Moody's

WEEKLY MARKET OUTLOOK

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Reading Between the Lines

The release of the minutes from the Federal Open Market Committee's February meeting provided additional insight into the Fed's current thinking. Given the encouraging data, policymakers lowered their expectations for inflation's near-term path between the December and February meetings but remain acutely concerned with premature optimism in financial markets. Due to this easing in financial conditions, a few participants would have supported a half-point hike in February. When the committee reconvenes next month, we expect an additional 25 basis points will be added to the fed funds rate, bringing the upper bound of the range to 5%. We are likely to add a further quarter-point hike to our March baseline, occurring at March's FOMC meeting, given the Fed communication and the ultra-tight U.S. labor market.

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Though February's slowdown was voted on unanimously, the latest minutes revealed some budding disagreement within the committee. A few participants would have been on board with a consecutive half-point increase instead of the reduction to 25 basis points. These participants favor quickly getting to a sufficiently restrictive stance before pausing rather than slowing down rate hikes and adopting a more flexible approach. According to the minutes, all committee members anticipate that ongoing increases to the fed funds rate would be necessary to bring inflation to the Fed's 2% target.

U.S. housing market slide slows...

Existing-home sales declined further to 4 million seasonally adjusted and annualized units in January, which is down slightly from the prior month and down 37% from January 2022. Buyer demand has plunged in recent quarters because of high mortgage rates and poor affordability, weighing on home sales. Single-family home sales dropped 0.8% to 3.59 million, while condo sales remained flat at 410,000 units. The Northeast and Midwest continued to lose ground on a month-to-month basis, with declines of 3.8% and 5%, respectively. Meanwhile, the South and West have finally gotten the nose up, posting gains of 1.1% and 2.9%, respectively.

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Sales continue to feel the weight of elevated mortgage rates as January marks a full year of monthly declines. Unsurprisingly, the rise in mortgage rates has brought affordability concerns to the forefront and sent median house prices tumbling. Fortunately, the rate of decline has slowed in recent months, indicating that the market may be approaching a turning point. A strong disincentive remains for homeowners to sell their homes because they have locked in low mortgage rates. This is keeping the supply of houses on the market low—2.9 months at the current sales rate.

There is some good news, however. Mortgage applications have ticked up, and while still bearish, homebuilder sentiment is trending upward. We still have a bit to go to get to a healthy housing market, but it looks like the worst is in the rearview mirror.

...And strong construction employment continues

The rapid decline in U.S. home sales, permits and starts last year led many analysts to expect that construction employment would fall dramatically as homebuilders looked to reduce their payrolls after ultra-low mortgage rates spurred demand over the previous two years.

However, the opposite happened, with construction payrolls expanding by nearly 300,000 positions over the year and even accelerating in the fourth quarter despite single-family home permits retesting their pandemic lows. Why would demand for construction workers remain strong despite expectations for new homebuilding permits to remain weak throughout 2023? We offer four key reasons:

First, the number of homes under construction is at a record high. With nearly 1 million multifamily homes (with five or more units) and 750,000 single-family homes in some stage of construction, the demand for workers is high. Builders are hiring aggressively to reduce the backlog as supply-chain bottlenecks for construction materials and appliances ease. For context, builders completed 1.4 million homes last year and around 1.3 million before the pandemic, suggesting plenty of work to be done even with the sharp decline in permits.

Second, demand for remodeling projects is significant. As the housing stock ages, demand from homeowners for construction professionals to repair and update their houses is strong. Given the lack of inventory of homes for sale, demand for remodeling services is expected to grow even faster as owners have few other options. Even if they could find a house to buy, homeowners who have locked in a low mortgage rate may be motivated to improve their existing homes rather than move.

Third, the Infrastructure Investment and Jobs Act of 2021 will increase demand for construction workers. The act authorized \$1.2 trillion in infrastructure spending. It included provisions related to federal highway and rail programs of

the Department of Transportation as well as funding for broadband access, clean water, and electric grid renewal. Given the long timelines needed to design and approve these large-scale projects, demand for construction workers will persist through the end of the decade.

The final reason is demographics. In addition to the immediate need for workers to complete outstanding construction projects, builders are doing everything they can to hang on to their employees as retirements and limitations on immigration affect the future supply of workers. Having experienced the hardship of trying to rehire workers after laying them off at the start of the pandemic, builders may be more inclined to maintain their existing payrolls—even if short-term demand were to weaken. Homebuilders are also looking through current economic weakness and anticipating continued demand for new housing units, given the population demographics and near-record-low vacancy rates.

The large number of young adults in the millennial generation will continue to drive housing demand as they look to start families and form their households. The potential demand for housing is underscored by the 23 million young adults between the ages of 18 and 34 who are living with their parents. This number rose significantly in the early months of the pandemic as college students returned home from school and other young adults delayed moving out given the uncertain economic environment. The number and fraction of young adults living at home have returned to pre-pandemic levels but remain well above the trends prior to the Great Recession.

The residential real estate market will face significant headwinds in 2023 due to rising mortgage rates and a slowing economy. Nonetheless, homebuilding and construction employment should remain robust throughout the year, given that a large number of homes have been started but not finished because of supply-chain bottlenecks affecting building materials.

Home sales, housing permits and starts will likely remain low throughout the year as the Federal Reserve continues its campaign of interest rate hikes to bring down inflation. As mortgage rates stabilize and the economy recovers toward the end of the year, activity should pick up, given strong underlying demand and the limited supply of available homes.

Barring a shock that causes the economy to go into recession, construction employment should remain robust throughout the year as declines in the construction backlog are offset by rising new permits and starts toward the end of the year. The pace of hiring may slow as builders work through short-term uncertainty, but a significant increase in layoffs is unlikely, given other sources of demand and fears of being unable to find workers in the future.

TOP OF MIND

Global Oil is Oversupplied

BY CHRIS LAFAKIS

West Texas Intermediate crude oil touched \$71 per barrel on December 9, its lowest since before Russia's invasion of Ukraine altered the global energy landscape. The collapse in oil prices was swift and substantial; as recently as last June, WTI was trading for almost \$50 more and regular unleaded gas prices were \$5 per gallon nationally.

Three key factors underpinned the decline. First, demand was and continues to be weak in most advanced economies. U.S. oil demand is approximately 10% below its level a year ago in the face of high prices.



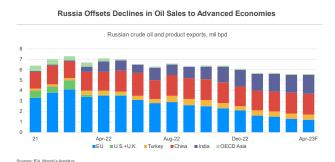
Second, coordinated releases of oil from global strategic petroleum reserves put additional supply on the market. And third, strong EU purchases of crude oil ahead of the December implementation of a bloc-wide ban on Russian oil imports created a "sell the news" situation, as oil demand was no stronger when the ban went into effect.

While demand remains sluggish, global strategic petroleum reserve releases are winding down, and uncertainty over the impact of EU sanctions is fading. Moreover, investors are coming to grips with an imminent decline in Russian crude oil production, a resilient U.S. consumer, and the reopening of the Chinese economy. These factors have combined to lift oil prices by \$8 per barrel from their December lows.

Russia's reselling reaches its end

Russian oil production has proved remarkably resilient to Western sanctions, but that is about to change. In 2022, the major OECD economies in Asia and North America implemented import bans on Russian crude oil and products. The U.K. joined in, but the EU took time to reach a bloc-wide consensus on what the response should be. In the meantime, sales to the U.S., U.K. and OECD Asia fell from a pre-invasion 1.2 million barrels per day to 100,000 bpd as of December. Moreover, Russia's oil sales to the EU fell another 1.2 million bpd because of so-called self-sanctioning. EU buyers increasingly shunned Russian oil as the war stretched on.

However, roughly 90% of the decline in advanced-economy oil sales was offset by sales to India, China, Turkey and unknown countries.



The Global South remains broadly apathetic—if not sympathetic—to Russia. These countries have taken advantage of discounts that Russia has had to offer its customers after the West walked away.



While these sales will continue, Russia will no longer be able to offset 90% of the decline in its Western customers with sales to the Global South. That is because the EU's ban on Russian pipeline imports went into effect in December, and a ban on oil product imports—including all-important diesel—went into effect in early February. If the sanctions are fully implemented as envisioned, EU imports of Russian oil could fall another 1.2 million bpd by spring, and the infrastructure simply does not exist to move that volume of crude oil to Asia via pipeline. Because of a lack of infrastructure that could take years to build, Russia has nearly exhausted its ability to ramp up oil sales to other countries. In response, its oil ministry announced that 500,000 bpd of production would be shut in as of March.

The Moody's Analytics forecast expects another 500,000 bpd of Russian crude oil production to be lost throughout

MOODY'S ANALYTICS

the course of the year. Sanctions evasions will continue, but Russia will not be able to replace Europe customer for customer and will run out of places to store its oil.

