

**WEEKLY MARKET  
OUTLOOK**

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# Wage-Price or Price-Wage Spiral?

We traditionally think of inflation becoming pernicious when there is widespread belief that it will remain high and workers will demand bigger wage increases to compensate. Businesses pass on their higher labor costs through even higher prices, and then a dreaded wage-price spiral takes hold.

This vicious cycle was behind the high inflation the U.S. suffered more than 30 years ago. The Federal Reserve views the risks of a regime of high inflation as greater than the downside risks of low inflation. This points toward a potential policy error by the Fed in tightening monetary policy too soon and/or too aggressively.

This theory would suggest that wages cause changes in inflation. The simple definition of inflation is too much money chasing too few goods. However, inflation causes changes in wages, therefore some of the acceleration in nominal wage growth recently is attributed to the acceleration of inflation, supporting the idea of a price-wage spiral.

The ECI for private workers, our preferred measure of wage growth, rose 1.2% in the fourth quarter following a 1.6% gain in the prior three months. The ECI for private workers has risen by at least 1% for four consecutive quarters. The gain in the fourth quarter leaves the ECI for private workers up 5% on a year-ago basis, the strongest since the 1980s.

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## Inflation Pulling Wages Higher



Sources: BLS, Moody's Analytics

We used Granger causality tests to see if the causal relationship runs in either one or both directions between nominal wage growth and consumer prices. For nominal wage growth, we used year-over-year ECI for private workers. For inflation, we used the consumer price index. Under various lags, the Granger causality tests showed that growth in the CPI causes changes in the ECI for private workers. The causal relationship runs in one direction.

The good news about the acceleration in nominal wage growth is that labor supply constraints should be less binding. Since the mid-1960s, changes in labor income have had a strong relationship with labor force growth. This also makes sense in theory: Workers normally have a sense of the minimum they will accept—also known as a reservation wage—to take a job. That reservation wage can be affected by a variety of factors such as family and homeownership status, available jobless benefits, or household wealth.

Therefore, with nominal wage growth accelerating, it should pull more people into the labor force this year. An end to the pandemic would also be key. Presently it is a main reason many people, including parents, remain on the sidelines.

### What if oil prices jump?

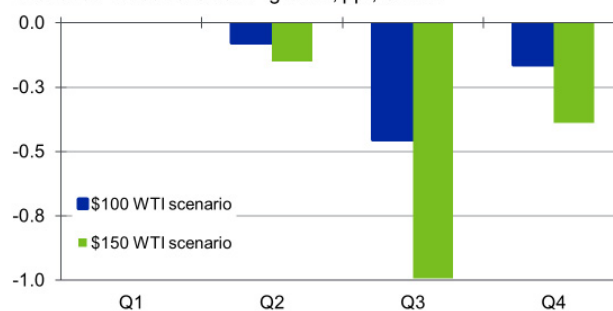
The geopolitical tensions between Russia and Ukraine pose the significant risk of a sudden spike in global oil prices that would have economic costs for the U.S. economy. Oil shocks have a long history of killing economic recoveries, and a sudden jump in oil prices could complicate matters for the Fed because it is already trying to chase inflation lower. Since the late 1980s, the Fed's general response to supply shocks that cause a spike in oil prices is to ease monetary policy. However, it is unlikely that would be the case this time around, unless it is clear that the recovery is at serious risk.

Russia is one of the largest global oil producers and, considering the current low space in capacity, any disruption could easily cause oil prices to jump. To gauge the potential implications for U.S. GDP, we ran two scenarios through our global macroeconomic model. In the first scenario, West Texas Intermediate crude oil prices jump to \$100 per barrel. The second scenario has oil prices hitting \$150. In each, increases in oil prices occur in the second quarter and remain in the third quarter before returning to the baseline. This movement in oil prices would be consistent with a sudden but temporary supply shock.

The economic costs increase as oil prices rise. In the \$100-per-barrel oil price scenario, GDP growth in the second quarter is reduced by 0.1 of a percentage point, but it reduces GDP growth in the third quarter by 0.5 of a percentage point and 0.2 of a percentage point in the final three months of the year. There is also an impact to inflation, which we have observed recently. Indeed, energy prices added 2.2 percentage points to year-over-year growth in the CPI in December. If oil prices increase to \$100 per barrel, year-over-year growth in the second quarter is boosted by 0.2 of a percentage point, relative to the baseline, and 0.3 of a percentage point in the third quarter. Annual growth in the CPI would be 5% this year if oil prices are higher than \$100 per barrel, compared with the baseline's 4.8%.

## Spike in Oil Prices Would Be Costly

Deviation in real U.S. GDP growth, ppt, SAAR



Source: Moody's Analytics

If oil prices are \$150 per barrel in the second and third quarters, the hit to GDP growth this year is more noticeable. GDP growth in the second quarter is reduced by 0.2 of a percentage point, 1 percentage point in the third quarter, and 0.4 percentage point in the final three months of the year. Year-over-year growth in the CPI is 0.5 of a percentage point higher than in the baseline in the second quarter and 0.6 of a percentage point in the third quarter.

These scenarios incorporate a policy response that is typical during supply-chain shocks, but the issue is that these scenarios could understate the economic costs because the Fed will fight inflation as long as the economy doesn't appear to be barreling toward a recession. The Fed has recently stressed that further acceleration in inflation will trump downside surprises in growth or the labor market. This change in the weight in its reaction function is a noticeably hawkish shift. The hit to GDP growth may seem modest, but the economy is less sensitive to swings in energy prices than in the past, as energy accounts for a smaller share of consumer spending than previously.

It can be difficult to trace all of the positive and negative consequences on U.S. GDP from fluctuations in global energy prices. However, there are obvious effects on consumer spending and business investment. Our rule of thumb is that every penny change in retail gasoline prices adds or subtracts \$1.28 billion in consumer spending over the course of a year.

The good news is that consumers are sitting on excess savings. Excess savings are the extra savings that households have accumulated as many sheltered in place and curtailed their spending, while others benefited from extraordinary government support. The excess savings are on top of what households would have saved if the pandemic had not occurred and their saving behavior had been the same as in 2019, before the pandemic. Excess savings were \$2.6 trillion in December. Therefore, consumers could tap into those excess savings rather than reduce discretionary spending in response to higher prices at the pump.

These scenarios show that a jump in energy prices boosts business investment, primarily in 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 sudden rise in energy prices would lead to an increase in the number of active rotary rigs, helping to cushion the hit to GDP.

### Tracking Q1 GDP is off and running

With the release of January vehicle sales, we have begun tracking first-quarter U.S. GDP growth. Our high-frequency GDP model's initial estimate is for first-quarter GDP growth of 0.8% at an annualized rate. It's very early; our tracking estimate will change, and errors can be large until more data are released. The average absolute error for the model's initial estimate is 1.3 percentage points compared with the 0.4-percentage point error for its final estimate.

U.S. new-vehicle sales jumped to 15 million seasonally adjusted annualized units in January from 12.5 million in December. The gain leaves vehicle sales 17.2% above their fourth-quarter average. This implies that real consumer spending is off to a good start this quarter, which is important considering inventories will likely be a drag. Our initial run of the high-frequency GDP model has real consumer spending rising 4.5% at an annualized rate in the first quarter.

Our high-frequency GDP model has inventories subtracting 0.3 percentage point in the first quarter. Inventories jumped by \$173.6 billion at an annualized rate in the fourth quarter after falling in each of the prior three months. Inventories added 4.9 percentage points to fourth-quarter GDP growth, among the largest gains since the 1980s. The sizable inventory build could be an issue for first-quarter GDP growth, because it is unlikely to be duplicated. For GDP, it's the change in the change in inventories that matters. In other words, inventories would need to increase more than that seen in the fourth quarter to add to first-quarter GDP growth.

# Seasonal Factors Distort Labor Data

BY ADAM KAMINS

Careful observers of the U.S. state and regional [employment release](#) have been left scratching their heads in recent months. Combining state measures of payroll employment or the unemployment rate and comparing them to the U.S. tend to produce similar results, albeit with small deviations. But the degree to which state and national labor markets have differed in recent months rivals any period since tracking began.

The results diverge enough to result in somewhat different narratives depending on whether one is examining the U.S. or an aggregation of states. This calls some of the state trends observed over the past year into question and potentially portends significant revisions come spring. But the cause is actually quite simple.

## Seasonal issues

Each month, the Bureau of Labor Statistics seasonally adjusts both U.S. and regional survey data in order to remove calendar-driven fluctuations. The adjustment factors are based on all of the history that is available to the BLS, including the most recent months. Typically, this does not matter much, and the seasonal factors prove stable over time, but the volatility of the past two years has created problems.

