

**WEEKLY MARKET
OUTLOOK**
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What's Tugging at High-Yield Corporate Bond Spreads

U.S. high-yield corporate bond spreads have resumed widening recently, but the process remains orderly and there is nothing that would significantly alter our near-term forecast for corporate bond issuance or signal a heightened risk of recession.

The Barclays/Bloomberg high-yield corporate bond spread has widened by 74 basis points since the beginning of the year to 352 bps. This is still well below its historical average of 529 bps and below its 2018 pre-pandemic peak of 537 basis points.

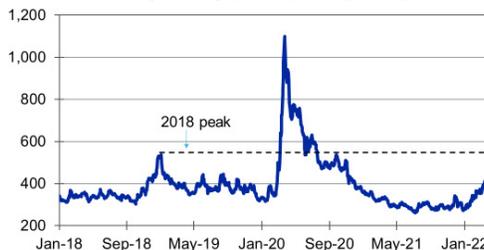
Volatility in high-yield corporate bond spreads also isn't significantly higher than just prior to the pandemic when the ebbs and flows in the economy were noticeably less than now. We reached this conclusion after calculating a 25- and 50-day rolling standard deviation in the high-yield corporate bond spread.

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Spreads Remain Tight

Barclays/Bloomberg U.S. high-yield option adjusted spread, bps

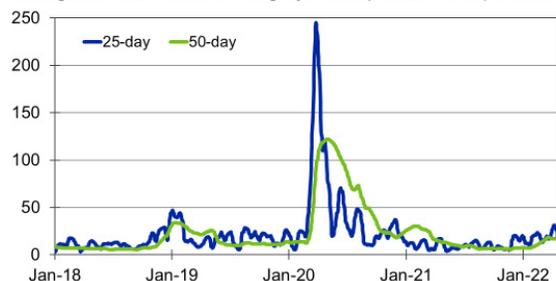


Sources: Barclays, Bloomberg LP, Moody's Analytics

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High-Yield Weathering Turbulence

Rolling standard deviation in high-yield corporate bond spread...



Sources: Bloomberg LP, Moody's Analytics

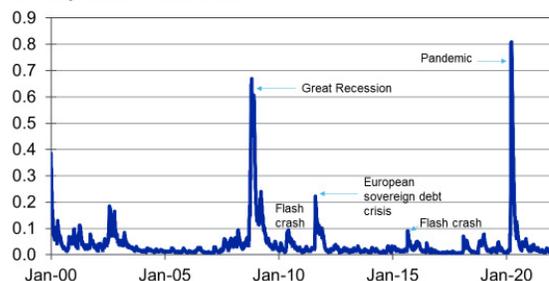
High-yield corporate bond spreads are forecast to widen through the remainder of this year, but risks are actually weighted toward them ending the year tighter than in our baseline forecast.

A few factors are likely to have limited the widening in high-yield corporate bond spreads in the face of tightening in broader financial market conditions. Credit risk remains in check since corporate defaults should remain very low this year and into early 2023. Also, higher global energy prices are helping keep spreads relatively tight. In our past work, we used Granger causality tests to see if there is a causal relationship between the high-yield corporate bond spread and West Texas Intermediate crude oil prices. With no lags, fluctuations in WTI crude oil prices were found to Granger-cause changes in the high-yield corporate bond spread. The results showed that the causality runs one way, which isn't surprising.

One reason that spreads have widened is an increase in volatility in equity markets. We used Generalized AutoRegressive Conditional Heteroskedasticity, or the GARCH model, to calculate the volatility in S&P 500 returns. The results show that volatility has increased since the end of last year because of the hawkish shift by the Federal Reserve and Russia's military conflict with Ukraine.

Nothing Eye Popping Here

Volatility in S&P 500 returns



Source: Moody's Analytics

Volatility is still lower than it was in 2018 when high-yield corporate bond spreads hit 537 bps. Volatility is a risk. Spikes in high-yield corporate bond spreads have occurred when volatility suddenly jumps, including during the pandemic, the European sovereign debt crisis, the flash crashes in the S&P 500, and the Great Recession. We opted to estimate volatility using the GARCH model, which measures realized volatility, while the VIX measures the expected volatility in stocks over the next 30 days. All told, realized volatility has risen while expected volatility measured by the VIX remains near its historical average. Therefore, some of the widening in high-yield corporate bond spreads recently is attributable to an increase in realized volatility in S&P 500 returns.

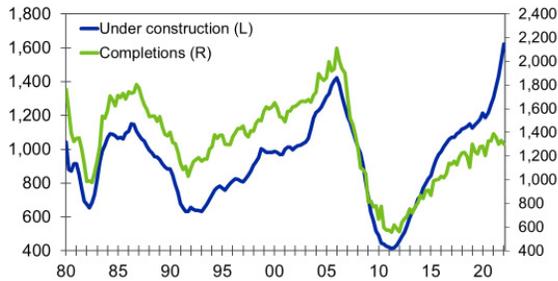
Supply chains, mortgage rates limit housing completions

Rising mortgage rates are another challenge facing U.S. homebuilders, and residential investment could fall short of our forecast in the second quarter. Homebuilders have faced rising mortgage rates in the past, but this increase is on top of supply-chain and labor-supply problems that have increased the cost of construction and driven a wedge between housing units under construction and completions.

The number of homes under construction was 1.622 million annualized units in the first quarter, the most since the early 1970s. Though starts and units under construction have been trending higher, completions have failed to keep pace and slipped 2.2% in the first quarter. This reverses the increase in the final three months of last year and is the third decline in the past four quarters.

Supply-Chains Likely Limiting Completions

U.S. housing units, ths, SAAR



Sources: Census Bureau, Moody's Analytics

Supply-chain issues are likely giving homebuilders headaches by driving up construction costs and probably preventing some homes from being completed. Builders are feeling the effect of higher costs and delays in delivery of important building materials including lumber, copper wire, windows and appliances. The inability to receive these

building materials is likely a key reason that housing completions have not been able to increase recently.

Rising mortgage rates could also prevent completions from closing the gap with starts and units under construction. The data for the first quarter capture very little if any of the recent jump in mortgage rates. Therefore, we used Granger causality tests to see if there is a causal relationship between changes in the 30-year fixed mortgage rates and changes in housing completions. With no lag, one-month and two-quarter lags, fluctuations in mortgage rates were found to Granger-cause changes in housing completions. The causality runs in one direction. Therefore, with mortgage rates climbing, completions could move sideways for a little longer.

All told, mortgage rates north of 5% are likely sufficient to cool the housing market, which isn't necessarily a bad thing. The housing market was red-hot, and that wasn't sustainable.

