# Moody's

#### WEEKLY MARKET OUTLOOK

MARCH 21, 2024

#### **Lead Author**

Dante DeAntonio Director

#### Asia-Pacific

Jeemin Bang Dave Chia Eugene Tan Stefan Angrick

#### **Europe**

Ross Cioffi Olia Kuranova Olga Bychkova

#### U.S.

Martin Wurm Ed Friedman Shannon Brobst Shandor Whitcher

#### Latin America

Juan Pablo Fuentes Gustavo Rojas-Matute

#### **Inside Economics Podcast:**



Join the Conversation

Apple Podcasts
Google Podcasts
Spotify

### No Surprise From the Fed

An upbeat, if still cautious, tone characterized the March meeting of the Federal Open Market Committee. The fed funds rate target, as anticipated, was kept unchanged, despite higher-than-expected consumer price inflation reports in recent months. However, reflecting recent communications, the Federal Reserve dampened expectations about the FOMC's urgency to rush to rate cuts.

The committee's latest Summary of Economic Projections suggests that 2024 will see 75 basis points' worth of cuts to the fed funds rate, unchanged from the most recent Summary of Economic Projections from December. This reflects policymakers' continued confidence that policy tightening has worked and inflation will eventually return to target. However, the

Table of Contents
Top of Mind3
Week Ahead in Global Economy 5
Geopolitical Risks7
The Long View       8         U.S.       8         Europe       13         Asia-Pacific       14         Latin America       15
Ratings Roundup 16
Market Data19
CDS Movers20
Issuance23

committee reiterated that it will not be appropriate to reduce the target range until it has gained greater confidence that inflation is moving sustainably toward 2%.

Notably, though, policymakers are now more upbeat about a soft landing than they were in December. The FOMC's GDP forecast for 2024 was revised upward from 1.4% to 2.1%. Subsequently, the Fed predicts 2% growth for 2025 and 2026, up slightly from December without comparable changes to inflation and unemployment projections.

Inflation has receded meaningfully in the U.S. without the corresponding increase in joblessness historically observed when restrictive policy is needed to bring down inflation. However, early inflation readings in January and February came in higher than expected, owing to a large degree to sticky shelter inflation. As Fed Chair Jerome Powell reiterated, the Fed will need to see a few more reports to convince itself that inflation is on a sustainable trend back to target. This renders a May cut unlikely, given a limited number of outstanding inflation reports before then.

The labor market is still threatening to stall progress on inflation. Wage growth is a sizable margin above the level the Fed estimates as compatible with its inflation target. January and February payroll hiring accelerated from late 2023, and at 3.9%, the unemployment rate signals the U.S. labor market is unlikely to have come fully into balance.

Our latest baseline forecast puts the first interest rate cut in June. In total, we expect a 75-basis point reduction by the end of 2024. We expect policy is loosened gradually and that the Fed's main policy rate remains restrictive through mid-2026.

#### CHIPS Act awards ramp up

Federal subsidies to boost semiconductor production in the U.S. are accelerating. In December, U.S. Commerce Secretary Gina Raimondo said she expects to make around a dozen semiconductor chips funding awards within the next year under the CHIPS Act of 2022, some of them multibillion-dollar announcements. This prediction is coming true.

On Tuesday, the White House announced the biggest award yet, approximately \$8.5 billion in direct subsidies to Intel along with up to \$11 billion in loans. The company had previously announced that it expects to spend upward of \$100 billion on U.S. facilities and research programs in Arizona, Ohio, New Mexico and Oregon. Two new facilities just outside Columbus OH will be part of a complex that could ultimately be among the largest chipmaking centers in the world.

Initial CHIPS Act payouts were slow in coming and relatively small. Now the pace is accelerating. On February 19, the Commerce Department announced a large award of \$1.5 billion to GlobalFoundries to subsidize three projects. The bulk of the award is for construction of a new plant on the company's Malta NY site, which will make chips for applications in automotive, aerospace, defense and artificial intelligence.

A smaller part of the award is for expansion of the company's existing Malta facility by adding new technologies already in use in GlobalFoundries' Singapore and Germany facilities, which supply the auto industry. The third project is to upgrade and expand capacity in the company's facility in Essex Junction VT, creating the first U.S. facility for high-volume production of gallium nitride semiconductors used in electric vehicles, power grids, data centers, and 5G and 6G smartphones.

The GlobalFoundries award is significant because the company is the only U.S.-based "pure-play" foundry. In other words, it makes chips based on users' specifications, making it a competitor to Taiwan-based TSMC, albeit much smaller. Although GlobalFoundries is U.S.-based, it also has facilities in Europe and opened one in Singapore in September.

The incentives to the company improve the prospects for domestic chip security in two ways: First, the better cost-effectiveness encourages the company to locate its next plant domestically. Second, as a competitor to TSMC, the company can potentially compete to supply some of TSMC's biggest U.S. customers, notably Apple and Nvidia.

#### TOP OF MIND

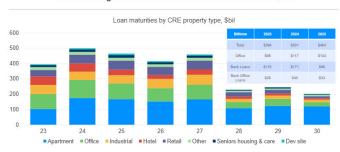
## U.S. CRE Risks and Bank Preparedness

#### By SHANNON BROBST and SHANDOR WHITCHER

The commercial real estate market has undergone significant upheaval in recent years. Prices soared from 2020 to 2022, buoyed initially by easy monetary policy and loose credit conditions, and then by demand from investors as a hedge against inflation. Conditions have since become much less favorable. Interest rates have surged amid a historic pace of monetary tightening. Moreover, lending standards on CRE loans have grown tighter since the midpoint of 2022.

These factors have strained the commercial real estate market in a few ways. First, higher interest rates have lured capital away from CRE in favor of lower-risk, yet newly lucrative fixed income investments. Meanwhile, an aboveaverage amount of CRE debt will mature in 2024 and 2025.

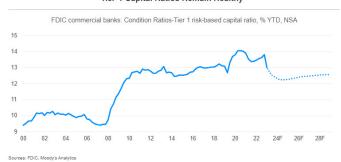
Above-Average Amount of CRE Debt Comes Due Short -Term



Many of these loans have large balloon payments, which will most likely need to be refinanced. Even with interest rates expected to inch down this year, borrowers will have to refinance at a much higher interest rate, increasing the —risk of cash flow issues. While these macro dynamics are shared across sectors, significant heterogeneity remains among them.

With considerable weakness in store for aggregate CRE prices, it is essential to consider the risks posed to the banking system. CRE accounts for nearly a quarter of bank loans, representing the largest single segment of bank-held debt. While this does spark concern, there is ample evidence that banks are equipped to handle the challenges ahead. First, banks remain well capitalized on average. Tier-1 capital ratios—a ratio measuring a bank's core capital against its total risk-weighted assets—among FDIC institutions are near an all-time high, leaving banks in a much stronger position than they were leading into the great financial crisis.

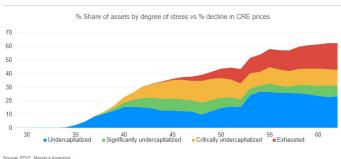
Tier-1 Capital Ratios Remain Healthy



Moreover, CRE lending has grown increasingly cautious since the Great Recession. Average loan-to-value ratios have declined significantly in the wake of the great financial crisis, leaving considerably more buffer against declines before banks face losses.

With these factors in mind, Moody's Analytics conducted a stress test of bank balance sheets against varying declines in CRE valuations. The analysis used a sample of more than 4,000 FDIC-insured institutions, with assets ranging from under \$3 million to more than \$3 trillion. The values of the CRE assets held by these banks were exposed to increasing price declines, assuming an average LTV ratio of 40%—a figure derived from loan-level data through the Moody's Analytics Credit Research Database. The analysis measured the degree of stress to institutions, from those that are undercapitalized to those that have fully exhausted their Tier-1 capital. The results were captured in terms of the share of institutions under stress. They were captured as well in terms of the share of assets under stress.

Share of Assets Under Stress



The results were broadly encouraging, with minimal stress under the baseline and consensus scenarios, both of which call for peak-to-trough declines of just over 10%. Even under the S4 – 96th percentile downside scenario, with price

declines of roughly 30% peak to trough, the stress does not begin to weigh on bank balance sheets. It requires assumed declines of more than 50% before bank stress begins to take hold. While the results were broadly heartening, the analysis does come with limitations. The analysis assumes a drop in CRE prices in isolation, not accounting for potential concurrent economic stresses that could exacerbate impacts on banks with diverse exposures.

Also, there is risk that even minimal signs of stress could amplify into broader crises of confidence in the banking system. CRE price performance will also vary by region, potentially affecting banks differently based on geographic exposure. To account for these broader self-reinforcing dynamics, Moody's Analytics has produced a Commercial Real Estate Doom Loop scenario where these factors were examined using the Global Macroeconomic Model.

Our baseline forecast expects much smaller price declines than the stress scenarios explore. Total CRE prices are forecasted to decline just over 10% peak-to-trough in the next year and a half. However, the decline will vary across each subsector.