These problems have been especially evident of late, such as when the seasonal adjustments of the U.S. produced a somewhat [misleading December jobs figure](#). But the issues are even more pronounced when examining smaller geographies, by virtue of both increased noise in the data and possible subtle methodological differences surrounding how outliers are dealt with.

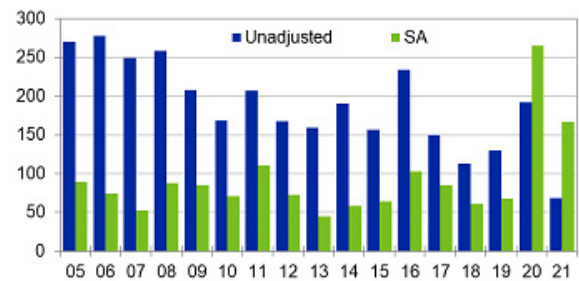
The degree to which seasonal adjustments are distorting the relationship between states and the U.S. is evident when examining the gap between sum of state payrolls and the U.S. for both the unadjusted and adjusted figures in 2021. After accounting for seasonality, the average absolute value of the gap between sum of states and the U.S. was nearly 170,000 jobs per month, far higher than usual. But when looking at the not seasonally adjusted figures, the difference drops by almost exactly 100,000.

This differs markedly from the pre-pandemic pattern, when the not seasonally adjusted data would feature a monthly difference nearly twice that of the adjusted figures when comparing sum of states and the U.S. It was not until 2020 that the pattern reversed, with the absolute error shifting

higher for seasonally adjusted figures. This suggests that the pandemic has destabilized seasonal factors in an exaggerated manner for states.

## Seasonal Factors Are Causing Problems

Sum of state payroll employment vs. U.S., avg absolute diff by mo, ths



Sources: BLS, Moody's Analytics

That finding holds whether examining final figures or prior years' preliminary estimates, before [benchmark revisions](#) were incorporated during the spring. So, while it is tempting to blame the current discrepancy on the fact that the data have not yet been revised, there is no historical precedent for revisions to narrow the gap in an especially dramatic manner.

Similarly, large differences in the labor force-weighted average unemployment rate for states disappear when examining not seasonally adjusted data. In other words, while the seasonal factors for different series spanning various surveys are calculated independently, all are introducing distortions into the state figures.

## Payroll problems

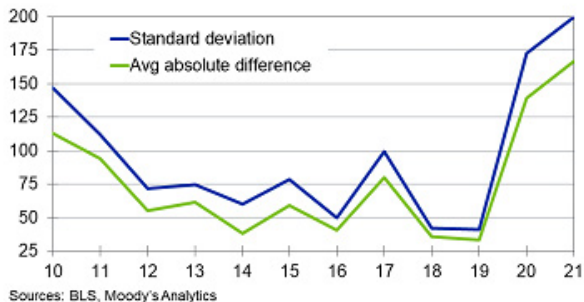
Just how dramatic were the distortions in the initial estimates last year? A look at the past decade helps to highlight the impact of seasonal adjustments.

Dating back to 2010, the average absolute difference between sum of states and the U.S. for job gains was noticeably higher in 2021 than for any prior year. Notably, this includes 2020, although subsequent revisions nearly doubled the gap. And while part of what happened last year can be traced to noise in the data that is typical after a recession, a roughly 50% increase in the average absolute difference from 2010 signals that this is not strictly a cyclical phenomenon.

Other measures are similarly lopsided in showing that 2021 was unique. The standard deviation of the monthly gap between sum of states and the U.S. was easily the highest since the Great Recession as well, a sign of just how volatile the seasonally adjusted data were over the course of the year.

### Divergence in 2021 Was Pronounced

Sum of state payroll employment vs. U.S., preliminary estimates, ths



Still, despite the volatility, year-end payroll employment closely matches when comparing sum of states to the U.S. This is because a cumulative undercount of nearly 1 million jobs across states during the spring and summer was followed by an overcount of nearly 750,000. As a result, the proverbial plane landed in a similar place, but the route it took was quite different.

Ultimately, the more topsy-turvy national path almost certainly better reflects reality. Continued misses in the middle of the year for states are also evident in the high correlation between the gap in jobs gained or lost in a given month and the figure for the preceding month. In most years, this is essentially a random walk, with the direction of the miss in one month having no bearing on the following month. But five consecutive months of states missing very low, followed by four months of missing very high, suggests something systematic and implies a far smoother path than what actually occurred in many places.

With more [complete data](#) from the Quarterly Census of Employment and Wages available through the second quarter of 2021, there was already reason to believe that revisions will pull states higher in the first half of the year, leading to convergence with the U.S. narrative.

But with the relationship reversing in the second half of 2021, it seems likely that the QCEW will suggest downward revisions for September and beyond. Bearing in mind that the yearly adjustments only reflect a complete count through the prior year's third quarter, it is possible that

further revisions will be needed to address some end-of-year gaps.

### Unemployment rates

While the payroll survey represents two divergent roads that eventually reach a similar destination, comparing the weighted average state and U.S. unemployment rates suggests two drivers going at entirely different paces. The average across states, calculated by taking the total number of unemployed people across all states and dividing by the sum of each state's labor force, now sits more than 70 basis points above the U.S. figure.

In fact, December was the fourth straight month in which there is a historic gap. In the more than 40 years since state tracking began, there has never been a difference between the two series even half of the current one. That divergence, on the heels of a similar starting point to begin 2021, suggests that the drop in joblessness nationally was about 50% larger than the average state decline.

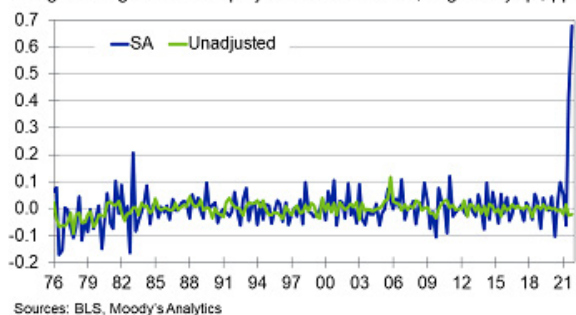
In a labor market that is marked by ever-increasing tightness, such a large difference signals fundamentally different stories being conveyed in the regional and national data. For the U.S. as a whole, a jobless rate that has dipped below 4% is consistent with an economy that is at full employment; this aligns with worker shortages that so many firms are encountering, even if some of those are a function of a smaller labor force.

While the national rate begins to approach its pre-pandemic low, the weighted average of states remains about a full percentage point above its early-2020 readings. This is a big deal given current conditions, suggesting that many states are farther from full employment than they actually are. Not only does this paint a misleading picture for economists interested in understanding regional trends, but it could give rise to misguided policy decisions with states believing that their labor markets feature more slack than actually exists.

Removing seasonal adjustment factors once again paints the story in a different light. While in some ways this matches historical patterns, in which seasonal adjustments can drive greater divergence when comparing states and the U.S., there has never been a period quite so extreme.

## Unemployment Rates Vary Drastically

Weighted avg state unemployment rate vs. U.S., avg diff by qtr, ppt



Sources: BLS, Moody's Analytics

As with the payroll survey, spring revisions—in the form of adjusted seasonal factors—should alleviate the glaring inconsistency relative to prior years. But it's worth noting

that previous adjustments have done little to narrow gaps and in some cases even widened them. Granted, those prior revisions were to data that were far more consistent than this year's, so revisions are all but certain to help, but expectations should be kept in check.

All told the recent regional data provide an important reminder that, although initial estimates are the best and most timely figures that exist, they can be deeply flawed especially after seasonal adjustments. A far more complete accounting next month should eliminate the most glaring issues. Until then any analysis of seasonally adjusted labor market data must be taken with a few grains of salt and an acknowledgment that intra-year patterns may not yet be fully understood by the BLS.



# The Week Ahead in the Global Economy

## U.S.

The U.S. economic calendar is a little lighter next week. The focus will be on inflation as the January consumer price index is released. The acceleration in year-over-year growth from 7% to our preliminary forecast of 7.3% will garner most of the attention. However, similar to the past several months energy and supply-chain issues will be behind the bulk of the year-over-year gain in the CPI.

We get another look at the labor market and we expect initial claims for unemployment insurance benefits to have fallen in the week ended February 5. Though Omicron weighed on the labor market in January, initial claims and other high-frequency data we closely track suggest that its grip on the economy is loosening. Other key data next week include the NFIB small business optimism survey and the University of Michigan's consumer sentiment survey.

## Europe

The U.K.'s fourth quarter GDP release will top headlines next week. GDP likely expanded 0.5% q/q in the final quarter of the year as output contracted 0.7% m/m in December. The tightening of social distancing rules heading into December is expected to have cut household consumption, as well as spending by firms. Output in the services sector will likely take a wide step back in December, weakening performance for the quarter.

