S&P Global
Ratings

Global Credit Conditions Q3 2022:

Resurfacing Credit Headwinds

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Key Takeaways

- **Sharp monetary tightening puts a brake on global growth:** Central banks are reversing their relaxed policy stance in response to continuing cost pressures in global supply chains, amplified after Russia's military actions in Ukraine destabilized energy, food, and other key commodity markets. As economic growth slows and financing conditions become tighter, we see a risk that sharply higher interest rates, persistent inflation, and renewed consumer caution will push the U.S., and potentially Europe, into a recession, most likely in 2023.
- **Inflation, energy security, and geopolitical uncertainty are the chief risks.** Persistent supply-side price pressures in the food and energy markets may fuel broad-based inflation, and the evolving repercussions of the Russia-Ukraine conflict could undermine global trade and economic growth. Other notable risks stem from governments prioritizing energy security and affordability over sustainability in the short term.
- **So far resilient rating trends will be under pressure heading into 2023.** The strong post-COVID recovery through Q1 has left many corporates with robust earnings and favorable refinancing profiles after two years of cheap money. Yet, falling real incomes and a higher cost of living could dampen consumer demand and make it more difficult to pass on rising input costs, eroding margins. Combined with tougher financing and operating conditions, businesses, especially the most vulnerable, are likely to start feeling some strain later this year. We expect U.S. and European default rates to double to 3% in Q1 2023, potentially reaching 5%-6% in a downside scenario.
- **Our new Credit Cycle Indicator (CCI) signals potential heightened credit stress globally in late 2022 or early 2023** with some variations in sensitivity between corporates and households.

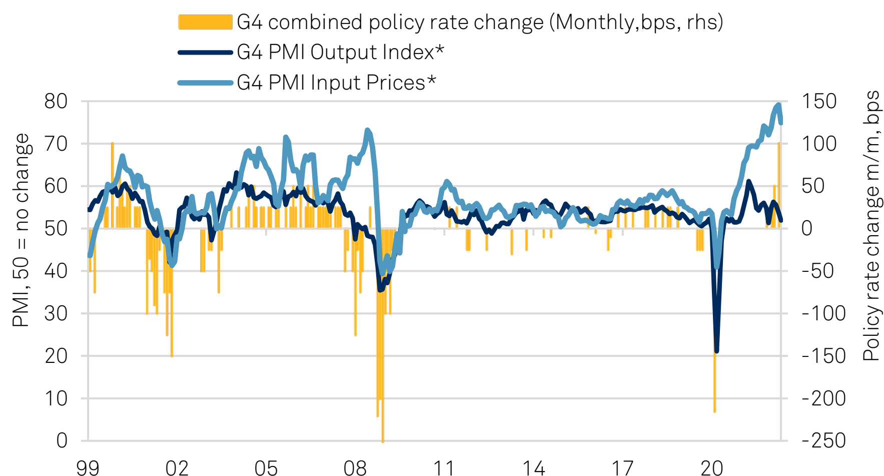
(Editor's Note: S&P Global Ratings' Credit Conditions Committees meet quarterly to review macroeconomic conditions in each of four regions: Asia-Pacific, Emerging Markets, Europe, and North America. Discussions center on identifying credit risks and their potential rating impact in various asset classes, as well as borrowing and lending trends for businesses and consumers. This commentary reflects views discussed in the global committee on June 23, 2022.)

As the geopolitical earthquake that is Russia's invasion of Ukraine extends into its fifth month, the humanitarian crisis, degrees of uncertainty and risk, and economic costs continue to rise. Inflationary pressures, amplified by Russia's weaponization of energy, food, and raw materials, together with Western sanctions, are also becoming more embedded. Central banks are being forced, in haste, to reverse a decade of unconventional monetary policy, notably even as slowing growth (see chart 1) and heightened recession risk spread across the U.S. and Europe. This changing geopolitical and inflation environment is reflected in some downward revisions to our global economic forecasts, in particular for 2023 (see "Global Economic Outlook Q3 2022: Rates Shock Puts The Economy On A Slower Path," published June 29, 2022).

Unsurprisingly, financial markets have turned tail across the board, with commodities providing the one safe haven. Benchmark yields have risen sharply, losing investors 12% so far this year on 10-year U.S. Treasuries, for example, while growth fears have pummeled equities: the S&P 500 Index is down 20% this year (as of June 23). Fixed-income credit instruments continue to suffer in illiquid market conditions; for instance, speculative-grade spreads in Europe, which tightened in May, have stretched past 550 basis points (bps) in June and are at the highest point since their COVID-19 peak.

Chart 1

Major Central Bank Tightening As Economic Activity Falls Represents A Significant Turn In Policy



rhs--Right scale. Sources: S&P Global Ratings. S&P Global Market Intelligence. *G4 countries (U.S., Japan, eurozone, U.K.), Purchasing Managers' Indices (PMI) series begins in Oct. 2009. Developed countries' PMI aggregates used as a proxy from Jan. 1999 – Sept. 2009.

However, fundamental credit quality continues to show resilience, when one looks at rating actions, outlook bias (indicating potential rating movements), and the level of defaults, which remains low. The strength of the post-COVID recovery through the first quarter of 2022 resulted in many companies boasting robust earnings and strengthening their balance sheets, while pent-up demand supports activity through the rest of the year in many sectors. This provides some buffers for a number of ratings, while overall, ratings are below pre-pandemic levels, particularly in the speculative-grade category, where the number of non-financial corporate issuers rated 'B-' or lower is now close to 30%. What's more, highly favorable financing conditions in recent years have enabled extensions of the tenor of outstanding debt, limiting exposure to refinancing risk in the short term.

