# MOODY'S

#### WEEKLY MARKET OUTLOOK

#### APRIL 20, 2023

#### Lead Authors

Dante DeAntonio Director

Mark Zandi Moody's Analytics Chief Economist

#### **Asia Pacific**

Katrina Ell Stefan Angrick Senior Economists

Sarah Tan Harry Murphy Cruise Economists

#### Europe

Ross Cioffi Olga Bychkova Economists

#### U.S.

Kristopher Cramer Steven Shields Economists

Matt Orefice Data Specialist

#### Latin America

Gustavo Rojas-Matute Juan Pablo Fuentes Economists

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



## Banks Tap the Liquidity Spigot

Surging interest rates coupled with an increased share of fixed-rate securities over the past year have made many banks vulnerable to evaporating deposits and duration risk. Smaller banks are having the most difficulty, but all banks are responding to reduced liquidity by restraining their lending, selling off liquid securities, and—critically—borrowing from backstops offered by the Federal Home Loan Banks and the Federal Reserve secured by their less liquid assets.

The FHLB system is a collective of 11 government-chartered cooperatives with nearly \$1 trillion in assets that provides a reliable source of liquidity to the banking system. These cooperatives make secured short- and long-term loans, called advances, to more than 6,500 members, collateralized by their

#### Table of Contents

Top of Mind3
Week Ahead in Global Economy 5
Geopolitical Risks7
The Long View
U.S
Europe13
Asia-Pacific14
Latin America15
Ratings Roundup 16
Market Data20
CDS Movers21
Issuance24

mortgage securities and other assets to help the members meet their depositors' withdrawal demands and other liquidity needs. Moreover, the FHLB system is often viewed as the "lender of next to last resort" in that it provides liquidity to banks as credit conditions tighten, which may help to prevent avoidable failure of many small-to-medium institutions by effectively diversifying their funding risks.

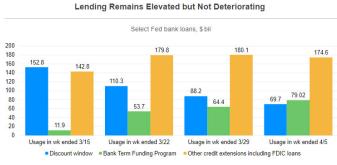
Banks Tap FHLB for Liquidity as Deposits Dry Up \$ bil Regional 20,000 banking crisis 1,200 Financial crisis Pandemic 18,000 1,000 16,000 14.000 800 12.000 600 10,000 8,000 400 6.000 4.000 200 2 000 0 00 02 04 06 08 10 12 14 Advances (L) —Deposits (R) 16 18 20 22

Moody's Analytics and Moody's Investors Service maintain separate and independent economic forecasts. This publication uses the forecasts of Moody's Analytics. Moody's Analytics markets and distributes all Moody's Capital Markets Research materials. Moody's Analytics does not provide investment advisory services or products. For further detail, please see the last page.

Sources: Federal Reserve, FHFA, BEA, Moody's Analytics

#### Perfect storm

In early 2022, banks were still flush with deposits. However, banks quickly found themselves inside a perfect storm. The Fed started to hike rates in February 2022—and aggressively picked up the pace in the summer—while also unwinding its balance sheet. At the same time, both businesses and consumers accelerated their borrowing through the second guarter of 2022 to capitalize on lower interest rates. Meanwhile, bank balance sheets had an increased share in fixed-income securities, including Treasury bonds and mortgage-backed securities, since many financial institutions sought to benefit from the higher yields available, having been provided with extra cash from government fiscal and monetary support during the pandemic. Banks do not necessarily have to realize such losses—unless they urgently need cash. But, as interest rates began to rise and depositors withdrew funds, banks, particularly midsize institutions, came under pressure to raise cash and to realize some of these losses.



Sources: Federal Reserve Board, Moody's Analytics

To cover deposits while customers withdraw, banks sought out FHLB advances, which rose 40% from the first to the second quarter of 2022 and finished the year 140% higher than in 2021. The increase in advances over the last year, to meet the liquidity demands of banks, mirrors the rise in the 2008 financial crisis. While an official update from the FHLB system on advances will be available later this month, estimates suggest that advances exceeded \$1 trillion as of March.

While the FHLBs aided financial institutions in the recent crisis, the system was not originally designed to be a crisis lender. The true "lender of last resort" is the Fed. The Fed's discount window, which provides loans to banks against good collateral but usually at a rate above those available in FHLBs and private credit arrangements. The discount window is the preferred vehicle for providing emergency credit to banks with liquidity—but not solvency—issues in a financial crisis like the current one. The Fed has the supervisory experience and analytical tools to distinguish those risks, whereas FHLBs simply lend to financial institutions that meet the criteria. Thus, we expect the Fed to pick up the mantle of providing liquidity support from the FHLBs as the crisis unfolds.

Therefore, borrowing from the discount window reached a record-high nominal value of \$152.8 billion in the week ended March 15, although adjusted for inflation the global financial crisis peak was a little higher. While discount window borrowing has declined in consecutive weeks since its peak, coming in at \$69.7 billion in the week ended April 5, total primary credit borrowing remains elevated, slightly below late-2008 and early-2009 levels. Meanwhile, utilization of the Fed's new and more favorable discount window facility, the Bank Term Funding Program, has increased steadily since its inception. The BTFP is unusual in that it is a one-year rather than overnight facility that allows depositories to pledge qualified assets at par in exchange for advances at attractive rates, which required a backstop from Treasury to avoid putting the Fed at risk of losses. This is a key difference from the discount window, which values pledged assets—that can only be Treasuries or agency-backed debt-at fair market value.

Although BFTP take-up has increased, the pickup isn't as fast as the decline in discount window borrowing. Moreover, utilization has not cascaded in a way that would signal eligible banks' positions are deteriorating, suggesting bank withdrawals have stabilized while contagion has not spread. Even if we are at the apex of the crisis, banks will likely continue to tap federal backstops while interest rates are high to help alleviate pressures of unrealized losses.

Discount window borrowing, while elevated, is roughly onetenth the size of borrowing from the FHLB system. The substantial disparity is likely due to the fact that the discount window is not intended to handle the large quantities of borrowing that the FHLB system is handling, as well as the stigma that is generally associated with borrowing from the Federal Reserve not being present when obtaining loans from the FHLB or other government-backed lenders. Banks hesitate to utilize the discount window out of concern that they may be perceived as being in a financially vulnerable condition, perhaps reflecting the more onerous terms of the discount window that a healthy institution would avoid.

In response to the coronavirus pandemic, the Fed announced that it was removing the penalty component of the primary credit rate, which has been viewed by market participants as the Fed's desire to reduce the stigma of discount window borrowing. Although this will lower interest rate costs and potentially remove some of the perceived stigma, the discount window will remain a more costly option for borrowers due to the Fed's greater haircut requirements than those imposed by the FHLBs. Without the FHLBs, the cost of funding for many lenders, especially smaller banks, would become prohibitively expensive during times of stress, severely restricting the availability of all credit and potentially the viability of these institutions.

#### TOP OF MIND

## Fed Should Now Pivot

#### **BY MARK ZANDI**

The crisis that swept the nation's banking system last month has been quelled by the government's muscular intervention, including the U.S. Treasury's effective guarantee of all bank depositors, the Federal Reserve's <u>emergency provision of liquidity</u> to the system, and the FDIC's quick resolution of troubled institutions. Deposit outflows appear to have abated, especially at small banks that are the most vulnerable, and inflows into <u>money</u> <u>market funds</u> have normalized. Stock prices for regional banks are down about 40% since before the crisis but have stabilized, and big bank stocks have largely recovered as investors believe they will ultimately benefit from their toobig-to-fail status.

While the crisis appears over, its economic impact has only begun to play out. Chastened banks with constrained liquidity and diminished capital are sure to be much more cautious. Their <u>lending standards</u>, which were already tightening significantly before recent events, will ratchet up substantially.

The tightening will be most pronounced for the always especially risky land and development loans, which are critical for small and midsize homebuilders without the access to capital markets for funding that is available to the big publicly traded builders. Banks will also tighten their commercial real estate mortgage lending, particularly for office buildings that are struggling with the adverse impact of remote work on office absorption. Multifamily developers will also face stiffer standards given the coming surge in supply, rising vacancies, and weaker rents. <u>Outstanding CRE loans</u>, which had been steadily increasingly even at the height of the pandemic, have fallen since mid-March, although this is overstated, since it also reflects the exclusion of loans at Silicon Valley Bank and Signature Bank whose loans are now owned by the FDIC.

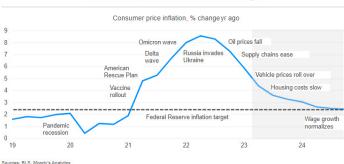
Banks are also pulling back on their commercial and industrial lending (loans to businesses). Small businesses, reliant on small and midsize banks for credit, will suffer most. According to a March survey by the small-business trade group the <u>National Federation of Independent</u> <u>Business</u>, the net percent of respondents saying credit is hard to get jumped; in the nearly 40 years of responses, this measure has been meaningfully higher only during the financial crisis. C&I loans outstanding have been falling for the past month.