German industrial production, meanwhile, likely ticked down 0.1%, deepening the previous month's fall. Automakers have been in a slightly better situation than earlier, but some of the momentum will likely have dried up as global supply issues persist. Likewise, Spain's industrial production likely contracted 2% m/m partly due to a recoil from the preceding month's stand-out 4.5% growth. Italy's industrial production growth likely slowed to 0.3% from 1.9%. Meanwhile, Italy's retail sales are expected to fall 1.5% m/m in December, deepening the 0.4% decline in November. Retail was hit hard across the euro zone during the month, due to the tightening of social distancing measures in the face of the reemergent Delta variant and news of the Omicron variant.

Russia's inflation rate likely eased to 8.2% y/y in January from 8.4% in December. Though very high, the inflation rate has held relatively stable in recent months as the Central Bank of Russia hikes interest rates. Indeed, we expect the

central bank to increase the policy 1-week repo rate again at next week's meeting by 100 basis points to 9.5%. Retail sales, meanwhile, likely softened, rising just 2.5% y/y in December, while the unemployment rate likely was unchanged at 4.3%. Finally, the foreign trade surplus is expected to have registered another strong month in December, with the balance rising to \$20.7 billion from \$9 billion a year earlier.

## Asia-Pacific

Malaysia's fourth-quarter GDP will be the highlight on the economic calendar. We expect Malaysia's economy to have grown 3% year on year in the final quarter, following a 4.5% contraction in the prior quarter. Severe resurgences of COVID-19 weighed heavily on the economy through much of last year, resulting in consecutive quarters of contraction as households retreated and private investment took a back seat. The weakness in domestic demand more than offset the gains from a relatively strong trade position over this period. But domestic conditions improved in the final quarter. Higher vaccination rates and the easing of restrictions paved the way for a visible turnaround in retail spending since October. We expect continued strength in exports and a revival in private consumption to have supported Malaysia's fourth quarter growth.

The Reserve Bank of India likely will keep its benchmark repo rate unchanged at 4%. The Omicron threat to India's recovery is starting to wane, but supply-side stress and volatile energy prices are stoking inflation concerns. India's consumer price inflation rose considerably in the closing months of 2021 and is forecast to rise more than 6% this quarter as core prices pick up. This will test the RBI's commitment to continue with an accommodative monetary stance, particularly as many other leading central banks consider bringing forward the timing of interest rate tightening.

The RBI began the process of policy normalisation when it suspended its bond purchases under the Government Securities Acquisition Programme in October. And it will not be surprising to see a hike in the reverse repo rate as early as next week. But we expect the RBI to remain patient until broader uncertainties to domestic recovery dissipate and look for the first repo rate hike to be implemented in the June-September quarter. Similarly, we expect the Bank of Thailand to leave its benchmark policy rate unchanged at 0.5%.

# Geopolitical Calendar

| Date      | Country     | Event                                        | Economic Importance | Financial Market Risk |
|-----------|-------------|----------------------------------------------|---------------------|-----------------------|
| 9-Mar     | South Korea | Presidential election                        | Medium              | Medium                |
| 27-Mar    | Hong Kong   | Chief executive election                     | Low                 | Low                   |
| 10-Apr    | France      | General elections                            | Medium              | Medium                |
| 9-May     | Philippines | Presidential election                        | Low                 | Low                   |
| 29-May    | Colombia    | Presidential elections                       | Medium              | Low                   |
| Jun       | Switzerland | World Economic Forum annual meeting          | 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/Nov   | China       | National Party Congress                      | High                | Medium                |
| 7-Nov     | U.N.        | U.N. Climate Change Conference 2022 (COP 27) | Medium              | Low                   |



# ISM Signals Wider Spreads

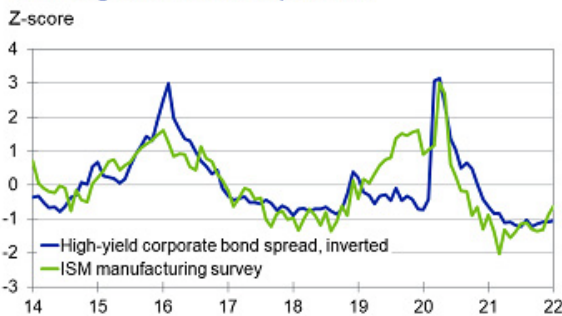
BY RYAN SWEET

## CREDIT SPREADS

Moody's long-term average corporate bond spread is 124 basis points, 5 basis points wider than the 119 basis points at this time last week and wider than the 115 basis point average in January. Over the past 12 months, the highest average corporate bond spread was 126 basis points, while the low was 95. The long-term average industrial corporate bond spread widened by 4 basis points to 112. This is above the prior high over the past 12 months of 114 basis points and above the low of 86.

The recent ICE BofA U.S. high-yield option adjusted bond spread widened over the past week by 20 basis points to 355 basis points. This below its recent high of 367 basis points in early December. The Bloomberg Barclays high-yield option adjusted spread has bounced around recently and is currently 326 basis points, compared with 315 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 but a little tighter than implied by a VIX of 22.

## ISM Signals Wider Spreads



The ISM manufacturing survey points toward some widening in high-yield U.S. corporate bond spreads, but nothing suggests that issuance would take a significant hit. To highlight this, we calculated z-scores. These measure the standard deviations above or below the mean for both the ISM manufacturing survey and the Bloomberg/Barclays high-yield corporate bond spread. This points toward some widening in the high-yield corporate bond spread.

## Defaults

Defaults remain very low. According to the latest Moody's monthly default report, the global speculative-grade default rate fell to 1.7% for the trailing 12 months ended in

December, from 2.0% the prior month. The rate has fallen steadily since touching a cyclical peak of 6.9% at the end of 2020 and remains below the pre-pandemic level of 3.3%. Under our baseline scenario, Moody's Credit Transition Model predicts that the global speculative-grade default rate will fall to a cyclical low of 1.5% in the second quarter of 2022 before gradually rising to 2.4% at year end.

We also expect default risk to remain low for speculative-grade companies as a whole because many have refinanced their debt in the last two years at very low interest rates, therefore mitigating their near-term default risks. However, some low-rated companies that are under liquidity or solvency stress could be vulnerable to default in the event of tighter liquidity, higher borrowing costs, and profit erosion.

## 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 week ended January 28, US\$-denominated investment grade corporate bond issuance was \$7.2 billion, bringing year-to-date issuance to \$164.8 billion. High-yield US\$-denominated corporate bond issuance was \$6.7 billion, bringing year-to-date issuance to \$32.3 billion.

#### U.S. ECONOMIC OUTLOOK

There were some noticeable changes to our January U.S. baseline forecast, particularly assumptions around fiscal and monetary policy. The Federal Reserve's hawkish shift isn't just rhetoric, and it is gearing up to start removing monetary policy accommodation more quickly than we had assumed in the December baseline. There remains an enormous amount of uncertainty about Biden's Build Back Better agenda, but we don't think it's dead, so we are leaving a version of it in the baseline forecast.

#### Fiscal policy uncertainty climbs

The Build Back Better agenda is down but not out following the spectacular collapse in negotiations between Senator Joe Manchin and the White House in late December. During the holidays, there was no sign of talks. However, this likely reflects a desire on both sides to ratchet down tensions that came to a boil right before the holidays. We expect congressional Democrats and the White House will make progress on a revised version of a BBB package that is acceptable to Manchin by the president's State of the Union address in February. However, if no progress is made by then, we will most likely pull the plug on our BBB assumptions in the baseline forecast.

It would not be a game changer for the economy if the BBB failed to become law, but it will diminish the economy's growth prospects and ding the fortunes of lower- and middle-income households. Our outlook for real GDP growth in 2022 would be reduced by 0.75 percentage point, since BBB is front-loaded—with budget deficits in the near term and surpluses in the longer run that roughly net out

over the 10-year budget horizon. Longer run, the economy's potential growth would be reduced by several basis points per year as the BBB agenda lifts labor force participation by lowering the cost of work, particularly for lower-income minority women.

However, Manchin has reportedly proposed a package costing a similar amount but with policies that do not sunset within the budget horizon. The senator argues that future lawmakers will not have the political fortitude to allow policies to actually expire, or to pay for them if they do not, and thus their cost will be substantially more than budgeted. To accommodate the senator's concern and pass BBB legislation, we assume the Biden administration and congressional Democrats will scale back the number of policies included in a BBB law and eliminate sunsets. The baseline forecast assumes a \$1.8 trillion BBB package that permanently funds an expansion of healthcare coverage, clean-energy and climate investments, and universal preschool, among others. The bill will be nearly paid for by higher taxes on corporations and well-to-do households. The BBB package is assumed to pass by the end of the first quarter of 2022, with implementation occurring in the following quarter.