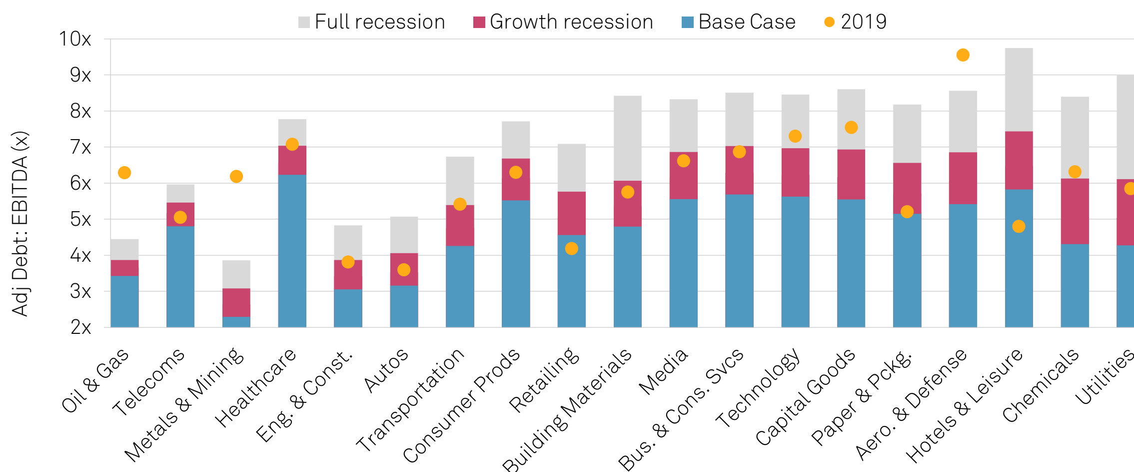
Nonetheless, we expect this resilience to be increasingly tested toward the end of this year and into 2023 given the deteriorating macroeconomic outlook, still-high inflation, and repricing of risk that will tip the balance in financing terms and conditions toward lenders. Once consumers start feeling the impact of declining real disposable incomes and the loss of wealth, that will inevitably translate into weaker demand, hitting corporate operating results and cash flow over time, since corporates are likely to find it more difficult to pass on the increase in input costs to consumers than in 2021. In the U.S., we are already seeing signs of demand deterioration in the most price-sensitive sectors, such as consumer products and retail (among the sectors with the most net negative rating actions), and we expect this to spread to the consumer-facing subsectors of technology and--to the extent advertising budgets are trimmed--eventually media and entertainment. As interest rates rise, sectors that rely on financing, such as real estate and automobiles, will feel the pinch.

Although credit quality deterioration would likely be gradual and sector specific, barring a recession, we see several potential outliers. In Europe, among the speculative-grade nonfinancial corporates typically sensitive to downturns, hotels, gaming, leisure, paper and packaging, and retail appear most susceptible to leverage rising beyond the 2019 level, even in a mild recession (see chart 2). However, the oil and gas, metal, and mining sectors, and to a lesser extent, the aerospace and defense sectors are clear beneficiaries from the surge in commodity prices amid growing security concerns. In a study published on June 23, 2022 ("What Recession Could Mean For European Speculative Grade Nonfinancial Corporates"), we find that, in a full-recession scenario in Europe, consistent with a 20% fall in EBITDA as seen in previous cycles, financial metrics would deteriorate beyond pandemic levels, placing downward pressure on ratings.

Adjusted median leverage could rise as high as 7.8x, with that in 10 sectors potentially exceeding 8x (see chart 2). About 50% of speculative-grade issuers could have negative free operating cash flow, up from less than 10% under our baseline. However, the extent and pace of downgrades in this type of scenario will largely depend on how persistent we think cash flow deficits will be, since most issuers face limited near-term liquidity-event risks.

Chart 2

European Nonfinancial Speculative Grade Median 2023 Adjusted Debt/EBITDA Under Different Stress Scenarios



Sources: S&P Global Ratings: "What Recession Could Mean For European Speculative Grade Nonfinancial Corporates," June 23, 2022. Ranked in increasing order of incremental leverage in the growth recession scenario.

Drawing on these insights also helps to frame the broadly stable credit outlook for banks in the U.S. and Europe as higher rates (more pronounced in 2023 in the eurozone) and lower credit costs versus historical norms will be favorable for earnings. In the U.S., credit losses are expected to remain fairly benign this year--below 2019 levels--before normalizing to around historical averages in 2023 as long as the economy avoids a prolonged recession. Similarly, for Europe, rising rates will support banks' earnings, even as weaker economic growth, market volatility, and inflationary pressure absorb some of that benefit. While banks' asset quality may deteriorate gradually due to a possible emergence of problem loans (potentially in Central and Eastern European and Baltic banking systems related to the Russia-Ukraine conflict), it would be from a starting position of asset quality strength, and we see credit losses remaining contained.

