WEEKLY MARKET OUTLOOK

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Fast and Furious: Fed Version

The minutes from the December meeting of the Federal Open Market Committee showed the central bank believed the time to begin removing policy accommodation was near and that policymakers favor interest rates over balance-sheet reduction as the primary tool. There were clear signs of concerns about inflation in the minutes, raising the odds of an earlier and faster increase in the target range for the fed funds rate.

There was a lot of discussion about reducing the balance sheet, but no consensus on either the timing or procedure. The Fed has thrown in the towel on "transitory" inflation, scrubbing the word from both the post-meeting statement and minutes.

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Fed officials feel more comfortable about reducing the size of the balance sheet this time around, having learned from the process in 2017 and 2018. Last time, the Fed waited two years between the first rate hike and reducing the balance sheet. That won't happen this time around. The minutes show support for reducing the balance sheet around the time of the first rate hike. This challenges the Fed's efforts to divorce its interest rate and balance sheet policies.

The Fed has a few more meetings in which to iron out the details of how it wants to reduce its balance sheet, but it does appear that it will use caps again. It doesn't need a new playbook. The one used last time to shrink the balance sheet will still work, it will just move more quickly and begin shortly after the first rate hike.

The runoff this time will be faster, as the Fed is more comfortable with the process, having done it before. This time the Fed has set up a backstop in the Standing Repo Facility. This is protection against the central bank overdoing it on quantitative tightening because the New York Fed conducts daily overnight repo transactions under a Standing Repo Facility to support the effective implementation of monetary policy and smooth market functioning.

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The implications for financial markets will likely be an increase in bond and equity market volatility. However, it's hard to say with any confidence if the equity market, which hit a bump when the Fed used QT last time, will repeat itself. One reason, at least initially, why it may appear that financial markets are brushing off QT is that there will still be a lot of excess liquidity—a little less than $1 trillion—when the central bank's balance sheet does begin to decline.

This excess liquidity will be reduced naturally, since the economy is expected to grow noticeably more quickly than the M2 money supply next year. Marshallian K, or the difference between year-over-year growth in M2 money supply and GDP, turned negative in the second quarter, but then was positive in the third quarter and is set to steadily decline over the next year. Another reason the runoff will be faster this time around is that the Fed has a lot more Treasuries maturing, on average around $60 billion to $70 billion per month next year. This provides the Fed a lot of flexibility in adjusting the amount of balance sheet runoff.

Something that could spook the Fed

The minutes show the Fed doesn't see any relief on the inflation front soon. The third-quarter Employment Cost Index contributed to policymakers' hawkish pivot, and the Fed won't like the ECI in the fourth quarter, either. It will be released later this month.

Fed Chairman Jerome Powell recently pointed to the strong gain in the ECI during the third quarter as the reason for the central bank's hawkish shift. Though one quarter isn't a trend, odds are that wage pressures didn't ease in the fourth quarter and may not do so early this year. This will fan concerns that risks have risen that a wage-price spiral is setting in.

Inflation becomes a pernicious problem when there is widespread belief that inflation will remain high, and workers demand bigger wage increases to compensate. Businesses then pass on their higher labor costs in even higher prices. A dreaded wage-price spiral takes hold. This vicious cycle was behind the high inflation we suffered more than 30 years ago. The Fed 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.

We forecast what the Fed will do, not what it should. Therefore, we are paying close attention to the ECI, particularly for wages. It looks like there was another strong year-over-year increase in the ECI for wages in the fourth quarter. Wages and salaries for all workers jumped 1.5% in the third quarter, nearly doubling the precrisis peak of 0.9% in the first quarter of 2020.

The quits rate is sending a warning about the fourth-quarter ECI for wages. The quits rate increased from 2.8% in October to 3% in November, matching the highest since the inception of the data in the early 2000s. The correlation coefficient between the quits rate and year-over-year growth in the ECI for wages is 0.74 since 2002. Correlation doesn't imply causation. Therefore, we used Granger causality tests to see if there is a causal relationship between the quits rate and growth in the ECI for wages. With no lags, the quits rate was found to Granger-cause changes in the ECI for wages. There was also a causal relationship with a one- and two-quarter lag. The results showed that the causality runs one way. With the quits rate climbing, wage pressures could intensify and that won't sit well with the Fed.

U.S. bond market shrugging off Omicron

The U.S. bond market views the Omicron variant of the COVID-19 virus as a temporary issue for growth while potentially causing inflation to remain higher for longer. The 10-year U.S. Treasury yield has risen more than 25 basis points since mid-December. The bond market is buying into the news that the Omicron variant isn't as virulent, which would mean the hit to GDP growth could be lighter than from Delta, but it could still cause disruptions to supply chains and, by extension, keep U.S. inflation from moderating as quickly as previously thought.

Our January baseline forecast will likely cut noticeably into first-quarter GDP. Our preliminary forecast for first-quarter GDP is coming in around 2% at an annualized rate, compared with 5% in the December baseline. We haven't finalized the January baseline yet, but it is clear that Omicron is going to deliver a big blow to growth early this year. We're using the Delta wave's hit to GDP growth as our benchmark.

Risks are actually weighted toward a smaller dent to growth. We've already mentioned the possibility that Omicron won't hit as hard as Delta. One reason is because of autos. Delta roiled global supply chains, which 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.

Also, supply-chain issues were deteriorating before the Delta variant hit. This time around, our U.S. Supply-Chain Stress Index has begun to improve and stress likely dropped further in December, before Omicron. Though the new variant could slow or reverse some of the recent improvement, it is unlikely to be as disruptive to global supply chains as prior

waves. And we don’t believe Omicron will be as inflationary as the bond market is betting on.

Market-based measures of inflation expectations have moved higher, with the five-year break-even rate hitting 3% on Tuesday, up from the 2.7% seen in the second half of December. Yet, the good news for the Fed is that long-term market-based inflation expectations remain anchored. The five-year, five-year forward U.S. inflation break-even rate is right where the Fed wants it to be. Also, the message from the inflation swap curve is that inflation will return to the Fed’s target, over time.