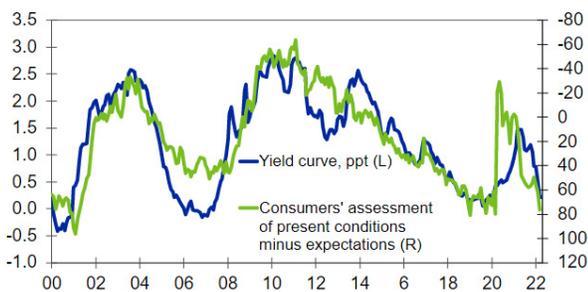
Consumers Watch the Yield Curve

BY RYAN SWEET

The U.S. yield curve, or the difference between the 10- and 2-year Treasury yields have widened since it inverted recently but it remains razor thin. Our daily probability-of-recession model that is based on various measures of the yield curve puts the odds of a recession in the next 12 months at 20%, which is higher than its historical average of 11.7%. There are reasons to be skeptical of the message being sent from the yield curve; the 10-year Treasury yield is no longer a true risk-free rate because of the Federal Reserve's purchases of Treasuries. The Fed has purchased Treasuries across the yield curve, and its total holdings of Treasury securities are \$5.76 trillion, more than double that seen pre-pandemic.

Though there are reasons to be skeptical of the yield curve, it does garner a ton of attention among investors and, surprisingly, also among consumers. Consumer confidence is important around turning points in the business cycle and some measures of consumer sentiment have weakened. The correlation coefficient between the yield curve and the difference between the Conference Board's consumer confidence present situation and expectations is -0.82.

Yield Curve State of Mind?



Sources: Treasury Department, The Conference Board, Moody's Analytics

Correlation does not imply causality. Therefore, we used Granger causality tests to see if there is a causal relationship between the yield curve and the difference between consumers' assessment of present conditions and expectations. With no lags and a couple months' lag, the yield curve Granger causes changes in the difference between the Conference Board's consumer confidence present situation and expectations. The causation runs in one direction.

This is particularly surprising considering that the Conference Board survey of consumer confidence is more sensitive to labor market conditions than the University of Michigan consumer sentiment survey, which asks more questions focused on personal finances. The current difference between consumers' assessment of present conditions and expectations would be consistent with a yield curve that is inverted.

One potential explanation for the strong correlation and causal relationship is that when the yield curve inverts it is covered widely in the press. To assess this, we turned to Google Trends, which measures online search intensity. We looked at search intensity for "yield curve." It jumps around times that the yield curve is close or does invert. Google searches for yield curve have jumped recently, consistent with past instances when it inverted.

The drumbeat in the press that an inverted yield curve is a good predictor of a looming recession could dampen consumers' spirits. There are reasons to be skeptical about the yield curve and the prospect for a recession, but one reason we can't discount is the psychological impact on investors and consumers. Inversions of the yield curve garner a lot of attention and impact consumer sentiment; we could talk ourselves into an economic downturn.

The Week Ahead in the Global Economy

U.S.

The U.S. economic calendar is a little busier. Among key data releases will be durable goods, consumer confidence, new home sales, and the advance estimate of first-quarter GDP. Though some source data for first-quarter GDP will be released early next week, our high-frequency GDP model has GDP on track to rise 1.1% at an annualized rate.

The Conference Board's consumer confidence for April will also be released. This measure of sentiment is sensitive to labor market conditions, and initial claims for unemployment insurance benefits suggest that job growth has remained strong in April. Fed Chair Jerome Powell recently threw his support behind front loading rate hikes, and data next week will support this. The headline PCE deflator will post another strong gain in March while the first quarter Employment Cost Index likely rose in excess of 1%.

Europe

The euro zone's preliminary estimates of first-quarter GDP and the April HICP will be at the fore. We expect GDP growth slowed to 0.2% q/q in the first quarter from 0.3% in the fourth. The outbreak of the Omicron variant of COVID-19 weighed on consumption in the first half of the quarter at the same time that rising inflation began to eat into purchasing power.

On that note, the preliminary estimate of the euro zone's harmonized index of consumer prices likely reported a 7.9% y/y increase. We still see room for core prices to grow with costs staying high. Food prices will also contribute largely to the headline inflation rate, while energy prices will rise further as utility contracts are renegotiated in view of the higher wholesale prices of the past months.

Economic sentiment in the euro zone as measured by the ESI likely dropped to 104 in April from 108.5 in March. Rising inflation and the military conflict in Ukraine have dismayed businesses and households alike; though according to flash estimates the consumer confidence indicator improved marginally in April from March. Meanwhile, supply disruptions have not significantly improved, likely hurting firms' views of their inventories.

There will be a slew of data releases out of Russia that will give a first look of the effects of the military conflict on the economy. We expect the unemployment rate popped to 4.7% in March from 4.1%. Job losses will mainly be due to foreign firms suddenly stopping operations in the country. Retail sales likely picked up 6.5% y/y in March, after a 5.9% rise in February. Households likely have been stockpiling amid the uncertainty and rapid price increases. By contrast, we see industrial production slowing to 5.5% y/y from 6.3% earlier. Base effects will still support the output figure, and although there are significant disruptions the Russian economy has not fully shut down. Foreign trade data from February will now be released too, after a delay. We expect the balance slumped to \$19 billion from \$21.2 in January. Exports will have dropped at the end of the month, but stronger activity earlier on will have a mitigating effect. The March figures will be more dramatic.

Given the unplanned interest rate cut earlier in the month, we do not expect the Central Bank of Russia to change policy rates at its meeting next week. That said, there is the possibility of further cuts as the CBR seeks to stimulate economic growth. Price stability will remain a concern, with the inflation rate jumping to 16.7% y/y in March and showing no sign of slowing.

Asia-Pacific

Australia's March quarter inflation data will be in the spotlight. We expect headline CPI growth to have accelerated to 4.1% y/y from the December quarter's 3.5%, driven by higher fuel, food and housing costs. Underlying inflation also likely gathered steam in the March quarter to 3% y/y, up from 2.7% in the December quarter. We expect the March quarter inflation print will be the trigger for the Reserve Bank of Australia to bring forward its guidance for the cash rate to rise as early as May.

Elsewhere, advance estimates are expected to show that South Korea's GDP growth cooled to 2.9% y/y in the March quarter. This follows 4.1% growth in the December stanza. Household consumption was patchy in the opening months of 2022 due to the COVID-19 resurgence that peaked in mid-March. The external sector has come under increased pressure as high energy costs have swollen the import bill.

Geopolitical Calendar

Date	Country	Event	Economic Importance	Financial Market Risk
8-May	Hong Kong	Chief executive election	Low	Low
9-May	Philippines	Presidential election	Low	Low
12-13 May	U.S.	U.S.-ASEAN summit	Medium	Low
22-26 May	Switzerland	World Economic Forum annual meeting	Medium	Low
29-May	Colombia	Presidential election	Medium	Low
29-30-Jun	NATO	NATO Summit, hosted by Madrid	Medium	Medium
Jun/Jul	PNG	National general election	Low	Low
2-Oct	Brazil	Presidential and congressional elections	High	Medium
Oct	Indonesia	G20	Medium	Low
Oct/Nov	China	National Party Congress	High	Medium
7-Nov	U.N.	U.N. Climate Change Conference 2022 (COP 27)	Medium	Low

Speculative-Grade Corporate Defaults Edge Lower, for Now

BY RYAN SWEET

CREDIT SPREADS

Moody's long-term average corporate bond spread is 144 basis points, 6 bps wider than at this time last week and narrower than the 175 bps average in March. The long-term average industrial corporate bond spread widened 8 bps to 132. It averaged 161 bps in March.