While tax receipts have outperformed official targets in most major economies during the first half of 2022, sovereigns' ability to reduce already elevated debt/GDP is at risk. This is because weaker confidence stemming from the Russia-Ukraine war and tightening financial conditions will weigh on future real and nominal GDP outcomes and push up the cost of debt. Many governments are being pressed to increase subsidies to cushion the impact of the rising cost of living and spike in energy prices on households. Higher energy and food costs and Fed rate hikes are also straining the external liquidity positions of the majority of emerging market sovereigns, many of which entered 2022 with depleted reserves. Mounting fiscal and external pressures may delay credit improvements and weigh on sovereign ratings. Rising rates would also raise sensitivity to funding costs. Under certain interest rate shock scenarios, the first-order effects of rising rates look to be fiscally challenging for a handful of developed market sovereigns and at least six of 19 emerging-market sovereigns (see "Take A Hike 2022: Which Sovereigns Are Best And Worst Placed To Handle A Rise In Interest Rates," published June 22, 2022).

Credit cycle signals point to heightened credit stress in late 2022 or early 2023. We are trialing a proprietary Credit Cycle Indicator (CCI) at the regional level. The CCI has five components: corporate and household debt leverage, equity and house prices, and our proprietary Financing Stress Indicator (FSI) (see the White Paper "Introducing Our Credit Cycle Indicator," published June 27). Our preliminary results show that peaks in the CCI tend to lead credit stresses by six to 10 quarters.

The CCI points to potential heightened credit stress globally in late 2022 or early 2023, with some variations in sensitivity between corporates and households, partly depending on the level of accumulated debt, and for households, the degree of property ownership, amount of savings, and health of the job market. For instance, in North America, while--on average--household balance sheets have so far remained healthy thanks to COVID-19-related stimulus measures and a tight labor market, credit risks could still prevail, especially for households in more vulnerable segments, given the uneven distribution of cash and debt across the population and as high prices erode purchasing power. In Europe, corporates appear more exposed, given the enormous step-up in corporate debt over the last two years, particularly for speculative-grade debt.

Global Financing Conditions

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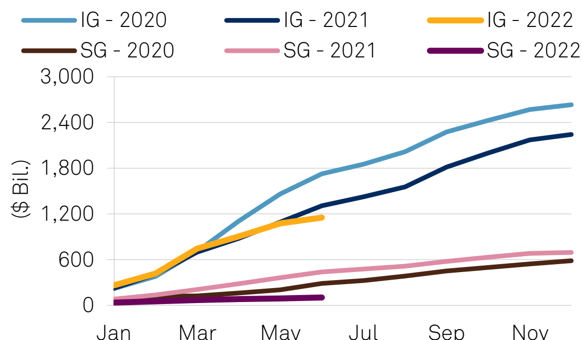
Credit risk and credit spreads are increasingly returning to the fore. After two years of abundant liquidity, which led many investors to extend the duration of their holdings or move lower down the credit curve in search of higher returns, eroding credit risk premia, a renewed focus on credit risk seems to be emerging, both for investment-grade and speculative-grade securities. Credit spreads, which had been expanding for most of 2022, widened sharply in June. Speculative-grade spreads in the U.S. increased by around 90 bps that month alone (as of June 23) and are now over 190 bps wider since the start of 2022; and in Europe, close to 250 bps wider since the start of the year. Speculative-grade spreads in emerging markets (EMs) are also broadening steadily if not dramatically, particularly in Latin America and in Europe, the Middle East, and Africa (EMEA), but not as sharply as might have been expected given regional and global challenges. Credit pricing indicators would all suggest credit investors are bracing for increased credit risk during the second half of 2022.

While primary markets remain volatile, refinancing risk looks manageable for now. Global bond issuance is down more than 20% as of June 23, compared with the same period in 2021 (see chart 3). Although primary volumes are down, markets are not closed. Many investment-grade issuers can still access primary markets, but the problem is far more acute for speculative-grade borrowers, which face sharply reduced demand (down more than 70% globally this year). Subdued primary conditions, particularly for speculative-grade issuers, have prevailed for close to five months. However, near-term refinancing risk is manageable and mainly pertinent for investment-grade issuers. Of the nonfinancial corporate issuers that we rate 'B-' or lower, only 3% of those in North America and 5% in EMEA have debt maturing in the second half of 2022, and only 15% and 22%, respectively, before the end of 2023 (see chart 4). In terms of key sectors, media and entertainment and consumer products are the two with the highest number of issuers in North America and EMEA, that we rate 'B-' or lower and have debt maturing before year-end 2023 (see "Where To Look For Refinancing Vulnerabilities Through 2023 Amid Market Turmoil").

Chart 3

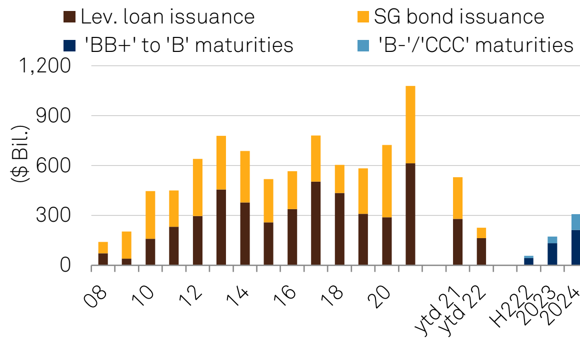
Global Bond Issuance Down Over 20% Year To Date*



*As of June 23. IG—investment-grade; SG—speculative-grade.
Source: S&P Global Ratings.