#### COVID-19 assumptions

When we updated the December baseline, information about the Omicron variant was lacking but it quickly became clear that a significant revision to our COVID-19 assumptions would be needed in January.

We adjusted our epidemiological assumptions to anticipate that total confirmed COVID-19 cases in the U.S. will be 107.1 million, nearly 50 million more than in the December baseline. The seven-day moving average of daily confirmed cases has jumped recently and is north of 700,000. The date for abatement of the pandemic, where total case growth is less than 0.05% per day, changed slightly; it is now May 13, a few of months later than in the prior baseline.

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.

#### Goodbye 2021, hello 2022

Each passing wave is expected to be less disruptive. That doesn't mean that the economic costs are negligible. We reduced our forecast for first-quarter GDP growth 3.3 percentage points to 2.1% at an annualized rate. Risks are actually weighted toward a smaller hit to growth, as it will not be as significant as Delta because of autos. Delta roiled global supply chains, and that had an enormous impact on U.S. auto production and sales. Autos subtracted 2

percentage points from GDP growth during the Delta wave, something that is unlikely to be repeated during the Omicron wave. So far, COVID-19 cases in the Asia-Pacific region haven't surged like they have in North America and Europe.

Omicron will be a temporary drag on growth, and we revised growth higher in the second quarter from 3.3% to 6.1% at an annualized rate. Growth in the second half of the year saw very modest revisions. For all of 2022, we expect GDP to rise 4.1%, a little lighter than the 4.4% in the December baseline but still nearly double the economy's potential. A big support to GDP growth this year will be the replenishment of inventories. The Bloomberg consensus is for GDP to increase 3.9% this year.

There was a small upward revision to GDP growth in 2023. We now look for it rise 3.1%, compared with 2.9% in the December baseline. The consensus is for GDP growth next year to be 2.5%.

Global supply-chain issues remain a downside risk to the near-term forecast. The issues with U.S. supply chains are both supply- and demand-related. On the demand front, wealth effects associated with rising asset prices, unprecedented fiscal stimulus, and fewer opportunities to spend on services led to an enormous increase in consumer goods spending. Control retail sales—total sales excluding autos, gasoline, building materials and restaurants—are 8.3% above what would have been if the pre-pandemic trend had continued. This has magnified the issues with U.S. supply chains. The good news is that our U.S. Supply-Chain Stress Index has improved recently.

#### **Business investment and housing**

Fundamentals remain supportive for business investment as corporate credit spreads remain tight and corporate profit margins are fairly wide. Also, banks are easing lending standards and corporate credit spreads are very tight, supporting investment-grade and high-yield corporate bond issuance.

We have real business equipment spending rising 9.7% this year and 5.2% next. On net, this is stronger than the December baseline that had real business equipment spending rise 9.9% this year and 5.2% next.

The biggest downside risk is a sudden tightening in financial market conditions or a sudden and significant bout of economic policy uncertainty early this year because of the BBB and the Fed gearing up to remove some policy accommodation.

The real nonresidential structures forecast was not revised significantly this year. We still have it rising 17%. But we did revise the forecast higher for real nonresidential structures investment next year, with it now forecast to rise 11.5%, compared with 10.1% in the December baseline. Real nonresidential structures investment will recoup all of the decline during the pandemic in 2023. There were no material changes to the forecast for commercial real estate prices this year or next.

New data and revisions to prior months led us to revise the forecast for housing starts higher. Housing starts are now forecast to total 1.82 million units, compared with 1.765 million in the December baseline. Risks are heavily weighted to the downside. There are likely only so many homes that can be built each year because of labor-supply constraints and 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. Revisions to the forecast for new- and existing-home sales this year were minor.

We didn't make material changes to the forecast for the FHFA All-Transactions House Price Index to increase 8.9% this year, compared with 8.7% in the December baseline. House price growth moderates noticeably in 2023, as prices are forecast to rise 2.1%. This is attributable to rebalancing of supply and demand.

#### **Seasonals mask improving labor market**

U.S. job growth has been weaker than expected in each of the past two months, but this is misleading because seasonal adjustment issues have been enormous weights. The December employment report was strong. Indeed, not seasonally adjusted employment increased by 72,000, the first increase for any December since 1999. Normally, not seasonally adjusted employment declines by a few hundred thousand in December. The Bureau of Labor Statistics' seasonal adjustment was sliced in half this December. If the adjustment was similar to that used before the pandemic, nonfarm employment would have risen closer to 500,000.

Looking across industries, the seasonal adjustment for leisure/hospitality stands out. This December, the seasonal adjustment was a drag on leisure/hospitality employment for the first time for any December since 1998. Normally, the seasonal adjustment is positive. The seasonal adjustment for retail didn't seem odd, which was a little surprising, as that was our initial thought where the issues would be concentrated. One industry we're keeping a close eye on is child day care services, which had employment fall in December and is 11% below its pre-pandemic level.

Putting seasonal adjustment issues aside, the December employment report was strong. This is clear in the

household survey, as the unemployment rate fell from 4.2% in November to 3.9%. There was a modest increase in the labor force. The prime-age employment-to-population ratio increased from 78.8% to 79%, leaving it on track to hit its pre-pandemic level by this spring. The number of people not in the labor force increased for the first time since August. About 63% of people not in the labor force are 55 years and older. Odds are that the steady increase among those 55 and older who are not in the labor force is due to retirements.

Forecast changes were modest in January. We expect average monthly job growth to be 360,000 this year, compared with 352,000 in the December baseline. Job growth slows next year, when the economy will be at or beyond full employment, and average job growth is expected to be 161,000, compared with 145,000 in the December baseline. We still have the unemployment rate averaging 3.5% in the fourth quarter of this year, but we cut the forecast for next year. The unemployment rate is now expected to average 3.3% in the fourth quarter of 2023, compared with 3.5% in the prior baseline. There were also no revisions to the forecast for productivity growth this year or next. Productivity is still expected to be stronger than its pre-pandemic trend.

#### Time has come

There were some material changes to the forecast for growth in the core PCE deflator. It is now expected to peak later and higher than in the December baseline. Year-over-year growth in the core PCE deflator is now expected to peak this quarter, slightly north of 4.5%. The peak in the December baseline was the fourth quarter of last year. Growth in core inflation is forecast to moderate throughout this year, but waves of COVID-19 lend upside risk to the forecast as further disruptions to global supply chains could cause inflation to remain higher for longer. For the Fed, the post-meeting statement no longer includes the note that the Fed will aim to achieve inflation moderately above 2% for some time—a recognition that its mandate has been met. Therefore, the Fed is aiming to get growth in the core

PCE deflator down to 2%. We have year-over-year growth in the core PCE deflator returning to the Fed's target in mid-2023.

There was a material change to the forecast for monetary policy. We doubled the number of Fed rate hikes this year from two to four. The rate hikes are expected to occur at the May, July, September and December meetings of the Federal Open Market Committee. A probabilistic forecasting approach, which is based on the subjective probabilities of a fed hike versus a cut, would have the first hike occurring earlier than May. We didn't alter our estimate of the long-run equilibrium fed funds rate, which remained at 2.5%. The change in the January baseline is that the fed funds rate reaches 2.5% in mid-2024, compared with early 2025 in the December baseline.

We still expect the tapering process to end in March. Risks are that the Fed allows the balance sheet to shrink—a process known as quantitative tightening—later this year. The balance sheet is currently \$8.7 trillion, or around 37% of nominal GDP. We don't draw too many comparisons with the pending reduction in the balance sheet to that last time the Fed tried to shrink its balance sheet. If the Fed does shrink its balance sheet, the reduction will be more aggressive, likely \$750 billion per year, \$250 billion more than last time.

Removing monetary policy accommodation isn't going to go smoothly. The Fed has signaled that it will allow its balance sheet to contract shortly after the first rate hike. It is unclear how rate hikes and quantitative tightening will interact with each other, which makes the odds of a policy error uncomfortably high.

There were no significant changes to the 10-year Treasury yield. The forecast is that the Dow Jones Industrial Average peaks this quarter. The rest of the contours of the forecast did not change, as we expect the Dow to steadily decline throughout this year and bottom in 2023.

# The Test for Europe's Gas Security

BY GAURAV GANGULY

[Russian](#) troops massed around [Ukraine](#)'s border have caused international concern. Western diplomatic efforts to address the issue have failed to satisfy Russian President Putin, and the world remains on edge at the prospect of a Russian invasion of Ukraine. It is worth remembering that there are already two points of conflict along Ukraine's long border with Russia. Crimea was invaded and taken over by Russia in 2014, and the Donetsk People's Republic, which has existed as a self-declared state since 2014, benefits from Russian assistance. Russia claims that it does not wish to invade Ukraine but wants guarantees that the NATO alliance will not extend further eastward to include Ukraine.