The recent ICE BofA U.S. high-yield option adjusted bond spread is off its recent peak of 420 basis points but tightened around 20 bps over the past week to 356. The Bloomberg Barclays high-yield option adjusted spread has bounced around recently and is currently 345 bps compared with 354 bps at this time last week. The high-yield option adjusted bond spreads approximate what is suggested by the accompanying long-term Baa industrial company bond yield spread and narrower than implied by a VIX of 21.4.

Defaults

The trailing 12-month global speculative-grade default rate was 2.0% at the end of March, unchanged from the prior month. This default rate calculation does not include those defaulting and non-defaulting Russian issuers whose ratings were withdrawn by Moody's in March. The March default rate would have been 3.1% if we had included those issuers. However, including these issuers in the default rate calculations would be misleading because Moody's no longer can obtain adequate information to ascertain their default status.

Two factors will be critical in driving near-term default trends: spillover severity of the Russia-Ukraine military conflict and the aggressiveness of monetary tightening in major economies. If the military conflict extends and international sanctions escalate, the higher the chances of a global recession and the greater the credit risks it introduces. Under our baseline scenario, however, we are not forecasting a global recession. One reason is that although the invasion of Ukraine is unambiguously negative for consumer confidence and economic activity, the crisis hit when the global economy was at cruising altitude. This is consistent with what high-yield spreads are indicating; they have widened in Europe and the U.S., but they remain near or below their historical averages for now.

Against this backdrop, Moody's Credit Transition Model predicts that the global speculative-grade corporate default rate will edge lower to 1.9% for April, May and June before rising to 2.9% in March 2023. That rate, if realized, would

still be below the long-term average of 4.1%. Our baseline forecasts assume that the U.S. high-yield spread will widen to 497 bps over the next four quarters from about 350 bps now. This will be partially offset by a slight improvement in the U.S. unemployment rate, which we expect to edge lower to 3.5% by the end of March 2023 from the current rate of 3.6%.

U.S. Corporate Bond Issuance

First-quarter 2020's worldwide offerings of corporate bonds revealed annual advances of 14% for IG and 19% for high-yield, wherein US\$-denominated offerings increased 45% for IG and grew 12% for high yield.

Second-quarter 2020's worldwide offerings of corporate bonds revealed annual surges of 69% for IG and 32% for high-yield, wherein US\$-denominated offerings increased 142% for IG and grew 45% for high yield.

Third-quarter 2020's worldwide offerings of corporate bonds revealed an annual decline of 6% for IG and an annual advance of 44% for high-yield, wherein US\$-denominated offerings increased 12% for IG and soared upward 56% for high yield.

Fourth-quarter 2020's worldwide offerings of corporate bonds revealed an annual decline of 3% for IG and an annual advance of 8% for high-yield, wherein US\$-denominated offerings increased 16% for IG and 11% for high yield.

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

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

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

ago basis. High-yield issuance fared 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 week ended April 15, US\$-denominated high-yield issuance totaled \$1.785 billion, weaker than the prior week. This brings the year-to-date total to \$66.5 billion. Investment-grade bond issuance rose \$21.8 billion in the week ended April 15, bringing its year-to-date total to \$561.75 billion. Total US\$-denominated issuance is tracking that seen in 2018 and 2019.

U.S. ECONOMIC OUTLOOK

Adjustments to our forecast in April were more significant than in prior months. The larger downward revision to the baseline forecast for U.S. GDP growth this year is mostly attributed to the larger adverse impact of the military conflict between Russia and Ukraine on the European economy, global energy prices, and U.S. financial market conditions.

One link between the Russian invasion and the global economy is through financial market conditions. To gauge the effect of geopolitical risk on U.S. financial markets, we leaned on a vector autoregression model that allowed us to estimate the response of equity prices, oil prices, the VIX, and high-yield corporate bond spreads. We also included some measures of economic activity. A sudden increase in geopolitical risk had a greater impact on financial markets than the economy. However, the tighter financial market conditions, with a lag, weigh on the economy.

Some other variables included in our VAR were the Federal Reserve's geopolitical risk index and economic policy uncertainty. There are two periods where both geopolitical risk and U.S. policy uncertainty increased, including the Gulf War and 9/11. The VAR used monthly data since January 1995 and included a few lags.

Our VAR results revealed that financial market conditions have tightened in line with that implied by the rise in geopolitical risk. However, the increase in volatility and widening high-yield corporate bond spreads are sticky and will have a larger drag on growth than previously thought.

Also, oil prices have been a little higher than we anticipated in the prior baseline.

Window is closing

There is still a window of opportunity for Democrats to pass a reconciliation bill, but it is closing. The new baseline forecast assumes Democrats pass a \$560 billion package that is solely focused on clean-energy tax credits and climate resilience investments. Previously, we assumed Democrats would also modestly expand the Child Tax Credit by making it fully refundable on a permanent basis, but this assumption was removed in April, reducing the size of spending under reconciliation by about \$50 billion over 10 years. There were no changes to our assumptions on the pay-for side. The package is still assumed to feature more than \$700 billion in higher taxes on well-to-do households and prescription drug savings. As a result, the reconciliation bill would lead to a net reduction of more than \$150 billion in cumulative deficits over the next decade.

For now, we are setting Memorial Day as a deadline for Democrats to arrive at some agreement over a reconciliation framework. Otherwise, we will remove this reconciliation package from the June baseline. By that time, it will be very tough for Democrats to negotiate a reconciliation package from scratch with the midterms rapidly approaching. Therefore, April and May will be crucial months in determining whether Democrats can rally around a reconciliation bill. Though the confirmation of Judge Ketanji Brown Jackson for the Supreme Court is over, there will be other priorities such as a \$10 billion COVID-19 funding bill and legislation to boost U.S. economic competitiveness with China that could distract from negotiations on a reconciliation bill. Further, getting all Democrats to agree on a reconciliation bill, no matter how slimmed down it is, could prove tricky. To get Senator Joe Manchin on board, any Democratic reconciliation bill would likely need to include investments in fossil fuel infrastructure, something that would be anathema to progressives.

COVID-19 assumptions

Changes to our epidemiological assumptions were minor in April. Total confirmed COVID-19 cases in the U.S. will be 81.35 million, compared with the 81 million in the March baseline. The number of assumed cases is still well above that assumed before the Omicron variant. The seven-day moving average of daily confirmed cases has stabilized around 30,000 for the past several weeks.

We have replaced the concept of herd immunity with "effective immunity," which is a rolling number of infections plus vaccinations to account for the fact that immunity is not permanent. The forecast still assumes that COVID-19

will be endemic and seasonal. However, each passing wave is assumed to have a diminishing economic effect.

Energy price assumptions

Our assumption is that the oil supply disruption from Russia's military conflict with Ukraine will be between 2 million and 3 million barrels per day. The anticipated loss in Russian supply will be largely offset by increasing OPEC and non-OPEC output, demand destruction due to higher prices, and the flexibilization of sanctions on Iran and Venezuela. Our baseline forecast assumes that the global oil market remains mostly balanced throughout the year, allowing oil prices to gradually drop. The price of West Texas Intermediate crude oil averages \$85 per barrel in the year's final quarter, down from \$105 in the second quarter. Prices continue to fall in 2023 as Russia's oil supply starts to recover. Assumptions around oil prices are becoming crucial to the evolution of the baseline forecast.