The office subsector will by far be hit the hardest, with office CRE prices projected to fall 26.3% through the second part of 2025. The pandemic increased remote work trends, decreasing businesses' need for offices. As a result, many are downsizing their office space or moving to less-costly areas. Office vacancy rates are edging up and hit an all-time high of 19.6% at the end of 2023. Weaker demand will be the driving force behind price declines short term. Though the price correction will be spread out as office leases are typically three to five years, many businesses are waiting until their lease is up to adjust their office space.

The multifamily sector has already endured a 15% price decline from mid-2022 to mid-2023 and is edging up. However, the improvement will be short lived as multifamily CRE prices are expected to fall another 5% during the next six quarters. Price declines stem from increased supply rather than weaker demand. During the pandemic, rents surged, bolstering multifamily CRE values. In response, builders increased multifamily construction.

Residential construction timelines lengthened due to labor shortages and supply-chain issues that plagued the economy following the onset of the pandemic. However, many projects have been completed in the last 18 months, with new units set to increase supply in upcoming quarters. The

multifamily vacancy rate has been rising since mid-2022 and hit 5.5% at the end of 2023.

Like the multifamily sector, industrial and warehouse CRE price declines will be driven by increased industrial construction and new supply coming online. Industrial space was in high demand following the onset of the pandemic and its vacancy rate plunged, spurring more construction.

As new space came online, the distribution vacancy rate has risen for five consecutive quarters to 5.6%. Demand will remain strong as many companies are reshoring, bringing production back to the U.S. to insulate their business from future supply-chain shocks like those created by the pandemic. Additionally, there has been a consumer preference shift toward domestically made goods. Industrial and warehouse will be hit more mildly than the abovementioned sectors, with CRE prices only falling 5.7% and 6.6%, respectively.

Meanwhile, retail CRE prices are forecasted to fall 8% over the next five quarters. The pandemic significantly accelerated the already-rising trend of online shopping. Online sales have increased, decreasing demand at brick-and-mortar stores.

The retail sector has the highest delinquency rate, since many large chains have closed store locations in recent years. Retail CRE is highly dependent upon location. Malls that have lost their department anchor store are hurting, while other malls have made a full recovery. Also, consumer spending is poised to soften short term as wage growth slows and savings dwindle, dampening demand for goods.

The hotel sector will perform the best but will not escape completely unscathed. Hotel CRE prices are forecasted to fall 5.2% peak to trough. Pent-up travel demand was released during the past few years following the pandemic travel bans, but that bump has ended and began to normalize last year. Softer consumer spending short-term will limit travel. Hotel occupancy rates have rebounded to above 60% but have not fully recovered to pre-pandemic levels.

In conclusion, CRE prices across subsectors are expected to fall during the next year and a half. It will take time for the market to adjust for the rise in construction, resulting in increased supply for certain sectors and changes in consumer preferences shifting demand in other sectors. Despite downward pressure on CRE prices, the sturdy position of bank balance sheets lends toward optimism. Thanks to strong capitalization and prudent lending, the banking sector's resilience offers a solid foundation for weathering CRE market adjustments without triggering a recession.

## The Week Ahead in the Global Economy

#### U.S.

The U.S. economic calendar remains busy. Consumers will be in focus with March readings of consumer sentiment from both the Conference Board and University of Michigan as well as data on personal income and spending.

We look for consumer sentiment to be little changed because of mixed signals from both the stock market and gasoline prices rising. Real personal spending likely bounced back in February following a decline to open the year. Strong auto sales will be one of the biggest contributors to growth.

Following this week's decision by the Federal Open Market Committee to hold the funds rate steady again, we will get an additional data point on inflation next week. The PCE deflator will provide little new information on that front. The headline index will tick slightly higher while growth in core prices is expected to modestly slow. The Fed will still be looking for further proof that inflation is nearing its target over the next several months.

Other key data released next week include new-home sales, pending home sales, and international trade.

#### Asia-Pacific

Several economies will post industrial production figures for February. In Taiwan, industrial production growth likely slowed to 9.7% year on year from 16% in January. As Lunar New Year holidays fell in February this year and January last year, they have had a distorting influence on year-earlier comparisons in the opening months of 2024. Celebrations to welcome the Year of the Dragon meant there were fewer working days in February 2024.

The same holidays will have a similar influence on South Korean industrial production, with growth likely slowing to 9.5% in February from 12.9% a month earlier.

In Thailand, industrial production likely fell 4.1% year on year, eclipsing January's 2.9% drop. The country's manufacturing PMI has indicated contraction for the last seven months amid a deteriorating industrial performance. We expect tight monetary conditions to restrain domestic demand, keeping production levels subdued.

Singapore and Japan are also scheduled to post industrial production figures during the week. We expect a drop of 0.5% year on year in Singapore and 1% month-on-month jump in Japan.

#### Europe

The Economic Sentiment Indicator due out next week will give a view of euro zone business and consumer sentiment

in March. We expect the ESI improved to a score of 96.7 from 95.4 in February. A flash estimate of consumer confidence came back positive with a modest monthly increase. Even with the potential improvement, sentiment remains dismal in the bloc. We expect a rise in disposable incomes to help lift consumers out of their grim state, while businesses will likewise expect better once they see other businesses and households pick up spending.

There is still a way to go before that, as reflected in the sluggish pace of the retail sector. In Germany, we are expecting zero growth in retail sales for February, stabilizing after a 0.4% monthly decline in January, while in Spain we anticipate just a 0.1% increase after a 0.5% decline. Low consumer sentiment is holding back demand, and to the extent households want to spend their stretched budgets, they are directing it to services. We do not expect retail sales to recover until later this year.

Germany's unemployment rate likely ticked higher in March to 6% from 5.9% in February. We expect the economy is still contracting in the first quarter of 2024, and for unemployment to continue increasing as a result. PMI surveys report that manufacturers were still laying off workers in March, though net hiring among respondents in the services sector moderated the overall pace of job loss. In line with this, we only expect minor increases in unemployment in the first half of the year.

By contrast, the number of job seekers in France was likely unchanged at 2.8 million in February. The number has not changed since November 2022. According to the March PMI, however, employment levels fell for the fourth time in the past five months. Again, it is a matter of job losses in manufacturing outpacing job gains in services.

Finally, we do not expect revisions to the fourth-quarter GDP estimates coming out for Spain or the U.K. We expect a quarterly contraction of 0.3% in the U.K., while we think that Spain's GDP picked up 0.6% from the third quarter.

#### Latin America

A new batch of economic indicators for Chile will show improvement at the start of 2024. Retail sales likely grew for a third consecutive month in February on a seasonally adjusted basis, the strongest sign yet that the country's economic recovery is gaining ground. We look for a 3.2% annual advance in retail spending to push the topline index, which tracks retail and wholesale sales. Manufacturing production also continued to gain steam, likely up 4.5% year over year in February as the domestic market feels the relief provided by the monetary relaxation in place. The

unemployment rate likely averaged 8.7% in the rolling quarter ending in February, up from 8.4% a year earlier. In seasonally adjusted figures, unemployment likely averaged 8.8%.

Argentina's economy likely contracted 6.2% year on year in January, after a 4.5% decline in the previous month. Seasonally-adjusted, GDP declined an estimated 2.5% month on month in this period. The ongoing recession will continue amid soaring inflation and the implementation of drastic fiscal consolidation measures.

Brazil's unemployment rate likely continued to rise in February due to seasonal factors. The economy created more jobs, but not enough to absorb the additional job seekers. We estimate that unemployment increased to 7.8% in the rolling quarter ending in February from 7.6% in the previous three-month period. Mexico's unemployment rate likely adjusted downward in February to a rate of 2.7% from January's 2.9% as the economy gains steam and created temporary jobs on the positive effects of the political cycle.