Lending standards for consumer loans, including credit cards, auto loans and personal loans, will be less impacted by the crisis, as much of this lending is done outside of the banking system. <u>Single-family residential mortgage lending</u> <u>standards</u> will not be affected as much either, because the bulk of this lending is directly backstopped by the federal government via Fannie Mae, Freddie Mac, and the Federal Housing Administration. Nonbank mortgage lenders, accounting for the bulk of single-family loan originations, may decide to implement their own underwriting overlays, but to date such moves appear modest.

Tighter underwriting and weakening credit flows will weigh most heavily on construction activity and small-business investment and hiring. Businesses with fewer than 100 employees will be hit hardest, and they account for about <u>one-third of private employment</u> nationwide and one-fourth of gross output. Weaker credit will also be a headwind to consumer spending, albeit less so, and more indirectly through a softer job market and any impact on consumer confidence. Economy-wide, the banking crisis is expected to reduce real GDP growth in 2023 by 0.5 percentage point to near 1%, about half the economy's estimated growth potential.

#### Inflation on script

Slower sub-potential growth will help further rein in inflation, which looks increasingly on script to return to the Fed's target by mid-2024. More explicit, <u>consumer price</u> <u>inflation</u>, which peaked at 9% on a year-over-year basis in June and has since moderated to 5% in March, is expected to be just over 3% by year-end 2023 and closing in on the Fed's 2.5% implicit CPI target by June 2024. While this remains an uncertain forecast, it seems more likely than it has been since inflation took off when the economy reopened after the pandemic shutdowns.



Most certain is a throttling back of growth in the cost of housing services, which accounts for an outsize more than one-third of the CPI and more than 40% of the core CPI that excludes food and energy prices. Both the

#### Inflation Is Headed Back to the Fed's Target

homeowners' equivalent rent and rent of shelter CPI measures tie back to <u>market rents</u> with a long lag given that most leases renew annually. Rents surged when the economy reopened and many renter households were forming, but pandemic-related supply-chain and labor supply problems limited new supply. Vacancy rates fell and rents surged. That translated into strong growth in the cost of housing services last year and into this year.

However, in recent months rents have gone flat to down as rental supply has picked up with normalizing supply chains and labor supply. There is a record close to <u>1 million</u> <u>multifamily units in the construction pipeline</u> that will be completed this year. There is also demand destruction in the rental market, because demand has weakened as rents got too expensive for many potential households, and those households have not formed. The now-weak rents will translate into much slower growth in the cost of housing services through the end of this year.

Vehicle prices, which have surged, are also set to fall meaningfully by year's end. Fueling higher prices has been weak global new-vehicle production, particularly in Japan and Germany, because of pandemic-related supply-chain problems. With inventories on dealers' lots depleted, the new-vehicle CPI took off, up almost 20% over the last two years. The used-vehicle CPI has been more volatile and is up by even more, since the limited supply of new vehicles resulted in fewer used vehicles.

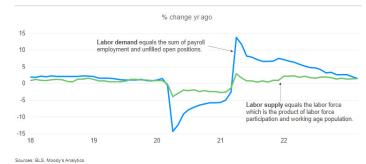
But with supply chains finally able to get up and running after China ended its zero-COVID policy earlier this year and global producers adjusting to the disruptions caused by Russia's war with Ukraine, global vehicle production is picking up and inventories are off bottom. It may take a few more months before inventories build sufficiently that competitive pressures kick in and manufacturers and dealers offer bigger incentives and reduced prices, but this is in train.

#### Supercore rolls over

Most difficult to gauge is the persistence of non-housing and non-energy service price inflation. This so-called supercore inflation reflects the price increases in a range of labor-intensive services such as healthcare, hospitality and personal services. The Federal Reserve is especially focused on supercore, as it most clearly reflects labor costs that monetary policy can impact as higher interest rates ultimately weigh on labor demand.

While supercore inflation remains uncomfortably high, the trend lines are encouraging. First, the Fed's aggressive rate hikes are working to weaken labor demand; businesses are pulling unfilled positions and pulling back on their hiring. Labor demand has fallen below labor supply for the first time since the pandemic shutdowns, and the tight labor market is easing.





Most telling is that wage growth has peaked, and while still too strong to be consistent with the Fed's inflation target, it isn't too far off given underlying labor productivity growth.

#### Federal Reserve pauses

With inflation headed back to the Fed's target with increasing certainty, the easing job market, and the fragile banking system, the Fed should soon pause its rate hikes. The Treasury bond and federal funds futures markets are even pricing in a significant easing in monetary policy beginning sometime this summer. Indeed, this would be consistent with the dour forecasts of the Fed's own economists. According to the <u>minutes</u> of the March Federal Open Market Committee meeting, Fed staff economists now project a mild recession starting later this year.

The Moody's Analytics outlook is not as bleak, but to skirt a recession the Fed must pivot quickly and end its rate hikes. We expect one more 0.25-percentage point increase in the funds rate, to just over 5%, at the next FOMC meeting in a few weeks. But it would not be surprising if policymakers decided to forgo this rate hike. After all, the economic fallout of the banking crisis is comparable to that of two or three 0.25-percentage point rate hikes by the Fed. And at near 5%, the funds rate is double the estimated 2.5% equilibrium funds rate or so-called r-star-the rate consistent with monetary policy neither supporting nor weighing against the economy's growth. Moreover, the Fed would be wise to put more weight on financial stability when contemplating another rate hike. It took a full government backstop to end the bank runs a few weeks ago. The next earthquake will likely be in the nonbank part of the system, where the Fed has much less sway.

It probably will not kill the economy if the Fed increases rates by another 0.25 percentage point. But why take that risk? The risk of inflation remaining too high appears meaningfully lower than the risk of a recession. The Fed misjudged and waited too long before normalizing interest rates coming out of the pandemic. The result was runaway inflation. It is not fair to be critical of the Fed given the extraordinary uncertainties created by the pandemic and Russian war in Ukraine. However, if policymakers misjudge again and push the economy into recession, that will be on them.

## The Week Ahead in the Global Economy

#### U.S.

The U.S. economic calendar heats up next week with a wide range of data including GDP, home sales, wage growth and jobless claims. The Bureau of Economic Analysis will release the first estimate of first-quarter GDP growth on Thursday. Our tracking estimate has softened in recent weeks, and we now expect growth of 2.1% to start the year.

We will continue to look for evidence that the housing market has reached a bottom and home sales data for March will provide a good view of the market.

The Federal Reserve will be keeping a close eye on the employment cost index as moderating wage growth will be key to reigning in core service inflation. We expect that the ECI will show a continued modest slowdown in the pace of wage gains as the quit rate has eased in recent months.

New data on jobless claims will also remain important to watch as a clear uptrend trend has formed in recent weeks. While still short of the breakeven level—which we currently estimate to be around 265,000—claims are clearly on the rise, and the ongoing spate of layoff announcements lends upside risk in the coming weeks.

Other key data due next week include the consumer confidence measures from both the Conference Board and University of Michigan, advanced durable goods, personal income and spending, and the PCE deflator.

#### Europe

Next week is important for European releases as preliminary estimates of first-quarter GDP will be published for the euro zone and the major euro zone economies. We anticipate zero growth for the euro zone aggregate, continuing the stagnation of the fourth quarter. Despite some resilience in manufacturing and service sector activity, we ultimately expect to see investments and consumption pull back as purchasing power continues falling. Zero growth does figure as an upgrade from our previous forecasts of a contraction in GDP, since conditions ultimately were better than expected thanks in part to the block avoiding a full-on energy crisis.

These better-than-expected conditions are also reflected in the continued recovery in economic sentiment that we foresee for April. We expect the Economic Sentiment Indicator to recover to the synthetic long-run average of 100 in April from 99.3 in March. With a banking crisis avoided for now, we think the ESI will rebound from the hit it took in March. That said, downside risks predominate, considering the negative signals for demand we have seen in indicators such as the March PMIs.

Unemployment likely remained low in Germany, France and Spain. Germany's unemployment rate was likely unchanged at 5.6% for April, while the number of job seekers in France

likely stayed at 2.8 million in March. In Spain, the unemployment rate likely inched lower to 12.8% across the first quarter from 12.9% in the fourth quarter. With the resilience of tourism and with factories still making their way through backlogged orders, we see demand for labour holding up between the first and second quarters. That said, the outlook remains grey, with downside risks that unemployment ticks up as we near the summer.