## Reliance on Russian gas

One of the immediate concerns is the potential impact of a conflict on supplies of natural gas from Russia to Europe. Russia supplies one-third of European gas via a number of pipelines, some of which run through Ukraine. Russia pays Ukraine transit fees for sending gas to Europe and there are longstanding disputes between the two over outstanding debts. The European position toward Russian gas has soured since the Crimean invasion in 2014 but the EU remains reliant on Russian gas and, given the current circumstances, the region's gas security is under threat.

Aggregate gas reserves have fallen to 435 terawatt hours, 39% of reserve capacity as of Saturday, down from a peak of approximately 77% capacity in mid-October. The current position is much weaker than a year ago when gas reserves stood at 52%. Gas transit through Ukraine has declined in recent months while a further squeeze has occurred due to a reversal of flows in the Yamal pipeline, which is currently being used to send gas to Poland. LNG imports have increased to provide an offset. Gazprom denies that it has reduced supply and maintains that it continues to fulfill contractual obligations. European gas futures prices are hovering around €92/Twh as financial markets assess the uncertainty around further escalation of conflict and the impact on European gas.

## The later the better

The timing and scale of any reduction or disruption to Russian gas flows into Europe needs to be carefully considered in assessing the potential impact on gas security and the associated economic fallout. In terms of timing, the later the disruption, the easier it will be for Europe to manage. Getting through February/March will be a relief as lower demand for gas heading into spring will give Europe

more time to replenish reserves and source alternatives. Conversely, disruption in the coming weeks will be much harder to deal with and may lead in the extreme to an emergency situation in Europe with gas rationing and an adverse impact on production and output.

The scale of any disruption is not immediately obvious. Conflict in Ukraine does not immediately imply a disruption to all gas supplies to Europe. Nord Stream, TurkStream and Yamal, the pipelines that do not run through Ukraine, may continue to operate and even Ukrainian transit gas may continue to flow. Gas prices may be volatile in the short term in such a scenario but are likely to normalise as gas security concerns ease.

Further short-term reduction in supply or even temporary disruption to gas routes are another possibility. Europe has some wiggle room in this case, even though the menu of options is limited. Increasing imports of LNG, some increased flows from North Africa, and a drawdown of strategic and ultimately cushion reserves (gas in storage that is necessary to maintain reserve pressure) could get Europe through a period of disruption. The longer-term strategic issue of European gas security will remain. Europe may struggle to replenish gas reserves over the summer, and price pressures will most likely linger even after the immediate disruption is over.

## A much worse scenario

Finally, a long-term reduction/disruption in gas supply would be a much worse scenario for Europe and the severity would depend on the volume of gas that is affected. Europe may find a solution if Ukrainian transit stops, but complete cessation of Russian gas imports would be a deeply negative scenario. It is not just European gas prices and inflation that would skyrocket as a result; the disruption would have strong negative global consequences. The geopolitical narrative that would accompany such a scenario would also be negative, and the financial market implications would be severe. We attach a very low probability to this.

The current situation should provide the EU with the impetus it needs to create a strategic response to its energy security. Member states need to work together to formulate a coordinated strategy that focuses on common strategic reserves and gas sharing, supplier diversification, improving energy efficiency, and lower reliance on gas.

# Australia Bond Buying to End

BY KATRINA ELL and SHAHANA MUKHERJEE

The Reserve Bank of [Australia](#) will end its bond buying program on 10 February. We expected this move to be announced in the February monetary statement. The drivers were the improved growth and labour market outlook and stronger inflation trajectory. It was previously expected that the program would end around May.

The RBA explicitly noted that the ending of its bond purchase program does not signal an imminent hike in the cash rate. The reason is that although inflation gathered momentum in the second half of 2021, the RBA argues that it is premature to determine that it is "sustainably within the target band". As financial markets were pinning their hopes on the RBA being more explicit in February about bringing forward an increase in the cash rate to the second half of 2022, the Australian dollar depreciated after the statement was released.

The RBA is holding on to the view that it won't move on the cash rate until wage growth materially picks up on the back of a tight labour market. Although the labour market is forecast to tighten this year, the extent of tightening is unclear, particularly given the return of overseas workers. It

is no surprise that the RBA takes an upbeat view on how much the labour market will tighten, pegging that the unemployment rate will drop below 4% next year. But it's worth remembering that as international borders reopen over the year, this will increasingly alleviate labour supply issues and, in turn, wage pressures, especially for industries such as construction and hospitality, which have struggled to find sufficient workers over the past 18 months.

Another issue for the RBA is that the supply side is largely behind the uptick in inflation, and there is heightened uncertainty about how long it will take to resolve supply-side stresses. Our expectation is that supply-side factors will keep upward pressure on the CPI into the second half of 2022. This will increasingly spill over to inflation expectations and eventually wages. But the RBA shouldn't wait for this to happen; it needs to act beforehand. Waiting too long will have adverse implications on central bank credibility and the anchoring of inflation expectations. If the RBA begins a gradual tightening cycle from November, it will be around a year before we see the full impact of those interest rate increases. Even then the hikes will be gradual.



# Investment Grade Takes Growing Share of Change Activity

BY MICHAEL FERLEZ

## U.S.

U.S. rating change activity was overwhelmingly positive last week. For the week ended February 2, upgrades accounted for 62% of all rating changes and 95% of affected debt. Last week's rating change activity was split across a wide array of industries, with investment-grade companies also accounting for a larger share of changes relative to prior months.

The largest upgrade in terms of affected debt was issued to American Express Company, with Moody's Investors Service upgrading the firm's long-term senior unsecured bond and issuer ratings to A2 from A3. Additionally, Moody's Investors Service upgraded American Express' long-term unsecured shelf rating to (P)A2. In its rating rationale for the upgrade, Moody's Investors Service cited its expectation that "creditors will experience a lower severity of loss in the event of default due to a lower potential for structural subordination."

The next-largest upgrade was issued to Univision Communications Inc., which received several upgrades,

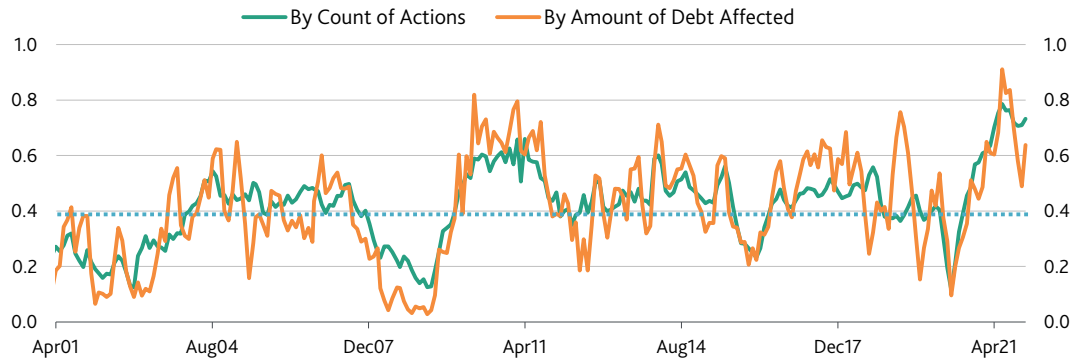
including seeing its corporate family rating, senior secured facilities, and senior secured notes all upgraded to B1. In the rating rationale, Moody's Investors Service cited the enhanced scale and improved financial metrics that resulted from Univision's recent acquisition of Grupo Televisa, S.A.B. among other reasons for the upgrade.

## Europe

Western European rating change activity was mixed last week. While upgrades accounted for six of the eight rating changes, they accounted for less than 10% of the affected debt. The largest change based on the amount of affected debt was issued to France-based IM Group SAS (Isabel Marant), which received several upgrades, including an upgrade of the firm's senior secured notes due 2025 to B2 from B3. In Moody's Investors Service rating action, Guillaume Leglise, a Moody's vice-president senior analyst and lead analyst for Isabel Marant was cited saying, "The upgrade reflects Isabel Marant's very good operational performance in 2021, and the company's strong credit metrics, which have already recovered to above pre-pandemic levels."