## Geopolitical Calendar

Date	Country	Event	Economic Importance	Financial Market Risk	Risk Assessment
22-Mar	U.S.	Federal government shutdown deadline, part 2	Low	Low	Temporary funding for Commerce/Justice/Science, Defense, Financial Services/General Government, Homeland Security, Interior/Environment, Labor/HHS/Education, Legislative Branch, and State/Foreign Operations is set to expire two weeks after the first tranche runs out.
March	Russia	Presidential election	High	Medium	As the first presidential election in Russia since the war in Ukraine began and constitutional amendments were made in 2020, the election will be closely watched for internal instability and potential disruption, even as Vladimir Putin is highly likely to win re-election.
March	China	Two Sessions (meetings of China's top legislative body and political advisory body)	High	Medium	The annual Two Sessions meeting sets the wider policy agenda along with economic and social goals for the world's second-largest economy.
10-Apr	South Korea	General election	Low	Low	The election will determine whether President Yoon Suk Yeol's policy agenda will continue to face opposition in the National Assembly.
30-Apr	U.S.	Deadline to pass 12 appropriations bills before 1% spending cuts become permanent	Medium	Low	The Fiscal Responsibility Act (2023) disincentivizes the use of continuing resolutions to fund the government by enforcing a 1% automatic cut to all discretionary spending if a CR is in place on April 30, 2024. Such a cut to spending would drag GDP growth, bringing additional urgency to Congress to pass a full-year budget.
5-May	Panama	General elections	Medium	Low	General elections in Panama fall amid rising unrest and uncertainty over the future of the mining sector.
19-May	Dominican Republic	Presidential and legislative elections	Low	Low	President Luis Abinader is the favorite to be re-elected. In a possible second term, he will seek a fiscal reform delayed from the first term.
May	India	Election (Lok Sabha, lower house)	Medium	Low	Prime Minister Narendra Modi is vying for a third term, building India as an economic engine of the world, but the domestic focus is now toward inflation and economic inequality.
1-Jun	Mexico	General election	High	Medium	As elections commence in Mexico, the risk of social and political unrest will rise due to concerns over election subversion and fraud. Financial markets would be shaken while consumption and investment decisions tank, raising the risk of recession.
6-9 June	EU	Parliamentary elections	Medium	Low	The European Parliament has increased in importance since the founding of the EU. The parliament has the power to amend or adopt legislation proposed by the European Commission.
30-Jun	Dominican Republic	Potential presidential runoff	Low	Low	President Luis Abinader is the favorite to be re-elected. In a possible second term, he will seek a fiscal reform delayed from the first term.
28-jul	Venezuela	Presidential election	Medium	Medium	The National Electoral Council scheduled the presidential election for July 28, a deviation from the typical December elections. Opposition candidate Maria Corina Machado has shown a lead in the polls over incumbent President Nicolas Maduro but faces a Supreme Court-imposed ban on her candidacy. Prospects for a free and fair election remain doubtful and may result in the reinstatement of U.S. sanctions on the Venezuelan oil industry.
27-Oct	Uruguay	General elections	Low	Low	Uruguay's president, Luis Lacalle Pou, is ineligible for re- election. Thus, the electoral contest could be between the ruling coalition candidate, Álvaro Delgado, and Laura Ruffo from Partido Nacional.
5-Nov	U.S.	Presidential and congressional elections	Medium	Low	American voters will head to the polls to cast their ballots for incumbent president Joe Biden or the GOP front-runner, former president Donald Trump. The balance of power in the House and Senate is also at stake, which could lead to a shake-up in fiscal policy.
24-Nov	Uruguay	Potential presidential runoff	Low	Low	Uruguay's president, Luis Lacalle Pou, is ineligible for re- election. Thus, the electoral contest could be between the ruling coalition candidate, Álvaro Delgado, and Laura Ruffo from Partido Nacional.

#### THE LONG VIEW: U.S.

## Healthcare and Hospitality Led Corporate Defaults in February

#### By OLGA BYCHKOVA

#### **CREDIT SPREADS**

Corporate credit spreads widened slightly during the last weekly period but remained tight in general. Narrow credit spreads show market participants remain confident in the creditworthiness of borrowers and see the overall economy as favorable. As a result, despite tight monetary conditions, the economy begins the final descent toward a soft landing, with inflation declining steadily and growth holding up. This has been underpinned by persistent strength in consumer spending on the demand side and increased labor force participation, mended supply chains and cheaper energy and commodity prices on the supply side. The Moody's Ratings long-term average corporate bond spread to the 10-year U.S. Treasury has increased just 1 basis point to 118 bps, remaining above its 12-month low of 114 bps. Similarly, Moody's long-term average industrial bond spread expanded 2 bps to 103 bps over the past week. That is above its one-year low of 99 bps.

Meanwhile, low-grade credit spreads—the difference between the yield on high-yield or below-investment-grade corporate bonds and the risk-free 10-year Treasury yield have trended lower marginally during the last weekly period. This yield spread represents the compensation investors demand for the risk that businesses they invest in could run into financial trouble and miss making timely principal and interest payments. The U.S. Bloomberg/Barclays high-yield option-adjusted spread contracted to 300 bps from 303 bps the previous week, while the ICE BofA U.S. high-yield option-adjusted bond spread closed Wednesday at 314 bps, down 1 bp from its prior-week value. This compares with an average high-yield spread of 1,000 bps during recent recessions and an average 350 bps outside of recessions. The average spread since the high-yield market was established in the 1990s is about 500 bps.

The VIX index—a real-time indicator of the implied volatility of S&P 500 stocks that measures the market's sentiment about future asset price variance—dropped 0.7 point over the week to 13, slipping further below its long-term average of about 20 and median of 18, meaning investors can buy relatively cheap insurance and position in potentially profitable trades. Since the VIX tends to move inversely to stocks, market participants watch it closely as an indicator of investor sentiment and positioning. In the past, there has

been a significant correlation between credit spreads and equity market volatility, as measured by the VIX. This relationship was disrupted in recent years, but the decline in the VIX last year by 42.5% to the average of 17 has brought it back generally in line with high-yield spreads.

#### **GLOBAL DEFAULTS**

Moody's Ratings reported that 12 corporate debt issuers defaulted in February, up slightly from 11 in January. Half of the February defaults came from two sectors: healthcare & pharmaceuticals and hotel, gaming & leisure, with each accounting for three defaults. The remaining six defaults came from five other sectors.

The rating agency expects defaults for the healthcare & pharmaceuticals sector to remain elevated in 2024 because more ratings migrated toward the lower-end of the credit spectrum in 2023 than in 2022 and a considerable number of issuers in the sector have excessive leverage and weak liquidity. In 2023, the sector had the highest default volume of \$20 billion and second-highest default count of 13 as it contended with labor cost inflation, higher funding costs and a tougher lending environment.

The three February defaulters in the healthcare & pharmaceuticals sector were Cano Health LLC, Pluto Acquisition I Inc., and Radiology Partners Inc., all based in the U.S. Radiology Partners, the biggest radiology practice in the country, was last month's largest defaulter after completing a debt restructuring that is considered a distressed exchange.

The overall default tally was 23 in the first two months of this year, up from 19 in the comparable period of last year. By region, North America had 14 defaults (13 in the U.S. and one from Canada). The rest were from Europe (six), Latin America (two) and Asia (one). In terms of initial default type, distressed exchanges remained elevated, accounting for about half the defaults so far this year, a trend that will likely continue.

The global speculative-grade corporate default rate remained at 5% for the trailing 12 months ended in February, unchanged from January's rate. The 5% level is the highest since the second quarter of 2021.

In the coming 12 months, defaults will gradually head toward normalization, falling from the higher levels that resulted from the pandemic, the war in Ukraine and interest rate hikes. The credit agency predicts that February's 5% default rate will mark the current cycle's peak and that the global speculative-grade default rate will decline moderately to 3.5% by the end of this year before edging lower to 3.4% in February 2025. Moody's Ratings assumes that the U.S. high-yield spread will widen to 498 basis points in the coming four quarters from the low base of 326 bps at the end of February. The default rate forecast also incorporates the assumption that the U.S. unemployment rate will rise to 4.3% from the current rate of 3.9%.

The forecast is underpinned by several factors. Growth for G-20 economies is expected to stabilize at modestly lower levels in 2024. The U.S. economic growth rate is forecast to be 2.1% this year, down from 2.5% in 2023. The Federal Reserve will likely start lowering the federal funds rate in the second quarter. As for the magnitude, Moody's Ratings assumes a cumulative 100 basis points of cuts in 2024 and another 125 bps of cuts in 2025. Likewise, the European Central Bank is expected to begin policy normalization in the second quarter of 2024.

#### **CORPORATE BOND ISSUANCE**

The first quarter of 2023 saw a decline in global offerings of corporate bonds, with investment-grade offerings falling 7.9% and high-yield offerings dropping 10.1% year over year. U.S. dollar-denominated investment-grade issuance, which accounted for more than half of activity globally, decreased 15% on an annual basis. U.S. high-yield issuance also experienced a sluggish start at just \$52 billion, marking its slowest kickoff to the year since 2009, and posting an 18.4% decline compared to the first quarter of 2022.

In the second quarter of 2023, issuance strengthened as worldwide offerings of corporate bonds revealed a year-over-year increase of 20.7% for investment grade. High-yield issuance in the period nearly doubled the amount recorded in 2022. Approximately 60% of U.S. dollar-denominated high-yield proceeds in the period were allocated to debt refinancing.

Third-quarter 2023 corporate bond issuance picked up further, with worldwide offerings of investment-grade corporate bonds rising 7.5% year over year. U.S. dollar-denominated investment-grade corporate bonds totaled \$315.6 billion, up 3.5% on a year-ago basis but down 8% from the prior quarter. U.S. dollar-denominated high-yield corporate bond issuance was \$54 billion in the third quarter, down from \$65.8 billion in the second. However, high-yield issuance was up a whopping 70% on a year-ago basis.