Indeed, consumer spending on goods likely ticked lower in both France and Spain in March. Spanish monthly retail sales likely pulled back 0.2%, while French household spending on goods likely fell 0.5%. High inflation, still-low confidence, and a preference for spending on services lead us to believe that expenditures on goods continued to decline in March.

#### Asia Pacific

Australia's headline inflation has passed its peak, so we look for the March-quarter CPI to notch 6.9% y/y. That would be a cooling from 7.8% in the December stanza. Price rises across housing, household furnishings, transport, and recreation and culture eased in the opening months of 2023. This likely means there will be only one more 25-basis point hike from the Reserve Bank of Australia, either in May or June, which will take the cash rate to 3.85%. It is less clear how quickly underlying inflation will ease and whether it will happen fast enough to satisfy the central bank. The labour market remains incredibly tight and resilient, with the unemployment rate holding at a low 3.5% in March.

The advance estimate of South Korea's GDP will likely show a 0.1% quarter-on-quarter expansion in the March quarter. This will be a small improvement on the 0.4% contraction in the December stanza. Weakness in exports and household consumption are weighing on the economy. Global growth is slowing, and the tech cycle is in a downswing. Meanwhile, highly-leveraged households have tightened their purse strings—their purchasing power eroded by higher borrowing costs and still-elevated inflation. Full-year GDP growth is forecast to slow to 1.4% in 2023 from 2.6% in 2022.

We do not expect the Bank of Japan to change course at its first monetary policy meeting under Governor Kazuo Ueda. Although the recent decline in government bond yields might seem to open the door for tweaks to yield-curve control, such a step could backfire. Economic data of late hasn't been good. Disappointing GDP growth means the economy still smaller than before the pandemic. Employment conditions are showing signs of softening, and wage growth is trailing inflation. Notwithstanding a strong shunto spring wage round, it's unclear that this year's strong gains will be repeated next year. Recent financial market disruptions abroad have only added risk. Given the BoJ's history of premature policy tightening, the bungled YCC tweak in December, and the cold water poured on the idea of a change at the first press conference with the BoJ's new leadership, it is unlikely the BoJ will move soon.

#### Latin America

We start with a series of retail sales indexes due next week for Latin America. Argentina's retail sales index for February will reflect the impact of high inflation and currency instability. After adjusting for inflation, the indicator likely will have slowed from 28.5% year-over-year growth in January to 8.5% in February. In Brazil, we expect the retail sales index to show an annual increase of 2.4% year over year in the same period. The week's main event will be release of economic activity indexes in Mexico and Argentina. For Mexico, we anticipate a decline of 1.2% year over year for February. Seasonally adjusted, GDP likely contracted 0.2% from January. For Argentina, we see annual growth of 3.8% for February.

Meanwhile, Chile's manufacturing production likely decreased for the third consecutive month. Employment numbers for Brazil and Chile are also due. We see both improving slightly. In Colombia, we expect the monetary authority to maintain the policy interest rate to address high inflation expectations with some relief predicted later in the year.

## Geopolitical Calendar

Date	Country	Event	Economic Importance	Financial Market Risk
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
14-May	Thailand	General election	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	Medium	Medium
18-Aug	United States	U.S. Treasury X-date	High	High
1-Sep	France	Senatorial elections	Low	Low
9-10 Sep	G-20	India hosts G-20 summit	Low	Low
14-Sep	Euro zone	European Central Bank monetary policy announcement	Medium	Medium
Sep	U.N.	General Assembly, New York	Low	Low
22-Sep	United Kingdom	Bank of England monetary policy announcement	Medium	Medium
By12-Oct	Spain	General elections	Medium	Medium
14-Oct	New Zealand	General election	Low	Low
26-Oct	Euro zone	European Central Bank monetary policy announcement	Medium	Medium
26-27-Oct	EU	European Council summit	Low	Low
29-Oct	Argentina	General election	Medium	Medium
29-Oct	Colombia	Regional elections	Low	Low
Oct/Nov	ASEAN	Indonesia to host ASEAN summit	Low	Low
Nov	Indonesia	Association of Southeast Asian Nations	Low	Low
Nov	APEC	Economic leaders' meeting, to be held in San Franciso, U.S.	Low	Low
3-Nov	United Kingdom	Bank of England monetary policy announcement	Medium	Medium
6-17 Nov	U.N.	COP 28, to be held in Dubai, UAE	Low	Low
14-Dec	Euro zone	European Central Bank monetary policy announcement	Medium	Medium
14-15-Dec	EU	European Council summit	Low	Low
15-Dec	United Kingdom	Bank of England monetary policy announcement	Medium	Medium

## March Defaults Highest Since December 2020

#### **BY STEVEN SHIELDS**

#### CREDIT SPREADS

Credit spreads were stable in the latest week with the Moody's Investors Service long-term average corporate bond spread effectively unchanged at 156 basis points. Similarly, the long-term average industrial corporate bond spread declined 1 basis point to 141. Both corporate and industrial bond spreads remain well below their twelvemonth highs of 178 and 162 basis points, respectively.

High yield credit spreads signal caution but are not at levels that imply heightened risk of default or an impending economic downturn. After peaking at a six-month high of 522 basis points in early March, the ICE BofA U.S. high-yield option-adjusted bond spread has retreated to 437 basis points. This compares with an average high-yield spread of 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 16.5.

#### DEFAULTS

Fifteen Moody's Investors Service-rated corporate debt issuers defaulted in March, marking the highest singlemonth count since December 2020. The March defaults bring the first quarter's tally to 33—the highest quarterly count since the fourth quarter of 2020 and up from 25 defaults in the first quarter of 2022. The trailing 12-month global speculative-grade default rate ticked up to 2.9% at the end of March from 2.8% at the end of February, which is still lower than the long-term average rate of 4.1%.

Three U.S. financial institutions defaulted in March: Silicon Valley Bank, its parent bank holding company SVB Financial Group, and Signature Bank. SVB was the first Moody's Investors Service-rated U.S. banking organization to default since 2015, when Doral Financial Corp., a U.S. bank holding company, filed for Chapter 11 bankruptcy protection following the failure of its unrated bank subsidiary, Doral Bank. Interest rate and asset liability management risks, sector concentration and weak governance contributed to the collapse of SVB and its closure by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation as a receiver on March 10. Signature Bank was closed on March 12 by the New York State Department of Financial Services, which also appointed the FDIC as receiver. The closure of SBNY was related to accelerated deposit outflows. SBNY's cryptocurrency deposit exposure and large amount of uninsured deposits also made it vulnerable to contagion

from SVB's failure. Later in the week, SVB's parent—SVB Financial Group—filed for Chapter 11.

While financial sector defaults were noteworthy, most defaults last month continued to occur in non-financial sectors. March saw 12 non-financial corporate defaults. Diamond Sports Group LLC was the largest by default amount. The U.S. regional sports broadcasting company is the entity through which Sinclair Broadcast Group Inc executed the acquisition of 21 regional sports networks from Walt Disney Company in 2019. Diamond Sports entered Chapter 11 aiming to renegotiate its broadcast contracts with teams and to restructure its more than \$8 billion of total debt stemming from Sinclair's 2019 acquisition.

Events in the first quarter of the year underscore Moody's Investors Service's expectation that higher interest rates and slower economic growth will drive credit trends in 2023. The stress experienced by some mid-sized U.S. regional banks serves as a reminder that a turn in the rate cycle can trigger otherwise latent risks. The swift response by regulators to maintain confidence in the banking system has prevented, for now at least, the emergence of more severe systemic financial pressures. Recent banking stress is likely to add to the financial tightening that was already underway. The baseline macro scenario incorporates tighter financial conditions and anticipates a mild recession in the second half of this year and tepid recovery from it next year in the major economies. Moody's Investors Service expects the global speculative-grade corporate default rate will end this year at 4.6% before rising further to 4.9% by the end of March 2024. If realized, both predicted rates would be higher than the long-term average of 4.1%. The baseline forecast assumes the U.S. high-yield spread will widen to 527 basis points over the next four guarters from about 455 at the end of March, and the U.S. unemployment rate will rise to 4.8% from 3.5% in the comparable period.

The baseline scenario also assumes that financial regulators and other policymakers will largely succeed in containing the ripple effects from stress at individual banks. But in an uncertain economic environment and with investor confidence remaining fragile, there is a risk that policymakers may not succeed and that stresses could spread beyond the banking sector, unleashing greater financial and economic damage than we anticipated in the baseline.

#### 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 yearover-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 yearago 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 neardecade low.