The long-term implications are equally damaging. It is unlikely that Europe will resume buying Russian oil once it has secured new, more reliable sources of supply. This would reduce Russia's market share of the global oil trade for at least a decade

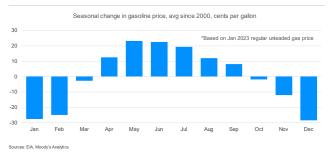
A well-supplied market

The oil market is oversupplied, as supply increases have outpaced growth in demand in the year since Russia invaded. Not only has Russia been able to reroute exports to this point, but U.S. oil production has climbed by 1 million bpd as higher prices created a strong incentive to produce. A second source of new oil supplies has been OPEC. Saudi Arabia and the United Arab Emirates have headlined a 700,000-bpd increase in crude oil production since the start of last year. And global SPRs have been a third source of new supplies. At the peak, allied countries were releasing up to 1 million bpd of oil from reserves to tamp down consumer price increases. Combined, these new sources of supply amount to 2.2 million bpd.

At the same time, demand growth has been exceptionally weak because of broad-based monetary tightening by the world's major central banks. China's zero-COVID policy was also a major factor weighing on oil demand. Weak demand, coupled with strong supply growth, allowed private sector OECD inventories to increase over the past year.

So why then did U.S. gasoline prices hit an all-time high of \$5 per gallon last summer? There are four key reasons. First, the supply-side response was not immediate. Through June, private sector inventories were actually being drawn down. Second, large risk premiums were driving up oil prices. Oil prices peaked right when the EU announced it would ban Russian oil. While this announcement did not affect supply and demand for months, it was priced in immediately. The same thing happened in agriculture product markets at the onset of the invasion. Third, the global oil trade got more expensive. Logistical costs increased alongside transportation, storage and insurance costs. It is more efficient for the EU to import oil from Russia via pipeline than via barge from Nigeria, for instance. This added costs. And last, there were greater frictions in oil product markets, particularly diesel. Global oil refining capacity fell for the first time in 30 years in 2021. This supercharged refinery profit margins by creating product shortages. The timing also coincided with seasonal factors to produce record-high consumer energy prices. Gasoline and diesel prices typically rise in summer months as demand rises and we use summer blend gasoline to avoid smog production.

Summer Is High Season for Gasoline Prices



Oil prices are expected to move sideways, averaging \$90 per barrel in 2023 and \$87 by the end of the year. Investors have already priced in the multiple reasons we expect the oil market to move from surplus to deficit throughout the year. Most importantly, China's economy is expected to surge as it emerges from COVID-19 lockdowns. Developing countries are the main sources of global oil demand growth, and China is the biggest.

Second, we expect the EU to implement the overwhelming majority of its Russian oil sanctions. Pipeline exports to Slovakia, the Czech Republic and Hungary will continue, but seaborne Russian oil imports will cease. This will force Russia to shut down roughly 1 million bpd in oil production. Third, we expect OECD SPR releases to wind down. The U.S. Department of Energy is already detailing plans to refill the SPR at prices of \$72 per barrel. Fourth, we expect U.S. oil production to grow by 250,000 barrels between now and the end of the year. The pace of growth will be much slower than last year because prices have fallen, but they remain above the levels necessary to profitably drill new wells.

Last, we expect the global economy to avoid recession. The European economic outlook has brightened, and the U.S. labor market remains red-hot. While interest rate increases will continue to slow global growth, central banks are expected to achieve price stability without a hard landing that would undermine global oil demand.

Risks

Risks to the forecast are balanced. On the downside, our key assumptions are that the global economy avoids recession, Russia will continually be forced to shut in production, and the Chinese economy's reopening will fuel blockbuster growth in global oil demand. If these do not happen, the oil market will not shift from oversupply to deficit and prices will underperform our forecast.

On the upside, we could be underestimating the rebound in global oil demand growth. Unexpected supply outages in Africa or the Middle East could also push oil prices above their forecast levels.

The Week Ahead in the Global Economy

U.S.

The U.S. economic calendar will provide some key insights next week. We will get additional data on the state of the consumer and the housing market and a read on the direction of construction and manufacturing.

We expect the Conference Board consumer confidence index will tick slightly higher in February as the strength of the labor market is offsetting concerns about the future path of the economy.

The ISM manufacturing index will likely remain in contractionary territory for the fourth consecutive month in February as manufacturers continue to grapple with diminishing demand for their goods.

We will also pay close attention to initial jobless claims—the timeliest indicator of changes in the labor market. We expect that claims will remain historically low, though they may start to come off of their recent bottom. An uptick in announced layoffs in January presents some risk that claims could pick up more meaningfully, but to date, there is no reason for concern from the labor market.

Other key data to be released next week include advanced durable goods, pending home sales, advanced international trade, construction spending, productivity, and vehicle sales.

Europe

The preliminary estimate of the euro zone's February inflation rate will headline next week. We forecast the rate to ease to 8.3% on a year-ago basis from 8.6% in January, falling mostly due to base effects in the energy segment. The details will be important because, although a lower headline rate will be good news, core inflation is likely more important for European Central Bank policymakers. We see a slight acceleration in the core inflation rate as likely, which will confirm the restrictive policy tilt at the ECB.

The euro zone's Economic Sentiment Indicator for February will be released next week as well, and the reading will likely increase to 101.5 from 99.9 in January. With national readings already in from Germany and France, we expect to see consumer and business confidence on the rise during the month, likely thanks to the lower energy costs and the better prospects this raises in the views of businesses and consumers. Even with the increases in the ESI since October, it will still be considerably below year-ago levels and not reflective of strong recovery forces.

There will likely be further good news from the unemployment rate release too. We think the unemployment rate will remain unchanged, at 6.6%, between February and January. At this near-record low, the

labour market will remain an important source of support to the economy by keeping households more confident with a sense of job security.

At the country level, Germany will publish data on January retail sales and February unemployment. While we see the unemployment rate holding firm at 5.5% in February, we only expect a weak 1% month-over-month rebound in retail sales in January after December's sizable 5.3% contraction. There is some upside risk, but we think German consumers remained cautious at the start of the year given their falling purchasing power.

Likewise, we expect the number of French job seekers held steady at 2.8 million between January and December, but household expenditures on goods fell back in January by 0.8% month over month, deepening a 1.3% fall previously. Here too, we think lower purchasing power got the better of consumers. The country's consumer confidence index lowered between December and January because of worse views on their personal financial situation and lower propensity to make a major purchase.

Final estimates of France's and Italy's fourth-quarter GDP growth will be released as well, and we expect the preliminary estimates to be confirmed at 0.1% quarter over quarter and -0.1%, respectively. For each, we expect to see weak private consumption. Fixed investments likely held up better in France, but the country's net trade balance also surprised to the upside according to the preliminary estimate, which likely kept growth positive.

Asia Pacific

Australia's GDP likely grew 0.6% in the fourth quarter from the third as headwinds caught up with the economy. Most sectors are feeling the squeeze between rising borrowing costs and bitingly high inflation. Not least of those are households. Real retail sales went backwards last quarter, suggesting households will contribute very little to December-quarter GDP. Similarly, government consumption is likely to have been flat across the final three months of 2022 as all layers of government reined in spending.

On the investment front, leading indicators suggest businesses may have spent more on machinery and equipment last quarter, while there are mixed signals for how nonresidential construction fared. With prices falling and construction activity modest, we expect dwelling investment to detract from growth. Meanwhile, having soared in the prior quarter, inventories are likely to have swung back the other way in the fourth quarter.

China's manufacturing PMI jumped back into expansionary territory in January as its reopening spurred a flurry of

activity. With business continuing to ramp up, we expect the manufacturing PMI to stay elevated in February even though weakness in new export orders will cap gains.

For India, we expect fourth-quarter GDP growth of 6.2% year on year. This would represent 3% growth in the third quarter and reflect India's strong industrial sector. Geopolitical uncertainty is weighing on investor sentiment and stoking input prices. That said, India has benefited from lower Russian oil prices and is seeking to broker deals with other countries. With inflation still elevated, sustainably cooling price pressures will remain a focus for the central bank. Rising food prices saw inflation soar to a three-month high of 6.5% year on year in January, exceeding the RBI's 2% to 6% target range.

Latin America

Peru, Uruguay and Colombia will be the first countries to release inflation readings for February next week. In

Uruguay, the annual inflation rate likely dropped to 7.9%, the lowest since late 2021. Meanwhile, we see annual inflation in Colombia reaching 13.2% in February, slightly decelerating from the previous month. In Peru, inflation likely ticked up to 8.8% in February as road blockages during recent protests caused delays in shipping produce and other agricultural goods. Chile will release a series of economic indicators for January, including monthly GDP and unemployment.

We see these indicators reflecting a continued downturn, though some improvement is expected compared with December. Brazil's economy likely expanded 2% year on year in the fourth quarter, down from 3.6% in the previous quarter. Meanwhile, the unemployment rate likely dropped to 8% in the rolling quarter ending in December from 8.1% in the previous three-month period.