Fourth-quarter 2023 corporate debt issuance came in suppressed. Worldwide offerings of investment-grade

corporate bonds totaled \$240.5 billion, down 35% year over year, while high-yield corporate bond issuance clocked in at \$38.1 billion, increasing 15% on a year-ago basis. U.S. dollar-denominated high-yield issuance ended the year at \$207.3 billion, reflecting a colossal 45.5% revival from 2022. Meanwhile, U.S. dollar-denominated investment-grade bond issuance totaled \$1.26 trillion in 2023, corresponding to a 3.1% decline from 2022. Over the past 12 months, total U.S. dollar-denominated issuance has tracked at a near-decade low, surpassing only 2022 value by a marginal 2.6%.

For the most recent week, U.S. dollar-denominated investment-grade debt issuance totaled \$39.6 billion, raising the headline figure to \$491.2 billion since the start of the year. This reflects a 26.9% increase compared with the same period in 2023. There was \$5.1 billion in high-yield debt issued in the same period, bringing the year-to-date reading to \$81.8 billion, a tremendous 65.4% resurgence relative to last year's pace. Total U.S. dollar-denominated corporate debt issuance so far tracks 37.7% above where it stood in 2023 and has jumped 23.4% higher compared with 2022.

#### U.S. ECONOMIC OUTLOOK

The U.S. economy is performing well, with above-trend growth in real GDP continuing in the fourth quarter. Consequently, we made only modest adjustments to the U.S. baseline forecast. Real GDP growth will be slightly stronger in the very near term, consistent with the recent economic momentum. Nonetheless, the forecast remains that growth will decelerate in response to fiscal tightening and high interest rates, gradually returning to trend by 2026. The unemployment rate will gradually rise to about 4%, little changed from last month's forecast.

In sum, key assumptions changed little in March. In terms of monetary policy, rate cuts in 2024 were slightly delayed, now beginning in June and with three instead of four by year's end. However, long-term rates were little changed. A slowdown in growth remains the expectation for next year, though the recently demonstrated economic momentum means it will be more gradual. We assume passage of a federal budget and no federal government shutdown. Our oil price outlook is little changed, although we did reduce the near-term forecast for natural gas as supply remains elevated. The trajectory for home sales, homebuilding and house prices was largely unchanged this month as the inventory of existing homes for sale remains low. The peak to trough outlook for commercial real estate prices was revised across property types based on generally strongerthan-anticipated recent performance data.

#### Monetary policy

Assumptions about monetary policy have become more restrictive since the last update. We now expect the Federal

Reserve will cut the policy rate three times this year from its current target range of 5.25%-5.50%, by 25 basis points each, down from four in the previous outlook. We anticipate the first cut in June instead of May, followed by cuts in September and December. Policymakers will subsequently relax monetary policy slowly, cutting rates by 25 basis points per quarter until reaching 3% by late 2026, and then cutting to 2.5% by 2030.

The adjustment reflects recent Fed communications. Following stronger-than-expected consumer price and labor market reports, policymakers signaled markets to be patient. Testifying to Congress in March, Fed Chair Jerome Powell suggested that while he remains convinced that prices are moving in the right direction, more data need to confirm that inflation is on a sustainable path to its 2% target before the Fed will consider cuts. Given the limited number of outstanding inflation reports before the Federal Open Market Committee's May meeting, this effectively rules out cuts prior to June.

Meanwhile, consumer price inflation in January came in ahead of expectations, and remained elevated in February, driven by higher energy and shelter prices. On a year-ago basis, headline inflation accelerated from 3.1% to 3.2% from January to February, and core inflation rose from 3.7% to 3.8%. Recent trends in the labor market also point up rather than down, with the economy adding an average of 265,000 payrolls over the past three months, up by 50,000 from last December. The jobless rate, however, inched up from 3.7% in January to 3.9% in February.

At the same time, financial markets took the Fed's communications relatively calmly. In early February, futures traders had priced in six rate cuts for 2024; now they expect four. Consistently, the 10-year Treasury yield averaged 4.2% in February, up 20 basis points from January, before settling around 4.1% in early March. Equities continued a bullish streak, with the S&P 500 hitting an all-time high in early March before dipping slightly when markets digested the Fed's slower pace. Concerns, however, linger in the banking sector, where yield curve inversion weighs on profit margins. The longer the Fed waits, the higher the odds that the inversion unveils fault lines in the fragile sector, resulting in broader economic consequences.

Reflecting recent history, the March baseline has consumer price inflation at 3% year over year in the first quarter of 2024, up from 2.9% in the previous outlook. We anticipate that inflation will return to target by the fourth quarter of 2024. Meanwhile, the 10-year Treasury yield will average 4.1% in the first quarter of 2024, compared with 4.2% in the previous baseline. Over time, the yield will approach its equilibrium level of 4%, and remain near this level until the end of the decade.

As Treasury yields have receded from last fall, the dollar lost momentum. On a real broad trade-weighted basis, the currency lost 2.5% from October through February. In a longer perspective, the dollar continues to be strong, at 5% above its pre-pandemic level.

#### Changes to GDP

U.S. economic growth decelerated in the fourth quarter, though only moderately. Real GDP declined from a clearly unsustainable 4.9% in the third quarter to a still above-trend 3.2%, according to the Bureau of Economic Analysis' second estimate. This was the sixth consecutive quarter of growth near or above the economy's potential. Consumer spending was the largest contributor as inventories became a drag. Trade grew as a support, government spending contributed, and fixed investment grew only modestly.

Consumer spending added 2 percentage points to growth, nearly as much as the prior quarter. Nonresidential fixed investment continued to contribute only modestly, but residential investment made its second positive contribution to growth since the start of 2021, albeit a tiny one. Government contributed 0.7 percentage point with the contribution led by state and local spending. Trade also contributed, with growth in exports only partly offset by the drag from growing imports.

Inventory accumulation will remain a minor drag in the current quarter and the contributions from consumer spending, trade and government will diminish in the first half of 2024. However, the deceleration in growth is more gradual than previously anticipated. On net, real GDP in 2024 will be higher than previously forecast, but the persistence of high interest rates ensures recent growth rates will not be maintained. Real GDP is projected to rise 2.5% in 2024 on an annual average basis, an upward revision of 0.2 percentage point. Subsequently, growth in the following two years will be 1.5% in 2025 and 1.9% in 2026, approximately the long-term trend.

#### Labor market

Payroll employment rose by 275,000 in February, once again beating expectations. Growth was strongest in healthcare, leisure/hospitality and the public sector, accounting for more than two-thirds of total gains. However, unlike January's report, the impact of revisions to prior months was negative. Specifically, gains in December and January were revised lower by a combined 167,000. The average gain over the last three months is now 265,000, compared with 289,000 last month—prior to revisions.

Another month of stronger-than-expected job growth in February will push average job gains in the first quarter just north of 250,000, an upgrade to our prior forecast.

However, we still expect job growth to cool quickly and average about 120,000 in the second quarter before slowing to 60,000 by year's end. The unemployment rate forecast was little changed. The uptick in February to 3.9% was in line with our expectation for the unemployment rate to edge slightly higher, reaching 4% by the end of the year before peaking just above that in mid-2025.

#### Business investment and housing

In the BEA's second estimate of growth in the fourth quarter, real business investment was 2.4% annualized, modestly higher than the initial reading of 1.9%. Some of the added gains came from structures, up 7.5% annualized compared to 3.2% in the earlier report. Intellectual property also contributed, up a percentage point more than in the first estimate. Within structures, the decline in commercial was more modest than the initial reading, and the estimates for both manufacturing and power were higher.

In contrast, equipment was significantly weaker, a decline of 1.7% annualized compared to an initial positive reading of 1% growth. Drilling down, the increase in IT was revised downward to only half of the initial estimate. Nonetheless this was the first increase in more than a year, potentially signaling the beginning of a significant rebound. Core industrial was also revised down to essentially flat compared to an initial reading of nearly 4% growth annualized. Although the revised data for transportation equipment were no worse than before, they confirm the weakness since mid-2023. The drop in light trucks reflects the persistence of struggles in that segment in recent years, at first because of supply-side shortages and subsequently on the demand side because of elevated costs of borrowing. The level of real spending is no higher than in 2016.

High-frequency data suggest that a turnaround in business equipment spending could be on the way, but it has not arrived yet. Shipments of nondefense, nonaircraft capital goods adjusted for inflation rose in December and January. However, inflation-adjusted new orders declined. On the positive side, the increase in shipments was consistent with a decline in unfilled orders, which had risen sharply in 2021 and 2022. Fulfilling this large backlog will support capital spending until new orders increase.

Real fixed business investment will rise by 3.4% on an annual average basis in 2024, more than the 3% in the February baseline. Stronger growth in structures that previously anticipated will contribute and so will a significant rebound in equipment spending. However, stillhigh interest rates will remain a headwind throughout 2024.

The forecasts for home sales, homebuilding and house prices are largely unchanged this month as the inventory of

existing homes for sale remains low. Permits and starts are expected to slow in the short term as mortgage rates remain elevated. Despite the slowing, activity is expected to remain relatively buoyant given the size of the nation's housing deficit. Additionally, homebuilders are responding to high mortgage rates by offering interest rate buydowns and other price concessions to continue attracting prospective buyers to their developments. The number of existing homes for sale is expected to increase gradually during the next year as life events lead more homeowners to list their homes. Increased supply will put downward pressure on the market but prices are largely expected to move sideways, allowing income growth to catch up with the significant house price appreciation of the last four years.

