten policy significantly. The accompanying risk is that, as growth slows, significantly higher funding costs will increasingly weigh on borrowers' financial risk profiles, mainly where refinancing requirements are material, debt levels are unsustainable, or where exposure to variable rate debt is high. This is particularly pertinent for non-financial corporate weakest links.

Risks of an escalation and broadening out of the Russia-Ukraine conflict

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

In the wake of Russia's recent battlefield losses and an increase in hostilities as winter approaches, we believe the conflict will grind on. While direct NATO military engagement in the conflict is not our base case, the risk is not insignificant, particularly should Russia use unconventional weapons or cause Article 5 to be invoked. The asymmetric nature of these risks only exacerbates existing shocks reverberating through the global economy. More broadly, this deepening geopolitical divide between autocratic and democratic blocs is increasingly undermining decades of economic cooperation and development, with implications for global security, trade, communications, climate, and health.

The war, energy scarcity, persisting inflation, and slow growth in U.S. and China risk an extended recession in Europe

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

High gas storage levels, warm seasonal temperatures, and lower industrial gas demand have eased some short-term pressures in Europe's gas and power market. But a continuation of the war carries potential further supply risks, particularly during winter 2023/2024, should Russia further cut pipeline gas supplies or retaliate against EU sanctions on Russian oil shipments (starting Dec. 5), or should the EU impose an oil price cap. Persisting inflation and higher rates, combined with weak growth prospects in the U.S. and China, risks a deeper and longer recession in Europe.

Sovereign bond investors may be unwilling to fund fiscal policy shifts

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

Sovereigns' ability to meet the cost of another global economic emergency (energy price shock) has run up against a hard constraint: central banks' renewed focus on their core price-stability mandates. Post-pandemic debt is elevated and only the strongest sovereign balance sheets (such as Germany's) are able to implement energy subsidies in excess of 6% GDP for 2023. Essentially, this represents a (reluctant) shift to tighter fiscal policy, since the majority of European governments, including the U.K., are set on withdrawing stimulus, albeit only gradually. Whether they are doing so quickly enough, given central banks' retrenchment from quantitative easing, is a dynamic that will play out throughout 2023, and into 2024 when revised fiscal rules are set to be reactivated in the euro area. Market conditions will depend largely, therefore, on the willingness and ability of investors to make up the gap in market demand left by the end of central banks' net asset purchases. In the end, whether budgets are more or less austere may hinge as much on market appetite as it does on policy or political calculations.

Structural risks

Heightened disruptions linked to physical and transition risks from climate change

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

The political and economic imperative to end Europe's reliance on Russian fossil fuels has created an urgency to accelerate the energy transition, with more ambitious plans. These face implementation challenges, notably regarding slow permitting and supply chain strains for renewables, biomethane, energy efficiency, and heat-pump rollouts, even as the phaseout of carbon-intensive energy sources is delayed to secure supply in the near term. The widening gap, between current emission trajectories and those needed to align to a 1.5 degree Celsius target by 2030, may lead to heightened societal tension as policymakers struggle to balance short-term social and economic priorities with long-term decarbonization ambitions. This may also trigger abrupt policy actions in later years, disrupting industries and business models, notably in the automotive, building, cement, steel, chemicals, transportation, and utilities sectors.

Mounting cyberattacks from geopolitical tensions and increasing digitalization

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

The pace of digitalization in the global economy exposes corporates and countries to mounting cyber risks-- where targets can include anything from utilities to insurers, to government agencies--that weigh on credit quality, result in substantial monetary losses, and undermine confidence in key institutions and infrastructure. In addition to the cyber threat from increasingly sophisticated criminal activity, ongoing geopolitical tensions increase the prospect of major cyberattacks. Russia's use of cyberattacks, while largely limited to Ukraine since the invasion, could become a new front in response to the West's military support for Ukraine, with potential systemic implications.

Source: S&P Global Ratings.