Geopolitical Calendar

	Country	Event	Economic Importance	Financial Market Risk
March	Beijing	National People's Congress	High	Medium
7-Mar	Australia	Reserve Bank of Australia monetary policy announcement	Medium	Low
10-Mar	Japan	Bank of Japan monetary policy announcement	Medium	Low
13-Mar	EU	Eurogroup	Low	Low
16-Mar	Euro zone	European Central Bank monetary policy announcement	Medium	Low
17-Mar	United Kingdom	Bank of England monetary policy announcement	Medium	Low
23-24-Mar	European Union	European Council summit	Low	Low
2-Apr	Finland	General election	Medium	Low
4-Apr	Australia	Reserve Bank of Australia monetary policy announcement	Medium	Low
28-Apr	Japan	Bank of Japan monetary policy announcement	Medium	Low
28-Apr	EU	Eurogroup	Low	Low
April	Solomon Islands	General election	Low	Low
May	New Zealand	2023 budget	Low	Low
May	Thailand -	General election	Low	Low
4-May	Euro zone	European Central Bank monetary policy announcement	Medium	Medium
5-May	United Kingdom	Bank of England monetary policy announcement	Medium	Medium
14-May	Turkey	Presidential and parliamentary elections	Low	Low
15-May	EU	Eurogroup	Low	Low
19-21-May	G-7	Summit-Japan	Low	Low
30-Apr	Paraguay	General election	Low	Low
15-Jun	Euro zone	European Central Bank monetary policy announcement	Medium	Medium
15-Jun	EU	Eurogroup	Low	Low
16-Jun	United Kingdom	Bank of England monetary policy announcement	Medium	Medium
25-Jun	Guatemala	General election	Low	Low
29-30-Jun	European Union	European Council summit	Low	Low
By Jul	Greece	General election	Medium	Low
23-Jul	Cambodia	General election	Low	Low
27-Jul	Euro zone	European Central Bank monetary policy announcement	Medium	Medium
4-Aug	United Kingdom	Bank of England monetary policy announcement Senatorial elections	Medium	Medium
1-Sep	France		Low	Low
9-10 Sep	G-20	India hosts G-20 summit	Low	Low
14-Sep	Euro zone	European Central Bank monetary policy announcement General Assembly, New York	Medium	Medium
Sep	U.N.	3 ,	Low	Low
22-Sep	United Kingdom	Bank of England monetary policy announcement General elections	Medium	Medium
By 12-Oct 14-Oct	Spain New Zealand	General election	Medium	Medium
			Low	Low
26-Oct	Euro zone	European Central Bank monetary policy announcement	Medium	Medium
26-27-Oct 29-Oct	EU Argentina	European Council summit General election	Low	Low
29-Oct	Argentina Colombia	Regional elections	Medium	Medium
Oct/Nov	ASEAN	Indonesia to host ASEAN summit	Low	Low
Nov	Indonesia	Association of Southeast Asian Nations	Low	Low
Nov	APEC		Low	Low
3-Nov	United Kingdom	Economic leaders' meeting, to be held in San Franciso, U.S. Bank of England monetary policy appropriate	Low	Low
6-17 Nov	U.N.	Bank of England monetary policy announcement COP 28, to be held in Dubai, UAE	Medium Low	Medium Low

THE LONG VIEW: U.S.

Bond Yields Inch Up, But Below Expectations

BY STEVEN SHIELDS

CREDIT SPREADS

Corporate bond yields and spreads edged higher in the latest period but remain comfortably below the levels experienced last October. The ICE BofA BBB U.S. corporate optionadjusted bond spread widened by 5 basis points to 159 basis points over the past week. Despite the uptick, the spread has trended lower since reaching a high of 210 basis points last October.

Meanwhile, the ICE BofA U.S. high-yield option-adjusted bond spread has increased to 441 basis points after reaching a six-month low of 395 basis points in early February. The Bloomberg Barclays high-yield option-adjusted spread widened this past week from 408 to 434 basis points. This compares to an average high-yield spread that averages 1,000 basis points during recent recessions and an average of 350 outside of recessions. The high-yield option-adjusted bond spreads approximate what is suggested by the accompanying long-term Baa industrial company bond yield spread but is wider than that implied by a VIX of 21. The VIX edged higher over the course of the past week with January's hotter-than-expected consumer price index contributing to the heightened volatility.

DEFAULTS

Five Moody's Investors Service-rated corporate debt issuers defaulted in January, down from eight in December. The global speculative-grade corporate default rate came in at 2.8% for the trailing 12 months ended in January, unchanged from the December 2022 level.

The January defaulters include two retail companies: U.S.-based Party City Holdings Inc. and Brazil-based Americanas SA. Party City is one of a number of retailers that have experienced financial difficulties recently. In the fourth quarter of 2022, four rated retailers defaulted, including Rite Aid Corp. and Bed Bath & Beyond Inc. Party City filed for Chapter 11 bankruptcy protection after contending with high supply-chain costs, helium shortages and softening customer demand, all of which have led to an unsustainable weakening of leverage, coverage and liquidity metrics. Party City has signed a transaction support agreement with more than 70% of its first-lien noteholders. The company expects to convert a material portion of its senior secured first-lien and senior unsecured notes to equity.

Americanas SA did not make the January interest payment on its senior unsecured notes that will mature in 2033. Soon after, a Brazilian court approved the company's judicial recovery request, the closest equivalent to the Chapter 11 process in the US. The default came shortly after the company disclosed accounting inconsistencies that involved

the recognition of roughly BRL20 billion in previously undisclosed suppliers' financing lines to Americanas as debt. This recognition will increase the company's leverage and reduce its interest coverage compared with its latest financial statements in September 2022. Outside of the retail sector, U.S.-based Serta Simmons Bedding LLC (durable consumer goods) filed for bankruptcy protection in January while Cooper-Standard Automotive Inc. (automotive), also based in the U.S., and Vue International Bidco plc (hotel, gaming, & leisure) of the U.K. completed distressed exchanges, a type of default under Moody's Investors Service's definition.

The global speculative-grade corporate default rate to rise in 2023 as slowing economic growth, higher input costs and rising interest rates reduce consumer and business demand, pressure corporate earnings and hamper free cash flow, according to Moody's Investors Service. The ratings agency expects the default rate to rise to 4.4% at the end of 2023 and to 4.6% by the end of January 2024. These forecasts, if realized, would surpass the long-term average of 4.1% but remain well below prior recessionary levels, including the pandemic peak of 7%. The agency's latest forecasts are lower than its projections last month, primarily because of a drop in high-yield spread assumption as recent levels have been lower than Moody's Investors Service had previously expected. The agency now assumes the U.S. high-yield spread will widen to only 510 basis points in the coming 12 months, down from its forecast of 596 basis points last month.

In the leveraged loan market, three Moody's Investors Service-rated corporate issuers defaulted on loans in January: Party City Holdings Inc., Serta Simmons Bedding LLC and Vue International Bidco plc. The issuer-weighted U.S. loan default rate came in at 2.3% at the end of January, up slightly from 2.2% in December. The global high-yield bond default rate was 1.0% in January when measured on a dollar-volume basis, unchanged from the December level. Across regions, the comparable rate rose to 1.2% from 1.1% in the U.S. but held steady at 0.5% in Europe.

U.S. CORPORATE BOND ISSUANCE

First-quarter 2021's worldwide offerings of corporate bonds revealed an annual decline of 4% for IG and an annual advance of 57% for high-yield, wherein US\$-denominated offerings sank 9% for IG and advanced 64% for high yield.

Issuance weakened in the second quarter of 2021 as worldwide offerings of corporate bonds revealed a year-over-year decline of 35% for investment grade. High-yield issuance faired noticeably better in the second quarter.

Issuance softened in the third quarter of 2021 as worldwide offerings of corporate bonds revealed a year-over-year decline of 5% for investment grade. U.S. denominated corporate bond issuance also fell, dropping 16% on a year-ago basis. High-yield issuance faired noticeably better in the third quarter.

Fourth-quarter 2021's worldwide offerings of corporate bonds fell 9.4% for investment grade. High-yield US\$ denominated high-yield corporate bond issuance fell from \$133 billion in the third quarter to \$92 billion in the final three months of 2021. December was a disappointment for high-yield corporate bond issuance, since it was 33% below its prior five-year average for the month.

In the first quarter of 2022, worldwide offerings of investment grade corporate bonds totaled \$901 billion, up 12% on a year-ago basis.

In the second quarter, corporate bond issuance weakened. Worldwide offerings of investment grade corporate bonds totaled \$548 billion, down 21% on a year-ago basis. US\$ denominated high-yield corporate bond issuance was \$38 billion in the second quarter, down from \$63 billion in the first three months of the year.

Third-quarter issuance declined further as higher interest rates weighed on lending activity. Worldwide offerings of investment grade corporate bonds totaled \$505 billion, down 30% year over year. US\$ denominated high-yield corporate bond issuance clocked in at \$21 billion in the third quarter. High-yield issuance declined approximately 84% on a year-ago basis.

Corporate debt issuance remained suppressed in the fourth quarter of 2022. US\$-denominated high-yield issuance ended the year at \$2.47 billion, reflecting a drastic 77% decline from 2021. Meanwhile, investment-grade bond issuance totaled \$1.29 trillion in 2022, corresponding to a 20.8% decline from 2021. Over the past twelve months total US\$-denominated issuance has tracked at a near-decade low.

US\$-denominated corporate bond issuance has largely outperformed expectations during the first two months of the year, especially high-grade debt. Over the past week, investment-grade bond issuance totaled \$57.5 billion, lifting its year-to-date total to \$265.48 billion. This marks a significant jump from 2022 and is trending just 3.2% below 2020. Meanwhile, high-yield issuance was light this past week at just \$500 million. At \$37.8 billion year-to-date, high-yield offerings are tracking at a seven-year low.