Investment-grade debt issuance denominated in U.S. dollars amounted to \$12.1 billion in the latest week, bringing the year-to-date total to \$455.9 billion. This represents a decrease of 18.9% compared with the same period last year. High-yield debt issuances only amounted to \$4.5 billion during the same period. Low-grade debt remains subdued, with a 4.0% decrease compared with last year and a significant drop of 73.9% compared with 2021. Overall, the total dollar-denominated corporate debt issuance is tracking 18.2% lower than the same period in 2022.

#### U.S. ECONOMIC OUTLOOK

Moody's Analytics made modest adjustments to the U.S.

baseline forecast in March based on new data and the recent collapse of Silicon Valley Bank, Signature Bank, and Silvergate Bank. These failures raise fears of contagion to other regional banks. Fundamentally, the outlook remains essentially the same, and the pace of annual GDP growth is only modestly changed.

However, there was a material change to monetary policy assumptions this month. Strong job, spending and inflation figures have caused us to assume a higher terminal fed funds rate than last month, though the recent financial system turmoil altered the timing of the increases. New data, especially for spending and income, were strong, lifting first-quarter growth at the expense of coming quarters. In contrast, recent data suggested modestly lower oil prices than expected and caused only minor shifts in the outlook for the labor market. Fiscal policy assumptions remained unchanged, while the outlook for the 10-year Treasury is a bit lower because of recent events.

#### Monetary policy

Our baseline forecast for the federal funds rate has changed materially from the previous outlook. After stronger-thanexpected January jobs and inflation figures, followed by hawkish rhetoric from the Fed, we anticipate that policymakers will ultimately hike interest rates higher than in the previous baseline. But our expectations about the timing have changed. The failures of Silicon Valley Bank, Signature Bank, and Silvergate Bank have roiled the financial system, and the Fed will be under pressure to pause its rate hikes. Financial conditions are one of the factors used in Fed monetary policy decisions, and the turmoil will likely lead to a tightening in underwriting standards and less credit availability. Therefore, we assume that the Fed will pause its rate hikes in March to gauge just how much conditions have tightened, as well as the impacts on the economy and inflation. We then expect two more 25-basis point rate hikes at the May and June meetings of the Federal Open Market Committee, putting the terminal range for the fed funds rate at 5% to 5.25% in the summer. The previous outlook predicted a single 0.25-point rate hike in March and a terminal range for the fed funds rate of 4.75% to 5%. We anticipate that the Fed will keep rates at the terminal level before beginning to cut 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.

Meanwhile, inflation continues to decelerate, although the progress is slower than last fall when pandemic-supply conditions and energy market frictions were fading. Consumer prices rose 0.37% in February, nearly matching the monthly average over the last six months. However, the increase was smaller than the almost 0.6% in January. The change in core inflation slightly accelerated to 0.44% in February, highlighting price pressures for shelter and nonshelter services. Overall, at 6%, year-over-year consumer price inflation remains well above the Fed's 2% target. Various Fed governors reiterated that further interest rate hikes will be appropriate. However, they did not commit 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. Their main bellwether remains labor market tightness. The Fed considers wage growth of 3.5% consistent with its 2% inflation target. Year-over-year growth in the employment cost index for wages and salaries was 5% in the last quarter of 2022, down from its peak of 5.7% earlier last year but still too high for policymakers to consider their job done.

The baseline outlook reflects our expectation that inflationary pressures 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 narrow: Policymakers cannot ease up 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 shows signs of sustained cooling, keeping interest rates too high for too long risks choking off the expansion and increasing unemployment. It also risks unearthing further imbalances in the financial sector.

Inflation remains the key to the baseline outlook. The March vintage has the CPI rising 4.1% in 2023 and 2.4% in 2024, a small uptick compared with 3.9% and 2.4%, respectively, in the prior baseline. The reason is that inflation in early 2023 has decelerated a bit more than expected.

Financial conditions remain unsettled as the recent market upheaval has undone some of the easing observed since inflation started to decelerate last fall. The 10-year Treasury yield briefly breached 4% in early March before falling back to 3.5%, as some investors scrambled for the exits after SVB's failure. The baseline outlook has the 10-year Treasury yield averaging 3.7% during the first three months of this year, unchanged from the previous baseline, and peaking in the first quarter of 2025 at 4.1%. Compared with the prior baseline, this marks a slight decline of less than 10 basis points for each upcoming quarter, reflecting higher investor risk aversion. We project that the 10-year Treasury yield will start to decline into 2025.

Foreign exchange markets have also started to relax since the Fed has slowed the pace of hiking. On a real broad trade-weighted basis, the U.S. dollar is still up more than 10% from its pre-pandemic level, but in February has depreciated by more than 5% from its October peak.

#### Energy

Moody's Analytics has lowered its oil price forecast. Brent crude oil is expected to average \$88.53 a barrel in 2023, down from \$90.59 a month ago. At prices north of \$80, crude oil is overvalued relative to conditions on the ground. Moody's Analytics' current and future assessment of the supply/demand balance suggests that Brent prices should be around \$75 and end the year around \$80.

A good bit of the tightening that we expect in the oil market, owing primarily to China's reopening, is already being priced in. It would take the full combination of a massive surge in Chinese demand—beyond the International Energy Agency's optimistic expectations—total EU compliance with the Russian energy ban, and a lack of Russian ability to reroute exports for oil to sustain \$100 a barrel for an extended period this year. Given the balance of risks, we have lowered the oil price forecast, particularly in the second quarter.

However, as we get into 2024, the buffer of oversupply will be gone, the prospects for new U.S. oil are bleak, and we expect the dollar to weaken considerably. This, combined with recent comments from U.S. drillers about a lack of productive shale oil inventory, has caused us to raise our oil price forecast for 2024. We expect Brent to then average \$78.92 a barrel, up from \$76.67.

Moody's Analytics also continues to reduce our forecast for Henry Hub natural gas prices. We expect gas prices to average \$5.18 per million BTUs for 2023, down from \$5.51 a month ago. Two of the three trains at the Freeport liquefied natural gas terminal have reopened, but that has had a modest impact on prices. Mild weather conditions continue to dominate the dynamics in the gas market, responsible for the oversupply. Absent a reversal in weather conditions or a near-term recovery in prices, we will likely continue to mark down our natural gas price forecast.

#### Changes to the pattern of GDP growth

The expansion in economic activity progressed in the second half of 2022 after pausing in the first half as measured by real GDP. The contribution from trade declined but inventory accumulation increased, and several other components contributed. Output rose 2.7%, following a 3.2% gain in the third quarter, according to the second report from the Bureau of Economic Analysis. The year as a whole was weak, and the economy is sure to have a difficult 2023, as it struggles under the weight of the interest rate increases orchestrated by the Federal Reserve to quell painfully high inflation and fallout from recent problems among banks. While the economy will struggle during the coming year in response to the Fed's actions intended to rein in the high inflation, the baseline outlook holds that the Fed will be able to accomplish this without precipitating a recession. That is, it will be able to raise rates high enough to sufficiently quell the wage and price pressures, but not so high and fast that it fully knocks the wind out of the economy. This is a scenario Moody's Analytics might call a "slowcession"—growth that comes to a near-standstill but never slips into reverse.

Revisions to the baseline forecast for real GDP are modest. The forecast for real GDP now shows only a slight dip in the first quarter of 2023, but a larger deceleration in growth in the second quarter before economic growth gradually accelerates. The strong January data contributed to this altered pattern, along with near-term concerns about the fallout from financial system issues. Annual growth rates in 2022 and 2023 are 2.1% and 1.9%, respectively, the latter a marked improvement from last month's forecast that comes at the expense of 2024. Growth in 2024 was revised lower to 1.9% and growth in 2025 was unchanged, at 2.7%. It will now take until 2025 before the economy returns to near-potential growth.

#### Labor market

The February employment report underscored the labor market's resilience but also showed signs of softening. Net payroll gains came in above expectations again but slowed from January's outsize gain. The unemployment rate rose to 3.6% as the labor force posted its third straight month of impressive gains. The new data were incorporated in the March baseline forecast, which has not materially changed from February.

The strong momentum of the job market means that the marked weakening in the labor market is not expected to materialize until the second quarter of 2023 and beyond. Monthly job gains will average less than 75,000 in the second quarter, followed by gains of only about 25,000 per month during the final two quarters of 2023. Growth will pick up only modestly in 2024 as the risk of a recession remains high. High-profile layoffs by tech companies and banks have started to have an impact, and as a result, financial services and information payrolls will be among the biggest losers over the next year. Despite the housing market being pummeled by high interest rates, construction payrolls will remain mostly flat in 2023 as builders work through a significant pipeline of projects.

The unemployment rate forecast has shifted slightly given the increase in February, with the rate now expected to hold stable at around 3.5% for most of this year before increasing at year's end. The unemployment rate will soften further next year and peak at 4%. Over the next year, the increase in the unemployment rate will be right on the border of the 50-basis point increase that historically has been a reliable indicator that the economy is in a recession.