The outlook for commercial real estate prices was revised upward across property types based on recent performance data. Historical CRE pricing data from the fourth quarter of 2023 came in stronger than anticipated with small price gains registered across property types. However, much of the observed price improvement was due to low transaction volumes, which add volatility to the movements in price indexes across geographic regions and market segments. As lease extensions end and as more mortgages come up for renewal, default rates are expected to rise, putting downward pressure on prices, especially for office buildings. Other property types, including industrial and retail, will fare better given structural shifts in demand but are expected to experience modest price declines due to the interest rate environment

#### Fiscal policy

The March 2024 baseline forecast incorporates marginal adjustments to the composition of federal revenue and spending, but the budget balance and debt outlook were little changed. On the revenue side, the projection for the effective tax rate for social insurance contributions—that is, payroll taxes for Social Security and Medicare—is now assumed to follow a slightly higher trajectory in the coming years. Increases to the Social Security base wage—that is, the income cap on payroll taxes—are expected to rise faster than incomes, pulling up the effective tax rate. On the expenditure side, the outlook for federal subsidies, a relatively small component of total outlays, is also now projected to decline more gradually over the short run. The budget component has started to stabilize after surging during the pandemic. Much of the pandemic-era stimulus was categorized as subsidies, temporarily swelling the category. These changes to revenues and expenditures largely offset.

Congress is in the process of passing six of its 12 appropriations bills. The finalized bills are in line with the baseline projection for a slight decrease in nondefense

discretionary spending. The remaining six appropriations continue to be funded under a continuing resolution that expires in late March. We maintain our assumption that Congress will avert a shutdown and pass all the necessary appropriations bills. An additional short continuing resolution may be necessary to finalize negotiations, but a slight delay has no macroeconomic implications. The final budget is expected to grant about \$1.66 trillion in discretionary outlays for fiscal 2024, which sidesteps the Fiscal Recovery Act's \$1.59 trillion through a series of accounting gimmicks. However, supplemental packages passed throughout the fiscal year—such as for international aid and disaster relief—will drive the total dollar amount higher. We assume an additional \$100 billion in supplemental spending, bringing total discretionary spending to \$1.76 trillion.

#### Energy

Moody's Analytics did not change its oil price forecast materially in March. We did lower the first quarter of 2024 due to the collection of new historical data and current prices. However, the second quarter of 2024 and beyond are very little changed. We still expect the current oversupply in the global oil market to be worked off by organic growth in global oil demand that is underpinned by emerging market economies. U.S. production growth is also expected to slow as the costs of establishing new production rise due to shale

oil drillers' depletion of their inventory of drilled-butuncompleted wells.

Moody's Analytics did, however, adjust its natural gas price forecast substantially lower, again. We have been lowering our forecast steadily during the last few months, as it has taken longer for the arbitrage trade between the U.S. and Europe to materialize. We still firmly believe that arbitrage will take place, which will boost U.S. natural gas prices and lower European natural gas prices. At present, however, the combination of favorable weather and strong residual U.S. gas production has left U.S. inventory levels bloated. As such, it will take longer to bring U.S. and European gas prices closer together than we previously expected. Moody's Analytics expects Henry Hub natural gas futures to average \$2.74 per million BTU in 2024, down from \$3.30 in the prior forecast vintage.

Moody's Analytics has also adjusted its forecast for long-term U.S. oil production substantially higher. We still expect the U.S. and global economies to decarbonize over time, reducing demand for oil, and thus lowering prices and production. As such, our forecast for long-term U.S. oil production is lower than the Energy Information Administration's. However, our U.S. production forecast was much too low in prior vintages, as our decarbonization assumptions were too aggressive.

#### THE LONG VIEW: EUROPE

## Bank of England Stands Pat

#### By OLIA KURANOVA

The Bank of England kept the policy rate unchanged at 5.25%, in line with our baseline and financial market expectations. The March meeting marks the fifth in a row where the policy rate remained unchanged.

Although there was no change in the headline, the new split in votes revealed a shift away from hawkishness. Eight members of the Monetary Policy Committee voted to keep rates on hold, including two who in February voted for a 25-basis point hike; and one member again voted for a 25-basis point cut. This meeting was the first since September 2021 where no member voted for an increase. Following the three-way split last month, the 8 to 1 vote to keep rates on hold indicates some convergence of opinion in the MPC and could mark a new step towards lower rates.

Despite the more dovish split in votes, the need for policy to remain restrictive for an extended period was reiterated. On the upside, the new guidance recognises that policy could remain restrictive even if rates are lowered, opening the door a little further to the possibility of a cut.

Earlier this week, <u>U.K.</u> inflation showed that it was still on a downward path, with consumer price inflation reporting in at 3.4% year over year in February, down from 4% in January. We expect the headline rate of inflation will moderate significantly further in the near term and decline closer to the 2% target in April.

But evidence of dissipating inflation pressures needs to be sustained. This makes a rate cut as early as the next meeting on 9 May unlikely. Only one more set of inflation and labour market data will have been published by then, so there will not be full clarity around the strength of wage settlements during the spring or the specific impact of the 10% rise in the National Living Wage. This is due to be implemented in April, and the MPC perceives upside risks to inflation from this increase.

Our baseline expectation is for a first 25-basis point cut in August. But if evidence that price pressures are becoming sufficiently contained were to build sooner, the MPC could have the necessary confidence to take interest rates lower at the June meeting.

#### All mixed up

The flash estimate of the <u>euro zone</u> composite PMI ticked higher to 49.9 in March from 49.2 in February. The

manufacturing PMI, however, eased to a three-month low of 45.7 from 46.5, while the services PMI surged firmly above the neutral threshold of 50, hitting 51.1 in March from 50.2 previously.

According to the manufacturing survey, output fell across the euro zone for a twelfth successive month in March, with the rate of decline easing only slightly. New orders for goods fell sharply by historical standards. Jobs, input buying and inventories were all on the decline. A steepening rate of job losses in manufacturing occurred alongside a softer pace of job creation in services. The notable fall in manufacturing jobs matched the largest decline since August 2020. Meanwhile, supplier delivery times continued to improve after initial delays in Red Sea at the start of the year, facilitating a further fall in manufacturing input prices.

In contrast, the services PMI lifted as business activity rose for a second month in March after six months of decline. The overall pace of expansion in services remained well below the pace from a year ago, but firms saw an increase in new work for the first time in nine months. Finally, headcounts rose, though at a softer pace.

Across the Channel, the <u>U.K.</u> flash composite PMI eased by a hair. It came in at 52.9 in March, down just slightly from 53 in February. In this case, the manufacturing PMI surged up to 49.9 from 47.5, but the services PMI contracted to 53.4 from 53.8 previously. Despite the slight easing in the composite figure, this was still the fifth month of expansion for the country's private sector thanks to solid increases in output. Even as services lost momentum, the overall reading remained in expansionary territory and outpaced manufacturing.

On the downside, while business activity seems on the rebound, employment stagnated, with firms citing cost pressures, as well as difficulties retaining existing staff and finding suitable candidates to fill vacancies. Input inflation stayed elevated due to higher salaries, freight costs and tight supply after Red Sea shipping disruptions.

The flash March PMIs chime with our view of a modest improvement in the region's economy in early 2024. We still see weak demand for industrial goods as the main drag, partially outweighed by resilience in demand for services. That said, the euro zone's economic momentum is clearly tentative.

#### THE LONG VIEW: ASIA-PACIFIC

## Japan: Land of the Rising Policy Rate

#### By STEFAN ANGRICK

Lift off! The Bank of Japan rushed to drop negative interest rate policy and yield curve control on Tuesday, emboldened by a surprisingly strong outcome last week from the shunto spring wage round. This is the first change in Japan's short-term policy rate since negative interest rates were introduced in 2016 and the first hike since February 2007.

On Friday, a key labour organisation, Rengo, reported the negotiation of a 5.3% pay rise—the biggest jump since 1991. This was in the ballpark of what's needed to sustain 2% inflation domestically.

The BoJ also announced a simplification of its framework, doing away with purchases of exchange-traded funds, real estate investment trusts, and all kinds of corporate debt. Purchases of government bonds will continue, broadly by the same amount as before and with a view to containing rapid surges in bond yields. But the bank won't give explicit purchase targets for amounts or 10-year yields.

On the short end, the BoJ is returning its focus to the uncollateralised overnight call rate—the same rate it used to target pre-2013. The BoJ aims to keep that rate between 0%

and 0.1% by paying interest on banks' reserve balances with the BoJ. Previously, the BoJ relied on a system of reserve tiers that kept the call rate between 0% and -0.1%. This means Tuesday's changes should see the rate rise about 10 basis points. The BoJ also dropped mention of not hesitating to use extra easing measures if necessary.