Chart 4

Upcoming North American Refinancing Demands Appear Manageable



Leveraged loan issuance includes institutional volume. Maturities include bonds and term loans (excluding revolvers) that are rated by S&P Global Ratings. U.S. issuance data through June 2, 2022. Maturity data as of Jan. 1,

Region By Region

U.S.: In the context of a tight labor market, and with inflation averaging 7.5% this year, the Fed is on a mission to raise rates aggressively; we estimate that the Fed funds rate could reach 3.0%-3.25% by year-end, well above the neutral level of 2.5%. We expect economic momentum will likely protect the U.S. economy from a technical recession this year but at a pace that is below potential in 2023, signaling a "slow-growth recession".

We now forecast full-year GDP growth of just 2.4% this year and 1.6% in 2023. Given the downward revisions of our economic forecasts, our estimate of recession risk over the next 12 months has moved higher, to a range of 35%-45%, with risks more likely to materialize in 2023 than in 2022. This is likely to put downward pressure on ratings, particularly on the most vulnerable entities. 34% of U.S. speculative-grade corporate issuers are rated 'B-' or lower, only 5% below the recent peak in early 2020. As a consequence, we estimate that the corporate speculative-grade default rate could double to 3% by the first quarter of 2023, potentially reaching 6% in a downside scenario.

Europe: Labor markets remain robust (particularly in the U.K.), and with some service sectors such as travel, leisure, and entertainment still benefitting from the release of pent-up demand after the lifting of most COVID-19 restrictions. But the war in Ukraine and high inflation are taking their toll on economic activity and confidence. Since energy prices will likely remain painfully high through next winter, real disposable incomes will inevitably be hit. This means that, despite recent benign rating trends, we can expect consumer-focused sectors to face the strongest rating headwinds, especially those with a relatively high proportion of entities rated in the 'B-' and 'CCC' categories, such as media and entertainment.

The utilities sector remains in the front line, grappling rising cost pressures, exacerbated in some cases by regulatory constraints on raising prices, in addition to the fundamental challenge facing the industry from the energy transition. Overall, growth momentum in the region continues to slip. We expect eurozone GDP to average 2.6% in 2022, which already implies minimal growth for the rest of the year given the statistical carryover from the first quarter, and 1.9% in 2023. The equivalent growth rates for the U.K. are 3.2% for 2022 and 1% for 2023.

China: China's continued pursuit of a zero-COVID policy is resulting in on-again off-again episodes of lockdowns of cities and towns. Subdued consumption, weaker employment, and supply chain implications could delay the resumption of economic activities. Consequently, we have revised down our growth expectations for China in 2022 to 3.3% from 4.2%. The corporate sectors with the biggest hits on demand are, as expected, mobility dependent: transport, retail, and leisure. Further spillovers could affect the fiscal balance sheets of local and regional governments as the cost of mass coronavirus testing and containment mounts, and weaker property sales further drag on property developers' cash flows.

Asia-Pacific (excl. China): Pain from persistently high commodities and energy prices is building. Challenges to pass through higher input costs to consumers, due to weaker global demand and subdued consumption, will contract margins and revenue. Concurrently, higher prices may prompt consumers to rein in spending or become more selective with purchases, denting consumption further. Except in China and Japan, most of the region's central banks will likely follow the Fed's monetary tightening policy to avoid the risk of domestic currency depreciation and capital outflows. Higher borrowing costs and lenders' more stringent risk selection could challenge weaker borrowers' refinancing and liquidity.

The strong U.S. dollar could put pressure on borrowers with significant foreign currency liabilities. For banks, the vulnerability of corporate and households' creditworthiness in the face of broader economic weakness could erode asset quality. Meanwhile, China's ongoing zero-COVID policy comes with spillovers to other countries, and those dependent on China for tourism, exports, finance (e.g., emerging markets), and supply chains could be implicated (e.g., component parts). The confluence of global and regional credit headwinds could result in a broad slowdown that clouds the region's credit outlook.

Emerging markets: Credit conditions will likely worsen, given persistent inflationary pressures, tightening financing conditions, slower growth in China, and the potential for a recession in the U.S. Our ratings on issuers across EMs reflect the recovery's trajectory as reopening boosts activity across most sectors and consumer optimism improves as the pandemic's effects subside. The first quarter of the year reflected these factors, and indicators such as GDP growth and EBITDA margins showed an upswing, despite inflationary pressures at the beginning of the year. But the Russia-Ukraine conflict is derailing these trends. Its knock-on effects began to show in the second quarter of 2022, and we expect this will continue for the rest of the year and in 2023.

We expect the situation to turn more negative over the coming quarters because rising interest rates, stubborn inflation, and weakening demand have the potential to erode corporate profits, households' purchasing power, and banks' asset quality. At the same time, many EM sovereigns will likely need additional funding to support fiscal measures that offset increasing fuel and food prices. This could curtail consolidation efforts, increase debt burdens, and erode sovereigns' credit quality.

Risks To Our Base Case

The main risks for our base case relate to persistent price inflation and continuing supply disruptions, amplified by Russia's prolonged invasion of Ukraine, the weaponization of food and energy, as well as Western sanctions. These in turn could force central banks to further accelerate the tightening of monetary policy to rein in escalating inflationary pressures, increasing the risk of a hard landing, and pushing the world's largest economies into recession. Increased geopolitical fragmentation could also hinder global trade and increase event risk (see table 1).