Nudging GDP lower

The April baseline factors in increasing costs of higher global energy prices and tighter financial market conditions. We now expect real GDP to rise 3.2% this year, compared with the 3.5% in the March baseline. Over the past three months we have shaved 0.5 of a percentage point off our forecast for GDP growth for this year. We cut the forecast for GDP growth in 2023 from 3.1% to 2.7%. The economy is still expected to grow above its potential, which is likely between 2% and 2.5%.

The forecast for first-quarter GDP growth was nudged higher from 0.7% to 0.9% at an annualized rate, not a significant deviation from our high-frequency GDP model's estimate. For the second consecutive month, the bulk of the downward revision for this year was in the second quarter, as real GDP is now expected to increase 3.4% at an annualized rate, compared with the 4.8% annualized gain in the March baseline. Growth in the third quarter was also cut from 2.5% to 1.6% at an annualized rate. The forecast for GDP growth in the final three months of this year was revised lower by 0.5 of a percentage point to 2.3% at an annualized rate.

A good chunk of the downward revision to GDP growth this year is because of softer real consumer spending than in the March baseline. Our rule of thumb is that every \$10 increase in the price of oil increases U.S. retail gasoline prices by 30 cents a gallon. Every penny increase in retail gasoline prices reduces consumer spending by about \$1.5 billion over the course of a year.

Our baseline forecast for real GDP growth this year is close to the Bloomberg consensus of 3.3%. The forecast for next year is 0.5 percentage point stronger than the Bloomberg consensus of 2.2%.

Business investment and housing

Heightened geopolitical uncertainty and tighter financial market conditions are weighing on real business investment in equipment. We have real business equipment spending rising 6% this year, compared with 7.3% in the March baseline. The forecast is for real business equipment spending to increase 4.6% in 2023, a percentage point weaker than in the March baseline. Other parts of business investment will do better, including nonresidential structures, now forecast to rise 14.7% this year (14.4% in the March baseline) and 11.6% in 2023 (10.9% in the March baseline). A good chunk of this is attributable to mining exploration, shafts and wells. The Bureau of Economic Analysis uses the American Petroleum Institute's weighted average of footage drilled along with rotary rig counts from Baker Hughes in its current-quarter estimate of private fixed investment in mining exploration, shafts and wells. This segment now accounts for more than 10% of nominal private fixed investment in nonresidential structures. Therefore, a rise in energy prices would lead to an increase in the number of active rotary rigs. Rig counts have risen but are still lower than pre-pandemic and less than implied by global oil prices.

Revisions to housing starts were small. Housing starts are expected to be 1.818 million, compared with 1.811 million in the March baseline. There were no revisions to housing starts next year. There are likely only so many homes that can be built each year because of labor-supply constraints and a lack of buildable lots. Some of the labor-supply issues will ease as the pandemic winds down, but the reduction in immigration is particularly problematic for homebuilders' ability to find workers. We cut the forecasts for new- and existing-home sales this year because of higher mortgage rates.

We nudged up the forecast for the FHFA All-Transactions House Price Index this year, with it rising 12%, compared with 11.5% in the March baseline. House price growth moderates noticeably in 2023, as prices are forecast to be little changed. This is attributable to rebalancing of supply and demand, which increases the risk of an outright decline in house prices.

Labor market

We have job growth averaging 376,000 per month this year, compared with the March baseline forecast of 367,000. Job growth has averaged around 600,000 per month over the past six months. If sustained, it would take nine months to close the employment gap, or the difference between the actual level of employment and where it would have been if the recession hadn't occurred and prerecession job growth was maintained. Job growth was broad-based in March, as the only major industries notching a decline in employment were transportation/warehousing and utilities. However,

labor supply is key to our near-term forecast for monthly job growth.

There was a modest change to the forecast for the unemployment rate this year; it is expected to average 3.2% in the final three months of 2022 and 3.5% in the fourth quarter of next year. We assume a full-employment economy is one with a 3.5% unemployment rate, around a 62.5% labor force participation rate, and a prime-age employment-to-population ratio a little north of 80%. All of these conditions will be met by late this summer.

Fast and furious

Because of the rise in global energy prices, there was a noticeably upward revision to year-over-year growth in the headline CPI. The forecast is for year-over-year growth to be around a full percentage point higher over the next few quarters than in the March baseline. There was also an upward revision to the forecast for growth in the PCE deflator, the Fed's preferred measure of inflation.

With the new inflation forecast and the Fed's hawkish rhetoric, we noticeably altered our forecast for the fed funds rate. The effective fed funds rate is now forecast to average 2.1% in the fourth quarter of this year, compared with 0.9% in the March baseline. We have a 50-basis point rate hike penciled into the forecast for May, as the Fed has clearly signaled that this is likely to occur. Fed Chair Jerome Powell described the labor market as unhealthily tight. Add

inflation that hasn't peaked yet, and that is going to lead to an aggressive tightening cycle. The terminal fed funds rate, or where rates peak this cycle, is now 2.75%, 30 basis points higher than in the March baseline. Also, the terminal rate has been hit nearly a year earlier than in the March baseline. The Fed is expected to start cutting rates in late 2024, as it will need to return the fed funds rate to its long-run equilibrium rate, which we estimate to be 2.5%, close to the central bank's estimate of 2.4%.

On the balance sheet, the minutes from the March Federal Open Market Committee meeting provided some color around the central bank's plan to reduce the size of its balance sheet. The minutes noted that the balance sheet reduction could start as early as May with a cap on Treasuries of \$60 billion and \$35 billion for mortgage-backed securities. This is almost double the peak rate of \$50 billion a month the last time the Fed reduced its balance sheet, from 2017 to 2019.

A more aggressive Fed and higher inflation led to an upward revision to our forecast for the 10-year Treasury yield, now expected to end this year around 3%, 60 basis points higher than in the March baseline. It is forecast to average 3.3% in the final three months of next year, compared with 3.1% in the March baseline. The 10-year yield converges with the March baseline in 2024. Changes to the forecast for the Dow Jones Industrial Average were modest. We incorporate the first-quarter actual data into the April baseline.

Mixed Messages on the Euro Zone Economy

BY ROSS CIOFFI

The final estimate of the euro zone's harmonized index of consumer prices inflation rate for March came in at 7.4% y/y, slightly lower than the preliminary estimate of 7.5%. Despite the downward revision, this is still a massive step up from the 5.9% y/y rate in February and the new highest rate on record. Meanwhile, according to our seasonal adjustments, the harmonized index of consumer prices jumped 1.7% month over month. The main factor for monthly and yearly inflation was energy, though year-ago price increases are above target throughout the HICP.

The [Russian invasion of Ukraine](#) sent commodity prices skyrocketing early in March. Most consequential were the steep rises in gas, oil, and wheat futures prices. Electricity prices surged as a result (6.8% m/m), but the rise in fuel prices was even more dramatic (14.8%). Government measures and the passing of time helped calm markets, so that the price of gas and oil has been inching lower in April. This could help ease prices in the coming month, though in April, utility companies may still be forced to pass on higher costs to consumers as they renegotiate expiring contracts.