## 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

|              |                                     |                |                                     |
|--------------|-------------------------------------|----------------|-------------------------------------|
| <b>BCF</b>   | Bank Credit Facility Rating         | <b>MM</b>      | Money-Market                        |
| <b>CFR</b>   | Corporate Family Rating             | <b>MTN</b>     | MTN Program Rating                  |
| <b>CP</b>    | Commercial Paper Rating             | <b>Notes</b>   | Notes                               |
| <b>FSR</b>   | Bank Financial Strength Rating      | <b>PDR</b>     | Probability of Default Rating       |
| <b>IFS</b>   | Insurance Financial Strength Rating | <b>PS</b>      | Preferred Stock Rating              |
| <b>IR</b>    | Issuer Rating                       | <b>SGLR</b>    | Speculative-Grade Liquidity Rating  |
| <b>JrSub</b> | Junior Subordinated Rating          | <b>SLTD</b>    | Short- and Long-Term Deposit Rating |
| <b>LGD</b>   | Loss Given Default Rating           | <b>SrSec</b>   | Senior Secured Rating               |
| <b>LTCF</b>  | Long-Term Corporate Family Rating   | <b>SrUnsec</b> | Senior Unsecured Rating             |
| <b>LTD</b>   | Long-Term Deposit Rating            | <b>SrSub</b>   | Senior Subordinated                 |
| <b>LTIR</b>  | Long-Term Issuer Rating             | <b>STD</b>     | 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 |
|-----------|--------------------------------------------------------|------------|---------------------|---------------------|---------|----------------|----------------|-------|
| 1/26/2022 | BED BATH & BEYOND INC.                                 | Industrial | SrUnsec/LTCFR/PDR   | 1200.01             | D       | B1             | B2             | SG    |
| 1/27/2022 | SUMMIT MATERIALS, LLC                                  | Industrial | SrUnsec/LTCFR/PDR   | 1000.00             | U       | B1             | Ba3            | SG    |
| 1/28/2022 | ENTERGY CORPORATION-ENTERGY TEXAS, INC.                | Utility    | SrSec/LTIR/PS       | 2475.00             | U       | Baa1           | A3             | IG    |
| 1/28/2022 | NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY              | Unknown    | SrSec               |                     | U       | Baa3           | Baa2           | IG    |
| 1/28/2022 | STEELCASE INC.                                         | Industrial | SrUnsec             | 450.00              | D       | Baa2           | Baa3           | IG    |
| 1/28/2022 | PORT NEWARK CONTAINER TERMINAL LLC                     | Industrial | SrSec               |                     | U       | Baa3           | Baa2           | IG    |
| 1/28/2022 | APEX TOOL GROUP, LLC.                                  | Industrial | LTCFR/PDR           |                     | U       | Caa2           | B3             | SG    |
| 1/28/2022 | CALCEUS ACQUISITION, INC.                              | Industrial | SrSec/BCF/LTCFR/PDR |                     | D       | B3             | Caa1           | SG    |
| 1/28/2022 | PLAYAGS, INC.-AP GAMING I, LLC                         | Industrial | LTCFR/PDR           |                     | U       | B3             | B2             | SG    |
| 1/28/2022 | API HOLDINGS II CORP.-API HOLDINGS III CORP.           | Industrial | SrSec/BCF/LTCFR/PDR |                     | D       | B2             | B3             | SG    |
| 1/28/2022 | EAST INC.-ELECTRONICS FOR IMAGING, INC.                | Industrial | SrSec/BCF/LTCFR/PDR |                     | U       | Caa3           | Caa2           | SG    |
| 1/31/2022 | BW NHHC HOLDCO, INC.                                   | Industrial | SrSec/BCF/LTCFR/PDR |                     | D       | Caa1           | Caa2           | SG    |
| 2/1/2022  | AMERICAN EXPRESS COMPANY                               | Financial  | SrUnsec/LTIR        | 6/4/1967            | U       | A3             | A2             | IG    |
| 2/1/2022  | UNIVISION HOLDINGS, INC.-UNIVISION COMMUNICATIONS INC. | Industrial | SrSec/BCF/LTCFR/PDR | 6/7/1913            | U       | B2             | B1             | SG    |
| 2/1/2022  | MEDNAX, INC.                                           | Industrial | LTCFR/PDR           |                     | U       | B1             | Ba3            | SG    |
| 2/1/2022  | ANKURA HOLDINGS, LP-ANKURA CONSULTING GROUP, LLC       | Industrial | SrSec/BCF           |                     | D       | B1             | B2             | SG    |

Source: Moody's

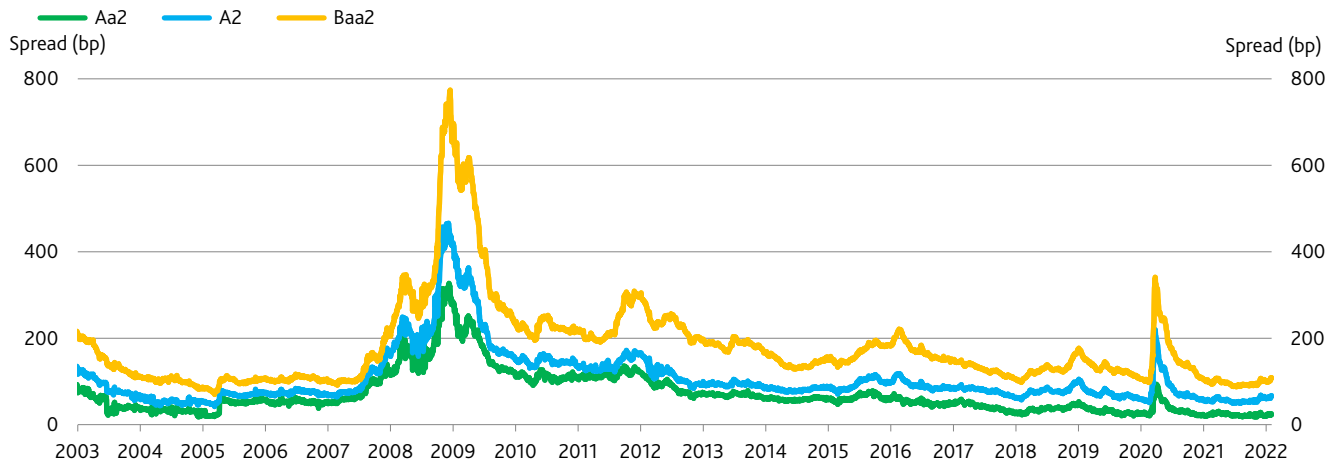
FIGURE 4  
Rating Changes: Corporate & Financial Institutions - Europe

| Date      | Company                                                  | Sector        | Rating              | Amount (\$ Million) | Up/Down | Old LTD Rating | New LTD Rating | IG/SG | Country        |
|-----------|----------------------------------------------------------|---------------|---------------------|---------------------|---------|----------------|----------------|-------|----------------|
| 1/26/2022 | FINANCIERE TOP MENDEL SAS-FINANCIERE MENDEL SAS          | Industrial    | SrSec/BCF/LTCFR/PDR |                     | U       | B3             | B2             | SG    | FRANCE         |
| 1/26/2022 | IM GROUP SAS                                             | Industrial    | SrSec/LTCFR/PDR     | 232.93              | U       | B3             | B2             | SG    | FRANCE         |
| 1/27/2022 | MEDIOCREDITO TRENINO-ALTO ADIGE S.P.A.                   | Financial     | STD/LTD             |                     | U       | Baa3           | Baa2           | IG    | ITALY          |
| 1/28/2022 | INTACT FINANCIAL CORPORATION-RSA INSURANCE GROUP LIMITED | Financial     | PS                  |                     | U       | Ba2            | Ba1            | SG    | UNITED KINGDOM |
| 1/28/2022 | RICHMOND UK TOP HOLDCO LIMITED-RICHMOND UK BIDCO LIMITED | Industrial    | SrSec/BCF/LTCFR/PDR |                     | U       | B3             | B2             | SG    | UNITED KINGDOM |
| 1/28/2022 | ILE-DE-FRANCE MOBILITES                                  | Sub-Sovereign | SrUnsec/LTIR/MTN    | 2896.82             | D       | Aa2            | Aa3            | IG    | FRANCE         |
| 1/31/2022 | PROMONTORIA HOLDING 264 B.V.                             | Industrial    | LTCFR/PDR           |                     | U       | Caa1           | B3             | SG    | NETHERLANDS    |
| 2/1/2022  | HELLA GMBH & CO. KGAA                                    | Industrial    | SrUnsec/LTIR        | 1037.36             | D       | Baa1           | Baa3           | IG    | GERMANY        |