TOP OF MIND

Risks Rising

BY MARK ZANDI

The U.S. economic recovery is set to turn soft at the start of the year as the Omicron wave of COVID-19 hits with full force and the tailwinds of monetary and fiscal support turn to headwinds. Global investors are looking through this. Stock prices continue to post record highs almost on a daily basis, house prices are sizzling, capitalization rates on commercial real estate properties are about as low as they've ever been, and credit spreads in the bond market are paper thin. Then there are crypto prices. Investors are forward looking and rightly figure that the economic recovery will quickly revive once Omicron fades. But they appear to be getting ahead of themselves and a re-pricing of asset markets seems increasingly likely. Although any selloff in asset markets is unlikely to be serious enough to undermine the recovery, this will become increasingly difficult to say if asset prices continue to appreciate rapidly.

COVID-19 calls the shots

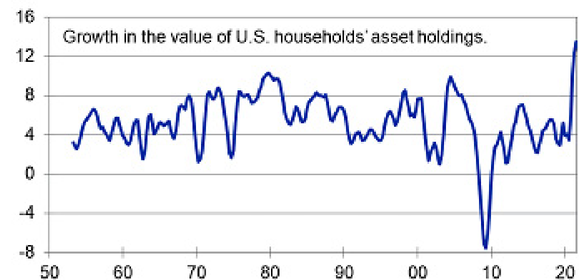
The pandemic continues to call the shots for the economy. The Delta wave significantly weighed on growth and fanned inflation this past fall, and Omicron is already doing significant economic damage: Credit card spending turned soft in recent weeks, particularly for travel; restaurant bookings are off; the National Hockey League suspended play for a time; much of Broadway has gone dark again; and the airlines are struggling with flight cancellations as pilots and other personnel get sick. These won't show up in the economic statistics for a few more weeks. Indeed, jobs for December, to be released Friday, should be up a strong close to 750,000, since they are based on a Bureau of Labor Statistics survey taken in the wake of Delta but before Omicron.

We have revised down our forecast for real GDP growth in the first quarter from about 5% annualized to closer to 2%. This is roughly consistent with the impact the Delta wave had on GDP growth in the third quarter of last year. Also, like Delta, Omicron will not have much of an impact on hiring. Businesses will largely ignore the wave, knowing it will be temporary. Instead, they'll focus on their persistent problem of labor shortages. We are revising up our GDP growth outlook for the second quarter. Activity will pick up quickly once the wave passes, which we assume happens faster than with Delta. Omicron will thus not have a material impact on calendar year 2022 growth, which we expect to be 4%.

Unlike Delta, Omicron's impact on inflation should be modest. Businesses have made meaningful progress easing the bottlenecks in their global supply chains that became evident during Delta. The impact on labor force participation will also be less pronounced; though more workers will get sick with Omicron than Delta, they should get back on the job more quickly. That's because they will be less sick, and the CDC recently cut the recommended isolation period after getting ill to five days from 10.

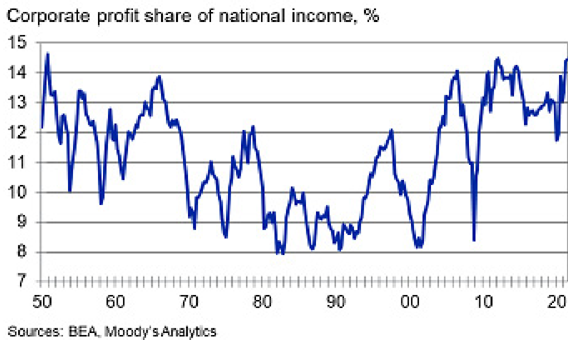
Investors sanguine

Global investors seem unperturbed by the Omicron wave or any other potential threat to the economic recovery. Asset prices are surging. Stock prices rose nearly 30% in 2021 and national house values were up an estimated close to 20%. Reflecting these price gains and the increase in household savings, the value of all assets (excluding crypto) owned by U.S. households increased an estimated 13.5% in 2021. This is far and away the strongest gain on record going back to the early 1950s, and about double the average annual increase over the period. It is worth noting that the gangbuster 2021 *is not* being flattered by a weak 2020. That year, household assets increased 6%. Stock prices cratered when the pandemic first struck in early 2020, but quickly rallied.

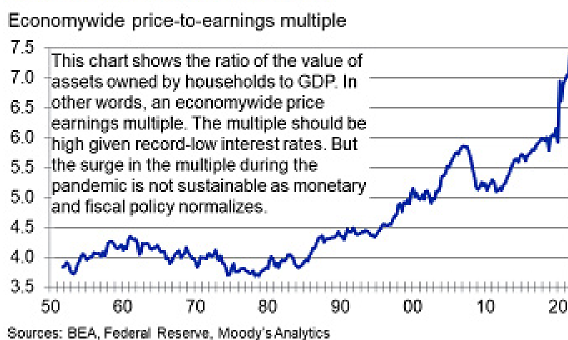


To be sure, asset prices should be high given the quickly recovering economy and strong growth in business profits, rents, and other income that ultimately support asset values. Corporate profits are swelling, up an estimated close to 20% in 2021. Profit margins have rarely been as wide, since businesses have been able to raise prices more quickly than their labor and other costs have risen. The recent bout of inflation has been a positive for profits, at least so far. Businesses are garnering close to their largest share of

national income ever. That is, businesses' slice of the economic pie has never been bigger. Housing rents have also taken off, fueled by the severe shortage of homes for rent and sale. The lack of housing is set to become even more acute given strong demand as many new households formed post-lockdown and constrained housing supply due to the global supply-chain problems for building materials and labor shortages in the construction trades.