It's hard to see the BoJ embarking on quick-fire rate hikes from here. Household and business spending is weak, and inflation is falling. The economy isn't in recession, but it's not far from one. Indeed, the BoJ said that 'accommodative financial conditions will be maintained for the time being'. Echoing the subdued outlook, the yen weakened to ¥150 per U.S. dollar after the BoJ announcement.

The move away from negative rates is based on the promise that wage growth will improve. But there is no guarantee the shunto result will translate into broader pay gains and stronger domestic demand. The BoJ is rushing. In the past, when it has been too eager to tighten policy, a downturn soon followed. This latest change is not large enough to do the economy in, but it wouldn't take much to do further damage. The BoJ is treading on thin ice.

#### THE LONG VIEW: LATIN AMERICA

## Challenges for Central America

#### By GUSTAVO ROJAS-MATUTE

Looking across the horizon of 2024, Central America's overall outlook remains positive, yet economic activity is poised to grow at a more measured pace.

Once the shining star of economic growth in Central America, Panama now faces a formidable adversary: the severe drought gripping the Panama Canal. This vital waterway sustains global trade, connecting the Atlantic and Pacific Oceans. As water levels recede, shipping traffic stalls, affecting revenue and regional dynamics. Innovative solutions are imperative to mitigate this natural crisis.

Other Central American nations—Costa Rica, El Salvador and Guatemala—are also losing their economic engines. Amid the challenges, the Dominican Republic emerges as a beacon of hope. After a lackluster 2023, the nation anticipates a robust rebound. Expansions in private and public spending and a resilient labor market are expected to drive growth. The Dominican Republic's strategic location, vibrant tourism sector, and export-oriented industries position it well for recovery.

Central America's economies rely heavily on the U.S. Healthy labor markets in the U.S. drive remittances—an essential lifeline for many regional households. North American tourists continue to explore Central America's natural wonders, injecting vitality into local economies. Additionally, exports to the U.S. market remain vital.

However, the U.S. economy wields a double-edged sword. While its strength bolsters Central America, any unexpected downturn could reverberate across borders. Policymakers must tread carefully, considering both opportunities and risks.

Central banks across the region face critical decisions. Lower inflation in 2024 provides an opportunity to ease interest rates, potentially stimulating investment and consumption. Drawing lessons from past experiences, these banks must strike a delicate balance between growth and stability.

This year brings three pivotal presidential races. President Nayib Bukele has already defied constitutional norms in El Salvador to secure re-election, consolidating power. His supermajority in Congress and mayoral victories signal a shifting political landscape. Former Panama President Ricardo Martinelli, once the front-runner, has been definitively banned from the ballots in Panama. José Raúl Mulino now leads the polls, navigating a crowded field of candidates. In the Dominican Republic, incumbent Luis Abinader, riding a wave of solid economic growth, seeks reelection.

As Central America charts its course, it confronts several uncertainties: severe weather events, U.S. economic fluctuations, and political volatility. Prudent policies, regional cooperation and adaptability will be crucial. The next chapter awaits—a blend of challenges and opportunities shaping the region's destiny.

#### **RATINGS ROUNDUP**

## Downgrades in U.S., Upgrades in Europe

#### By OLGA BYCHKOVA

#### U.S.

U.S. credit downgrades outnumbered upgrades in the latest weekly period. The changes issued by Moody's Ratings spanned a diverse set of speculative-grade bonds and industrial and financial companies. Downgrades comprised four of the seven rating changes and 57% of affected debt.

The largest downgrade, accounting for almost 49% of debt affected in the period, was issued to Office Properties Income Trust, a real estate investment trust that owns and operates office buildings throughout the United States. Its senior unsecured debt and senior unsecured shelf ratings were lowered to Caa2 from Caa1 and (P)Caa2 from (P)Caa1, respectively, and its corporate family rating was cut to Caa2 from Caa1. The speculative-grade liquidity rating is unchanged at SGL-4, and the outlook remains negative. Moody's Ratings also assigned a Caa1 rating to OPI's new \$300 million senior secured notes due 2029. Proceeds from the new secured notes were used, along with drawings under OPI's new \$325 million secured revolving credit facility, to repay \$350 million of its senior unsecured notes due May 2024. The new senior secured notes benefit from first ranking security over 17 properties, with a gross book value of \$574 million. The secured notes are rated one notch above OPI's unsecured notes reflecting their first claim on the collateral made up of assets of higher quality, better occupancy and longer leases than the rest of OPI's portfolio, the rating agency clarified.

OPI's CFR downgrade was prompted by its high financial leverage and operating risks as well as weak liquidity. According to the credit agency, the REIT continues to face significant maturities with its next being \$650 million of debt maturing in February 2025. OPI's SGL-4 reflects Moody's Ratings' expectation that it will continue to remain reliant on secured financings and asset sales to meet upcoming maturities over the next 12 months. The negative outlook continues to be motivated by OPI's weak financial flexibility as it is reliant on secured financings and asset sales as it seeks to refinance upcoming debt maturities, which will likely weaken the size and quality of its unencumbered asset pool and recoveries. Other considerations include its mixed asset quality and challenging capital market conditions for commercial real estate, factors that are weakening its capacity to execute well-priced financing terms, the rating agency added.

Upgrades were headlined by New York Community Bancorp Inc. and its lead bank Flagstar Bank NA, which saw all their long-tern ratings and assessments raised, including NYCB's long-term issuer rating to B2 from B3 and Flagstar's long-

term deposits and baseline credit assessment to Ba2 from Ba3 and to b1 from b2, respectively, impacting nearly 33% of debt affected in the period. Moody's Ratings also lifted to B2 from B3 Flagstar Bancorp Inc.'s subordinate debt rating, which is assumed by NYCB, and to B3 (hyb) from Caa1 (hyb) New York Community Capital Trust V's backed preferred stock rating, affirmed at Not Prime Flagstar's short-term bank deposits and short-term counterparty risk ratings as well as its Not Prime(cr) short-term counterparty risk assessment. The outlook on all ratings changed to positive. The rating action followed NYCB's 12 March announcement that it had closed the \$1.05 billion in capital commitments from several institutional investors and its 14 March filing with the SEC of its 2023 annual report on Form 10-K. According to the rating agency, the one-notch upgrade of NYCB's long-term ratings was driven by the investors' capital injection and by its having received an unqualified audit opinion on its 2023 financial statements.

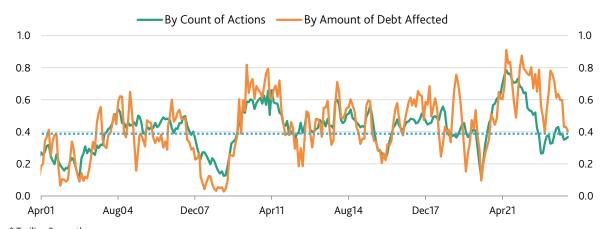
#### Europe

Corporate credit rating change activity was much stronger across Western Europe, with 22 changes issued to the diverse set of speculative- and investment-grade industrial and financial firms. Last week, upgrades outstripped downgrades, 20-to-2, and comprised 99% of affected debt.

Last week, Moody's Ratings upgraded ratings of six Spanish financial institutions: the BCA, long-term deposit and senior unsecured debt ratings of CaixaBank S.A. to baa2 from baa3, to A2 from A3 and to A3 from Baa1, respectively; the BCA of Banco Sabadell S.A. to baa3 from ba1; the BCA and longterm deposit ratings of Bankinter S.A. to baa1 from baa2 and to A2 from A3, respectively; the BCA and long-term deposit ratings of Unicaja Banco S.A. to ba1 from ba2 and to Baa2 from Baa3, respectively; the BCA, long-term deposit and senior unsecured debt ratings of Ibercaja Banco SA to baa2 from baa3 and to Baa1 from Baa2, respectively; the BCA and long-term deposit ratings of Cecabank S.A. to baa3 from ba1 and to Baa1 from Baa2, respectively. The change impacted almost 32% of debt affected in the period. The upgrades were prompted by improved operating and credit conditions in Spain, which have led to a higher Macro Profile for Spain to Strong from Strong-. The rating actions also reflect the change to positive from stable of the outlook on Spain's Baa1 government bond rating, the credit agency said.