We view all these as high and worsening risks since we expect the Russia-Ukraine conflict will drag on. According to S&P Global Market Intelligence's political risk team, the Russia-Ukraine conflict has entered a phase of costly attritional warfare. Both sides are committed to mutually exclusive objectives. Russia's likely minimum objective is to capture all of the Donetsk and Luhansk regions, which would allow Russia to annex territory and the Kremlin to claim "victory". Russia will seek to maintain its blockade of Ukraine's coasts and ports, seriously disrupting marine traffic in the Black Sea through 2022. For Ukraine, the objective is to reestablish territorial sovereignty.

Table 1

Top Global Risks

Persistent price pressures and supply disruptions risks undermining credit quality

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

The conflict in Ukraine exacerbates inflationary pressure with a second supply shock (after COVID-19) leaving commodity, energy, and food prices persistently high globally, well into 2023, despite slowing demand. As consumers' purchasing power erodes and pent-up demand from the pandemic fades, borrowers in many sectors will inevitably find it harder to pass through costs. Margin pressures will amplify and weigh on credit quality in certain industries--particularly in countries where economic growth slows measurably. Sovereign post-pandemic fiscal consolidation could be significantly delayed as governments provide support to help their populations cope with prolonged high energy and food prices disproportionally affecting households in lower-income countries, and as the weakening economic outlook weighs on fiscal revenue.

The Russia-Ukraine conflict exposes geopolitical fragmentation that threatens to undermine global trade and development

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

The war in Ukraine precipitates the end of the post-cold war global order that supported global trade growth and prosperity. The implications of increased geopolitical fragmentation could be severe. Most prominently, Russia weaponizing energy deliveries to Europe could cause energy prices to become even more expensive if supply restrictions prevent European gas storage replenishment before next winter. In this high-risk scenario, some gas rationing may be required over and above price-induced curtailment of demand, and growth would stall or potentially trigger a recession in the worst case. More broadly, a protracted conflict risks escalating famine and food insecurity across many emerging markets, which could trigger social upheaval. Elsewhere, tensions between China and U.S. continue to simmer. The war in Ukraine has placed China's relationship with Russia in focus and could exacerbate the likelihood of China accelerating its decoupling initiatives (reducing imports or de-dollarizing its financial system). Heightened global tensions between major countries could reignite supply chain mitigation strategies, spark restrictions regarding access to intellectual property, weigh down investor confidence, and diminish global cooperation regarding environmental and health priorities.

Rapid tightening of financing conditions increases the likelihood of recession, exposing weaker borrowers

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

Central banks have to respond more aggressively to prevent inflation pressures broadening out through the economy, leading to a more severe tightening of funding conditions than markets expect. This is a particular concern in the overheated U.S. economy where, in a reasonable downside scenario, the Fed raises rates to a level that pushes the U.S. economy into a recession. In anticipation, volatility in financial markets (including currencies) is increasing, financial assets across the board are being repriced as investors re-assess risk and demand higher yields, and financing conditions are tightening, albeit in many cases from ultra-lax levels. As funding liquidity contracts and financing costs increase, lower-rated borrowers increasingly struggle to refinance and become more prone to default. Also, this scenario presents risks for emerging markets with heavy reliance on foreign funding and large external and/or fiscal imbalances and exposed to potential further strengthening of the U.S .dollar over the next year.

Structural Risks

Security of energy supply and affordability override sustainability ambitions in the short term

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

The Russia- Ukraine crisis has forced policymakers to reprioritize energy security and affordability over sustainability for the short term. To protect energy supply to businesses and households, the phase out of carbon-intensive energy sources is in the process of being delayed in Europe. This delay will widen the gap between global greenhouse-gas emissions and the actions required by 2030 to limit warming to 1.5 degrees Celsius. This may lead to societal tension as policymakers struggle to balance short-term social and economic priorities with long-term decarbonization ambitions. Different countries are exposed in different ways to the environmental challenge, whether through physical risk, adaptation costs, or reengineering fossil fuel exporting industries. Abrupt policy actions in the coming years will also disrupt industries, with potential implications for business and financial risk in energy-intensive sectors.

Cyber attacks disrupt business models and add to systemic risks

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

Amid increasing technological dependency and global interconnectedness, cyber attacks pose a potential systemic threat and significant single-entity event risk, with the Russia-Ukraine conflict raising the prospect of major attacks. Criminal and state-sponsored cyber attacks are likely to increase, and with hackers becoming more sophisticated, new targets and methods are emerging. As public and private organizations accelerate their digital transformation, 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.

Sources: S&P Global Ratings.

*__Risk levels__ may be classified as very low, moderate, elevated, high, or very high, 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.

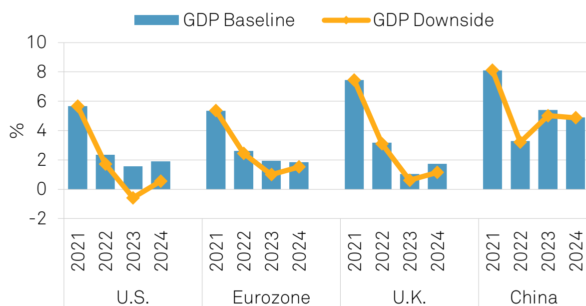
Downside Scenario Points To U.S. Recession in 2023 And Lower Growth In Europe

Given the high level of uncertainty in the current environment, we have developed a reasonable downside scenario--with a roughly one-in-three likelihood of occurring--based on a consistent set of downside projections presented for the U.S., Europe, and China over the period 2022-2024. This downside scenario is generated based on assumptions for two core risk variables: a cyclical risk, namely, persistent high inflation in the U.S., requiring a more aggressive Fed response; and more of an event-driven risk, linked to continued dislocation in the energy markets as the Russia-Ukraine conflict continues. We assume Brent crude oil reaches $155 per barrel in the first quarter of next year--50% higher than the baseline--and remains significantly above our baseline through 2023. European gas prices remain elevated at $40 per million British thermal unit (mmBtu) through to Q1 2023, 33% higher than under our baseline, gradually falling back into line with our baseline in early 2024.