However, the asset price gains have significantly outpaced the growth in profits, rental, and other income that support asset values. Asset valuations are thus extraordinarily high compared with any historical norm. At year-end 2021, the ratio of the value of assets owned by households to GDP rose to a record 7.5 times. Think of this as an economywide price-earnings multiple, with asset prices in the numerator, and GDP, which is roughly the sum of profits and income, in the denominator. Prior to the pandemic, this multiple was six times, which itself was a new high, besting the previous record set when the housing bubble was at its most inflated. Other tried-and-true measures of asset valuations such as stock price multiplies, price-to-rent ratios, credit spreads, and capitalization rates are also historically out of bounds.



Record-low interest rates help to partly explain the high valuations. Low interest rates increase the present value of future profits and income, while high interest rates decrease them. It's no surprise that valuations were at their nadir when interest rates spiked in the late 1970s. But valuations appear to have stretched well beyond what can be explained by low rates and appear increasingly frothy. So-called meme stocks, SPACs, and the wave of IPOs, particularly of high-flying technology companies, are such signs in the stock market.

In the housing market, it is the recent spike in the share of home sales by housing investors. Investor purchases have almost doubled over the past year and suddenly account for one-fourth of home sales. Sales to typical households are actually down a bit. Large institutional investors have especially ramped up their buying to feed their buy-to-rent business models. These investors are for the most part not speculators or flippers—buyers whose intention is to sell quickly to make a fast buck. That's good. Flippers had infected housing in the bubble that burst causing the financial crisis.

But the bulk of investors in the crypto markets are speculating. They've been mesmerized by the parabolic increase in prices and believe there will be other investors to buy their crypto at a much higher price than they paid. It's the greater fool theory at work—prices go up because people are able to sell their crypto to a greater fool. That is, of course, until there are no greater fools left.

Asset prices are thus highly vulnerable to significant corrections, and the catalyst may well be the pending shifts in monetary and fiscal policy. If things hold together as we anticipate, the Federal Reserve will wind down its quantitative easing by this spring and lift the federal funds rate off the zero lower bound by summer. Interest rates are headed higher; it is only a question of how high and how

fast. It is hard to fathom how asset valuations can remain as lofty as they are, even with only a modest increase in rates.

The economic thrust of fiscal policy is also quickly turning less supportive, which is sure to crimp economic growth and business profits. Even if lawmakers are able to get it together soon and pass some version of President Biden's Build Back Better legislation, the winding down of funds made available by the American Rescue Plan will weigh on growth. Without BBB, the slowdown will be more pronounced. Residential rent growth is also expected to roll over by this time next year as household formation growth slows, supply chains and the job market sort themselves out, and homebuilding picks up more substantially.

If asset markets sold off today, the selloff is unlikely to be deep and persistent enough to undermine the economic recovery. The resulting negative wealth effects—the impact of changes in wealth on consumer spending—would likely be modest, since the runup in wealth in the pandemic doesn't appear to have had much if any impact on household saving and spending. Rising wealth in times past has made households more confident, leading to less saving and more spending. It is difficult to disentangle things, but this has not happened during the pandemic. Lower stock and bond prices will increase the cost of capital for businesses but likely not nearly enough to forestall much investment. Moreover, households have not overly borrowed to finance their asset purchases. Although margin debt, which is used to finance stock purchases, and mortgage debt have recently begun to increase quickly, it is still premature to send off red flares.

Having said this, this sanguine perspective will not hold much longer if asset prices continue to climb and leverage continues to build at the pace of the past year. The economy has become prone to asset bubbles. There was the stock market bubble of Y2K and the housing bubble of the mid-2000s. When these bubbles ultimately deflated, they did significant damage to the economy. It is premature to think that we are in the next asset bubble, but it is not premature to worry that one is forming.

The Week Ahead in the Global Economy

U.S.

It will be another busy week on the U.S. economic data front. The focus will be on the December consumer price index. It's unlikely that the CPI will duplicate the 0.8% gain in November. Omicron won't have any impact on the December CPI but it could in January. The Fed fears that inflation could remain higher for longer.

However, inflation could moderate more quickly than some anticipate next year as the year-over-year comparisons become extremely difficult. For example, monthly growth in the CPI averaged 0.58% last year. If this is the increase in 2022, year-over-year growth next December would be 2.2%.

Other key data released next week are producer prices, retail sales and industrial production. We also get our first look at consumer confidence in January, which could be adversely affected by surging COVID-19 cases.

Europe

The euro zone's industrial production likely continued to grow in November, by 0.5% m/m, adding to the 1.1% increase in October. A rebound in output from automakers drove growth in October and likely kept the growth rate positive in November as well. However, output should cool again as inventories tighten once more for key inputs like semiconductors.

Unemployment in the euro zone was likely stable in November. We expect the unemployment rate was unchanged at 7.3%. Despite headwinds this winter, firms are eager to keep their rosters. They are also benefitting as well from short-time work schemes, which are ideal for supply-side caused disruptions to activity.

The euro zone's external trade surplus likely remained depressed at €11 billion in November, down from 25.2 billion a year earlier. Supply issues kept a lid on export growth, but the resumption in industrial production in October and presumably November, should allow for an increase in exports with respect to October. Imports likely remained strong either way, given the heightened need for energy goods in the lead up to winter.

The U.K., meanwhile, will likely report a 0.2% m/m increase in GDP for November, following a 0.1% gain in October. Retail sales were strong during the month, pointing to increased household consumption. But supply difficulties likely continued to hold back the industrial and construction sectors. Throughout December, however, the uptick in COVID-19 infections led to tighter social distancing measures, which will be bad news for December activity.

Asia-Pacific

China's inflation reading for December will be the highlight on the economic calendar. We expect annual inflation to have moderated to 1.8% in December from 2.3% in November. Consumer inflation likely softened due to some cooling in energy and food prices. The effect will have been reinforced by the broader property market slump and a resurgence of COVID-19 cases in some regions, which potentially suppressed domestic demand over this period. China's producer prices are also likely to have grown at a more moderate pace of 11% year on year in December, easing from 12.9% in November.