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Credit Conditions Asia-Pacific

Still Above Water

Key Takeaways

- **Soft rebound.** Unlike in the U.S. and Europe, growth in Asia-Pacific is likely to pick up slightly--to 4.3% in 2023 from 4.1% in 2022 as China begins easing on COVID lockdowns.
- **Japan to hike.** We now expect Japan will follow other Asia-Pacific central banks (China being the exception) to hike policy rates. Financing conditions may tighten in 2023.
- **Inflation tail.** Despite commodity prices softening from weaker demand, Asia-Pacific's weak currencies will keep imported prices high, with a flow-on effect on inflation.
- **China recovery.** An easing of COVID containment policies by China is critical for its economic growth recovery, as the impact of support initiatives are likely to be limited.
- **Downside remains.** Notwithstanding the soft economic rebound, global credit headwinds and structural risks (including climate and cyber) indicate still-high downside risks.

Editor's Note: S&P Global Ratings' Asia-Pacific Credit Conditions Committee took place on Nov. 22, 2022.

Slower global growth. Tightening global monetary policies are dampening demand, increasing risks of protracted U.S. and European recessions and a weak recovery in China. With GDP growth (Asia-Pacific excluding China) decelerating to 3.9% in 2023 (see further research under "Read more"), declining exports and corporate revenue will slow corporates' capital expenditure investment.

Continuing rate hikes. We expect most regional central banks (except in China) to hike policy rates further. Japan, having kept rates flat in 2022, could begin raising rates to limit the yen's depreciation. Rated corporates are struggling with higher input costs and rates.

Imported inflation. Asia-Pacific's currency weakness has led to costlier imports, despite lower global commodity and energy prices. Corporates have not been able to pass on higher costs to consumers. Meanwhile, high food prices are pressing down on households.

China's COVID policy easing. Recurring COVID-19 outbreaks in China may constrain consumption. A significant lifting of COVID measures may only occur in the second quarter of 2023. On property, the government's recent step to inject RMB1 trillion of liquidity may slow the downward spiral for developers.

Geopolitical pains. Despite an amicable meeting between President Xi and President Biden at the G-20 summit, U.S.-China disagreements remain. The U.S. tightening of export restrictions on advanced semiconductor technology to China raises risks for regional tech majors.

Other risks. Energy and food security concerns are an added complication for global economies. Extreme weather events have threatened agriculture and food.

Limited headroom. The rating outlook bias remains steady at negative 3% on a net basis (October 2022), but a gloomy economic backdrop and profit margin squeezes limit ratings' headroom.

Regional Credit Conditions Chair

Eunice Tan

Hong Kong
+852-2533-3553
eunice.tan@spglobal.com

Read more

[Global Slowdown Will Hit, Not Halt, Asia-Pacific Growth?](#), Nov. 28, 2022

[Asia-Pacific Sector Roundup Q1 2023: Cracks In The Wall](#), Nov. 14, 2022

[Asia-Pacific's Strong-Dollar Problem: Inconvenience Today, Headache Tomorrow](#), Nov. 10, 2022

[China Property Is Heading For A Transformation, And Maybe A Turnaround](#), Nov. 21, 2022

[Asia-Pacific Tech Firms Face Long-Term Risk From China Chip Restrictions](#), Oct. 14, 2022

[Agriculture Industry Is Still Sweating This Year's Droughts](#), Oct. 13, 2022

[China's Zero-COVID Stance Poses A Bigger Threat To Firms Than Inflation](#), Sept. 20, 2022

Top Asia-Pacific Risks

Higher borrowing costs or tighter financing-access to hit business operations and debt serviceability

Risk level Moderate Elevated **High** Very high **Risk trend** Improving Unchanged **Worsening**

Most central banks are pushing up policy rates except China. Inflationary expectations could see investors seek higher yields. Access to dollar debt funding has tightened. While domestic funding is accessible if economies slow sharply, banks may tighten credit. This could squeeze liquidity, particularly of lower-rated and highly leveraged borrowers. Unhedged debtors are exposed to further U.S. dollar appreciation.

Sharper-than-expected global economic slowdown, further depressing aggregate demand and exports

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

Economic strain in the U.S., Europe, and China could intensify because of policy missteps, falls in business and consumer sentiment, more supply chain disruption, or geopolitical, health, and natural disaster shocks. The region is vulnerable to tepid global demand (affecting exports) and weak domestic consumption. Capital outflows may worsen for some economies if currencies weaken further, or investors turn more risk adverse.

Inability to pass through persistently high prices will drag on already thin profit margins

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

The region is grappling with higher commodity, energy and food prices and shortages. While CPI inflation could peak soon, input prices may remain high. Weak consumer sentiment is dissuading corporates, particularly SMEs, from fully passing on increased input costs. Stresses and defaults will rise if corporates remain unable to pass on costs. If the slowdown worsens, stagflation-like conditions may manifest.