U.S: Under this downside scenario, economic activity would slow sharply in the second half of this year and contract to produce a recession in 2023. This is premised on downstream price pressures broadening further across the supply chain, placing the Fed in the difficult position of having to further accelerate its tightening of monetary policy even as growth slows. Inflation, as measured by the consumer price index, would remain above 8% for the rest of 2022, declining to 3.5% toward the end of next year and returning to policymakers' target of 2% only in 2024. The Treasury yield curve would reflect the tightening of financing conditions, with long-term yields rising to about 4.6% by the end of this year, 1.5 percentage points higher than in our base case, and peaking at around 4.7% in early 2023. With the economy contracting in early 2023, unemployment would begin to rise from below 4% to 6% by the end of next year, and reach 7.2% in late 2024 even as the inflationary shock dissipates.

Chart 5

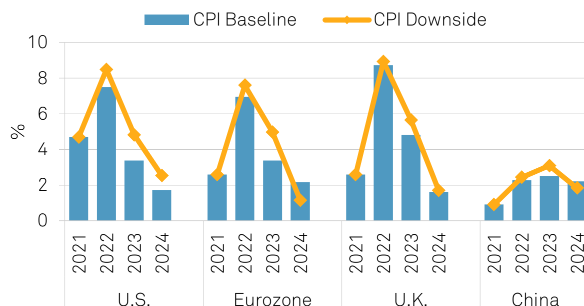
U.S. Risks Recession In 2023



Sources: S&P Global Ratings. S&P Global Market Intelligence.

Chart 6

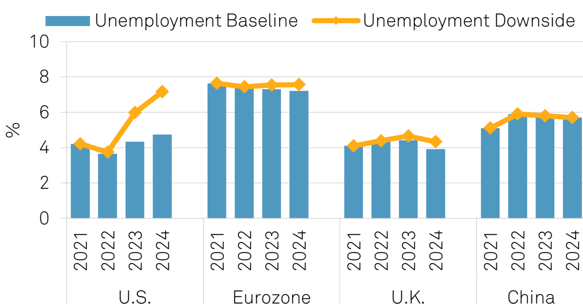
Inflation Remains Higher Than Baseline Through 2023



Sources: S&P Global Ratings. S&P Global Market Intelligence.

Chart 7

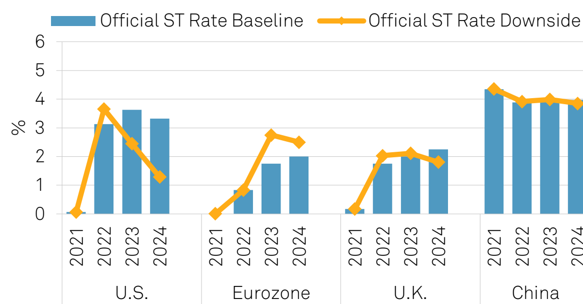
Unemployment Rises Where Recession Hits



Sources: S&P Global Ratings. S&P Global Market Intelligence.

Chart 8

Rates Peak More Quickly in Downside



Sources: S&P Global Ratings. S&P Global Market Intelligence.

Europe: The downside scenario's impact on eurozone GDP shows a slowdown to 1% in 2023, with growth in Germany's more industrial economy falling back sharply to 0.6%, compared with our baseline of 2.0% for 2023. For the U.K., a tighter labor market, building wage pressures, and an amplified commodity price shock result in the central bank front-loading interest rate hikes to depress demand, even as real disposable incomes fall. The U.K. could experience a growth recession in 2023 with growth slipping to 0.6%. Unemployment in Europe is less affected than in the U.S., indeed hardly at all in the eurozone, reflecting relatively stable labor markets, high job vacancies, and little prospects for a full recession materializing in this scenario.

China: Overall, the impact of this discrete downside scenario is fairly limited since its impact would be directly through the energy market, and only indirectly through the trade channel and spillovers arising from slower growth in the rest of the world, in particular, the U.S. China's GDP would be only about 0.4% lower overall in 2023 in this scenario compared with the baseline. Little impact is evident in later years in this scenario. Note that we made no specific assumptions over and above our baseline regarding further COVID-19 lockdowns that could have a material negative impact on growth.

Appendix

We have developed this reasonable downside scenario centered on two key assumptions:

i) **Persistent high U.S. inflation** requiring an even more aggressive Fed response. This scenario mirrors the assumptions underpinning IHS Markit's latest stagflation scenario (D2) detailed in its latest Macro/Financial Alternatives Scenario report published by S&P Global Market Intelligence in June 2022.

ii) **Continued dislocation in the energy market** primarily stemming from event-driven supply constraints linked to the unwinding of commercial relations with Russia in the context of its prolonged invasion of Ukraine.