Australia's retail sales are likely to have risen 2.8% month on month in November, following a 4.9% increase in October, on the back of improving household confidence, materially relaxed restrictions in major states, and stronger spending ahead of the holiday season. India's industrial output is likely to have expanded by 3.6% year on year in November, following a 3.2% expansion in October, aided by recovering manufacturing production as well as some gains in mining and quarrying.

Geopolitical Calendar

Date	Country	Event	Economic Importance	Financial Market Risk
9-Mar-22	South Korea	Presidential election	Medium	Medium
27-Mar-22	Hong Kong	Chief Executive election	Low	Low
10-Apr-22	France	General elections	Medium	Medium
9-May-22	Philippines	Presidential election	Low	Low
29-May-22	Colombia	Presidential elections	Medium	Low
Jun	Switzerland	World Economic Forum annual meeting	Medium	Low
Jun/Jul-22	PNG	National general election	Low	Low
2-Oct-22	Brazil	Presidential and congressional elections	High	Medium
Oct/Nov-22	China	National Party Congress	High	Medium
7-Nov-22	U.N.	U.N. Climate Change Conference 2022 (COP 27)	Medium	Low

Inventories Add to Growth, for Now

BY RYAN SWEET

CREDIT SPREADS

Moody's long-term average corporate bond spread is 111 basis points, a touch wider than this time last week, but still tighter than the 113 average in December. Over the last 12 months, the highest average corporate bond spread was 113 bps, while the low was 95. The long-term average industrial corporate bond spread was little changed over the past week and is now 98 bps. This is below the high over the past 12 months of 102 bps but above the low of 86.

The recent ICE BofA U.S. high-yield option adjusted bond spread narrowed over the past week to 309 basis points. This is below its recent high of 367 bps in early December. The Bloomberg Barclays high-yield option adjusted spread widened by 5 bps to 286. The high-yield option adjusted bond spreads approximate what is suggested by the accompanying long-term Baa industrial company bond yield spread and are roughly consistent with a VIX of 20.

Defaults

Defaults remain very low. The latest Moody's monthly default report showed the trailing 12-month global speculative-grade default rate came in at 1.8% in November, down from 2.1% in October and the lowest in several years. The trailing 12-month global speculative-grade default rate also declined in November, falling from 2.3% to 2%.

In light of our expectation of a continued economic recovery and accommodative funding conditions in the coming year, Moody's Credit Transition Model projects that the global default rate will continue to fall over the next few months, bottoming at 1.3% in March. Thereafter, the default rate climbs to hit 2.35% in November.

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 faired noticeably better in the second quarter.

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

In the week ended January 2, there wasn't any US$-denominated investment grade or high-yield corporate bond issuance. This was not surprising due to the holidays.

U.S. ECONOMIC OUTLOOK

There were some tweaks to our U.S. baseline forecast in December, including bringing forward the timing of the first rate hike by the Federal Reserve. Changes to GDP growth this year and next were modest, but the Omicron variant of COVID-19 lends downside risk. Our assumption that each passing wave of COVID-19 will have smaller economic costs will be tested with Omicron. We didn't significantly alter the forecast because of the new variant, as it's unclear how much of an effect it will have. We should have more information on how infectious it is soon and what this means for hospitalizations.

Turning to fiscal policy, we maintained our assumption of a $1.75 trillion social safety net and climate spending bill, which would be almost fully paid for by higher taxes on corporations and well-to-do households. The bill, known as the Build Back Better Act, was assumed to pass in late

December, with implementation starting in early 2022. Under current law, the monthly Child Tax Credit advances ended after December.

We believed the top-line $1.75 trillion figure was a compromise framework amenable to key moderate senators, who are balking at the House-passed BBBA that packs more than $2 trillion in spending and tax breaks. As opposed to the House-passed legislation, the BBBA, assumed in our forecast, does not include immigration funding, paid-leave investments, nor an increase to the existing limit on the state and local tax deduction. All told, the contours of our $1.75 trillion assumption were largely the same as in November. Clean-energy and climate provisions amounted to nearly $600 billion; childcare and preschool investments totaled nearly $400 billion; and more than $300 billion funded an expansion of healthcare coverage. Other measures included extending the expanded Child and Earned Income Tax Credits, investing in affordable housing, and boosting other social safety net programs.

COVID-19 assumptions

We adjusted our epidemiological assumptions to anticipate that total confirmed COVID-19 cases in the U.S. will be 57.2 million, compared with 49.12 million in the November baseline. The seven-day moving average of daily confirmed cases has declined recently, but this could be misleading because of reporting issues around the Thanksgiving holiday. Also, there have been reported cases of the Omicron variant in the U.S., which we will be watching closely, as it would warrant additional changes to our COVID-19 assumptions next month.

The date for abatement of the pandemic changed slightly; it is now February 13, a couple of months later than in the prior baseline. Herd resiliency, which is a 65%-or-greater share of the adult population being fully vaccinated or previously infected, was achieved on August 30. The forecast assumes that COVID-19 will be endemic and seasonal.

There has been some good news recently regarding vaccinations for children and the discovery of effective therapies that can either prevent or cure infection, which should further weaken the linkage between COVID-19 infections, consumer confidence and economic activity. This will likely reduce the future economic costs from waves of COVID-19. Waves won't be avoidable, particularly in the winter. There is a strong correlation between average temperatures and the number of COVID-19 cases. Therefore, odds are high that a wave will occur this winter.

Another solid year ahead

The Delta wave that hit last summer did significant damage to the recovery—hurting growth and juicing up inflation. As Delta has receded, growth has quickly rebounded, and inflation is near a peak. Of course, the next wave formed on the fast-spreading Omicron variant of the virus. We assume this wave will be less disruptive to the healthcare system and economy than Delta, but this is a tenuous assumption. The next few weeks will tell.