Source: Moody's

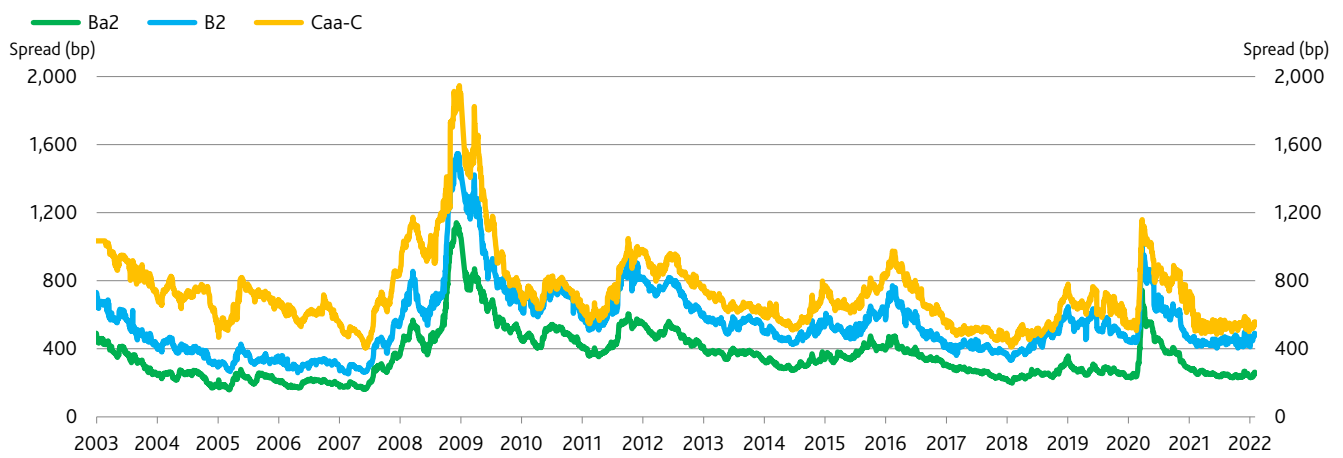
## MARKET DATA

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 (January 26, 2022 – February 2, 2022)

| CDS Implied Rating Rises         | CDS Implied Ratings |         |                |
|----------------------------------|---------------------|---------|----------------|
|                                  | Feb. 2              | Jan. 26 | Senior Ratings |
| Colgate-Palmolive Company        | A3                  | Baa2    | Aa3            |
| Apple Inc.                       | Aaa                 | Aa1     | Aaa            |
| CVS Health Corporation           | A2                  | A3      | Baa2           |
| Charles Schwab Corporation (The) | A3                  | Baa1    | A2             |
| CSC Holdings, LLC                | B2                  | B3      | B3             |
| United Parcel Service, Inc.      | Aa1                 | Aa2     | A2             |
| Northrop Grumman Corporation     | Aa1                 | Aa2     | Baa1           |
| Sysco Corporation                | Baa2                | Baa3    | Baa1           |
| AvalonBay Communities, Inc.      | A3                  | Baa1    | A3             |
| Halliburton Company              | Baa2                | Baa3    | Baa1           |

| CDS Implied Rating Declines          | CDS Implied Ratings |         |                |
|--------------------------------------|---------------------|---------|----------------|
|                                      | Feb. 2              | Jan. 26 | 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 |         |             |
|-----------------------------------|----------------|-------------|---------|-------------|
|                                   |                | Feb. 2      | Jan. 26 | Spread Diff |
| Deluxe Corporation                | B3             | 396         | 115     | 281         |
| Pitney Bowes Inc.                 | B1             | 641         | 546     | 95          |
| Liberty Interactive LLC           | B2             | 505         | 468     | 37          |
| SLM Corporation                   | Ba1            | 402         | 367     | 35          |
| Travel + Leisure Co.              | B1             | 199         | 167     | 32          |
| Avis Budget Car Rental, LLC       | B2             | 301         | 271     | 30          |
| DPL Inc.                          | Ba1            | 174         | 144     | 30          |
| Service Properties Trust          | Ba2            | 265         | 237     | 28          |
| Service Corporation International | Ba3            | 172         | 149     | 23          |
| Meritage Homes Corporation        | Ba1            | 165         | 143     | 22          |

| CDS Spread Decreases          | Senior Ratings | CDS Spreads |         |             |
|-------------------------------|----------------|-------------|---------|-------------|
|                               |                | Feb. 2      | Jan. 26 | Spread Diff |
| Staples, Inc.                 | Caa1           | 1,036       | 1,097   | -61         |
| Rite Aid Corporation          | Caa2           | 991         | 1,047   | -57         |
| Talen Energy Supply, LLC      | Caa2           | 3,969       | 4,014   | -44         |
| R.R. Donnelley & Sons Company | B3             | 156         | 198     | -42         |
| Nabors Industries, Inc.       | Caa2           | 630         | 662     | -32         |
| Wendy's International, LLC    | Caa2           | 155         | 186     | -31         |
| iStar Inc.                    | Ba3            | 304         | 323     | -19         |
| Univision Communications Inc. | Caa1           | 417         | 431     | -15         |
| Vornado Realty L.P.           | Baa2           | 111         | 126     | -15         |
| American Airlines Group Inc.  | Caa1           | 788         | 801     | -13         |

Source: Moody's, CMA

## CDS Movers

Figure 4. CDS Movers - Europe (January 26, 2022 – February 2, 2022)

| CDS Implied Rating Rises           | CDS Implied Ratings |         |                |
|------------------------------------|---------------------|---------|----------------|
|                                    | Feb. 2              | Jan. 26 | Senior Ratings |
| Issuer                             |                     |         |                |
| Banque Federative du Credit Mutuel | Aa2                 | Aa3     | Aa3            |
| TDC A/S                            | Ba1                 | Ba2     | B1             |
| Proximus SA de droit public        | A3                  | Baa1    | A1             |
| Telefonaktiebolaget LM Ericsson    | Baa2                | Baa3    | Ba1            |
| Iberdrola S.A.                     | A2                  | A3      | Baa1           |
| Wienerberger AG                    | Baa3                | Ba1     | Ba1            |
| United Kingdom, Government of      | Aaa                 | Aaa     | Aa3            |
| Italy, Government of               | Baa3                | Baa3    | Baa3           |
| France, Government of              | Aaa                 | Aaa     | Aa2            |
| Germany, Government of             | Aaa                 | Aaa     | Aaa            |

| CDS Implied Rating Declines                 | CDS Implied Ratings |         |                |
|---------------------------------------------|---------------------|---------|----------------|
|                                             | Feb. 2              | Jan. 26 | Senior Ratings |
| Issuer                                      |                     |         |                |
| DZ BANK AG                                  | A3                  | Aa2     | Aa2            |
| Orsted A/S                                  | A1                  | Aa2     | Baa1           |
| Landesbank Hessen-Thuringen GZ              | A1                  | Aa3     | Aa3            |
| Bayerische Motoren Werke Aktiengesellschaft | A3                  | A2      | A2             |
| Nationwide Building Society                 | A3                  | A2      | A1             |
| ENGIE SA                                    | A1                  | Aa3     | Baa1           |
| Siemens Aktiengesellschaft                  | Aa2                 | Aa1     | A1             |
| Heineken N.V.                               | Aa2                 | Aa1     | Baa1           |
| Raiffeisen Bank International AG            | A3                  | A2      | A2             |
| de Volksbank N.V.                           | A3                  | A2      | A2             |

| CDS Spread Increases                   | Senior Ratings | CDS Spreads |         |             |
|----------------------------------------|----------------|-------------|---------|-------------|
|                                        |                | Feb. 2      | Jan. 26 | Spread Diff |
| Issuer                                 |                |             |         |             |
| Casino Guichard-Perrachon SA           | Caa1           | 681         | 621     | 61          |
| Novafives S.A.S.                       | Caa2           | 720         | 671     | 49          |
| Piraeus Financial Holdings S.A.        | Caa2           | 547         | 520     | 26          |
| Vedanta Resources Limited              | B3             | 824         | 803     | 21          |
| Ardagh Packaging Finance plc           | Caa1           | 308         | 293     | 15          |
| Stena AB                               | Caa1           | 418         | 403     | 15          |
| Avon Products, Inc.                    | Ba3            | 283         | 268     | 14          |
| DZ BANK AG                             | Aa2            | 45          | 32      | 13          |
| Banca Monte dei Paschi di Siena S.p.A. | Caa1           | 294         | 281     | 13          |
| Rolls-Royce plc                        | Ba3            | 169         | 158     | 11          |

| CDS Spread Decreases               | Senior Ratings | CDS Spreads |         |             |
|------------------------------------|----------------|-------------|---------|-------------|
|                                    |                | Feb. 2      | Jan. 26 | Spread Diff |
| Issuer                             |                |             |         |             |
| Boparan Finance plc                | Caa1           | 1,236       | 1,411   | -175        |
| TDC A/S                            | B1             | 129         | 161     | -32         |
| National Bank of Greece S.A.       | B3             | 253         | 270     | -17         |
| Italy, Government of               | Baa3           | 82          | 91      | -9          |
| Iceland Bondco plc                 | Caa2           | 591         | 600     | -9          |
| Unione di Banche Italiane S.p.A.   | Baa3           | 65          | 72      | -7          |
| UPC Holding B.V.                   | B3             | 164         | 171     | -7          |
| Greece, Government of              | Ba3            | 107         | 113     | -6          |
| Banque Federative du Credit Mutuel | Aa3            | 29          | 34      | -5          |
| Alpha Services and Holdings S.A.   | Caa1           | 288         | 293     | -5          |