U.S. ECONOMIC OUTLOOK

Moody's Analytics made minor adjustments to its U.S. baseline forecast in February, as new data altered the outlook only slightly. Fundamentally, the outlook remains the same, and the pace of annual GDP growth is nearly unchanged.

There were no changes to monetary or fiscal policy assumptions this month. New data contained some surprises, especially the labor market data, which showed a stronger-than-expected job market as 2023 started. This results in a more gradual deterioration in job growth in the forecast compared with the prior month. Demand for oil surprised to the upside, but warm weather contributed to weaker-than-expected demand for natural gas, so those forecasts shifted in opposing directions in the short run. Risks around the debt limit were highlighted as it was breached. The near-term outlook for the 10-year Treasury is a bit lower because of the recent decline.

Energy

Moody's Analytics has raised its oil price forecast by \$1 to \$3 from now until the third quarter of 2024. The forecast has been raised because of an improved outlook for the global economy, anticipated halts in global strategic petroleum reserve releases, and ongoing expectations for Russian crude oil supply to decrease as EU sanctions take their toll.

We have also appreciably reduced our natural gas price forecast. We now expect Henry Hub futures to average \$5.51 in 2023, down from \$6.62 a month ago. We downgraded our price forecast because demand has collapsed in the midst of the warmest winter in recent memory. This has substantially reduced demand for space heating and electricity generation.

Liquefied natural gas contract prices are still much higher than current Henry Hub prices. However, arbitrage opportunities are not available because the Freeport LNG hub is still offline, German gas inventory is essentially maxed, and there is a lack of infrastructure to receive more U.S. cargoes. We expect the Freeport terminal to open in the second quarter, facilitating more arbitrage opportunities and putting upward pressure on U.S. gas prices. Moreover, the weather will eventually turn; it is most favorable for low prices at the moment.

Labor market

The release of the January employment report underscored the labor market's resilience. It showed net payroll job gains popped up to more than half a million in that month and the unemployment rate fell to 3.4%—its lowest level since 1969. These new data, plus upward revisions to the November and December numbers, were incorporated in the February baseline forecast, and the near-term forecast is a bit altered from the prior month.

The strong momentum of the job market means that a marked weakening in the labor market is not expected to materialize until the second half of 2023 and will continue through 2024. Monthly job gains will average 75,000 in the second quarter of this year, followed by gains of only about 25,000 per month in the final two quarters of 2023. Growth

will pick up slowly through 2024, when the risk of a recession is highest. Interest-rate-sensitive industries like construction and financial services will lose jobs on net this year. Consumer-driven segments like retail will slow to a near-halt but avoid outright losses.

The unemployment rate forecast is also more optimistic in the first half of 2023 compared with the January baseline forecast but worsens through the back half of the year and through 2024. The unemployment rate will peak at 4% but not until later in 2024. Over the next year, the increase in the unemployment rate will be shy of the 0.5-percentage point increase that historically has been a reliable indicator that the economy is in a recession. The economy will remain at or near full employment as well—the employment-to-population ratio will not fall below 80%.

Fiscal policy

The federal budget deficit will amount to \$1.1 trillion in fiscal 2023, or 4.3% of GDP. While the fiscal 2023 deficit will be slightly larger than we projected in January because of a higher-than-expected budget shortfall in the fourth quarter, it still represents an appreciable decline from the 5.5% deficit-to-GDP ratio in fiscal 2022 due in part to the wind-down of federal pandemic relief.

Since the last update to the federal fiscal forecast, the most important development in Washington DC was the U.S. government hitting its statutory borrowing limit on January 19, setting the stage for a monthslong political fight. The debt limit is the maximum amount of debt the Treasury can issue to the public or other federal agencies. January 19 was not a hard deadline for lawmakers to address the debt limit. The Treasury will be able to continue paying its bills by employing extraordinary measures and drawing down its cash on hand. Extraordinary measures are accounting sleights-of-hand, which reduce the level of intragovernmental debt, like Treasury securities held in government accounts, that would otherwise count against the statutory limit.

If Congress fails to address the debt limit, the Treasury will eventually use up the extraordinary measures at its disposal and run out of cash. At that point, it will be unable to meet its financial obligations in full or on time, and an unprecedented default by the federal government will ensue. Forecasting the length of time the Treasury can forestall a default by tapping into extraordinary measures and its cash on hand is always an intrepid affair. It requires making assumptions about federal payments and receipts months in advance. Uncertainty around the upcoming tax filing season, student loan policy, the effects of recent fiscal legislation, and the state of the economy make such forecasting even more challenging this year.

According to Treasury Secretary Janet Yellen, the Treasury is unlikely to exhaust the cash and extraordinary measures at its disposal before early June. Our preliminary outlook is that

the Treasury could run out of cash and default as early as August. Our baseline assumption is that lawmakers will find a way to come together and raise or suspend the debt limit in time, given the huge economic stakes involved with maintaining the nation's creditworthiness.

GDP

The expansion in economic activity continued in the fourth quarter after pausing in the first half of 2022 as measured by real GDP. The contribution from trade declined, but inventory accumulation increased, and several other components contributed. Output rose 2.9% following a 3.2% gain in the third quarter, according to the preliminary report from the Bureau of Economic Analysis.

The composition of growth was concerning for the outlook. Inventories became a noteworthy contributor to growth, adding 1.5 percentage points as the accumulation of inventories accelerated. Trade also contributed. Fixed investment fell, subtracting 1.2 percentage points from growth with residential investment pulling growth down by 1.3 percentage points and intellectual property investment in software the strongest performer. Consumer spending on services was also a major contributor.

Revisions to the baseline forecast for real GDP growth are modest. The forecast for real GDP now shows a small dip in the first quarter of 2023 but a stronger acceleration in subsequent quarters this year. Annual growth rates in 2022 and 2023 are 2.1% and 1.3%, respectively, unchanged from last month's forecast. Growth in 2024 was revised up slightly to 2.2% and growth in 2025 was unchanged, at 2.7%. Both figures still suggest an economy returning to near-potential growth.

Business investment and housing

Growth in real fixed-business investment slowed significantly in the fourth quarter of 2022, down to 0.7% annualized, according to the BEA advance estimate. The locus of the weakness was the large category of IT equipment, which fell a sharp 24% annualized, leaving it down 2% year over year. This squares with data from a variety of industry sources, which have reported deep declines in sales of PCs as pandemic-era spending related to remote working recedes. High-frequency data also paint a downbeat picture. Adjusted for inflation, new orders for nondefense, nonaircraft capital goods trended down throughout 2022.

The near-term prospects for growth in business investment remain moderate at best. Credit conditions are tight and will tighten somewhat more, and the projection for overall economic growth in 2023 is still weak. As a result, the forecast for growth in real business investment is more than a percentage point lower than in January. The total will advance by 3.2% on an annual average basis in 2023, with equipment spending rising by just 1.9%. Structures have

begun a weak rebound, but spending will remain far below the pre-pandemic pace because of low demand for office space.

Moody's Analytics made only modest adjustments to its forecasts for home sales and construction activity to account for movements in performance data. Recent declines in mortgage rates are expected to support the broader housing market consistent with our outlook for activity to remain low but stable in the first half of 2023 followed by a modest recovery in activity as inflation moderates. House prices are falling but showing signs of resilience as buyers and sellers adjust to the new environment. Prices are expected to decline 5% to 10% from peak to trough nationally and by as much as 20% in some markets. Homebuilders will remain active throughout 2023 due to the large number of housing units that have been started but not completed, supporting construction employment.

Moody's Analytics maintained a negative outlook for commercial real estate price growth over the next year given shifts in consumer demand and the higher interest-rate environment. The completion of additional multifamily properties will place downward pressure on rents, helping bring down headline inflation at the expense of cap rates and prices for apartment buildings. Despite these headwinds, demand for housing is expected to be robust given the large number of young adults hoping to form their own households. Conversely, weakening demand for office and retail properties is expected to place downward pressure on prices for these segments.

Monetary policy

Moody's Analytics baseline forecast for the federal funds rate remains unchanged from the previous outlook. Interest rates will continue to rise in early 2023 as the Federal Reserve remains committed to its fight against inflation. Policymakers slowed the pace of hiking to 25 basis points at the Federal Open Market Committee's February meeting, raising the target range for the fed funds rate to 4.50%-4.75%. The slowdown was expected as inflation is now consistently moderating. Consumer prices fell 0.08% from November to December, the largest decline since the beginning of the current inflation episode in the spring of 2021. However, at 6.4%, year-over-year consumer price inflation remains well above the Fed's 2% target. Therefore,

the FOMC reiterated its view that further interest rate hikes will be appropriate. The Fed, meanwhile, has not committed to how high the policy rate will ultimately have to go; policymakers instead have signaled that they will stop when incoming data firmly suggest that broad-based inflation has turned.

We expect the FOMC will hike the fed fund rate by another 25 basis points at its March meeting and then stop. Our terminal fed funds rate projection in 2023 falls just shy of 5%. The Fed will keep rates at this level before cutting them at the first FOMC meeting in 2024. Monetary policy will remain restrictive through the end of 2025. The fed funds rate will return to its neutral rate in early 2026.