In the December baseline, we kept our forecast for 2021 GDP growth at 5.6%, identical to the prior baseline. We look for GDP growth to be 4.4% in 2022, 0.2 of a percentage point lighter than in the November baseline. We nudged our forecast for growth in 2023 higher, from 2.8% to 2.9%.

Inventories should add a lot to growth in the fourth quarter and in the first half of 2022 but could cause problems down the road. The volatility in consumer and producer prices today could set the stage for the cobweb theorem, which normally plagues agriculture, to affect other industries. The cobweb model describes cyclical supply and demand in markets where the amount of supply tends to be determined before prices are fully observed. This has typically applied to agriculture, as farmers need to decide what crop to produce and how much before the market price is set. This agriculture model applies to an economy emerging from a pandemic, where there is uncertainty that prices today will hold in a few months and the effect will be mitigated or magnified by the price elasticity of demand.

Volatility in prices will lead to mistakes, either in over- or underbuilding inventories. We looked at the five-year rolling correlation between the contribution of each component to GDP and total GDP growth. This is then multiplied by the five-year rolling standard deviation of the components' contribution to GDP divided by the rolling standard deviation in GDP growth. This would imply that inventories are contributing little to the volatility in GDP growth. However, if we cut the sample down to the past two years to include the pandemic, inventories are contributing more to the volatility of GDP growth. This isn't surprising, but as we learned in the third quarter, inventories can make the difference between a positive, flat or negative GDP print.

Global supply-chain issues remain a downside risk to the near-term forecast. There has been a little improvement recently, according to our U.S. Supply-Chain Stress Index. The Omicron variant could unwind this or delay further improvement.

Business investment and housing

There was a small upward revision to the forecast for real business equipment investment in 2022, as it is forecast to increase 9.9%, compared with the 9.2% in the prior baseline. We nudged the forecast for 2023 lower; we now expect real business equipment investment to increase 4.6%.

Risks are roughly balanced to the forecast, as fundamentals, including supportive financial market conditions and better after-tax corporate profits as a share of nominal GDP, should continue to spur investment into 2022. Also, banks are easing lending standards and corporate credit spreads are very tight, supporting investment-grade and high-yield corporate bond issuance.

Another favorable development for business investment is that the rate of new-business formations remains strong. The biggest downside risk was a sudden tightening in financial market conditions or a sudden and significant bout of economic policy uncertainty in the fourth quarter because of the threat of a partial government shutdown and decision about the debt ceiling.

The real nonresidential structures forecast was not revised significantly over the next few years. New data and revisions to prior months led us to revise lower the forecast for housing starts. Housing starts were forecast to rise 12.4% in 2021, compared with 13.8% in the November baseline. We revised the forecast higher for growth in 2022 housing starts from 9.9% to 12.4%. Lower construction costs, additional labor supply, and strong demand will be supportive for residential construction this year.

We had been steadily revising our forecast higher for house prices during the past several months. We boosted the forecast for the FHFA All-Transactions House Price Index to increase 12.9% in 2021, stronger than the 10.6% in the November baseline. House price growth is also stronger because of the imbalance between supply and demand; in 2022, we look for prices to rise 8.7%, compared with the 6.7% in the November baseline.

Tale of two surveys

U.S. job growth fell well short of expectations in November, but this didn't deter the Federal Reserve from announcing that it is doubling the amount by which it is tapering monthly asset purchases. Don't fixate on the headline increase in nonfarm employment, because the details elsewhere were noticeably stronger.

For example, the prime-age employment-to-population ratio jumped from 78.3% to 78.8%. Historically, a prime-age employment-to-population ratio of 80% is consistent with an economy at full employment. With the labor market quickly approaching that threshold, the Fed will want the flexibility to raise the target range for the fed funds rate in 2022. Also, the unemployment rate is on track to drop below 4% early this year. Add to this mix that inflation will remain elevated, and the November employment report won't alter the Fed's hawkish shift.

The labor market added only 210,000 jobs for November, and the revisions to September and October were modest, adding 82,000 more positions. The gain fell well short of our and the consensus expectation but is far from a dud. The increase in November was stronger than average monthly job growth during the last expansion.

Declines in retail trade and government and weak gains in leisure/hospitality pulled down the top line. However, technical factors were at play that weighed on job growth in November. For retail, it was an earlier payroll reference period, and this reduced the number of seasonal hires who were counted for the holiday shopping season. Also, the seasonal adjustment factor was significantly less favorable than we had anticipated. In fact, the difference between the change in not seasonally and seasonally adjusted employment was more than 500,000, the largest reduction for any November on record.

It was difficult to find anything bad in the household survey. Adjusted household employment was up 1.9 million in November. The adjusted household employment series is calculated by subtracting from total employment agriculture and related employment, the unincorporated self-employed, unpaid family and private household workers, and workers absent without pay from their jobs, and then adding nonagricultural wage and salary multiple jobholders. This makes it a more apples-to-apples comparison with the establishment survey. Given the small survey sample, this measure is also more volatile than the payroll estimate. Still, cumulative increases in the establishment and adjusted household survey are 6.1 million in 2021. Therefore, underlying job growth is running at 555,000.

We look for average monthly job growth in 2022 to be 352,000, stronger than the 340,000 in the November baseline. Job growth will moderate further in 2023, with average job growth of 145,000, a touch weaker than the 150,000 in November.

The unemployment rate was forecast to average 4.3% in the fourth quarter, compared with the 4.5% in the prior baseline. This incorporates the new data on the unemployment rate for November. The unemployment rate will average 3.5% at the end of this year, in line with the prior baseline. Our rule of thumb is that a prime-age employment-to-population ratio of 80% is consistent with an economy at full employment, and our back-of-the-envelope forecast would have the economy hitting that threshold in the fourth quarter of 2022.