Food prices, which rose by 5% y/y in March, have been an increasingly important contributor to headline inflation as well. As mentioned, the invasion into Ukraine greatly affected food commodity prices, but the upward trend predates the conflict. Fertilizer prices increased last fall when the global shortage in natural gas first hit.

Core inflation also sped up during the month (to 2.9% y/y from 2.7%) as firms pass on higher production costs to consumers. This is most clear in the car sector, where the cost of inputs to making cars continues to rise, dragging along consumer sticker prices with them. That said, core prices have yet to catch fire in the same way they have in the U.S. or the U.K. as demand has been relatively more subdued. We do expect core prices to pick up further in the months to come, however. Consumer demand will continue to rebound from the pandemic and producer costs will stay high. We expect the HICP to speed up again in April.

Confidence in the euro zone improves

Preliminary estimates point to confidence improving slightly this April in the euro zone. The reading picked up to -16.9 from 18.7 in the previous month. There are no details yet in the flash release. But we expect that some of the initial shock from the Russian invasion into Ukraine lightened.

Depending on the future path of inflation, however, confidence could falter again.

Industrial production picked up solidly in February, by 0.7% m/m, but it comes after a downwardly revised contraction of the same degree in the previous month. February's increase in production was because of upsides following the easing of COVID-19 restrictions. The easing of health restrictions has been unleashing pent-up demand for consumer services, and with threats from the virus diminishing, workers are also returning to the office. All of this has allowed demand for clothing and footwear to strengthen, supporting production in the sector. Supply shortages continue to weigh on output, particularly among car manufacturers. Output in the sector fell 2.3% m/m, deepening the 2.1% fall in January. Unfortunately, the supply situation will not likely get significantly better any time soon. China's zero-COVID policy is resulting in massive lockdowns there, and the military conflict in Ukraine has hit supplies of key inputs and commodities.

Passenger car registrations fall again

Regarding supply issues facing European carmakers, the number of registered passenger car sales slumped 20.5% year over year in March, to 844,187 units. This worsened the 6.7% year-on-year decline in February. Supply issues for the car industry got worse in March after the Russian invasion of Ukraine. Carmakers in Europe, such as Volkswagen, were forced to stop factories as they suddenly lost access to Ukrainian car-parts suppliers. This is a downbeat omen for March industrial production. There likely will be a sharp downturn in motor vehicle output dragging on IP.

The trade deficit widens

The euro zone trade balance remained deep in negative territory this February. Although in not seasonally adjusted terms the year-ago contraction was less than in January (€7.6 billion versus €27.3 billion), in seasonally adjusted terms the bloc's trade deficit deepened to €9.4 billion from €7.7 billion in the previous month. Indeed, we would chalk up the weaker year-ago contraction to more favorable base effects. In February 2021, domestic demand began to gradually improve as there was an initial easing in lockdowns: Imports picked up considerably in February 2021, lifting up the base. Nonetheless, in both year-ago and month-ago terms, imports outpaced exports and the relative strength of imports will likely persist in the first half because of supply disruptions.

China Beats GDP Expectation for Q1

BY JEFF YU

China's first-quarter GDP growth beat expectations by accelerating to 4.8% y/y from 4% in the previous quarter. This translated into 1.3% quarter-on-quarter growth. We had expected March GDP to expand 4.1% y/y. Despite the stronger outcome, the outlook is bleak. China's zero-COVID stance increases the chances of disruptive lockdowns, and consumer and investor sentiment are very low due to a confluence of adverse events domestically and internationally. Since mid-March, various parts of the country have been locked down, including in Jilin, Shenzhen and most noticeably, Shanghai.

China's industrial production, fixed-asset investment, and foreign trade held up better than expected, supporting headline growth. Fixed-asset investment grew 9.3% in the first three months of 2022 from the same period of 2021, slowing from 12.2% y/y for January and February combined. The first-quarter result beat expectations amidst rising energy and commodity prices, with government infrastructure projects likely offsetting some of the weakness. Manufacturing and infrastructure fixed-asset investment were boosted by an expansionary fiscal policy and an increase in local government bond issuance. Industrial production in March was up 5% y/y. Mining production improved in year-on-year terms from the previous January-February period, while manufacturing and utilities saw a slowdown.

Domestic private consumption remained a weak spot in the economy. Retail sales surprised on the downside in March,

falling 3.5% y/y. This stood in contrast to the 6.7% y/y increase in January-February. Consumers spent less on luxury goods, as captured by the decline in sales of precious metals, jewellery and clothing. First-quarter online retail sales rose 8.8% year on year, an early indication of how shopping patterns are changing in light of restrictions.

Lockdown effects

The lockdowns prompted us to downwardly revise our China GDP growth forecast for 2022 to 4.9% from 5.1%. Current lockdowns will take a bigger toll on consumption than industrial production because some large manufacturers have been able to continue operating. Some manufacturers house workers on site. And in some cases, orders can be diverted to other locations where COVID-19 cases are low.

Expansionary fiscal policy will support economic growth in 2022. In the long term, this may see local governments again binge on off-balance sheet debt via local government financing vehicles. A cut to the reserve requirement ratio that was announced by China's central bank on 15 April will provide extra liquidity and lower funding costs. However, considering the U.S. Federal Reserve is expected to hike more aggressively, any future easing by China's central bank will need to be executed with extra caution to mitigate the risks of capital outflow acceleration and increased financial market volatility.

U.S. Activity Still Broadly Positive

BY STEVEN SHIELDS

U.S.

The trend in U.S. rating change activity remained broadly positive in the latest period. For the week ended April 19, upgrades accounted for 58% of total rating change activity and 73% of the affected debt. All 12 ratings changes were issued to speculative grade firms. Moody's Investors Service upgraded all the ratings of VICI Properties L.P. and those of MGM Growth Properties Operating Partnership LP. In the same rating action, Moody's assigned a Ba1 rating to VICI's senior unsecured notes being marketed, which Moody's expects will be closed simultaneously with the MGP merger as mandated by the master transaction agreement. Moody's will officially withdraw all MGP's ratings upon the closing of the merger, except for ratings on certain debt that will remain outstanding.

Meanwhile, downgrades were headlined by Talen Energy Supply LLC with Moody's lowering its senior unsecured debt to Caa3 from B1 and its senior unsecured notes to C from Caa2. Talen's current ratings reflect the company's high

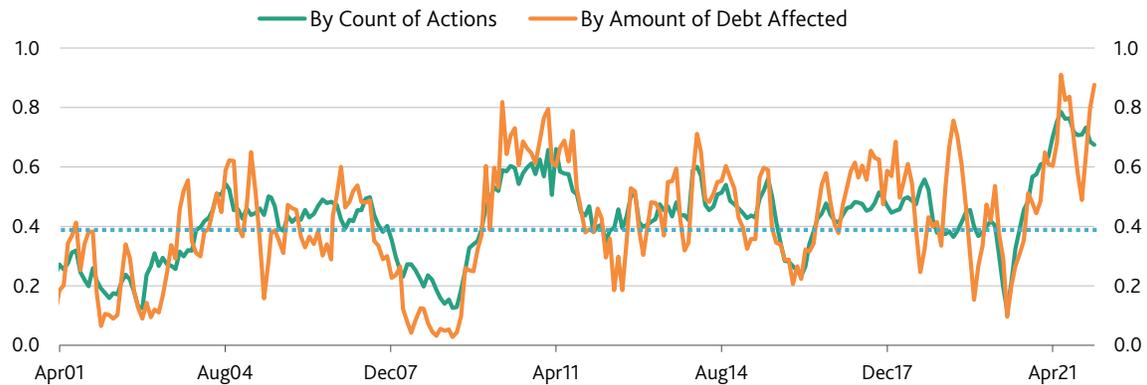
debt load of approximately \$5.3 billion and unsustainable capital structure because of its weak financial performance, limited access to external liquidity, and pressure from higher natural gas prices.