The baseline outlook reflects our expectation that inflation pressures stemming from supply-side frictions, energy markets, shelter, and U.S. labor market conditions will continue to soften throughout the year. The path toward a soft landing for the Fed remains a narrow one: Policymakers cannot ease too early and have repeatedly pointed to tight financial market conditions as the central monetary policy mechanism to dampen demand; however, as U.S. demand is showing signs of sustained cooling, keeping interest rates too high for too long risks choking off the expansion and pushing up unemployment.

Inflation remains the key to the baseline outlook. It rose an estimated 8% in 2022, and the February vintage has the CPI rising 3.9% in 2023, and 2.4% in 2024, a rounding difference down from the prior baseline, as recent inflation has decelerated quicker than expected.

Financial conditions, meanwhile, remain tight, if not quite as tight as a few months ago. The 10-year Treasury yield averaged 3.8% in the final quarter of 2022 but fell to 3.5% in January. The baseline outlook has the 10-year Treasury yield averaging 3.7% in the first three months of this year and peaking in the fourth quarter of 2023 at 4.1%. Compared with the prior baseline, this marks a decline of 10 to 30 basis points for each quarter, reflecting the easing market conditions since the fall of last year. As inflation is falling quicker than expected, markets have been expecting policy rates to come down quicker than previously anticipated. We estimate the 10-year Treasury yield will then decline into 2025.

THE LONG VIEW: EUROPE

Euro Zone Inflation Revised Slightly Higher

BY ROSS CIOFFI

Final estimates revised the euro zone's harmonised inflation rate for January higher, to 8.6% year over year from a preliminary 8.5%. The inflation rate decelerated by 0.6 percentage point from 9.2% in December. The slight upward revision does not change much about what we learned in the preliminary release. Energy inflation is cooling off, but there are still strong and sticky pressures within the energy component and food and core prices.

According to the details, energy inflation dropped to 18.9% in January on a year-ago basis from 25.5% in December. Food, beverage and tobacco prices grew by 14.1% in January after a 13.8% increase. And core inflation sped up to 5.3% from 5.2% previously. Core inflation was one of the segments with an upward revision; the preliminary release pegged it at 5.2%. However, in many core segments, we saw inflation rates either unchanged from the previous month or softening slightly.

Ultimately, even with the upward revision, January marked a tangible decline in inflation in the euro zone, although 0.6 percentage point is nothing to scoff at. However, inflation remains significantly above the European Central Bank's target, and there are sticky pressures such as higher production costs, which will make it difficult to drag inflation back down to 2% in a sustained manner. Therefore, the ECB will maintain its restrictive monetary policy stance. We continue to forecast another 50-basis point hike at the upcoming 16 March meeting. The prospects of higher interest rates and still-high inflation are negative for the broader euro zone outlook. We also forecast private spending to contract in the first quarter of 2023.

Business confidence rising in France, Germany

Business confidence measurements were released Wednesday for France and Germany, and both improved. Germany's Ifo business climate index picked up to 91.1 in February from 90.1 in January. However, it is concerning that, while firms were considerably less pessimistic about

the future, their assessments of the current situation worsened.

Good news such as declining natural gas prices is helping businesses get excited about future prospects. However, it may undervalue how much inflation could still cut into consumer purchasing power and demand. Either way, there are some sectoral differences, with tourism and hospitality reporting higher morale and export-oriented manufacturers reporting worse morale.

Tourism has had a positive winter, though we were expecting an underwhelming season. But even low flows would look favourable compared to the past two winters when COVID-19 lockdowns and social distancing crushed the tourism season.

Meanwhile, France's business climate indicator rose to 103 in February from 102 in January. The service sector also stood firm in France. The only sector in the country to track a net decrease in sentiment was construction. Overall, employment expectations were stable, with the index at 110, well above the synthetic long-term average of 100. The high employment expectations reading is a relief for households and, subsequently, their expenditures that the country's tight labour market has supported despite headwinds from the dual inflation and energy crises.

European PMI jumps in February

According to flash estimates, the euro zone's composite PMI jumped from 50.3 in January to 52.3 in February, the strongest reading since May 2022. A score above 50 implies growth in the economy. Looking at the details, however, we see a divide between the manufacturing and service sectors. The manufacturing PMI declined during the month to 48.5 from 48.8, implying that the sector contracted even quicker. But the services PMI buoyed the composite, leaping 2.2 points to 53.

China Recovery Will Bolster the Region

BY STEVEN COCHRANE

For the Asia-Pacific region, 2022 ended up being a year of uncertainty and volatility. This year seems to be offering up just as much uncertainty and possibly more. The major economies of the region, except for Hong Kong, avoided recession last year, and yet nearly all suffered volatile growth last year. This was most notable in Vietnam, where robust growth in the second and fourth quarters was preceded by quarterly declines.

In recent trends, Malaysia enjoyed a strong first half as commodity prices rose following Russia's invasion of Ukraine. But the second half slowed under higher interest rates and inflation, tepid consumer confidence, and softer commodity prices. The pattern was the reverse in the Philippines, which enjoyed the beginning of a strong recovery in the second half after the longest period of pandemic-related restrictions in Asia.

Japan was among the weaker performers because of very weak investment spending, particularly for housing, and modest consumer spending. Exports were Japan's bright spot last year. South Korea, on the other hand, slowed throughout the year, with exports and consumption declining in the fourth quarter.

China's economy was one of the most volatile, with the zero-COVID policy resulting in lockdowns that hit hard in Shanghai and elsewhere in the second quarter; these compounded global commodity price spikes and supply disruptions flowing from the start of the war in Ukraine. The lockdowns continued off and on until the policy reversal in December, which also eliminated the use of frequent COVID-19 testing, opened the borders with Hong Kong and Macau, and allowed for wider overseas travel.

Recovery expected

Thus, 2023 marks a significant change in the opportunities and risks before the Asia-Pacific economy. The recovery of the Chinese economy is no longer uncertain. Indeed, it has already shown signs of acceleration, particularly during the late-January Lunar New Year holidays, when households could travel and spend without restraint for the first time in three years.

But it is less clear if this growth pattern will continue throughout the year or how it will support the regional economy. This year's holiday travel was still well below prepandemic levels, although current data could be undercounting total travel. The data do not include passenger vehicles, which may have played a larger role this year as holiday travelers sought to avoid close contact with

others. But it is indicative of broader consumer spending, where the rebound hasn't brought a return to pre-pandemic levels

More importantly, the housing market is holding back growth in China.

Residential sales are down nearly 50% from their peak in early 2021, and new construction starts are down by more than 60% from their mid-2020 peak. Neither metric has shown any sign of stabilization. This, despite reduced interest rates, an easing of restrictions on property developers to seek new funding, and additional incentives to buyers of residential units. Given pent-up demand, the housing market will stabilize, but not until this year's second half at the earliest, and in coming years it will not play the outsize role in driving the economy that it has over the past decade.

Similarly, Chinese manufacturing and trade will improve slowly this year. The official Purchasing Managers' Index shows improved sentiment for production and new orders, although export orders still appear weak. This is clear in the value of China's exports and imports. These fell year on year in November and December, although that was likely the low point ahead of China's economic recovery.

On a nominal volume basis, the weakness has been more prolonged. It is also broadly based, with exports from the Asia-Pacific region's emerging and more developed economies falling since midyear. This has been due to soft demand in China, Europe and North America. The improving, but mixed, picture for China's manufacturers will stabilize regional trade this year, but a surge in trade is not expected until 2024.

Outlook

China's recovery this year has begun and will become more visible in second-quarter data. The recovery will have an impact on the rest of the region via three channels—trade, inflation and tourism.

China's manufacturing rebound will be driven by improved domestic demand this year. While not as potent as its more powerful export engine, it will create demand for goods from the APAC region. Demand for intermediate goods such as semiconductors and auto and machinery parts will have a wide impact, particularly in Taiwan, South Korea and Singapore, but elsewhere as well. This trend will be stronger in 2024 as global demand for high-tech products turns. Also,

growing Chinese demand for commodities such as crude and refined energy, coal, copper and food commodities will help Australia, New Zealand, Thailand, Malaysia and Indonesia this year. The impact of this will depend to a large degree on how quickly public funding in China can support infrastructure expansion and how well Chinese households respond to policy support for housing demand. In any case, demand for commodities will be complemented by an acceleration of global demand next year.

Inflation

Rising demand in China will lift its inflation rate, which has been quite low through the pandemic. The strength of its rebound could delay the process of disinflation that has begun in the APAC region. Already, top-line inflation peaked around mid-2022 in the tech- and finance-oriented economies of Singapore, South Korea and Taiwan, as well as in Thailand and to a certain degree in India. The risk is higher in other parts of Southeast Asia, particularly in the Philippines and Vietnam, where food prices are still rising and energy subsidies are being scaled back.

Central banks, excluding China and Japan, are still expected to end their tightening cycles this quarter and to hold rates steady through this year. However, higher-than-expected inflation could slow the pace of growth in the region, and if regulators choose to raise policy interest rates later in the year, it would put additional brakes on economic growth.