Source: Moody's, CMA



## CDS Movers

Figure 5. CDS Movers - APAC (January 26, 2022 – February 2, 2022)

| CDS Implied Rating Rises       | CDS Implied Ratings |         |                |
|--------------------------------|---------------------|---------|----------------|
|                                | Feb. 2              | Jan. 26 | Senior Ratings |
| China Development Bank         | Baa1                | Baa2    | A1             |
| Bank of East Asia, Limited     | Baa2                | Baa3    | A3             |
| Development Bank of Kazakhstan | Ba1                 | Ba2     | Baa2           |
| Flex Ltd.                      | Baa2                | Baa3    | Baa3           |
| SK Hynix Inc.                  | Baa2                | Baa3    | Baa2           |
| Japan, Government of           | Aaa                 | Aaa     | A1             |
| China, Government of           | A3                  | A3      | A1             |
| Australia, Government of       | Aaa                 | Aaa     | Aaa            |
| India, Government of           | Baa3                | Baa3    | Baa3           |
| Commonwealth Bank of Australia | Aa2                 | Aa2     | Aa3            |

| CDS Implied Rating Declines      | CDS Implied Ratings |         |                |
|----------------------------------|---------------------|---------|----------------|
|                                  | Feb. 2              | Jan. 26 | Senior Ratings |
| JFE Holdings, Inc.               | A2                  | A1      | Baa3           |
| NIPPON STEEL CORPORATION         | A1                  | Aa3     | Baa2           |
| Japan Tobacco Inc.               | Aa1                 | Aaa     | A2             |
| ITOCHU Corporation               | Aa1                 | Aaa     | A3             |
| Kia Corporation                  | Baa1                | A3      | Baa1           |
| Halyk Savings Bank of Kazakhstan | B2                  | B1      | Ba2            |
| Nippon Yusen Kabushiki Kaisha    | A3                  | A2      | Ba3            |
| Japan, Government of             | Aaa                 | Aaa     | A1             |
| China, Government of             | A3                  | A3      | A1             |
| Australia, Government of         | Aaa                 | Aaa     | Aaa            |

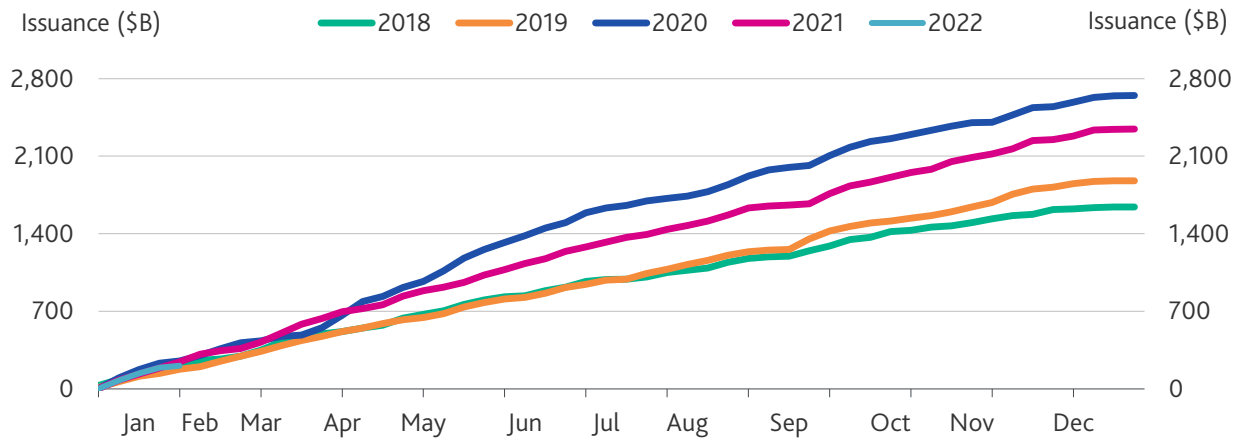
| CDS Spread Increases             | CDS Spreads    |        |         |             |
|----------------------------------|----------------|--------|---------|-------------|
|                                  | Senior Ratings | Feb. 2 | Jan. 26 | Spread Diff |
| Halyk Savings Bank of Kazakhstan | Ba2            | 315    | 297     | 17          |
| SoftBank Group Corp.             | Ba3            | 308    | 292     | 16          |
| SK Innovation Co. Ltd.           | Baa3           | 96     | 91      | 6           |
| Indonesia, Government of         | Baa2           | 86     | 83      | 3           |
| Philippines, Government of       | Baa2           | 70     | 66      | 3           |
| Malayan Banking Berhad           | A3             | 68     | 65      | 3           |
| Qantas Airways Ltd.              | Baa2           | 152    | 149     | 3           |
| China, Government of             | A1             | 47     | 46      | 2           |
| Malaysia, Government of          | A3             | 57     | 54      | 2           |
| Mitsui & Co., Ltd.               | A3             | 24     | 22      | 2           |

| CDS Spread Decreases                       | CDS Spreads    |        |         |             |
|--------------------------------------------|----------------|--------|---------|-------------|
|                                            | Senior Ratings | Feb. 2 | Jan. 26 | Spread Diff |
| Bank of East Asia, Limited                 | A3             | 66     | 81      | -15         |
| Pakistan, Government of                    | B3             | 400    | 414     | -13         |
| Development Bank of Kazakhstan             | Baa2           | 145    | 156     | -11         |
| LG Electronics Inc.                        | Baa2           | 76     | 84      | -8          |
| SK Hynix Inc.                              | Baa2           | 72     | 78      | -6          |
| Suncorp-Metway Limited                     | A1             | 46     | 50      | -5          |
| Nomura Securities Co., Ltd.                | A3             | 61     | 66      | -5          |
| Chugoku Electric Power Company, Inc. (The) | Baa2           | 15     | 19      | -4          |
| Tata Motors Limited                        | B1             | 258    | 262     | -3          |
| Mitsubishi Estate Co., Ltd.                | A2             | 16     | 18      | -2          |

Source: Moody's, CMA

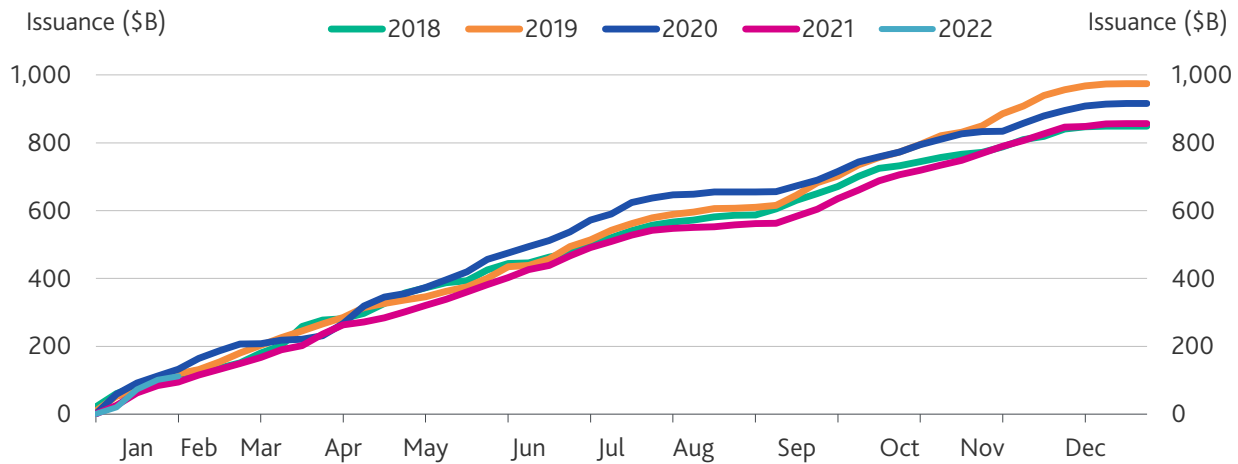
ISSUANCE

**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<br>\$B    | Amount<br>\$B | Amount<br>\$B |
| Weekly       | 7.273            | 6.710         | 18.315        |
| Year-to-Date | 164.763          | 35.245        | 208.159       |

|              | Euro Denominated |               |               |
|--------------|------------------|---------------|---------------|
|              | Investment-Grade | High-Yield    | Total*        |
|              | Amount<br>\$B    | Amount<br>\$B | Amount<br>\$B |
| Weekly       | 9.211            | 0.874         | 10.148        |
| Year-to-Date | 102.275          | 8.322         | 111.255       |

\* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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