China's COVID policy and property sector pains dim its economic recovery, business, and household confidence

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

China's COVID lockdowns and a weak property sector have dampened growth, business activity, and employment. Soft consumption is stressing the services and SME sectors. A more systematic lifting of COVID restrictions may only begin in Q2 2023 or later. For property developers, Beijing's policy easing could help refinancing conditions, but sales look subdued. Weak corporate and household sentiment could retard 2023's economic rebound.

Increased geopolitical tensions will squeeze trade, financial, and investment flows

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

China and the U.S. may co-operate in some areas (e.g., global climate change) but are competing in others (e.g., U.S. export restrictions on semiconductor technology to China). China is now Russia's largest energy customer, complicating Beijing's relationship with the West. Partial decoupling of China from the West would alter supply chain, financial, and investment flows, incurring an economic cost for the world.

Structural risks

Natural disasters threaten energy and food supplies, implicating supply chains and risking another wave of inflation

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

Extreme weather events have increased. Droughts and floods threaten agriculture supply. China's drought this year stalled hydroelectricity generation, hit lithium and aluminum production, and reduced shipping activity. Crop disruption can lead to food inflation and increased social unrest. On energy, redirection of funding away from less-green investments, could curtail fossil-fuel-based power capacity, adding to energy costs

Increasing threats from cyberattacks and digitalization can disrupt business models, hiking costs

Risk level Moderate **Elevated** High Very high **Risk trend** Improving **Unchanged** Worsening

Increasing technological interconnectedness makes cyber risk a systemic threat and significant single-entity risk. Borrowers need to incur additional ongoing and rising costs to combat the threat. Businesses slow to adapt to current and emergent information and other technologies could see their credit profiles decline. Increasing demand for key minerals, hardware, and software for use in technology could point to higher costs.

Source: S&P Global Ratings.

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Credit Conditions Emerging Markets

Downturn Exacerbates Risks

Key Takeaways

- Credit conditions in emerging markets (EMs) will remain pressured during 2023, while economic stress will be taking a toll mostly on sovereigns and households.
- The balance of risks for EMs is firmly on the downside, given that rapid monetary tightening is potentially pushing major economies into recession and strengthening the U.S. dollar.
- Financing conditions will probably remain restrictive during 2023, because we expect policy rates and overall financing costs to stay elevated next year.

Regional Credit Conditions Chair

Jose M Perez-Gorozpe

Madrid
+34-914-233-212
jose.perez-gorozpe
@spglobal.com

Editor's Note: S&P Global Ratings' Credit Conditions Committees meet quarterly to review macroeconomic conditions in each of four regions (Asia-Pacific, Emerging Markets, North America, and Europe). Discussions center on identifying credit risks and their potential rating impact in various asset classes, as well as borrowing and lending trends for businesses and consumers. This commentary reflects views discussed in the Emerging Market committee on Nov. 17, 2022.

Credit conditions in EMs will remain pressured during 2023, while we expect sovereigns and households to be particularly hit by the likely economic downturn. The corporate sector continues to present a mixed picture; some sectors will be able to protect profits by passing costs through prices in goods and services, taking advantage of high commodity prices (commodity exporters), while others will suffer from subdued demand (consumer products, chemicals or building materials). Banks are well positioned to face the downturn, and higher interest rates could help bolster their net interest margins. Alternatively, asset-quality and credit losses will depend on the economic downturn's severity. Our downside-case scenario assumes that some banking systems could suffer as asset quality weakens and blunts the benefit of higher interest rates.

EM sovereigns will be challenged as the revenue windfall from the nominal effect of high inflation and recovering economic growth dissipates, and expenses climb amid higher interest rates, wage pressures, and social demands to curb energy prices. At the same time, EM households will continue struggling as lingering high prices erode their purchasing power and unemployment rises.

The balance of risks for EMs is firmly on the downside due to rapid monetary tightening potentially pushing major economies into recession and strengthening the U.S. dollar; persistently high prices lifting costs and eroding households' purchasing power; tight financing conditions, given investors' demand for higher returns and limited access to funding for speculative-grade issuers; and China grappling with structural factors that are undermining its economic growth.