Based on an assumption of hostilities in Ukraine extending into 2023, compounded by an already very tight and increasingly fragmented energy market, oil and gas prices could surge over the course of next winter. Brent is assumed to reach $155 during Q1 2023--50% higher than the baseline--while European gas prices remain elevated at $40 per mmBtu through to Q1 2023, 33%, higher than under our baseline.

Factors that feed into this downside energy-price profile include: the imposition of the EU's embargo on shipped oil, and a European ban on insuring Russian oil cargos, both by the end of 2022; Russia increasingly reducing gas flows to Europe, and arbitrarily cutting off supply to some smaller countries; plus stronger seasonal demand during winter. A complete EU embargo on Russian gas supplies or gas supply disruptions requiring material rationing of production in Europe (for instance in the case of a Level 3 emergency declaration in Germany) are risks not incorporated into this downside scenario.

Downside Summary

These assumptions are linked to S&P Global Ratings' June 2022 macroeconomic forecasts (see tables below) using the Global Link Model (GLM) to produce a reasonable set of consistent downside projections for the U.S., Europe, and China over the period 2022-2024.

Table 2

GDP And Inflation Downside Projections

(In annual percentage change)

	--GDP Growth Rates--						--CPI Inflation--					
	Downside scenario			Difference from baseline			Downside scenario			Difference from baseline		
	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
U.S.	1.7	-0.6	0.6	-0.6	-2.2	-1.4	8.5	4.8	2.5	1.0	1.4	0.8
Europe												
Eurozone	2.5	1.0	1.5	-0.2	-0.9	-0.3	7.6	5.0	1.1	0.6	1.6	-1.0
Germany	1.7	0.6	1.7	-0.2	-1.3	-0.2	8.3	6.6	1.3	0.7	2.5	-1.0
France	2.4	1.2	1.2	-0.1	-0.5	-0.4	5.6	3.7	1.4	0.4	1.0	-0.7
Italy	2.7	1.0	1.0	-0.1	-0.9	-0.5	6.7	3.7	1.5	0.4	1.0	-0.7
Spain	4.0	1.8	2.0	-0.1	-0.8	-0.5	8.8	4.9	1.2	0.9	1.5	-1.6
U.K.	3.1	0.6	1.1	-0.1	-0.4	-0.6	8.9	5.6	1.7	0.2	0.8	0.1
Asia- Pacific												
China	3.2	5.0	4.9	-0.1	-0.4	0.0	2.4	3.1	1.8	0.2	0.6	-0.4

Source: S&P Global Market Intelligence; S&P Global Ratings.

Table 3

Unemployment And Official Short Term Interest Rates In Downside Scenario

(In percent)

	--Unemployment Rate (eop)--						--Official Interest Rate (eop)--					
	Downside scenario			Difference from baseline			Downside scenario			Difference from baseline		
	2022	2023	2024	2022	2023	2024	2022	2023	2024	2022	2023	2024
U.S.	3.7	6.0	7.2	0.1	1.6	2.4	3.7	2.5	1.3	0.5	-1.2	-2.0
Europe												
Eurozone	7.4	7.5	7.6	0.0	0.2	0.3	0.8	2.8	2.5	0.0	1.0	0.5
Germany	3.1	3.2	3.5	0.1	0.3	0.5	0.8	2.8	2.5	0.0	1.0	0.5
France	7.5	7.7	7.7	0.0	0.2	0.3	0.8	2.8	2.4	0.0	1.0	0.5
Italy	8.8	8.7	8.6	0.0	0.1	0.2	0.8	2.8	2.4	0.0	1.0	0.5
Spain	13.3	13.3	13.2	0.1	0.4	0.4	0.8	2.8	2.5	0.0	1.0	0.5
U.K.	4.4	4.7	4.3	0.0	0.2	0.4	2.0	2.1	1.8	0.3	0.1	-0.4
Asia- Pacific												
China	5.9	5.8	5.7	0.0	0.0	0.0	3.9	4.0	3.8	0.0	0.1	-0.1

Source: S&P Global Market Intelligence; S&P Global Ratings. eop—end of period

U.S.: Inflation pressures remain elevated for longer, due to flagging domestic demand in addition to supply shocks that continue to amplify the surge in the price of oil and other commodities. Downstream price rises are assumed to spread further across the supply chain, including through higher unit labor costs, particularly in COVID-19-affected sectors competing for workers in a tight labor market with unemployment well below its natural rate. In this context, inflation expectations continue to rise. The Fed is in the unenviable position of having to further accelerate policy tightening even as growth slows and the risk of recession rises.

As a result, in this downside scenario:

- **Consumer price inflation (CPI):** U.S. CPI (all-item) peaks close to 9% in the third quarter of 2022, almost 1.5% higher than in the baseline, declining to an average of 4.8% in 2023, and to 2.5% in 2024, still above the Fed's 2% target.
- **Fed Funds:** Faced with a very tight labor market, the Fed, already raising rates sharply, responds by hiking rates faster to 3.7% by year-end 2022, 50 bps above the baseline. By midyear 2023 as recession looms, and with unemployment rising and inflation easing, pressure comes off the Fed, and short-term rates start to reverse through the second half of 2023.