#### Fiscal policy

The Treasury budget deficit will amount to 4.9% and 5.3% of GDP in fiscal 2023 and 2024, respectively, down from 5.5% in fiscal 2022. The deficit-to-GDP ratio for the current fiscal year is 0.6 percentage point higher than in the February forecast following the budget shortfall that the Treasury recorded in February, which was the largest ever for the month of February outside of the COVID-19 pandemic. Also, personal tax payments have come in lighter than expected in early 2023. Close observers of the federal budget should not be sidetracked by the improvement in deficits since fiscal 2020, as this reflects the winding down of emergency pandemic relief. The federal budget is still on an unsustainable track, and budget shortfalls will reach 6.7% by fiscal 2033. Likewise, public debt outstanding will rise from an expected 97.1% in fiscal 2022 to 115.5% in fiscal 2033.

The U.S. Treasury is quickly approaching the X-date—the day it will not have enough cash to pay all the federal government's bills on time. Moody's Analytics assumes lawmakers will suspend or increase the Treasury debt limit before this happens, allowing the Treasury to issue more debt and pay the government's bills. The debt limit was hit on January 19, and the Treasury is using "extraordinary measures" to come up with the additional cash needed to pay its bills while staying under the statutory limit. Based on our updated assessment of the government's outlays and receipts in the coming weeks, those measures seem likely to be exhausted by mid-August. To be more precise, the Xdate appears to be August 18, which is not much different from our assumption in the February vintage. Investors in short-term Treasury securities are coalescing around a similar X-date, demanding higher yields on securities that mature in late August, given worries that a debt limit breach may occur.

#### Business investment and housing

The Bureau of Economic Analysis' second estimate of fourth-quarter real fixed business investment showed growth of 3.3% annualized, a measurable upward revision from 0.7% in the advance estimate. The bulk of the adjustment came from structures, which rose 8.5% annualized compared with 0.4% in the earlier publication. Drilling down further, the source appears to be that the large office segment recorded its first gain in real terms in more than three years. However, one quarter does not make a trend.

Otherwise, the revised data on equipment spending mainly confirmed the weakness in IT, which led the overall decline. Pandemic-related spending by companies on computers and peripherals is past the peak as the proportion of the labor force working remotely stabilizes. However, the significant gains in transportation equipment spending were unchanged as supply-chain issues continue to resolve, and the upward revision in fourth-quarter growth in core industrial equipment spending to 6.1% annualized was noteworthy. Still, high-frequency data are pessimistic, with inflationadjusted new orders for nondefense, nonaircraft capital goods steadily declining by 2.8% cumulatively over the course of 2022.

The bottom line is that the improved fourth-quarter structures spending data will help to lift the outlook for 2023 growth in business investment modestly. The new projection is that real business fixed investment will grow 3.9% on an annual average basis, up from 3.4% forecast in February. The outlook for equipment spending is largely unchanged, up 2% versus February's 1.8%. However, the unexpectedly high January CPI data mean that the Fed will tighten more than previously expected, adding downside risk to the outlook. The failure of SVB, the bank for high-tech startups, will also weaken business sentiment. By contrast, Moody's Analytics downgraded its short-term outlook for housing permits and starts due to expectations for higher mortgage rates to persist throughout 2023. Underlying demand due to demographics continues to support increased construction activity in the long run as vacancy rates remain near their all-time lows and as the nation continues to run a significant housing deficit. Builders are expected to slow applications for new permits in 2023 as they focus on completing the large number of units under construction.

Commercial real estate price growth was revised downward given the upward revisions to interest rates, which will increase the financial burden on property owners and potential buyers. Prices for office properties are expected to decline more than other property types as more businesses adopt remote or hybrid work policies, thereby decreasing their need for office space. Apartment building prices are expected to soften because of higher interest rates as well as slowing rent growth. Property prices, rents and cap rates will come under further pressure as many multifamily buildings under construction are completed this year and add to the available supply.

#### THE LONG VIEW: EUROPE

## Euro Zone Sentiment Slumps

#### **BY ROSS CIOFFI**

The ZEW economic sentiment index for the euro zone fell to 6.4 in April from 10 in March. If the index were just a few points lower, the balance of opinion would show that more respondents expected the euro zone economy to get worse in the upcoming six months. A smaller percentage of respondents viewed the current situation as bad—a positive development after last month. However, the survey reflects a continued decline in the market's appetite for risk. Between March and April, more respondents expected to see stocks falling, short-term rates increasing, and long-term rates decreasing.

Financial indicators are flashing some contradictory signals. The Euro Stoxx 50 index has not only recovered from the hit it took in March following the failure of Credit Suisse, but it is now only a few steps away from its previous long-time high, reached on 17 November 2021.

Looking at the money supply in the euro zone, there are clear signs that activity is contracting. Loans to households and nonfinancial firms had been growing at a considerably slower pace, even before the banking scare in March; the M1 money supply is already contracting in year-ago terms. The most recent data update for the monetary aggregates was in February; we expect to see the downward trend strengthen in March and April, confirming that low confidence and higher interest rates are leading to tighter lending standards.

#### Car registrations jump

In March, the <u>EU</u> added 1,087,939 passenger car registrations, a year-over-year jump of 28.8%. Although this marks the highest level in years, it is still considerably below pre-pandemic norms.

The strong growth speaks more to the problems in the automobile sector last year than to particularly robust consumer demand. Throughout much of 2021 and 2022, registrations were curtailed by the unavailability and quickly rising price of new and used cars. And the global semiconductor shortage forced production lines to halt or slow to a snail's pace. In the final months of 2022, global supplies started to tangibly improve as production levels began to recover at European factories.

March's jump in car registrations is a positive signal that car manufacturing kept up and that supply conditions remained conducive to greater production. European manufacturing, however, appears to be running on previous orders rather than new demand. Manufacturing PMI surveys remain well below the break-even score of 50 because of continued declines in new orders. The March manufacturing PMI references a slight increase in output, but orders falling for 11 months in a row, even with the shortening of supplier delivery times, pushed the reading to 47.3 in March, down from 48.5 in the previous month. European manufacturing may continue to outperform expectations heading into the second quarter, but when backlogs eventually run dry and new orders stall, production will fall back considerably on the Continent.

#### U.K. unemployment inches higher

The U.K.'s unemployment rate ticked higher in the threemonth period leading to February to 3.8%, compared to the November stanza. The unemployment rate increased because of an expansion in labour force participation. The inactivity rate decreased by 0.4 percentage point, outpacing a 0.2-percentage point rise in the employment rate. This shows households are being pushed to work amidst the stillhigh inflationary environment. Indeed, real wages are still falling. Although in nominal terms, regular pay continued to grow at a substantial pace, at 6.6% year over year in the February stanza. This stronger-than-expected increase may make the Bank of England uneasy about its inflation target. Nominal wage growth did not keep up with inflation, which meant there was a 3% decline in real wages. Low unemployment has been a force that has helped keep consumer spending resilient this winter, but as disposable incomes continue to fall, we see a negative trend in private consumption.

Meanwhile, <u>U.K</u>. CPI inflation came in at 10.1% year over year in March, slightly down from 10.4% in February. The reading was higher than our and consensus expectations. While there was a tangible detraction from motor fuels, food and nonalcoholic beverage inflation increased 0.7 percentage point to 15% year over year, while core inflation remained unchanged at 6.2%. Because of the U.K.'s electricity and gas price cap, base effects from last year's surge in wholesale energy costs will only show up in April, when the cap is typically updated. This year, the cap will hold firm until June at £2,500 as part of the country's Energy Price Guarantee policy. As core inflation has remained unchanged and nominal wage growth has picked up again in the February stanza, this will likely be cause for concern for the Bank of England.

## Central Bank Scorecard

#### BY SARAH TAN and HARRY MURPHY CRUISE

Having skyrocketed over the past 18 months, headline inflation is cooling across most Asia-Pacific economies thanks to dampening demand and an easing of upstream costs. But even with price growth tapering, inflation remains uncomfortably high in many countries, particularly Australia, the Philippines, India, Indonesia, Malaysia and Singapore.

The easing of inflation has given some central banks pause for thought. The Bank of Korea, Bank Negara Malaysia, the Reserve Bank of Australia, the Reserve Bank of India and Bank Indonesia all held borrowing costs steady at their most recent meetings. Others are yet to be convinced that interest rates are sufficiently high to quell price pressures. The Reserve Bank of New Zealand and Bangko Sentral ng Pilipinas have been some of the most aggressive central banks in the region; even with inflation past its peak, both have signalled there is likely more hiking to come.