Financing conditions will probably remain restrictive during 2023. While slower economic activity and easing inflation might relieve pressure on central banks, we expect reference interest rates and overall financing costs to remain high next year. Easing inflation, on the other hand, might bring back investor appetite for EMs and lower-rated issuers, which currently have very limited access to capital markets.

Top Emerging Market Risks

High inflation squeezes the finances of corporations, households, and banks

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

Risks remain that pressures over core inflation will continue, owing to second-round effects, as higher energy and food prices are passed through to core prices, especially those in the services sectors. Lagging inflationary effects could materialize in 2023, including increasing financing costs, as refinancing with higher interest rates takes place (and variable-rate loans reset) and demands for wage increases persist. Corporations' capacity to pass on higher costs to customers is ebbing, due to households' decreasing purchasing power. The pressure may also intensify on some EM sovereigns, given that lingering high energy prices could prompt subsidies to rise, diminishing fiscal leeway. If this continues, corporate margins could shrink, households' credit quality weaken, and banks' asset quality indicators deteriorate.

Further monetary tightening in the U.S. and the dollar's strength weaken financing conditions

Risk level Moderate Elevated **High** Very high **Risk trend** Improving Unchanged **Worsening**

There's still a risk that the U.S. Federal Reserve needs to tighten its policy rates further than expected, and for rates to remain higher for a longer period. This could not only heighten market volatility but lead to overly restrictive financing conditions for issuers across EMs. In this scenario, the U.S. dollar could further strengthen as investors rebalance their portfolios considering higher rates on lower-risk debt instruments from U.S. issuers (as the higher yields offered by EM instruments will be less attractive to investors), or away from the most vulnerable EM issuers to higher-quality ones offering better returns. The U.S. dollar's strength heightens refinancing risk, prolongs inflationary pressures, and complicates fiscal and monetary policy, exacerbating an already uncertain economic outlook.

A sharper slowdown in the largest economies leads to a global recession

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

Sharply rising interest rates, a pullback by consumers, and Europe's energy crisis could push the U.S. and Europe's largest economies into a deeper-than-expected recession and cause a steep rise in unemployment. In China, losses in the corporate sectors and households in 2022 and restrictive COVID policies could undermine a rebound of activity in 2023. Slower global demand could weigh significantly on key EM exporters by reducing trade, portfolio flows, and foreign direct investment. Slower economic activity in these EMs could imperil the corporate sector's fundamentals and banks' asset quality. Unemployment could rise, which could further hit EM households that have been battered by inflation.

Increasing geopolitical tensions and difficult domestic socio-political conditions erode credit fundamentals

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

The Russia-Ukraine military conflict has reached a stalemate, with no visible short-term resolution. Disruption of gas supplies from Russia is weighing on Europe's economic outlook for 2023 and increasing risks for EMs with strong links with Europe, such as through trade, tourism, and remittances. Additional escalation and a continued rise of energy and food prices could sap confidence and growth. It could also fuel tensions and trigger social unrest, particularly among EMs with limited fiscal space or high debt, such as those in the Middle East and Africa.

Prolonged restrictive COVID policies and real-estate sector stress to curtail recovery of China's economy and business and household confidence

Risk level Moderate Elevated **High** Very high **Risk trend** Improving **Unchanged** Worsening

China's COVID lockdowns and crackdown on the real-estate sector have stalled its economic growth momentum, denting business activity, household confidence, and employment. Concurrently, the government's mobility restrictions to curb the rise in COVID cases have hit consumption, intensifying credit pressures for the services sector and SMEs. Even if the policy is lifted (possibly in 2023), China will be emerging into a much less conducive global environment (both economically and geopolitically). Losses sustained by the corporate sector and households in 2022 could undermine a rebound of activity in 2023.

Structural risk

Climate change and rising adaptation costs

Risk level Moderate **Elevated** High Very high **Risk trend** Improving Unchanged **Worsening**

Larger, more frequent natural disasters increase physical risks for public- and private-sector entities and threaten to disrupt supply chains such as for agriculture and food in some EMs. EMs located near the equator are particularly exposed to heatwaves and droughts as global warming increases, while island states are set to face more frequent storms and exposure to higher sea levels. At the same time, stepping up adaptation to climate change may represent an additional fiscal burden for the most vulnerable countries and higher costs for private-sector entities.

Source: S&P Global Ratings.

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