Tourism

International tourism offers some upside to a number of regional economies. The removal of entry restrictions across most of the region, combined with the elimination of regulatory barriers in China for traveling abroad, creates good potential for high-spending Chinese tourists to boost service-providing industries in the Asia-Pacific region. Most pent-up demand in China is among higher-income households who already are spending more on luxury goods within China. The primary factor that will limit international travel and spending will be international airline capacity in China

The Philippines, Thailand and Vietnam have the most to gain if travel from China can rebound to pre-pandemic levels. Their tourism industries depend the most on visitors from China, who made up between 20% and 35% of total tourist arrivals in 2019. Singapore's attractions, luxury shopping malls, and Mandarin language capability will also attract Chinese tourists. Malaysia and Indonesia similarly stand to get a boost from arrivals from China, while Australia and New Zealand will see a return of university students. Japan's large economy is less dependent upon tourism, but its opening to all international arrivals already is raising occupancy rates at hotels and supplementing spending in an otherwise lackluster consumer economy.

Regional Recovery Will Accelerate Through This Year

The APAC economy will accelerate as the year progresses. China will have the strongest acceleration as it transitions from the era of the zero-COVID policy that created deep uncertainty over most of 2022. The nearly instant and complete policy pivot in December offers the potential for a much quicker recovery than experienced elsewhere. ASEAN economies, South Korea and Australia will follow suit, but with much shallower trajectories. Taiwan's economy will perform more unevenly this year as it awaits the cyclical turnaround in the semiconductor industry expected late this year and next year.

The greatest risk to this optimistic outlook is that U.S. and European economies falter and fall back into recession, delaying the improvement in demand for imported goods and services. The baseline forecast does not envision recession in the developed economies, or globally, but the risk of recession in the U.S. and Europe is uncomfortably high.

The war in Ukraine is an additional risk because fighting will likely escalate with the spring thaw. New sanctions on energy products from Russia and ensuing supply-chain constraints could reignite inflation and derail the outlook for accelerating economic growth in the second half of 2023 and into 2024.

THE LONG VIEW: LATIN AMERICA

Roadblocks Obstruct Energy Transition

By JUAN PABLO FUENTES

There seems to be a growing political and social consensus in Latin America regarding the need to accelerate the region's energy transition in the next decade. Recent elections in the region hint at the growing interest among voters to support green candidates. Colombia's Gustavo Petro and Chile's Gabriel Boric ran successful campaigns partly on the promise of advancing the energy transition in both countries. In Brazil, Lula da Silva's surprising return to the presidency last year was partly supported by his commitment to save the Amazon rainforest; deforestation in Brazil surged 60% under Lula's predecessor, Jair Bolsonaro. Meanwhile, mining projects in countries such as Peru and Bolivia have faced increasing opposition from local communities in recent years.

The region enjoys natural advantages when it comes to potential renewable energy sources. According to the World Economic Forum's Energy Transition Index, most countries in the region score above the world's average thanks in part to the extensive use of hydropower generation in South America—and in some cases, to the early adoption of government policies aimed at increasing energy efficiency.

According to the World Economic Forum, the "ETI provides a data-driven framework to foster understanding of the performance and readiness of energy systems across countries for transition. An effective energy transition can be defined as a timely transition toward a more inclusive, sustainable, affordable and secure energy system that provides solutions to global energy-related challenges, while creating value for business and society." Uruguay, a country with limited natural resources, scores the highest in the

region, followed by Costa Rica, Colombia, Brazil and Chile. On the negative side, most of Central America and Venezuela score poorly, highlighting the link between economic performance and energy transition.

Aside from access to hydropower, the region also has high potential for the development of solar and wind power as power generation sources. The region aims for 70% of electric energy consumption to come from renewable sources by 2030, according to the Renewable Energy for Latin America and the Caribbean Initiative, signed by 15 countries.

However, limiting the use of fossil fuels in power generation will be relatively easy compared with the decarbonization of the transport sector, the largest source of greenhouse emissions in the region. This would require massive investments in public transportation infrastructure and the implementation of long-term subsidy programs to encourage the electrification of the auto sector. Yet most countries in the region can hardly afford those expenses given their structural fiscal problems and elevated debt burden.

Governments must encourage the private sector to participate in energy transition by creating a simple, favorable legal and tax framework. Increased private investment in this area can also help generate more formal jobs, which would boost productivity and growth. Without the inclusion of private capital, the energy transition process will stall and the region will fail to achieve its greenhouse emission goals.

Downgrades Dominate Again

BY OLGA BYCHKOVA

U.S.

U.S. credit downgrades outnumbered upgrades for the seventh consecutive week since the beginning of the year, coming in at 11-to-4 in the latest weekly period, though comprising only 23% of affected debt. The changes Moody's Investors Service issued spanned a diverse set of speculative-and investment-grade bonds and industrial and financial companies.

The largest downgrade, accounting for 13% of debt affected in the period, was issued to one of the world's largest apparel, footwear and accessory companies, V.F. Corporation, with its senior unsecured debt rating lowered to Baa2 from Baa1, senior unsecured shelf and senior unsecured MTN ratings cut to (P)Baa2 from (P)Baa1, subordinate shelf rating reduced to (P)Baa3 from (P)Baa2, and preferred shelf rating downgraded to (P)Ba1 from (P)Baa3. Moody's Investors Services affirmed the company's P-2 short-term commercial paper rating and changed the rating outlook to stable from negative. The downgrades reflect VF's currently high leverage, caused by underperformance in its largest and most profitable brand, Vans, large customer inventory destocking at Dickies, a slower-than-expected recovery in China because of ongoing COVID-related disruptions, and elevated inventory levels that are leading to higher promotional sales activity and reduced margins. The company also borrowed incremental debt through an unrated delayed draw term loan to pay \$875.7 million of gross tax and interest being disputed in connection with its appeal of an adverse legal ruling related to VF's acquisition of Timberland in 2011, the rating agency added.

VF's Prime-2 commercial paper rating reflects Moody's Investors Service's expectation that the company will maintain decent liquidity to fund cash flow needs over the next 12 months, including highly seasonal working capital needs, capital expenditures, and its reduced dividend. The stable outlook reflects Moody's expectation that VF will steadily improve operating performance, cash flow and credit metrics over the next two years, led by improved performance in Vans and successful inventory reduction efforts. The outlook also reflects the rating agency's expectation that VF will maintain a more conservative financial policy by focusing on debt reduction while maintaining solid liquidity, improving free cash flow, and refinancing its euro notes due September 2023, well ahead of maturity.

Upgrades were headlined by Kraft Heinz Foods Company, which saw its and other subsidiaries of the Kraft Heinz Company senior unsecured ratings raised to Baa2 from Baa3, and the commercial paper ratings upgraded to Prime-

2 from Prime-3, impacting 67% of debt affected in the period. The outlook is stable. According to Moody's Investors Service, the upgrades reflect the company's significant progress toward reducing financial leverage and improving its operating performance in recent years. The stable rating outlook reflects Moody's expectation that the company will continue to support its brands to promote growth and balance its financial policy to maintain credit metrics at or slightly better than current levels. The rating agency also projects that Kraft Heinz will experience some margin improvement as pricing actions are fully cycled, supply chains improve, cost savings continue to be pursued, and inflation abates.

In January, 69% of the U.S. rating changes that Moody's Investors Service issued were credit downgrades, comprising 63% of the total affected debt.

FUROPF

In Western Europe, downgrades also outstripped upgrades, 9-to-2, and comprised 58% of affected debt. The changes Moody's Investors Service issued spanned a diverse set of speculative- and investment-grade industrial and financial firms.

The largest downgrade last week, accounting for 23% of affected debt, was made to Dutch chemicals company Akzo Nobel N.V., which saw its senior unsecured rating lowered to Baa2 from Baa1 and its backed senior unsecured notes and senior unsecured EMTN program cut to Baa2 from Baa1 and (P)Baa2 from (P)Baa1, respectively. Moody's Investors Service also changed the outlook to stable from negative and affirmed AkzoNobel's commercial paper and other short-term ratings at P-2 and (P)P-2, respectively. The downgrades reflect AkzoNobel's high point-in-time leverage as well as Moody's expectations that the deleveraging trajectory will not be commensurate with a Baa1 rating, in particular as the company is likely to refinance some shortterm debt and fund cash outflows with long-term debt, causing an enduring change of its capital structure. The stable outlook on AkzoNobel's ratings reflects the rating agency's expectation that the company will demonstrate its ability to substantially reduce Moody's adjusted gross leverage over the next 12-18 months. The stable outlook reflects Moody's expectation that the company will prudently manage its liquidity profile, including its shortterm debt maturities.