Even where central banks have taken a breather, there is no guarantee that further hikes are off the table. In Australia, the Reserve Bank Board noted it would look at three key data points to inform future rate decisions: inflation, the labour market and household spending. Very strong labour market data released following the RBA's April meeting suggests more hikes could be on the way. Likewise, Bank Negara Malaysia has left the door ajar to at least one more rate hike this year, acknowledging that inflation will likely stay high because the domestic economy is being supported by China's reopening.

New price challenges are also on the horizon. Global oil prices have rebounded following the announcement of a surprise production cut of around 1.16 million barrels per day by OPEC+ producers, effective from May. This threatens to push up regional production costs just as easing inflation gains momentum.

That said, some countries in Asia may feel less pain than others. Crude oil from Russia has been sold at record

discounts on account of the EU oil embargo forcing Russia to find alternative buyers. China and India have been big beneficiaries of this cheaper oil. February's International Energy Agency data show that Russia accounted for 40% of India's and 20% of China's crude oil imports. Cheaper Iranian oil—discounted following sanctions by the U.S.—is also providing a price reprieve for Chinese firms. All told, these discounts should ease the pain from any rise in global oil prices for the region's most populous economies.

In raising rates, central banks are not just focused on inflation. Interest rate differentials with the U.S. can put pressure on local currencies. But having depreciated against the U.S. dollar on the back of soaring commodity prices and differences in the pace of rate hikes against the U.S. Fed, currencies in the region are rallying. Commodity prices have broadly eased, and the U.S. Fed has eased the pace of its tightening cycle. Even so, most currencies have yet to return to values seen in the days before Russia invaded Ukraine. Further, it's likely the Fed will hike at least once more, which could put pressure on Asia-Pacific currencies.

The good news is that most economies in the region enjoy current account surpluses that buoy their reserves and support their currencies. With more dollars flowing into regional economies than out, demand for local currencies is robust. But economies battling sky-high inflation, such as New Zealand and the Philippines, have been aggressive with monetary tightening and are stuck with large current account deficits that exacerbate a tricky situation.

All in all, the rate hikes by the region's central banks are paying off—headline inflation has started trekking lower, and currencies are regaining their strength. However, a volatile oil market could throw a spanner in the works. Indeed, the story isn't over despite inflation likely having passed its peak.

## IMF Lowers Region's Growth Projections

#### **By JUAN PABLO FUENTES**

According to the International Monetary Fund, growth in Latin American and the Caribbean will reach 1.6% in 2023, a slight drop from 1.8% in the agency's January update. However, the Moody's Analytics baseline forecast for April calls for the region to grow 1% this year—a more pessimistic projection than the IMF. The IMF's more optimistic outlook for Mexico explains most of the gap between the two forecasts. Additionally, the IMF's growth in aggregate includes Central America and the Caribbean, while our aggregate considers only the region's seven largest economies, which account for more than 90% of the region's GDP. Looking at South America, both the IMF and Moody's Analytics project growth of about 1% for this year.

The multilateral agency sees the Mexican economy growing 1.8% this year, compared with Moody's Analytics projection of 1.2%. Economic activity in Mexico surprised in January, rebounding after a steady deceleration in previous months. This rebound was mainly the result of an acceleration in services fueled primarily by the significant increase in the minimum wage in late 2022. As a result, the economic activity index, a proxy for GDP, grew 4.4% year over year in January after growth of 2.6% in the previous month. Seasonally adjusted, the index grew 0.6% from the previous month.

Despite January's better-than-anticipated reading, we still see growth in Mexico slowing down in upcoming months amid restrictive monetary conditions and deteriorating confidence. Government policies aimed at increasing state regulations will continue to hinder investment in key areas, which will hurt the economy. Recent bank failures in the U.S. will also have an unfavorable impact on Mexico's economy. Tighter credit conditions will put the brakes on the U.S. economy in upcoming months, hampering demand for Mexican exports. Further, Mexico will see fewer remittances as the U.S. labor market deteriorates in the medium term. Remittances represent a key driver of growth for private consumption in Mexico.

The IMF reduced Brazil's growth projection for 2023 by 0.3 percentage point to 0.9%. This is in line with the Moody's Analytics forecast. The Brazilian economy will decelerate in 2023 as the arrival of the new administration slows government spending, which is typical in an electoral cycle. Restrictive economic policies and the country's heightened political polarization will also impede growth in 2023. Meanwhile, the IMF has a more favorable outlook about Peru's short-term prospects than Moody's Analytics. We have downgraded Peru's growth projections in recent months amid the recent surge in political and social unrest. Regarding Argentina, Chile and Colombia, the IMF's growth forecast for 2023 remains mostly in line with that of Moody's Analytics.

The IMF's April outlook report highlights the possibility of a more adverse scenario for the global economy in 2023. This alternative downside scenario assumes a measurable tightening of credit conditions in OECD countries in upcoming months as more small and medium-size banks come under pressure. In this scenario, the U.S. economy grows only about 1% in 2023, compared with 1.6% in the baseline. Moreover, the Mexican economy weakens measurably under this scenario while South American economies fare better. We have partly incorporated these assumptions in our baseline forecast for Mexico, which explains our more downbeat outlook for 2023.

## U.S. Downgrades Dominate Latest Period

#### **BY OLGA BYCHKOVA**

#### U.S.

U.S. corporate credit quality took a turn in the latest weekly period with credit downgrades overwhelmingly outnumbering upgrades 7-to-1 and comprising 100% of affected debt. The changes issued by Moody's Investors Service spanned a diverse set of speculative-grade industrial companies.

The largest downgrade, accounting for 45% of debt affected in the period, was issued to a real estate investment trust, Office Properties Income Trust, focused on owning and leasing high quality office properties to tenants with high credit quality characteristics in select, growth-oriented U.S. markets. Its corporate family and senior unsecured ratings were lowered to Ba3 from Ba2. The senior unsecured rating of Select Income REIT was also cut to Ba3 from Ba2. Moody's Investors Service has also placed each of these ratings on review for further downgrade but maintained the speculative grade liquidity rating at SGL-3. The ratings downgrades follow the REIT's announced plans to merge with Diversified Healthcare Trust, an affiliated healthcare REIT with which it shares an external manager. The rating action was prompted by Moody's concerns about OPI's financial policy and business strategy, as it demonstrates its willingness to materially increase its already high financial leverage and increase business risk, regardless of whether this particular transaction closes. OPI's review for downgrade was motivated by Diversified Healthcare's very high financial leverage and weak cash flow metrics as the REIT's senior housing operations have been slow to recover from the pandemic. Should OPI complete this merger, Moody's Investors Service expects that OPI's key credit metrics and covenant cushion would weaken further as management does not expect senior housing cash flows will help it to deleverage until late 2024.

The lone upgrade last week was made to MH Sub I LLC, an internet media company that owns more than 250 branded websites across four major verticals—health, legal, dental, and media comprising automotive, home and travel. Moody's Investors Service raised the company's corporate family rating to B2 from B3, probability of default rating to B2-PD from B3-PD, senior secured first lien bank credit facilities ratings to B1 from B2, and senior secured second lien term loan to Caa1 from Caa2. Concurrently, Moody's assigned a B1 rating to the proposed \$4.7 billion senior secured first-lien term loan. The ratings upgrade reflects Moody's expectation that the company will demonstrate improved credit protection measures, including deleveraging and continued strong free cash flow generation, and very

good liquidity over the rating horizon. The stable outlook reflects the agency's view that the company's performancebased digital advertising model and software-as-a-service subscription platform will remain resilient and generate solid free cash flow even if the economy slows over the coming quarters and/or enters a mild recession.

#### EUROPE

Corporate credit rating change activity was much lighter though stronger across Western Europe with upgrades outstripping downgrades 2-to-1 but impacting only 30% of debt affected in the period and issued to the diverse set of speculative-grade industrial firms.

Upgrades were headlined by a global online classifieds company that operates generalist, real estate, car, job and other digital marketplaces, Adevinta ASA, which saw its corporate family and probability of default ratings raised to Ba2 from Ba3 and Ba2-PD from Ba3-PD, respectively. At the same time, Moody's Investors Service has upgraded to Ba2 from Ba3 the ratings for the €735 million and \$498 million of outstanding senior secured term loan B tranches (due 2028), €450 million senior secured revolving credit facility (due 2026, fully undrawn as of 31 December 2022) and the €1,060 million of outstanding senior secured notes (due 2025 and 2027). The rating outlook remains stable. According to the rating agency, the upgrade is driven by the company's track record of healthy and resilient operating performance despite the market headwinds over the last few years; good progress with eBay Classifieds Group's integration, with Adevinta remaining on track to deliver €130 million of run-rate cost synergies by 2024; strong revenue and EBITDA growth potential over 2023-2026 that will rely on the successful execution of the company's strategic growth plan; and the company's stated ambition to reduce reported net leverage through EBITDA growth and further debt repayment.