The Fed's hawkish pivot

There were some material changes to the forecast for growth in the core PCE deflator. Year-over-year growth in core inflation is now expected to be north of 4% for the

fourth quarter of 2021 and first quarter of 2022 before it decelerates and ends the year just north of 2%. The core CPI follows a similar pattern.

Something that isn't getting enough attention is the sheer amount by which supply-chain stress is boosting the U.S. CPI. Building off of our prior work on estimating the reopening effect on the CPI, we created a supply-chain constrained CPI. In October, our supply-chain constrained CPI added 1.6 percentage points to year-over-year growth in the headline CPI and has boosted it by at least a full percentage point since April. Therefore, absent stress in the U.S. supply chain, year-over-year growth in the CPI in October would have been 4.6%, still the strongest since 2008, when energy prices were spiking. Higher global energy prices, which have been proven to have a temporary effect on the CPI, added 2.2 percentage points to year-over-year growth in the CPI in October. Excluding supply-chain constrained components and energy, the CPI would have been up only 2.4%, near the Fed's 2% objective.

The Federal Reserve announced that it is accelerating its tapering process at the December meeting of the Federal Open Market Committee. The risks that the Fed would increase the amount by which it reduces its monthly asset purchases had risen noticeably after the October CPI, which likely altered the central bank's near-term forecast for inflation. The Fed had warned that an adjustment to the outlook could warrant a change to the tapering process. The Fed decided to increase the monthly taper by $15 billion to $30 billion.

Our December baseline forecast brought the first increase in the target range for the fed funds rate forward, from December 2022 to September 2022. We don't like to be whipsawed by changing the forecast for the path of interest rates, but another change is likely for the January 2022 baseline. Doubling the pace of accommodation increases the odds of the first rate hike next June, as asset purchases would be zero by the end of March. A probabilistic forecasting approach based on the subjective probabilities of a fed hike versus a cut would have the first hike occurring earlier than next September.

There were no significant changes to the 10-year Treasury yield. The forecast is that the Dow Jones Industrial Average peaks in early 2022. However, the rest of the contours of the forecast did not change, as we expect the Dow to steadily decline through this year. The decline in stock prices is forecast to be orderly, but it could turn into something worse. One potential catalyst would be an explosion in the value of margin accounts at brokers and dealers, which amounted to $595 billion in last year's second quarter, nearly double the pre-pandemic level. A drop in stock prices could trigger margin calls. These occur when the equity in your investing account drops to a certain level and you owe money to your brokerage firm. If there is no money, investors have to sell other assets.

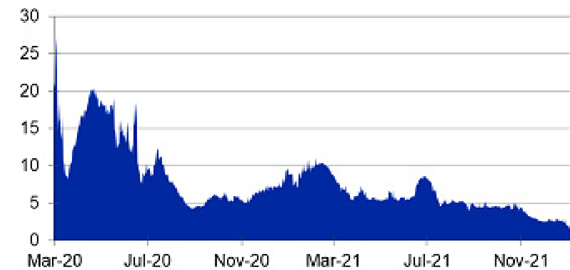
THE LONG VIEW: EUROPE

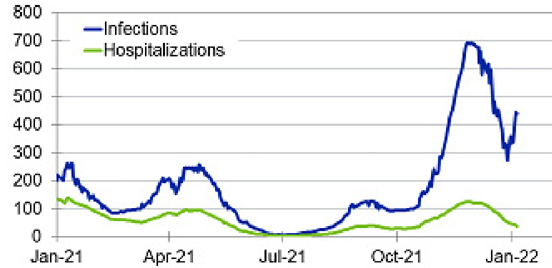
Germany Braces for Its Turn With Omicron

BY EVAN KARSON

Germany managed to repel a surge in COVID-19 infections in late 2021, but the fourth quarter's wave owed largely to the Delta variant of the virus. Over the next few weeks, Europe's largest economy is all but guaranteed to face down another rush of infections as the highly transmissible Omicron variant becomes the dominant strain.

The pace of new infections has already started perking up, and if France, Italy, and the U.K. provide guidance, Germany will soon see its sharpest spike in cases yet. Hospitalizations are currently breathing easier than a month ago, but the public health system will come under significant stress in the weeks ahead.





Omicron's high transmissibility and lower virulence, especially for vaccinated people, increase the likelihood that the developing wave of infections will burn out quickly and cause less overall disruption. South Africa, where Omicron was first detected, provides one datapoint to support this possibility. The infection rate in South Africa peaked after about four weeks and receded almost as quickly. Taking South Africa's experience into account, our baseline forecast assumes infections in Germany will more or less wind down by early to mid-March. We expect Germany will once again avoid a full lockdown, leaning on targeted restrictions to limit strain on hospitals and ICUs. Despite some peaks and valley, the ratio of hospitalizations to infections has declined steadily since the pandemic began, partly due to vaccines.

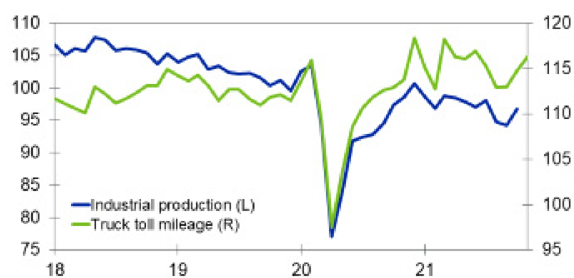
The January baseline features only slight forecast downgrades as a result of these new assumptions. Even though Omicron presents new headwinds to growth, the recent Delta-driven wave of infections wound down more quickly than we expected. These two developments essentially come out to a wash in the January baseline. Real GDP growth in the first quarter of 2022 will modestly underperform the euro area average under pressure from softening consumption and fading fiscal stimulus.