Europe

European rating activity was light with only three changes issued in the period. Moody's Investors Service upgraded the senior unsecured ratings of Entain plc to Ba1 from Ba2 and SGL Carbon SE's Corporate Family Rating to Ba3 from Caa1. Meanwhile, SANEF S.A. was the lone downgrade in the period and comprised the bulk of debt affected in the region. The affirmation of Holding d'Infrastructures de Transportand's rating, which owns 100% of Sanef, and change of outlook to stable from negative reflects the improved traffic prospects on Sanef's toll road network and the expectation that the HIT/Sanef group will be able to maintain credit metrics in line with those expected for the current rating.

RATINGS ROUND-UP

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



* Trailing 3-month average

Source: Moody's

FIGURE 2
Rating Key

BCF	Bank Credit Facility Rating	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/SG
4/13/2022	TALEN ENERGY SUPPLY, LLC	Utility	SrSec/SrUnsec/BCF/LTCFR/PDR	4580.34	D	B1	Caa3	SG
4/13/2022	ASPIRE BAKERIES HOLDINGS, LLC	Industrial	SrSec/BCF/LTCFR/PDR		D	B1	B2	SG
4/14/2022	PROVIDENT GROUP - EMU PROPERTIES LLC	Industrial	SrSec		D	Baa3	Ba3	IG
4/14/2022	LG PARENT HOLDCO INC.-LIBBEY GLASS LLC	Industrial	SrSec/BCF/LTCFR/PDR		U	Caa1	B3	SG
4/15/2022	PROWLER INTERMEDIATE CORP.-PSS INDUSTRIAL GROUP CORP.	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa2	Ca	SG
4/18/2022	MGM GROWTH PROPERTIES LLC-MGM GROWTH PROPERTIES OPERATING PARTNERSHIP LP	Industrial	SrUnsec/SrSec/BCF/LTCFR	4200.00	U	B1	Ba1	SG
4/18/2022	RECESS HOLDINGS, INC.	Industrial	SrSec/BCF/LTCFR/PDR		U	B2	B1	SG
4/18/2022	VICI PROPERTIES INC.-VICI PROPERTIES L.P.	Financial	SrUnsec/LTCFR	4750.00	U	Ba3	Ba1	SG
4/19/2022	JILL HOLDINGS LLC-JILL ACQUISITION LLC	Industrial	LTCFR/PDR		U	Caa1	B3	SG
4/19/2022	BOE INTERMEDIATE HOLDING CORPORATION-MAUSER PACKAGING SOLUTIONS HOLDING COMPANY	Industrial	SrSec/SrUnsec/BCF/LTCFR/PDR	3533.21	U	B3	B2	SG
4/19/2022	OPTIV INC.	Industrial	SrSec/BCF/LTCFR/PDR		U	Caa1	B3	SG
4/19/2022	OUTCOMES GROUP HOLDINGS, INC.	Industrial	SrSec/BCF		D	B2	B3	SG

Source: Moody's

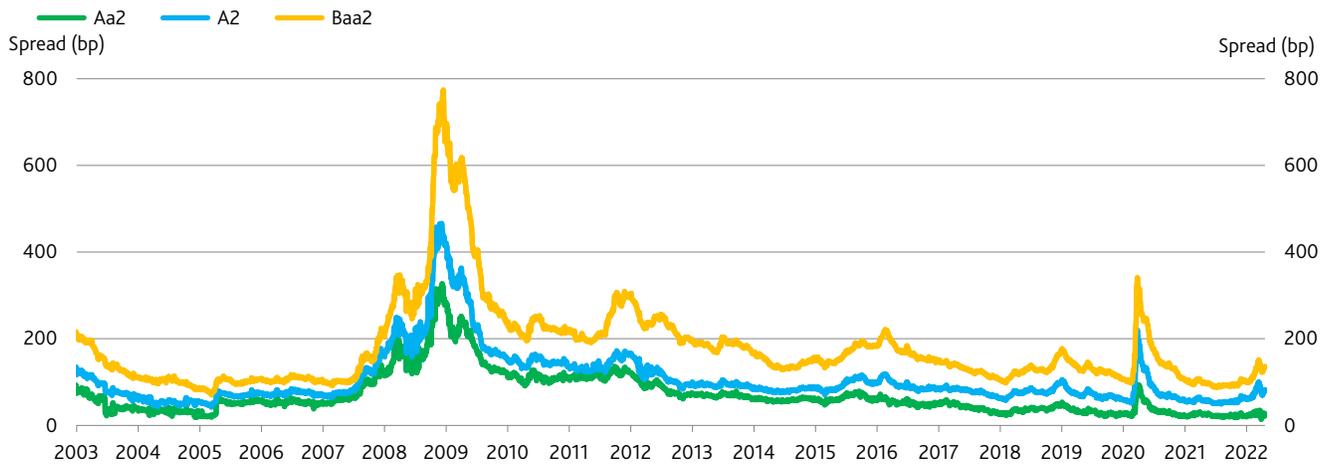
FIGURE 4
Rating Changes: Corporate & Financial Institutions - Europe

Date	Company	Sector	Rating	Amount (\$ Million)	Up/Down	Old LTD Rating	New LTD Rating	IG/SG	Country
4/13/2022	SGL CARBON SE	Industrial	LTCFR/PDR		U	Caa1	B3	SG	GERMANY
4/13/2022	ABERTIS INFRAESTRUCTURAS S.A.-SANEF S.A.	Industrial	SrUnsec/MTN	1048.18	D	Baa1	Baa2	IG	FRANCE
4/14/2022	ENTAIN PLC	Industrial	SrSec/BCF/LTCFR/PDR		U	Ba2	Ba1	SG	ISLE OF MAN