The sole downgrade across Western Europe was made to Bellis Finco PLC, the third largest grocery retailer in the U.K., with its corporate family and probability of default ratings cut to B2 from B1 and B2-PD from B1-PD, respectively. Simultaneously, Moody's Investors Service lowered to B2 from B1 the ratings of the following existing debt instruments issued by Bellis Acquisition Company PLC: the £195 million senior secured first lien term loan A due August 2025, the €845 million senior secured first lien term loan B due February 2026, the £2.25 billion backed senior secured notes due February 2026, the £500 million backed senior secured notes due February 2026, and the £500 million 2025. Moody's also downgraded to Caa1 from B3 the rating of the £500 million backed senior unsecured notes due February 2027 issued by Bellis Finco PLC. The outlook on both entities remains stable. The lower rating reflects the very competitive nature of the U.K. grocery sector; an underweight presence in the convenience channel compared to peers, which the company has started to address; execution risks on the strategic responses of traditional grocers to the continued growth of discounters; high leverage; and substantial separation costs that the rating agency expects will continue to be incurred over the next two years. The stable outlook balances Bellis' planned cost reduction measures, which provide an opportunity for strengthening in its credit metrics, with the competitive challenges of the U.K. grocery industry.

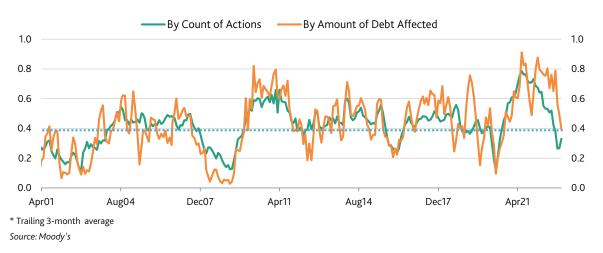


FIGURE 1



FIGURE 2 Rating Key

BCF	Bank Credit Facility Rating	MM	Money-Market
CFR	Corporate Family Rating	MTN	MTN Program Rating
СР	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/ SG
4/12/2023	MICRO HOLDING CORPMH SUB I, LLC	Industrial	SrSec/BCF/LTCFR/PDR		U	B2	B1	SG
4/12/2023	AMENTUM HOLDINGS LLC-AMENTUM GOVERNMENT SERVICES HOLDINGS LLC	Industrial	SrSec/BCF/LTCFR/PDR		D	B1	B2	SG
4/13/2023	OFFICE PROPERTIES INCOME TRUST	Industrial	SrUnsec/LTCFR	2200	D	Ba2	Ba3	SG
4/13/2023	ELEVATE TEXTILES HOLDING CORPORATION-ELEVATE TEXTILES, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa3	Ca	SG
4/14/2023	BADGER FINANCE, LLC	Industrial	SrSec/BCF/LTCFR/PDR		D	B3	Caa2	SG
4/14/2023	MAGIC ACQUIRECO, INCMICHAELS COMPANIES, INC. (THE)	Industrial	SrSec/SrUnsec/SrSec/BCF/LTCFR/PDR	2150	D	B1	B2	SG
4/17/2023	TUTOR PERINI CORPORATION	Industrial	SrUnsec/LTCFR/PDR	500	D	B2	B3	SG
4/17/2023	TRITON UK MIDCO LIMITED-SYNAMEDIA AMERICAS HOLDINGS, INC.	Industrial	SrSec/BCF		D	B2	B3	SG
Source: Moody'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
4/12/2023	ADEVINTA ASA	Industrial	SrSec/SrSec/BCF/LTCFR/PDR	1166.797	U	Ba3	Ba2	SG	NORWAY
4/13/2023	BELLIS FINCO PLC-BELLIS ACQUISITION COMPANY PLC	Industrial	SrSec/SrUnsec/SrSec/BCF/LTCFR/PDR	4044.301	D	B1	B2	SG	UNITED KINGDOM
4/14/2023	EUROPCAR MOBILITY GROUP S.AEC FINANCE PLC	Industrial	SrSec/LTCFR/PDR	550.3759	U	B1	Ba3	SG	FRANCE
Source: Moody's									

MOODY'S ANALYTICS CAPITAL MARKETS RESEARCH / WEEKLY MARKET OUTLOOK

#### MARKET DATA

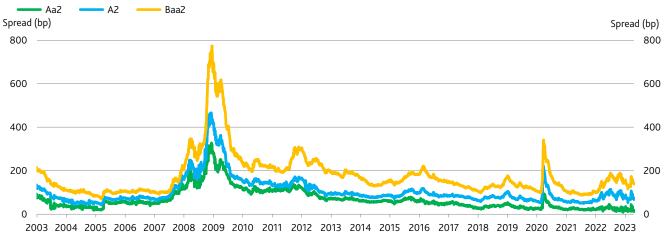


Figure 1: 5-Year Median Spreads-Global Data (High Grade)

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 202 Source: Moody's

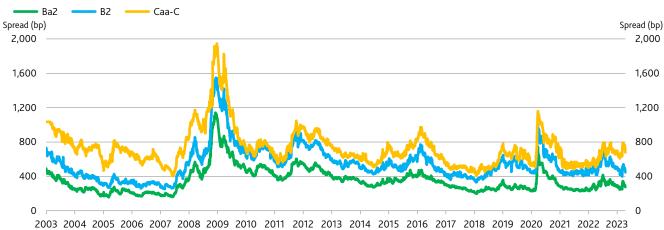


Figure 2: 5-Year Median Spreads-Global Data (High Yield)

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 20 Source: Moody's

#### CDS Movers

#### Figure 3. CDS Movers - US (April 12, 2023 – April 19, 2023)

CDS Implied Rating Rises	CDS Impli	CDS Implied Ratings		
Issuer	Apr. 19	Apr. 12	Senior Ratings	
State Street Corporation	A2	Baa1	A1	
L3Harris Technologies, Inc.	A3	Baa2	Baa2	
JPMorgan Chase & Co.	A3	Baa1	A1	
Bank of America Corporation	Baa2	Baa3	A2	
Citigroup Inc.	Baa1	Baa2	A3	
JPMorgan Chase Bank, N.A.	A2	A3	Aa2	
Wells Fargo & Company	Baa2	Baa3	A1	
Ford Motor Credit Company LLC	Ba2	Ba3	Ba2	
Citibank, N.A.	Baa2	Baa3	Aa3	
Southern California Edison Company	Baa2	Baa3	Baa1	

CDS Implied Rating Declines	CDS Impli	ed Ratings	_
Issuer	Apr. 19	Apr. 12	Senior Ratings
3M Company	A3	A1	A1
Comcast Corporation	A2	A1	A3
John Deere Capital Corporation	A1	Aa3	A2
Boeing Company (The)	Baa3	Baa2	Baa2
Walmart Inc.	Aa2	Aa1	Aa2
Bristol-Myers Squibb Company	Aa2	Aa1	A2
Procter & Gamble Company (The)	Aa2	Aa1	Aa3
Merck & Co., Inc.	Aa3	Aa2	A1
Roche Holdings Inc.	Aa2	Aa1	Aa2
Fiserv, Inc.	Baa1	A3	Baa2

CDS Spread Increases	_		CDS Spreads	
Issuer	Senior Ratings	Apr. 19	Apr. 12	Spread Diff
Dish DBS Corporation	ВЗ	2,442	2,229	212
Rite Aid Corporation	Ca	6,005	5,851	155
Staples, Inc.	Caa2	2,046	1,944	102
Paramount Global	Baa2	209	182	27
Glatfelter Corporation	Caa1	733	709	24
iHeartCommunications, Inc.	Caa1	1,314	1,298	17
Carpenter Technology Corporation	B2	270	254	16
Caesars Entertainment, Inc.	ВЗ	289	277	12
UDR, Inc.	Baa1	125	113	12
Interpublic Group of Companies, Inc. (The)	Baa2	134	122	12

CDS Spread Decreases			CDS Spreads	
Issuer	Senior Ratings	Apr. 19	Apr. 12	Spread Diff
Liberty Interactive LLC	Caa2	3,612	3,905	-293
Lumen Technologies, Inc.	Caa1	2,097	2,256	-159
Embarq Corporation	Caa2	1,890	2,034	-145
Brandywine Operating Partnership, L.P.	Baa3	515	594	-79
CSC Holdings, LLC	B1	1,743	1,814	-72
Qwest Corporation	B1	880	947	-67
United Airlines Holdings, Inc.	Ba3	592	652	-59
Kohl's Corporation	Ba2	653	706	-53
Scripps (E.W.) Company (The)	B3	291	342	-51
Pitney Bowes Inc.	B3	1,140	1,191	-51