Expect healthy industrial production results

Friday's industrial production release is expected to show that Germany's output expanded modestly in November, rising somewhere between 0.75% and 1% month-over-month. Industrial production grew a healthy 3.2% m/m in October, which would typically signal some near-term softening. From 1991 to 2019, monthly industrial production rose by more than 2% only 30 times; in two-thirds of those instances, output dropped the following month.

Solid readings on truck toll mileage underly our prediction for a modest gain in output. Truck toll mileage correlates strongly with industrial production and recorded its third increase in a row in November. A forecast model predicting industrial production growth based on the change in truck toll mileage in the current and previous two months estimates a 2.8% m/m gain in industrial production for November. An increase of this magnitude would be

surprising but not wholly impossible given how volatile and unpredictable trade has become as a result of the pandemic. On the flip side, a decline in output would not be a major shock. Supply-chain disruptions remain a pressing issue for manufacturers, and our baseline forecast does not anticipate significant relief until the second half of 2022.



Sources: Bundesbank, National Statistics Office, Moody's Analytics

Singapore Outpaces Expectations

BY SHAHANA MUKHERJEE and DENISE CHEOK

Singapore's economy powered ahead of expectations in the fourth quarter of 2021. GDP grew 2.6% quarter over quarter, strengthening from the previous quarter's 1.2% increase. This brought full-year GDP growth to 7.2%, ahead of the Moody's Analytics forecast for a 6.8% expansion and the Ministry of Trade and Industry's forecast for 7% growth.

As expected, the all-important manufacturing sector was the key source of growth. It expanded 2.2% in quarterly terms in the December quarter, from 1.2% in the prior quarter, amidst sustained global demand for electronics and the semiconductor shortage. Service industries picked up as social distancing measures began to ease. Accommodation and food services, real estate, and administrative and other services expanded by 4.9% quarter over quarter, compared with a modest 0.8% expansion in the prior quarter. Information and communications together with financial and related services grew 3.1%, up from 1.2% in the prior quarter. In comparison, wholesale and retail trade were up 2.3%, a turnaround from the 1.3% contraction in the September quarter.

Although Singapore's output exceeded pre-pandemic levels by the September quarter last year, growth remains highly uneven. Contact-sensitive sectors have been subjected to a staggered revival, and important segments such as wholesale and retail trade, transport, and construction remain below pre-pandemic levels, tightly tethered to the pandemic's trajectory. Expansion of vaccinated travel lanes initially brought some optimism, but the rapid spread of the Omicron variant of COVID-19 and quick reimposition of travel restrictions highlight that governments remain jittery despite high vaccination rates in most countries.

Regional bellwether

Singapore is one of the earliest to release preliminary growth numbers for the December quarter and serves as a bellwether for the region. The better-than-expected numbers reflect improving momentum towards the end of the year, particularly for some of the trade-reliant economies in Asia. For Singapore, the notable growth in manufacturing is also indicative of some resilience in regional supply chains despite the slowdown in China's factory activity.

Gains to continue

Looking ahead, Singapore's near-term growth outlook has some upsides. Manufacturing output should continue to record notable gains over the next few quarters, likely to be driven by sustained overseas demand for electronics and the semiconductor shortage. Despite Singapore leading the Asia-Pacific region's vaccination drive, its services industries are likely to witness another phase of a dual-speed and volatile revival. The temporarily reinstated border measures have potentially significant implications for the timely resumption of international travel, mobility and tourism. They could also potentially delay investment decisions.

In light of improved vaccination rates and a gradual policy pivot towards living with COVID-19, policymakers are calibrating their approach to the evolving COVID-19 situation. Conditions and the broader economic outlook can certainly change in the coming months. For now, Singapore's policy priorities might not change much. In particular, Singapore's outsize fiscal spending of the past two years is likely to start tapering, with the government gradually turning its attention toward fiscal consolidation. Similarly, it is possible that the Monetary Authority of Singapore will tighten monetary settings in its April meeting as rising inflation pressures take the stage after two years of pandemic-induced uncertainty.

Strong Year-End Finish for U.S. Change Activity

BY MICHAEL FERLEZ

U.S.

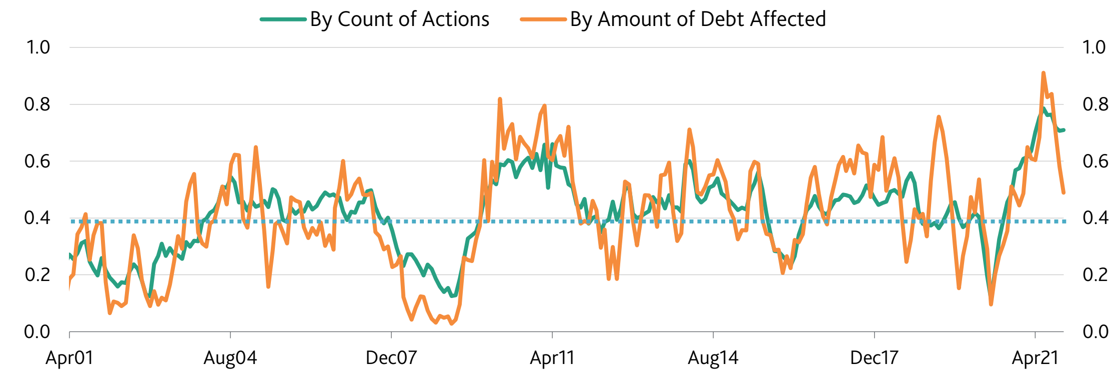
U.S. rating change activity finished last year on a strong note. In the second half of December, upgrades outnumbered downgrades 2-1 and accounted for 95% of the reported affected debt. Although speculative-grade companies led upgrades for most of 2021, it was investment-grade companies that headlined rating changes to end the year. The most notable upgrade was made to Apple Inc., which saw its senior unsecured rating upgraded to Aaa. In Moody's Investors Service rating action, Moody's analyst Raj Joshi was quoted saying, "The upgrade of Apple's rating to Aaa reflects the company's exceptional liquidity, robust earnings that we expect will continue to grow over the next 2 to 3 years, and its very strong business profile. Apple's ecosystem of products and services provides enhanced revenue visibility over time despite some level of volatility that is inherent in its business from product introduction cycles." The upgrade impacted $118 billion in outstanding debt.