#### **RATINGS ROUND-UP**

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



<sup>\*</sup> Trailing 3-month average

Source: Moody's

#### FIGURE 2 Rating Key

BCF	Bank Credit Facility Rating	MM	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	IG/S G
3/13/2024	OFFICE PROPERTIES INCOME TRUST	Industrial	SrUnsec/LTCFR	1850	D	Caa1	Caa2	SG
3/14/2024	ABC SUPPLY HOLDING CORP-AMERICAN BUILDERS & CONTRACTORS SUPPLY CO., INC.	Industrial	SrUnsec/LTCFR/PDR	400	U	B1	Ba3	SG
3/14/2024	PROOFPOINT, INC.	Industrial	LTCFR/PDR		U	В3	B2	SG
3/14/2024	CASTLE US HOLDING CORPORATION	Industrial	SrUnsec/SrSec/BCF/LTCFR/PDR	300	D	Caa2	Caa3	SG
3/15/2024	NEW YORK COMMUNITY BANCORP, INC.	Financial	LTIR/LTD/Sub/PS	1240	U	В3	B2	SG
3/15/2024	ENVIVA HOLDINGS, LP-ENVIVA INC.	Industrial	PDR		D	Ca	D	
3/19/2024	REVERB BUYER, INCMEDICAL SOLUTIONS HOLDINGS, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa1	Caa2	SG
Source: Mood	fy's							

FIGURE 4
Rating Changes: Corporate & Financial Institutions - Europe

Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/ SG	Country
/13/2024 CREDITO	EMILIANO HOLDING S.P.ACREDITO EMILIANO S.P.A.	Financial	LTD		U	Baa2	Baa1	IG	ITALY
/14/2024 UNITED	HEALTHCARE (BROMLEY) LIMITED	Industrial	SrSec	176.3631	D	Baa1	Baa3	IG	UNITED KINGDOM
/14/2024 GESTAM	AUTOMOCION, S.A.	Industrial	SrSec/LTCFR/PDR	435.5211	U	Ba3	Ba2	SG	SPAIN
/15/2024 DEKABAI	NK DEUTSCHE GIROZENTRALE	Financial	SrUnsec/LTIR/LTD/Sub/MTN	4770.155	U	Aa2	Aa1	IG	GERMANY
15/2024 BAYERIS	CHE LANDESBANK AOR	Financial	SrUnsec/LTIR/LTD/Sub/MTN	29573.66	U	A2	A1	IG	GERMANY
15/2024 LANDESE	BANK HESSEN-THUERINGEN GIROZENTRALE	Financial	SrUnsec/LTIR/LTD/Sub/MTN	15025.48	U	Aa3	Aa2	IG	GERMANY
/15/2024 NORDDE	UTSCHE LANDESBANK - GIROZENTRALE -	Financial	SrUnsec/LTIR/STD/LTD/Sub/MTN/CP	25750.75	U	A3	Aa2	IG	GERMANY
/15/2024 LANDESE	BANK BADEN-WUERTTEMBERG	Financial	SrUnsec/LTIR/LTD/Sub/MTN	3990.476	U	Aa3	Aa2	IG	GERMANY
/15/2024 SPARKAS	se koelnbonn	Financial	LTD/MTN	2.177606	U	A1	Aa3	IG	GERMANY
15/2024 LANDESE	BANK SAAR	Financial	LTIR/LTD		U	A1	Aa2	IG	GERMANY
/15/2024 SYNTHO	MER PLC	Industrial	SrUnsec/LTCFR/PDR	566.1774	D	Ba3	B1	SG	UNITED KINGDOM
/15/2024 CERELIA	GROUP HOLDING-CERELIA PARTICIPATION HOLDING SAS	Industrial	SrSec/BCF/LTCFR/PDR		U	B3	B2	SG	FRANCE
/15/2024 LORCA J	/CO LIMITED-LORCA FINCO PLC	Industrial	SrSec/SrUnsec/SrSec/BCF/LTCFR/PDR	3103.088	U	B1	Ba3	SG	UNITED KINGDOM
/18/2024 HNVR M	DCO LIMITED-HNVR HOLDCO LIMITED	Industrial	SrSec/BCF/LTCFR/PDR		U	B3	B2	SG	UNITED KINGDOM
/18/2024 BOLUDA	TOWAGE S.L.	Industrial	SrSec/BCF/LTCFR/PDR		U	B2	B1	SG	SPAIN
/19/2024 BANKINT	ER, S.A.	Financial	STD/LTD/Sub	1724.818	U	A3	A2	IG	SPAIN
/19/2024 BANCO :	SABADELL, S.A.	Financial	SrSub/Sub/MTN	2177.606	U	Ba2	Ba1	IG	SPAIN
/19/2024 CONFED	eracion espanola de cajas de ahorro-cecabank s.a.	Financial	LTD		U	Baa2	Baa1	IG	SPAIN
/19/2024 ABB LTD	ABB FINANCE B.V.	Industrial	SrUnsec/LTIR/MTN/CP	8900.355	U	A3	A2	IG	NETHERLANDS
/19/2024 CAIXABA	NK, S.A.	Financial	SrUnsec/LTIR/STD/LTD/Sub/MTN	36644.65	U	Baa1	A3	IG	SPAIN
/19/2024 UNICAJA	BANCO, S.A.	Financial	STD/LTD/Sub	326.6408	U	Baa3	Baa2	IG	SPAIN
/19/2024 IBERCAIA	CAJATRES-IBERCAJA BANCO SA	Financial	SrUnsec/LTD/Sub	2014.285	U	Baa2	Baa1	IG	SPAIN

#### MARKET DATA

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

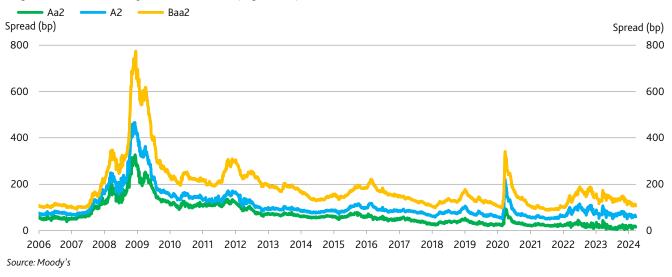
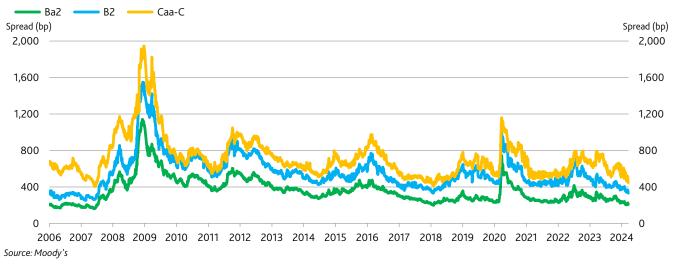


Figure 2: 5-Year Median Spreads-Global Data (High Yield)



#### **CDS Movers**

Figure 3. CDS Movers - US (March 13, 2024 – March 20, 2024)

CDS Implied Rating Rises	CDS Impli		
Issuer	Mar. 20	Mar. 13	Senior Ratings
Capital One Financial Corporation	Baa1	Baa3	Baa1
Advance Auto Parts, Inc.	Ba1	Ba3	Baa3
Charles Schwab Corporation (The)	A2	A3	A2
Nissan Motor Acceptance Company LLC	Ba2	Ba3	Baa3
MPLX LP	A3	Baa1	Baa2
Crown Castle Inc.	Baa2	Baa3	Baa3
Fidelity National Information Services, Inc.	Baa1	Baa2	Baa2
DTE Energy Company	Baa2	Baa3	Baa2
Alexandria Real Estate Equities, Inc.	Baa2	Baa3	Baa1
Equinix, Inc.	Ba2	Ba3	Baa2

CDS Implied Rating Declines	CDS Impli	ed Ratings	_
Issuer	Mar. 20	Mar. 13	Senior Ratings
Toyota Motor Credit Corporation	A1	Aa1	A1
International Business Machines Corporation	A2	Aa2	A3
Thermo Fisher Scientific Inc.	A2	Aa2	A3
Roche Holdings Inc.	A1	Aa1	Aa2
Quest Diagnostics Incorporated	A1	Aa1	Baa2
Bear Stearns Companies LLC. (The)	A2	Aa2	A1
United States of America, Government of	A1	Aa2	Aaa
JPMorgan Chase Bank, N.A.	A2	Aa3	Aa2
John Deere Capital Corporation	A1	Aa2	A1
Amazon.com, Inc.	A1	Aa2	A1

CDS Spread Increases			CDS Spreads	
Issuer	Senior Ratings	Mar. 20	Mar. 13	Spread Diff
Dish Network Corporation	Caa3	2,435	2,205	230
Anywhere Real Estate Group LLC	B3	1,087	858	229
Liberty Interactive LLC	Caa2	1,596	1,382	214
Dish DBS Corporation	Caa3	2,883	2,712	171
CSC Holdings, LLC	B2	1,536	1,406	130
Scripps (E.W.) Company (The)	B3	807	711	96
Lumen Technologies, Inc.	Ca	2,650	2,578	71
Nordstrom, Inc.	Ba1	426	365	61
Staples, Inc.	Caa2	873	825	48
JetBlue Airways Corp.	В3	607	570	37

CDS Spread Decreases	CDS Spreads				
Issuer	Senior Ratings	Mar. 20	Mar. 13	Spread Diff	
Advance Auto Parts, Inc.	Baa3	131	205	-74	
Pitney Bowes Inc.	В3	590	610	-20	
Capital One Financial Corporation	Baa1	60	78	-18	
Equinix, Inc.	Baa2	168	185	-17	
PennyMac Financial Services, Inc.	Ba3	213	230	-17	
Brandywine Operating Partnership, L.P.	Ba1	322	338	-16	
Nissan Motor Acceptance Company LLC	Baa3	156	170	-14	
Paramount Global	Baa3	239	251	-13	
Marathon Oil Corporation	Baa3	135	147	-13	
Federal Realty OP LP	Baa1	72	85	-13	