#### CDS Movers

#### Figure 4. CDS Movers - Europe (April 12, 2023 – April 19, 2023)

CDS Implied Rating Rises	CDS Impli		
Issuer	Apr. 19	Apr. 12	Senior Ratings
ABN AMRO Bank N.V.	A1	A2	A1
Barclays PLC	Baa2	Baa3	Baa1
NatWest Markets Plc	Baa1	Baa2	A1
Mercedes-Benz Group AG	A2	A3	A2
Volkswagen Aktiengesellschaft	Baa2	Baa3	A3
Equinor ASA	Aa1	Aa2	Aa2
Barclays Bank PLC	Baa2	Baa3	A1
OP Corporate Bank plc	A3	Baa1	Aa3
Bankinter, S.A.	Baa1	Baa2	Baa1
EDP - Energias de Portugal, S.A.	Baa1	Baa2	Baa3

CDS Implied Rating Declines	CDS Impli	ed Ratings	
Issuer	Apr. 19	Apr. 12	Senior Ratings
BNP Paribas	A3	A2	Aa3
Banque Federative du Credit Mutuel	A3	A2	Aa3
Societe Generale	Baa1	A3	A1
Ireland, Government of	Aa1	Aaa	A1
Nordea Bank Abp	A3	A2	Aa3
Credit Agricole Corporate and Investment Bank	A2	A1	Aa3
Dexia Credit Local	A3	A2	Baa3
Swedbank AB	Baa1	A3	Aa3
Standard Chartered PLC	Baa2	Baa1	A3
Merck KGaA	Aa2	Aa1	A3

CDS Spread Increases			CDS Spreads	
Issuer	Senior Ratings	Apr. 19	Apr. 12	Spread Diff
Casino Guichard-Perrachon SA	Caa2	8,230	5,794	2,436
Jnited Group B.V.	Caa1	1,181	1,070	111
NEOS Quattro Finance 2 Plc	B2	543	521	22
aguar Land Rover Automotive Plc	B1	739	726	13
/ivendi SE	Baa2	119	110	9
lstom	Baa2	153	144	9
Credit Mutuel Arkea	Aa3	101	93	8
Banque Federative du Credit Mutuel	Aa3	69	63	6
AB Holdings B.V.	Baa1	82	77	6
egrand France S.A.	A3	48	42	6

CDS Spread Decreases			CDS Spreads	
Issuer	Senior Ratings	Apr. 19	Apr. 12	Spread Diff
Vedanta Resources Limited	Caa2	2,519	2,791	-272
CECONOMY AG	B2	1,040	1,244	-203
Boparan Finance plc	Caa3	2,000	2,088	-89
Avon Products, Inc.	Ba3	322	387	-64
Novafives S.A.S.	Caa2	1,055	1,095	-39
Faurecia S.E.	Ba2	336	368	-32
CPI Property Group	Baa3	596	620	-24
Bellis Acquisition Company PLC	Caa2	687	708	-22
Garfunkelux Holdco 3 S.A.	Caa2	1,341	1,363	-22
Iceland Bondco plc	Caa2	1,068	1,090	-22

Source: Moody's, CMA

#### CDS Movers

#### Figure 5. CDS Movers - APAC (April 12, 2023 – April 19, 2023)

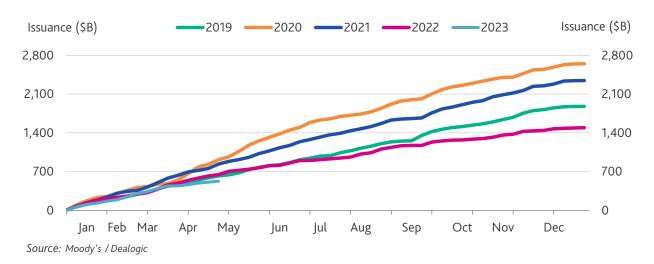
CDS Implied Rating Rises	CDS Impli	ed Ratings	
Issuer	Apr. 19	Apr. 12	Senior Ratings
NIPPON STEEL CORPORATION	A1	A3	Baa2
Sumitomo Mitsui Trust Bank, Limited	Baa1	Baa2	A1
Takeda Pharmaceutical Company Limited	Aa2	Aa3	Baa2
SoftBank Group Corp.	Ba2	Ba3	Ba3
Nissan Motor Co., Ltd.	Baa3	Ba1	Baa3
JFE Holdings, Inc.	A2	A3	Baa3
East Japan Railway Company	Aa2	Aa3	A1
Export-Import Bank of India	A3	Baa1	Baa3
Tokyo Electric Power Company Holdings, Inc.	Baa1	Baa2	Ba1
Sydney Airport Finance Company Pty Ltd	Baa1	Baa2	Baa1

CDS Implied Rating Declines	CDS Impli	ed Ratings	_
Issuer	Apr. 19	Apr. 12	Senior Ratings
China, Government of	A3	A2	A1
Indonesia, Government of	Baa2	Baa1	Baa2
National Australia Bank Limited	A3	A2	Aa3
Philippines, Government of	Baa2	Baa1	Baa2
Malaysia, Government of	A3	A2	A3
Korea Gas Corporation	A2	A1	Aa2
Vanke Real Estate (Hong Kong) Company Limited	B1	Ba3	Baa2
Bank of Queensland Limited	Baa2	Baa1	A3
Lenovo Group Limited	Ba1	Baa3	Baa2
LG Electronics Inc.	Baa2	Baa1	Baa2

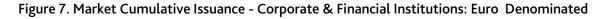
CDS Spread Increases			CDS Spreads	
Issuer	Senior Ratings	Apr. 19	Apr. 12	Spread Diff
Vanke Real Estate (Hong Kong) Company Limited	Baa2	379	346	33
SK Hynix Inc.	Baa2	222	206	16
Toyota Industries Corporation	A2	139	127	12
LG Electronics Inc.	Baa2	91	80	11
Boral Limited	Baa2	145	133	11
SK Innovation Co. Ltd.	Baa3	284	273	11
Indonesia, Government of	Baa2	90	83	7
Philippines, Government of	Baa2	89	82	6
Vietnam, Government of	Ba2	124	118	6
Transurban Finance Company Pty Ltd	Baa2	92	87	5

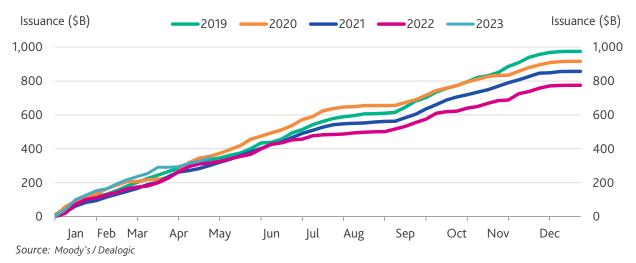
CDS Spread Decreases	-		CDS Spreads	
Issuer	Senior Ratings	Apr. 19	Apr. 12	Spread Diff
Pakistan, Government of	Caa3	4,191	4,270	-79
Nissan Motor Co., Ltd.	Baa3	150	177	-27
dani Green Energy Limited	B2	937	955	-19
GMR Hyderabad International Airport Limited	Ba3	301	318	-18
okyo Electric Power Company Holdings, Inc.	Ba1	82	99	-16
oftBank Group Corp.	Ba3	294	308	-14
izal Commercial Banking Corporation	Baa3	128	142	-14
SC Halyk Savings Bank of Kazakhstan	Ba2	459	472	-13
FE Holdings, Inc.	Baa3	60	70	-11
NIPPON STEEL CORPORATION	Baa2	56	67	-11
aurea Maadu's CMA				

#### **ISSUANCE**



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





#### ISSUANCE

		USD Denominated	
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	12.129	4.475	17.121
Year-to-Date	455.852	63.853	528.992
		Euro Denominated	
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	18.238	0.164	19.846
Year-to-Date	308.375	22.882	346.093

#### Figure 8. Issuance: Corporate & Financial Institutions

\* 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: 1365453

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 © 2023 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 BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") 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 PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS 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 PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS 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. HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS 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 PUBLICATIONS 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.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS 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 Publications.

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 fees ranging from \$1,000 to approximately \$5,000,000. 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 <u>www.moodys.com</u> under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

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 657AF5L 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AF5L 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 Japan only: Moody's Japan K.K. ("MJKK") is a wholly owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly owned by Moody's Overseas Holdings Inc., a wholly owned subsidiary of MCO. Moody's SF Japan K.K. ("MSF]") is a wholly owned credit rating agency subsidiary of MJKK. MSF] is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.