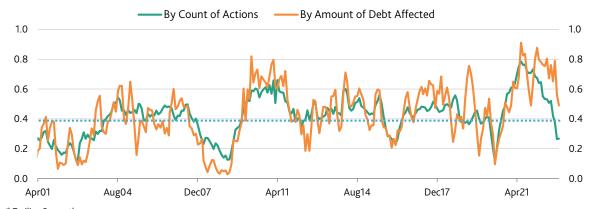
The largest upgrade, accounting for 31% of debt affected in the period, was issued to Banca Monte dei Paschi di Siena S.p.A. Moody's Investors Service raised the company's longterm foreign and domestic currency deposit ratings to Ba2 from B1, long-term domestic senior unsecured debt rating to B1 from Caa1, domestic senior unsecured euro mediumterm note program ratings to (P)B1 from (P)Caa1, domestic subordinated debt rating to B2 from Caa1, long-term foreign and domestic currency counterparty risk rating to Ba1 from Ba3, baseline credit assessment and adjusted BCA to b1 from b3, and long-term counterparty risk assessment to Ba1(cr) from Ba3(cr). The outlook remains stable. The rating agency referenced that the bank has made significant

progress over the last few years that buttressed its viability. In particular, the recent capital increase of €2.5 billion in November 2022 completed the actions needed to shore up the bank's solvency and rebuild its capacity to generate some profitability.

Similar to the U.S., in January, 75% of ratings changes issued by Moody's Investors Service in Western Europe were credit downgrades, comprising 73% of total affected debt.

RATINGS ROUND-UP

FIGURE 1
Rating Changes - US Corporate & Financial Institutions: Favorable as a % of Total Actions



^{*} Trailing 3-month average

Source: Moody's

FIGURE 2 Rating Key

BCF	Bank Credit Facility Rating	ММ	Money-Market
CFR	Corporate Family Rating	MTN	MTN Program Rating
CP	Commercial Paper Rating	Notes	Notes
FSR	Bank Financial Strength Rating	PDR	Probability of Default Rating
IFS	Insurance Financial Strength Rating	PS	Preferred Stock Rating
IR	Issuer Rating	SGLR	Speculative-Grade Liquidity Rating
JrSub	Junior Subordinated Rating	SLTD	Short- and Long-Term Deposit Rating
LGD	Loss Given Default Rating	SrSec	Senior Secured Rating
LTCF	Long-Term Corporate Family Rating	SrUnsec	Senior Unsecured Rating
LTD	Long-Term Deposit Rating	SrSub	Senior Subordinated
LTIR	Long-Term Issuer Rating	STD	Short-Term Deposit Rating

FIGURE 3
Rating Changes: Corporate & Financial Institutions - US

Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	
2/15/2023	NBG INTERMEDIATE HOLDINGS, INC-KNB HOLDINGS CORPORATION	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa3	С	SG
2/15/2023	AVAYA HOLDINGS CORP	Industrial	SrSec/BCF/LTCFR/PDR	1000	D	Caa2	Ca	SG
2/15/2023	GUITAR CENTER INC. (NEW)	Industrial	SrSec/LTCFR/PDR	550	D	В3	Caa1	SG
2/16/2023	COTY INC.	Industrial	SrSec/SrUnsec/BCF/LTCFR/PDR	2886.048	U	Ba3	Ba2	SG
2/16/2023	HOLLEY INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	В3	SG
2/17/2023	V.F. CORPORATION	Industrial	SrUnsec/Sub/MTN/PS	4537.222	D	Baa1	Baa2	IG
2/17/2023	KRAFT HEINZ COMPANY (THE)-KRAFT HEINZ FOODS COMPANY	Industrial	SrUnsec/CP	22948.15	U	Baa3	Baa2	IG
2/17/2023	SILVERGATE CAPITAL CORPORATION	Financial	LTIR/LTD/PS	200	D	B1	B3	SG
2/17/2023	CYXTERA DC HOLDINGS, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	В3	Caa2	SG
2/17/2023	AZUL S.A.	Industrial	SrUnsec/LTCFR	1000	D	Caa1	Caa3	SG
2/17/2023	FS ENERGY AND POWER FUND	Financial	SrSec/LTCFR	500	D	Ba3	B1	SG
2/17/2023	API HOLDINGS II CORPAPI HOLDINGS III CORP.	Industrial	SrSec/BCF/LTCFR/PDR		D	В3	Caa3	SG
2/21/2023	VANTAGE SPECIALTY CHEMICALS, INC.	Industrial	SrSec/BCF/LTCFR/PDR		U	В3	B2	SG
2/21/2023	ACADEMY SPORTS & OUTDOORS, INCACADEMY, LTD.	Industrial	SrSec/BCF/LTCFR/PDR	400	U	Ba3	Ba2	SG
2/21/2023	ASTRO INTERMEDIATE HOLDING II CORPORATION-ASTRO ONE ACQUISITION CORPORATION	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa1	Ca	SG

Source: Moody's

FIGURE 4
Rating Changes: Corporate & Financial Institutions - Europe

Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD	New LTD Rating	IG/	Country
2/15/2023	BANCA MONTE DEI PASCHI DI SIENA S.P.A.	Financial	SrUnsec/LTD/Sub/MTN	4265.393	U	Caa1	B1		ITALY
2/15/2023	COLOUROZ MIDCO	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa1	Caa2	SG	LUXEMBOURG
2/16/2023	VESTAS WIND SYSTEMS A/S	Industrial	SrUnsec/LTIR/MTN	1066.348	D	Baa1	Baa2	IG	DENMARK
2/16/2023	ZEPHYR GERMAN TOPCO GMBH-FLENDER INTERNATIONAL GMBH	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	В3	SG	GERMANY
2/17/2023	AKZO NOBEL N.V.	Industrial	SrUnsec/MTN	3145.727	D	Baa1	Baa2	IG	NETHERLANDS
2/17/2023	ADIDAS AG	Industrial	SrUnsec/LTIR	2665.87	D	A2	А3	IG	GERMANY
2/17/2023	HAMBURG COMMERCIAL BANK AG	Financial	SrUnsec/LTIR/LTD/MTN	1555.477	U	Baa1	А3	IG	GERMANY
2/17/2023	ATENTO S.AATENTO LUXCO 1	Industrial	SrSec/LTCFR	500	D	B2	Caa1	SG	LUXEMBOURG
2/17/2023	TECHNICOLOR CREATIVE STUDIOS SA	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa1	Caa3	SG	FRANCE
2/21/2023	CECONOMY AG	Industrial	SrUnsec/LTCFR/PDR	533.1741	D	B1	B2	SG	GERMANY
2/21/2023	ZARA UK TOPCO LIMITED-FLAMINGO GROUP INTERNATIONAL LIMITED	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	В3	SG	UNITED KINGDOM

Source: Moody's

MARKET DATA

Figure 1: 5-Year Median Spreads-Global Data (High Grade)

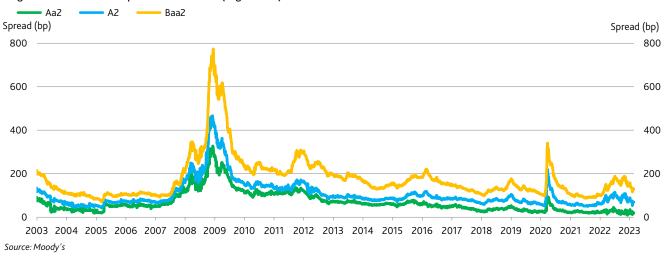
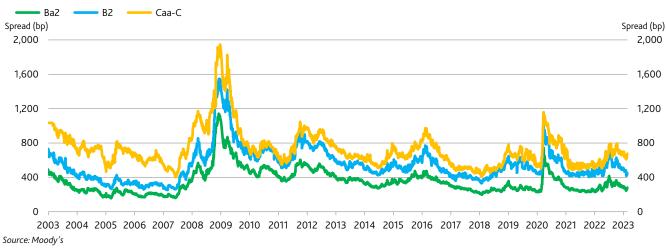


Figure 2: 5-Year Median Spreads-Global Data (High Yield)



CDS Movers

Figure 3. CDS Movers - US (February 15, 2023 – February 22, 2023)

CDS Implied Rating Rises	CDS Impli	CDS Implied Ratings		
Issuer	Feb. 22	Feb. 15	Senior Ratings	
Merck & Co., Inc.	Aa3	A2	A1	
Georgia-Pacific LLC	Aa2	A1	A3	
Apple Inc.	Aaa	Aa1	Aaa	
Intel Corporation	A2	A3	A2	
Caterpillar Financial Services Corporation	Aa3	A1	A2	
State Street Corporation	A1	A2	A1	
Thermo Fisher Scientific Inc.	A3	Baa1	A3	
Truist Financial Corporation	Baa2	Baa3	A3	
Visa Inc.	A2	A3	Aa3	
Cargill, Incorporated	Baa1	Baa2	A2	

CDS Implied Rating Declines	CDS Impli	ed Ratings	_
Issuer	Feb. 22	Feb. 15	Senior Ratings
Bank of America Corporation	Baa1	A3	A2
Goldman Sachs Group, Inc. (The)	Baa2	Baa1	A2
Morgan Stanley	Baa2	Baa1	A1
Ally Financial Inc.	Ba2	Ba1	Baa3
Union Pacific Corporation	Aa2	Aa1	A3
3M Company	A3	A2	A1
Consolidated Edison Company of New York, Inc.	Baa3	Baa2	Baa1
Bank of America, N.A.	Baa1	A3	Aa2
Valero Energy Corporation	Baa2	Baa1	Baa2
Exelon Corporation	Aa3	Aa2	Baa2