Source: Moody's, CMA

#### **CDS Movers**

Figure 4. CDS Movers - Europe (March 13, 2024 – March 20, 2024)

CDS Implied Rating Rises	CDS Impli	CDS Implied Ratings		
Issuer	Mar. 20	Mar. 13	Senior Ratings	
Tyco Electronics Group S.A.	A2	Baa1	A3	
HSBC Holdings plc	A3	Baa1	A3	
ABN AMRO Bank N.V.	A2	A3	Aa3	
Lloyds Bank plc	A2	A3	A1	
DNB Bank ASA	A2	A3	Aa2	
Erste Group Bank AG	A3	Baa1	A1	
Swedbank AB	A2	A3	Aa3	
Landesbank Hessen-Thueringen Girozentrale	Baa3	Ba1	Aa2	
NatWest Markets Plc	Baa1	Baa2	A1	
Credit Mutuel Arkea	A2	A3	Aa3	

CDS Implied Rating Declines	CDS Impli	_	
Issuer	Mar. 20	Mar. 13	Senior Ratings
ENGIE SA	A2	Aa2	Baa1
UniCredit Bank Austria AG	A2	Aa2	A3
Siemens Aktiengesellschaft	A1	Aa1	Aa3
Anheuser-Busch InBev SA/NV	A2	Aa2	A3
Vattenfall AB	A1	Aa1	A3
Pernod Ricard S.A.	A1	Aa1	Baa1
Schneider Electric SE	A1	Aa1	A3
Electrabel SA	A1	Aa1	Baa1
BAE SYSTEMS plc	A2	Aa2	Baa1
Raiffeisen Schweiz Genossenschaft	A1	Aa1	A3

CDS Spread Increases				
Issuer	Senior Ratings	Mar. 20	Mar. 13	Spread Diff
Ardagh Packaging Finance plc	Caa1	1,840	1,456	385
Grifols S.A.	Caa1	693	603	90
Trinseo Materials Operating S.C.A.	Caa1	2,034	1,972	62
Bellis Acquisition Company PLC	Caa2	482	429	53
Hapag-Lloyd AG	Ba3	257	218	39
Virgin Media Finance PLC	B2	326	292	34
Ziggo Bond Company B.V.	В3	310	278	32
United Group B.V.	Caa1	290	261	29
Lanxess AG	Baa3	190	162	27
Sunrise Holdco IV BV	В3	181	155	26

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 20	Mar. 13	Spread Diff
Close Brothers Group plc	A2	134	165	-31
Close Brothers Finance plc	Aa3	135	167	-31
Vedanta Resources Limited	Ca	1,426	1,450	-24
Garfunkelux Holdco 3 S.A.	Caa2	1,386	1,406	-20
TK Elevator Holdco GmbH	Caa1	363	380	-18
Intelsat Jackson Holdings S.A.	B1	2,378	2,392	-14
Investec plc	Baa1	128	141	-13
thyssenkrupp AG	Ba3	129	141	-12
Hamburg Commercial Bank AG	A3	184	194	-10
Stagecoach Group Limited	Baa3	142	151	-9

Source: Moody's, CMA

#### **CDS Movers**

Figure 5. CDS Movers - APAC (March 13, 2024 – March 20, 2024)

CDS Implied Rating Rises	CDS Impli	CDS Implied Ratings	
Issuer	Mar. 20	Mar. 13	Senior Ratings
Mizuho Financial Group, Inc.	A2	A3	A1
Macquarie Group Limited	Baa1	Baa2	A1
Bank of China Limited	Baa2	Baa3	A1
LG Chem, Ltd.	Baa1	Baa2	A3
Development Bank of Kazakhstan	Ba1	Ba2	Baa2
Electric Power Development Co., Ltd.	A2	A3	A3
Coca-Cola Amatil Limited	A2	A3	Baa1
Agricultural Bank of China Limited	Baa2	Baa3	A1
China, Government of	Baa2	Baa2	A1
India, Government of	A3	A3	Baa3

CDS Implied Rating Declines	CDS Impli	_	
Issuer	Mar. 20	Mar. 13	Senior Ratings
Australia and New Zealand Banking Grp. Ltd.	A1	Aa1	Aa2
United Overseas Bank Limited	A2	Aa2	Aa1
Singapore, Government of	A1	Aa1	Aaa
Oversea-Chinese Banking Corp Ltd	A1	Aa1	Aa1
Kookmin Bank	A2	Aa2	Aa3
Korea Electric Power Corporation	A2	Aa2	Aa2
Marubeni Corporation	A1	Aa1	Baa1
SK Telecom Co., Ltd.	A2	Aa2	A3
Japan, Government of	Aa2	Aaa	A1
Commonwealth Bank of Australia	Aa3	Aa1	Aa3

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Mar. 20	Mar. 13	Spread Diff
Aurizon Network Pty Ltd	Baa1	87	70	16
Qantas Airways Ltd.	Baa2	146	133	13
Australia and New Zealand Banking Grp. Ltd.	Aa2	36	24	12
APA Infrastructure Limited	Baa2	91	81	10
SoftBank Group Corp.	Ba3	180	170	10
CNAC (HK) Finbridge Company Limited	Baa2	147	137	10
Indian Railway Finance Corporation Limited	Baa3	66	57	9
Bank of East Asia, Limited	A3	101	93	8
Vanke Real Estate (Hong Kong) Company Limited	Ba2	3,075	3,067	8
Rizal Commercial Banking Corporation	Baa3	79	71	8

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 20	Mar. 13	Spread Diff
Pakistan, Government of	Caa3	1,574	1,613	-39
Adani Green Energy Limited	B2	267	284	-16
GMR Hyderabad International Airport Limited	Ba3	184	191	-7
Development Bank of Kazakhstan	Baa2	127	132	-5
Nissan Motor Co., Ltd.	Baa3	92	95	-3
Lenovo Group Limited	Baa2	83	86	-3
Halyk Bank of Kazakhstan JSC	Ba2	359	361	-2
Transurban Finance Company Pty Ltd	Baa2	71	72	-1
Toyota Motor Corporation	A1	9	10	-1
Woolworths Group Limited	Baa2	65	66	-1

Source: Moody's, CMA

#### **ISSUANCE**

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

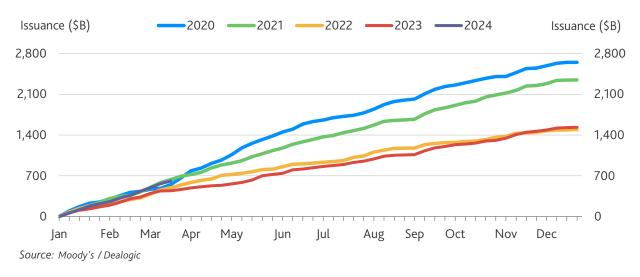


Figure 7. Market Cumulative Issuance - Corporate & Financial Institutions: Euro Denominated

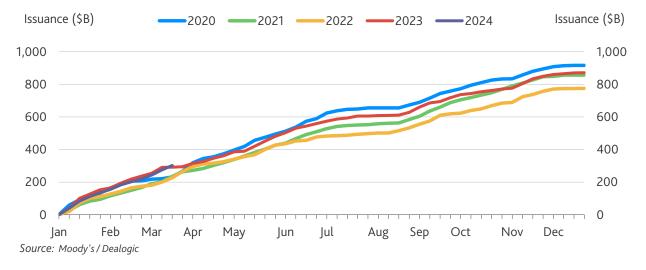


Figure 8. Issuance: Corporate & Financial Institutions

	USD Denominated		
	Investment-Grade	Total*	
	Amount \$B	Amount \$B	Amount \$B
Weekly	39.600	5.085	46.808
Year-to-Date	491.183	81.768	610.564

	Euro Denominated				
	Investment-Grade	Investment-Grade High-Yield		Investment-Grade High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B		
Weekly	20.903	0.547	27.314		
Year-to-Date	230.937	18.041	302.155		

<sup>\*</sup> Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

To order reprints of this report (100 copies minimum), please call 212.553.1658.

Report Number: 1402535

Editor Reid Kanaley

helpeconomy@moodys.com

Contact Us Americas +1.212.553.1658 clientservices@moodys.com

Europe +44.20.7772.5454 clientservices.emea@moodys.com

Asia (Excluding Japan) +85 2 2916 1121 clientservices.asia@moodys.com

Japan +81 3 5408 4100 clientservices.japan@moodys.com © 2024 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"), All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHED SO OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, FLOLDING, OR

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <a href="https://www.moodys.com">www.moodys.com</a> under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V, I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Calificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

Moody's SF Japan K.K., Statistical Rating Organization.

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating." The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesses," not "Credit Rating Business," and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.