Source: Moody's

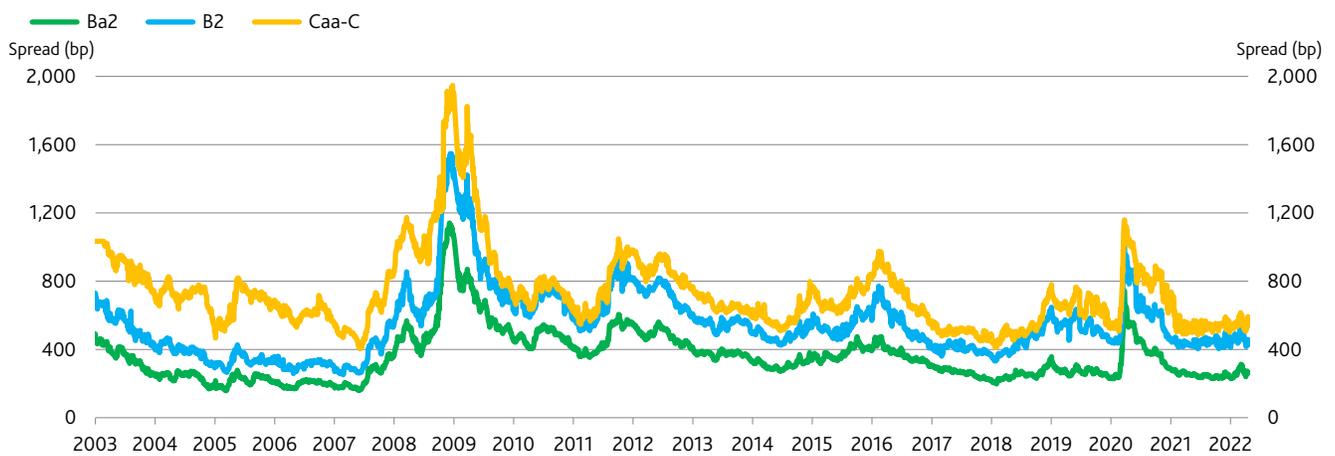
MARKET DATA

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



Source: Moody's

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



Source: Moody's

CDS MOVERS

Figure 3. CDS Movers - US (April 13, 2022 – April 20, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
	Apr. 20	Apr. 13	Senior Ratings
Altria Group Inc.	Baa1	Baa2	A3
United Airlines, Inc.	Caa1	Caa2	Ba3
Bath & Body Works, Inc.	Ba3	B1	Ba2
Vulcan Materials Company	A3	Baa1	Baa2
Dover Corporation	Baa2	Baa3	Baa1
Gap, Inc. (The)	B1	B2	Ba3
American Airlines Group Inc.	Caa3	Ca	Caa1
Alliant Energy Corporation	Baa1	Baa2	Baa2
Beazer Homes USA, Inc.	B3	Caa1	B3
United States of America, Government of	Aaa	Aaa	Aaa

CDS Implied Rating Declines	CDS Implied Ratings		
	Apr. 20	Apr. 13	Senior Ratings
CenterPoint Energy, Inc.	Baa2	A3	Baa2
PepsiCo, Inc.	A2	A1	A1
Philip Morris International Inc.	A2	A1	A2
General Electric Company	Baa3	Baa2	Baa1
Eli Lilly and Company	Aa2	Aa1	A2
FirstEnergy Corp.	Baa3	Baa2	Ba1
Emerson Electric Company	Baa1	A3	A2
Danaher Corporation	A3	A2	Baa1
Archer-Daniels-Midland Company	A2	A1	A2
United Rentals (North America), Inc.	Ba2	Ba1	Ba2

CDS Spread Increases	Senior Ratings	CDS Spreads		
		Apr. 20	Apr. 13	Spread Diff
Rite Aid Corporation	Caa2	1,852	1,670	182
Pitney Bowes Inc.	B3	768	711	56
Service Properties Trust	B1	287	263	25
Realogy Group LLC	B2	533	509	24
Encompass Health Corp.	B1	195	171	24
iStar Inc.	Ba3	302	278	24
SITE Centers Corp.	Baa3	145	124	20
Liberty Interactive LLC	B2	745	726	19
Nissan Motor Acceptance Company LLC	Baa3	298	280	18
Amkor Technology, Inc.	B1	268	250	18

CDS Spread Decreases	Senior Ratings	CDS Spreads		
		Apr. 20	Apr. 13	Spread Diff
Talen Energy Supply, LLC	C	5,340	8,346	-3,005
United Airlines, Inc.	Ba3	630	672	-42
American Airlines Group Inc.	Caa1	945	982	-37
Bath & Body Works, Inc.	Ba2	266	300	-34
Gap, Inc. (The)	Ba3	366	389	-23
Nabors Industries, Inc.	Caa2	487	509	-22
Meritage Homes Corporation	Ba1	207	229	-22
Beazer Homes USA, Inc.	B3	522	541	-19
Carnival Corporation	B2	459	476	-17
Royal Caribbean Cruises Ltd.	B2	402	420	-17

Source: Moody's, CMA

CDS Movers

Figure 4. CDS Movers - Europe (April 13, 2022 – April 20, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
	Apr. 20	Apr. 13	Senior Ratings
Issuer			
Dexia Credit Local	Aa3	A2	Baa3
Lloyds Bank plc	Aa3	A1	A1
NatWest Group plc	A3	Baa1	Baa1
Norddeutsche Landesbank GZ	Baa1	Baa2	A3
HSBC Bank plc	Aa3	A1	A1
Schneider Electric SE	Aa2	Aa3	A3
ASML Holding N.V.	Aaa	Aa1	A2
United Kingdom, Government of	Aaa	Aaa	Aa3
France, Government of	Aa1	Aa1	Aa2
Germany, Government of	Aaa	Aaa	Aaa

CDS Implied Rating Declines	CDS Implied Ratings		
	Apr. 20	Apr. 13	Senior Ratings
Issuer			
Italy, Government of	Baa3	Baa2	Baa3
Intesa Sanpaolo S.p.A.	Baa3	Baa2	Baa1
Nationwide Building Society	A3	A2	A1
UniCredit Bank Austria AG	A3	A2	Baa1
Banco Comercial Portugues, S.A.	Ba3	Ba2	Ba1
Tesco Plc	Baa2	Baa1	Baa3
Eni S.p.A.	Baa1	A3	Baa1
Novo Banco, S.A.	Ba2	Ba1	Caa2
RWE AG	Baa1	A3	Baa2
Gecina SA	A3	A2	A3

CDS Spread Increases	CDS Spreads			
	Senior Ratings	Apr. 20	Apr. 13	Spread Diff
Issuer				
Vue International Bidco plc	Ca	1,099	1,049	50
Vedanta Resources Limited	B3	848	819	29
Casino Guichard-Perrachon SA	Caa1	1,166	1,144	21
Wienerberger AG	Ba1	118	99	19
Jaguar Land Rover Automotive Plc	B1	566	554	13
Iceland Bondco plc	Caa2	667	654	13
Novafives S.A.S.	Caa2	921	909	13
Stagecoach Group Plc	Baa3	126	113	13
Ardagh Packaging Finance plc	Caa1	408	399	9
Banco Comercial Portugues, S.A.	Ba1	243	236	7

CDS Spread Decreases	CDS Spreads			
	Senior Ratings	Apr. 20	Apr. 13	Spread Diff
Issuer				
Boparan Finance plc	Caa1	1,688	1,767	-79
Stena AB	B2	474	495	-21
Atlantia S.p.A.	Ba2	194	208	-14
Dexia Credit Local	Baa3	43	55	-12
Telecom Italia S.p.A.	Ba3	330	336	-6
BAWAG P.S.K. AG	A2	57	63	-6
TDC Holding A/S	B2	190	195	-5
Norddeutsche Landesbank GZ	A3	71	75	-4
Piraeus Financial Holdings S.A.	Caa1	680	683	-3
UBS AG	Aa3	53	57	-3