CDS Spread Increases			CDS Spreads	
Issuer	Senior Ratings	Feb. 22	Feb. 15	Spread Diff
Liberty Interactive LLC	В3	2,612	2,153	459
CSC Holdings, LLC	B1	1,588	1,411	177
Embarq Corporation	Caa2	1,825	1,705	120
Freedom Mortgage Corporation	B2	831	730	102
Lumen Technologies, Inc.	B2	1,470	1,372	97
Glatfelter Corporation	Caa2	746	654	92
Dish DBS Corporation	В3	1,343	1,274	68
Anywhere Real Estate Group LLC	B2	832	772	60
Carnival Corporation	В3	941	883	58
Nabors Industries, Inc.	Caa1	508	453	56

CDS Spread Decreases			CDS Spreads			
Issuer	Senior Ratings	Feb. 22	Feb. 15	Spread Diff		
Rite Aid Corporation	Ca	4,583	4,923	-340		
Southern Copper Corporation	Baa1	102	131	-28		
United States Cellular Corporation	Ba2	301	314	-13		
Tenet Healthcare Corporation	В3	378	388	-11		
ERAC USA Finance LLC	Baa1	97	108	-11		
Gap, Inc. (The)	Ba3	471	482	-11		
Alabama Power Company	A1	78	87	-9		
RPM International Inc.	Baa3	144	153	-9		
Merck & Co., Inc.	A1	47	55	-8		
Service Properties Trust	B2	498	506	-8		

Source: Moody's, CMA

CDS Movers

Figure 4. CDS Movers - Europe (February 15, 2023 – February 22, 2023)

CDS Implied Rating Rises	CDS Impli	_	
Issuer	Feb. 22	Feb. 15	Senior Ratings
Hammerson Plc	Ba2	B1	Baa3
Nordea Bank Abp	Aa3	A1	Aa3
Svenska Handelsbanken AB	A2	A3	Aa2
DNB Bank ASA	A1	A2	Aa2
Lloyds Bank plc	Aa2	Aa3	A1
Swedbank AB	A2	A3	Aa3
Landesbank Hessen-Thueringen GZ	A2	A3	Aa3
Bayerische Landesbank	Aa2	Aa3	Aa3
SEB AB	A1	A2	Aa3
Banco Comercial Portugues, S.A.	Ba3	B1	Baa3

CDS Implied Rating Declines	CDS Impli	CDS Implied Ratings		
Issuer	Feb. 22	Feb. 15	Senior Ratings	
HSBC Holdings plc	Baa1	A3	A3	
Dexia Credit Local	Baa1	A3	Baa3	
ENGIE SA	A3	A2	Baa1	
Deutsche Telekom AG	Aa3	Aa2	Baa1	
Unilever Finance Netherlands B.V.	Aa2	Aa1	A1	
UBS Group AG	Baa1	A3	A3	
Anglo American plc	Ba1	Baa3	Baa2	
de Volksbank N.V.	Baa2	Baa1	A2	
Orsted A/S	Baa1	A3	Baa1	
Allied Irish Banks, p.l.c.	Baa2	Baa1	A1	

CDS Spread Increases			CDS Spreads	
Issuer	Senior Ratings	Feb. 22	Feb. 15	Spread Diff
Casino Guichard-Perrachon SA	Caa1	2,397	2,098	299
INEOS Quattro Finance 2 Plc	B2	570	492	78
Ardagh Packaging Finance plc	Caa1	705	643	62
Carnival plc	В3	893	838	55
Jaguar Land Rover Automotive Plc	B1	748	696	52
CECONOMY AG	B2	783	738	44
Iceland Bondco plc	Caa2	1,097	1,055	42
Novafives S.A.S.	Caa2	995	956	39
Credit Suisse Group AG	Baa2	347	311	36
Sappi Papier Holding GmbH	Ba2	302	271	31

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Feb. 22	Feb. 15	Spread Diff
Hammerson Plc	Baa3	289	317	-29
Garfunkelux Holdco 3 S.A.	Caa2	1,035	1,063	-27
Yara International ASA	Baa2	132	153	-21
Banca Monte dei Paschi di Siena S.p.A.	B1	349	369	-20
Grifols S.A.	В3	459	475	-16
Faurecia S.E.	Ba2	318	331	-12
Evonik Industries AG	Baa2	70	82	-12
PPF Telecom Group B.V.	Ba1	276	287	-12
Vedanta Resources Limited	Caa1	1,840	1,848	-8
CPI Property Group	Baa3	554	560	-6

Source: Moody's, CMA

CDS Movers

Figure 5. CDS Movers - APAC (February 15, 2023 – February 22, 2023)

CDS Implied Rating Rises	CDS Implied Ratings			
Issuer	Feb. 22	Feb. 15	Senior Ratings	
Australia and New Zealand Banking Grp. Ltd.	A1	A2	Aa3	
Telstra Corporation Limited	Aa3	A1	A2	
Mitsubishi HC Capital Inc.	A1	A2	A3	
Woolworths Group Limited	A3	Baa1	Baa2	
Nomura Securities Co., Ltd.	A3	Baa1	A3	
Tata Motors Limited	Ba2	Ba3	B1	
SK Innovation Co. Ltd.	Ba1	Ba2	Baa3	
Nippon Yusen Kabushiki Kaisha	A1	A2	Ba2	
Japan, Government of	Aaa	Aaa	A1	
China, Government of	A3	A3	A1	

CDS Implied Rating Declines	CDS Impli	CDS Implied Ratings	
Issuer	Feb. 22	Feb. 15	Senior Ratings
China Development Bank	Baa1	A3	A1
Korea Development Bank	Aa3	Aa2	Aa2
Thailand, Government of	A1	Aa3	Baa1
Export-Import Bank of China (The)	A3	A2	A1
Malaysia, Government of	Baa1	A3	A3
Mitsubishi Corporation	Aa1	Aaa	A2
Takeda Pharmaceutical Company Limited	Aa2	Aa1	Baa2
Malayan Banking Berhad	Baa2	Baa1	A3
CITIC Limited	Baa3	Baa2	А3
Mitsui & Co., Ltd.	Aa1	Aaa	A3

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Feb. 22	Feb. 15	Spread Diff
GMR Hyderabad International Airport Limited	Ba3	308	293	15
CITIC Group Corporation	A3	114	99	15
Nissan Motor Co., Ltd.	Baa3	150	139	11
China, Government of	A1	69	60	9
ndonesia, Government of	Baa2	96	87	9
Malayan Banking Berhad	A3	85	77	9
Tenaga Nasional Berhad	A3	88	79	9
Bank of China (Hong Kong) Limited	Aa3	89	81	8
Fransurban Finance Company Pty Ltd	Baa2	86	78	8
BDO Unibank, Inc.	Baa2	191	183	8

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Feb. 22	Feb. 15	Spread Diff
Pakistan, Government of	Caa1	3,454	3,589	-135
Adani Green Energy Limited	B2	2,018	2,056	-38
SK Innovation Co. Ltd.	Baa3	223	250	-27
SK Hynix Inc.	Baa2	141	150	-9
Tata Motors Limited	B1	288	295	-8
Halyk Savings Bank of Kazakhstan	Ba2	452	459	-7
Boral Limited	Baa2	141	147	-6
NBN Co Limited	A1	81	85	-4
Hong Kong SAR, China, Government of	Aa3	39	43	-4
Nomura Securities Co., Ltd.	A3	69	73	-4

Source: Moody's, CMA

ISSUANCE

Figure 6. Market Cumulative Issuance - Corporate & Financial Institutions: USD Denominated

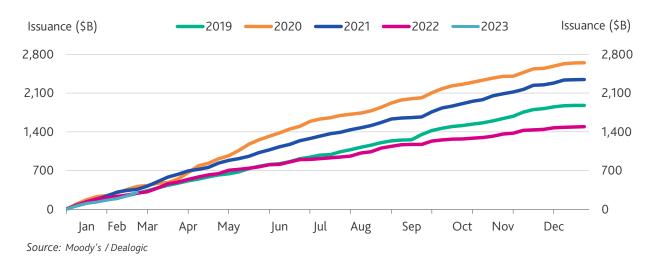
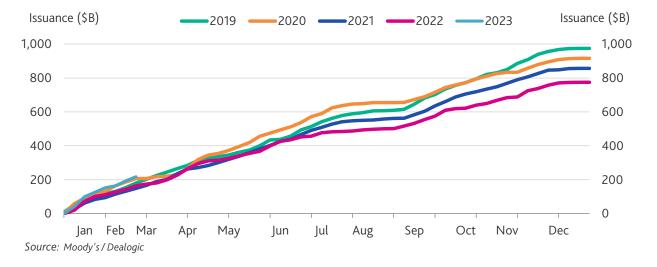


Figure 7. Market Cumulative Issuance - Corporate & Financial Institutions: Euro Denominated



ISSUANCE

Figure 8. Issuance: Corporate & Financial Institutions

	USD Denominated		
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	57.496	0.500	58.502
Year-to-Date	265.475	37.775	305.987

	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	23.465	1.068	24.613
Year-to-Date	190.294	17.165	217.821

^{*} Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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