- **Long-term yields:** Tightening of financing conditions is also reflected across the Treasury yield curve, with long-term yields rising by an additional 1.5 percentage points above the baseline by the end of this year to about 4.6%, reaching a peak of around 4.8% early in 2023. This underpins a rapid rise in mortgage rates that could slow demand for homes in the next year, particularly for prospective first-time homebuyers as affordability worsens. But, by the end of 2023, long-term yields could fall back to 3.3% in line with the baseline and keep reducing in 2024 as short-term rates fall further.
- **GDP:** Growth slows to below potential in the second half of 2022, running at about 1% below the baseline. It falls into recession territory in 2023 with full-year GDP projected to fall by 0.6% in 2023, as much as 2.2% below the baseline. From a credit quality standpoint, cyclical sectors would be in the front line in this scenario. These would include the media sector, which is highly dependent on cyclical consumer and advertising spending. Also, consumer durable companies that benefited during the pandemic will likely see softness as retailers reduce bloated inventories and consumers cut back discretionary spending. More positively, a slowing economy could ease some of the country's supply chain problems, including logistics.
- **Unemployment:** As the economy stalls in early 2023, unemployment starts to rise from below 4% to reach 6.0% by year's end, and peak at about 7.2% late in 2024 just when CPI moves back into line with the 2% target.

Europe: The downside scenario for Europe captures an extended energy shock (including natural gas) linked to the war in Ukraine, the EU's further unwinding of commercial relations with Russia, and the spillover effects of a global economic slowdown, in particular emanating from the U.S. Energy price pressures are the key contributors to rising inflation in the eurozone and, as inflation diverges further from target through 2022, the ECB responds by raising rates steadily but at a faster clip through to early 2024. From a credit perspective, high gas and electricity prices have the greatest negative impact on energy-intensive industries and could involve rationing over the winter if gas pipeline supplies from Gazprom fall below critical levels. At the same, high energy prices are credit supportive, for instance for hydro and renewable power generation companies, although potential windfall taxes remain a concern.

As a result, in this downside scenario:

- **CPI:** CPI (all-item) peaks at almost 9% in the eurozone, and just above 10.5% in the U.K. in late 2022 and declines at a slower pace than under the baseline during 2023. As energy prices decline, inflation rates in the eurozone rapidly fall back below target, and below the baseline in early 2024. Inflation appears more embedded in the U.K. and slower to fall, partly due to the operation of the energy price cap, which delays the full pass through of energy prices to households.
- **Official rates:** Faced with a supply shock, an output gap, and few signs of excessive wage pressures developing in the major eurozone economies, the ECB raises the refinancing rate to the neutral level of 1.5% two quarters earlier than under the baseline. The refinancing rate rises to 2.75% by early 2024, 1% higher than in the baseline. With quarterly growth returning to potential from midyear 2024, and unemployment remaining fairly stable at around 7%, there is little pressure on the ECB to lower rates again. Facing higher and broader inflation pressures, a tight labor market, and a weak currency, the Bank of England raises U.K. interest rates to 2.5% by midyear 2023, 50 bps higher than under our baseline, before rates ease to 2.1% by the end of the year.
- **Long-term yields:** Global tightening of financing conditions is reflected in long-term German Bund and Gilt yields rising by 140 bps-150 bps to peak at 2.7% and 3.4% respectively in early 2023, 1% above the baseline. Higher financing costs will feed through relatively slowly to rated corporates and sovereigns, given these entities' extension of bond maturities in recent years.
- **GDP:** After suffering a quarter of negative growth in Q2 2022, in the downside scenario, the forecast recovery in eurozone growth stutters as geopolitical uncertainties, extremely high oil and gas (also linked to power) prices, and slowing global growth (particularly in the U.S.), all combine to push down demand growth. The eurozone narrowly avoids a recession as growth slows to 1% in 2023, with the more industrial German economy experiencing the sharpest slowdown to 0.6% compared with 2.0% in our baseline for 2023. For the U.K., a tighter labor market, building wage pressures, and an amplified commodity price shock result in the Bank of England front-loading interest rate hikes to depress demand, even as real disposable incomes fall. The U.K. could experience a growth recession in 2023, with GDP growth slipping to 0.6%.

- **Unemployment:** Europe will be less affected than the U.S., and hardly at all in the eurozone, reflecting relatively stable labor markets, high job vacancies, and little prospect of a full recession materializing in this scenario. This would underpin the housing market and consumption even though real disposable incomes remain under increasing pressure.

China: Overall, the impact of this discrete downside scenario is fairly limited because it only feeds through directly via the energy market, and only indirectly through the trade channel with spillovers arising from slower growth in the rest of the world, particularly the U.S. Notably, we have made no specific assumptions, over and above our baseline, regarding further COVID-19 lockdowns that could have a material negative impact on growth.

As a result, in this downside scenario:

- **CPI:** CPI (all-item) in China experiences a modest pickup in 2023 due to the knock-on effect of global inflation on imports and commodities. Inflation is projected to average 3.1% in 2023, 0.6% higher than the baseline, but then quickly fall back to around 2% in subsequent years.
- **Official rates:** No meaningful divergence in official rates under this downside scenario, although a stronger U.S. dollar in the short term could put some marginal upward pressure on the central bank's policy stance.
- **GDP:** GDP could be about 0.4% lower overall than the baseline in 2023 as a slowdown in foreign export demand is partly mitigated by some catch up after the lockdown induced slowdown in the domestic economy in 2022. Little impact is evident in later years in this scenario.

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