Source: Moody's, CMA

CDS Movers

Figure 5. CDS Movers - APAC (April 13, 2022 – April 20, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
	Apr. 20	Apr. 13	Senior Ratings
Issuer			
Pakistan, Government of	Caa3	Ca	B3
NIPPON STEEL CORPORATION	Aa1	Aa2	Baa2
Japan Tobacco Inc.	Aa1	Aa2	A2
Marubeni Corporation	Aa1	Aa2	Baa2
Chorus Limited	Baa1	Baa2	Baa2
Japan, Government of	Aaa	Aaa	A1
Australia, Government of	Aaa	Aaa	Aaa
India, Government of	Baa3	Baa3	Baa3
Korea, Government of	Aa2	Aa2	Aa2
Sumitomo Mitsui Banking Corporation	Aa2	Aa2	A1

CDS Implied Rating Declines	CDS Implied Ratings		
	Apr. 20	Apr. 13	Senior Ratings
Issuer			
China, Government of	Baa1	A3	A1
Indonesia, Government of	Baa3	Baa2	Baa2
Commonwealth Bank of Australia	A1	Aa3	Aa3
Thailand, Government of	A1	Aa3	Baa1
Malaysia, Government of	Baa2	Baa1	A3
Macquarie Bank Limited	A2	A1	A2
Export-Import Bank of China (The)	Baa1	A3	A1
Export-Import Bank of India	Baa3	Baa2	Baa3
Flex Ltd.	Baa3	Baa2	Baa3
Tata Motors Limited	B1	Ba3	B1

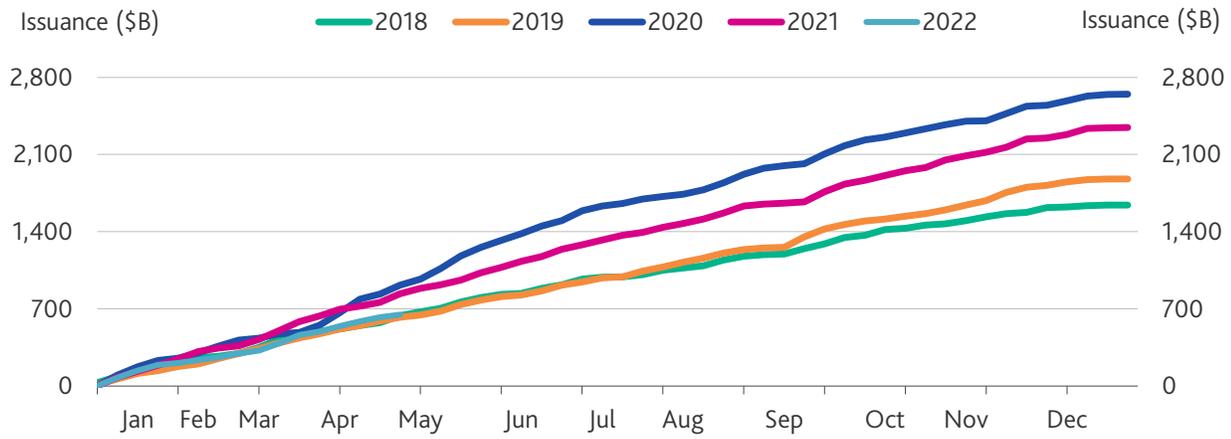
CDS Spread Increases	CDS Spreads			
	Senior Ratings	Apr. 20	Apr. 13	Spread Diff
Issuer				
Flex Ltd.	Baa3	105	93	12
Export-Import Bank of India	Baa3	95	89	6
Nissan Motor Co., Ltd.	Baa3	170	164	6
Reliance Industries Limited	Baa2	102	96	6
Tenaga Nasional Berhad	A3	74	69	6
Petroleum Nasional Berhad	A2	84	78	6
Telekom Malaysia Berhad	A3	74	68	6
India, Government of	Baa3	107	102	5
Indonesia, Government of	Baa2	99	94	5
Philippines, Government of	Baa2	94	89	5

CDS Spread Decreases	CDS Spreads			
	Senior Ratings	Apr. 20	Apr. 13	Spread Diff
Issuer				
Pakistan, Government of	B3	896	1,017	-121
Woolworths Group Limited	Baa2	59	65	-6
MTR Corporation Limited	Aa3	37	41	-3
Mitsui O.S.K. Lines, Ltd.	B1	65	68	-3
SoftBank Group Corp.	Ba3	330	332	-2
NIPPON STEEL CORPORATION	Baa2	29	31	-2
Japan Tobacco Inc.	A2	29	30	-2
Panasonic Corporation	Baa1	31	33	-2
Marubeni Corporation	Baa2	30	32	-2
Amcor Pty Ltd	Baa2	89	91	-2

Source: Moody's, CMA

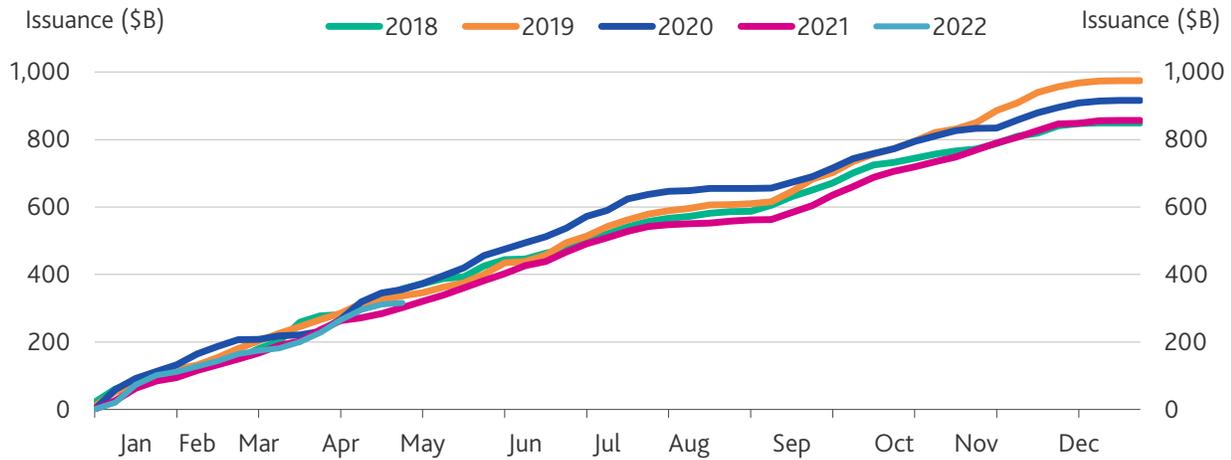
ISSUANCE

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



Source: Moody's / Dealogic

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



Source: Moody's / Dealogic

ISSUANCE

Figure 8. Issuance: Corporate & Financial Institutions

	USD Denominated		
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	21.815	1.785	24.130
Year-to-Date	561.748	66.526	646.707

	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	4.079	0.000	4.079
Year-to-Date	288.290	20.956	315.679

* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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