Europe

Western European rating change activity was balanced over the past several weeks, with rating changes split evenly between upgrades and downgrades. The most notable rating change in terms of affected debt was made to Bank of Cyprus Public Company Limited. On December 15, Moody's Investors service upgraded several of the Bank of Cyprus' credit ratings, including its senior unsecured and subordinated debt and its long-term bank deposit rating. In the rating action, Moody's Investors Service cited the Bank of Cyprus' significant ongoing improvement to its asset quality as one factor for the upgrade.

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
12/15/2021	HUNTINGTON BANCSHARES INCORPORATED-TCF NATIONAL BANK	Financial	Sub	810.00	U	Baa1	A3	IG
12/15/2021	KAMC HOLDINGS, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	B3	SG
12/16/2021	BAXTER INTERNATIONAL INC.	Industrial	SrUnsec	5641.61	D	Baa1	Baa2	IG
12/16/2021	ARRAY TECHNOLOGIES, INC.-ARRAY TECH, INC.	Industrial	LTCFR/PDR		D	B1	B2	SG
12/17/2021	FAIRFAX FINANCIAL HOLDINGS LIMITED-ALLIED WORLD ASSURANCE COMPANY (U.S.) INC.	Financial	IFSR		U	A3	A2	IG
12/17/2021	COOPER-STANDARD HOLDINGS INC.-COOPER-STANDARD AUTOMOTIVE INC.	Industrial	SrSec/SrUnsec/BCF/LTCFR/PDR	650.00	D	B1	B2	SG
12/17/2021	UNDER ARMOUR, INC.	Industrial	SrUnsec/LTCFR/PDR	600.00	U	B1	Ba3	SG
12/17/2021	MARINER WEALTH ADVISORS, LLC	Financial	SrSec/BCF		U	B1	Ba3	SG
12/20/2021	FREEPORT-MCMORAN INC.	Industrial	SrUnsec	8306.94	U	Ba1	Baa3	SG
12/20/2021	HORNBLOWER SUB, LLC	Industrial	LTCFR/PDR		U	Caa2	Caa1	SG
12/21/2021	APPLE INC.	Industrial	SrUnsec/MTN	118132.76	U	Aa1	Aaa	IG
12/23/2021	YELLOW CORPORATION	Industrial	LTCFR/PDR		U	Caa1	B3	SG

Source: Moody's

FIGURE 4

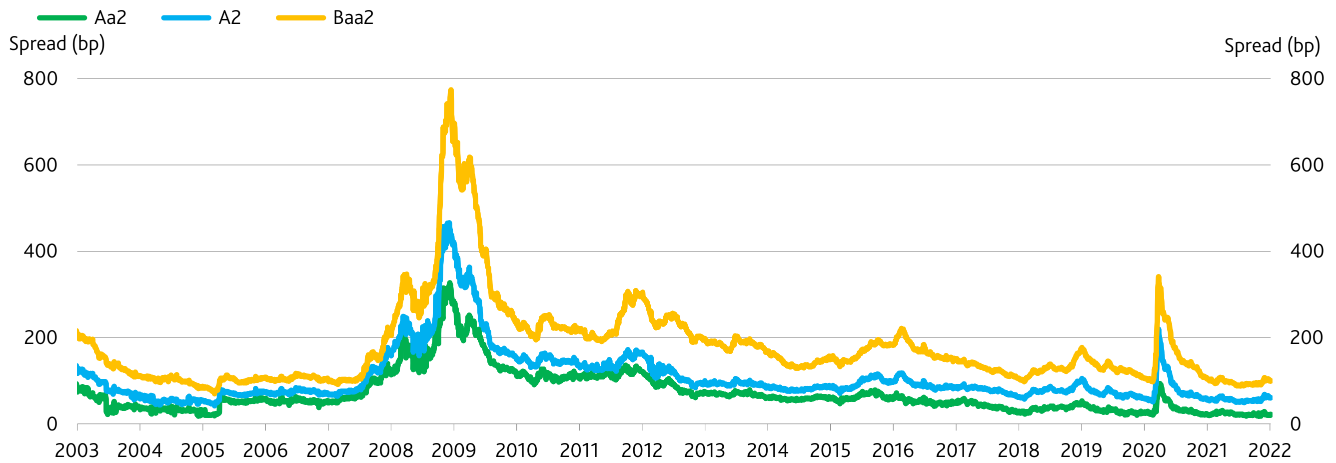
Rating Changes: Corporate & Financial Institutions - Europe

Date	Company	Sector	Rating	Amount ($ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/ SG	Country
12/15/2021	STMICROELECTRONICS N.V.	Industrial	LTIR		U	Baa3	Baa2	IG	NETHERLANDS
12/15/2021	IWH UK FINCO LIMITED	Industrial	SrSec/BCF/LTCFR/PDR		U	B3	B2	SG	UNITED KINGDOM
12/15/2021	BANK OF CYPRUS HOLDINGS PUBLIC LIMITED COMPANY	Financial	SrUnsec/LTD/Sub/MTN	989.95	U	Caa1	B3	SG	IRELAND
12/17/2021	KEDRION S.P.A.	Industrial	SrSec/LTCFR/PDR	477.50	D	B1	B2	SG	ITALY
12/20/2021	GO-AHEAD GROUP PLC (THE)	Industrial	SrUnsec	344.31	D	Baa3	Ba1	IG	UNITED KINGDOM
1/4/2022	GROUPE CRELAN-AXA BANK BELGIUM	Financial	STD/LTD		D	P-1	P-2	IG	BELGIUM

Source: Moody's

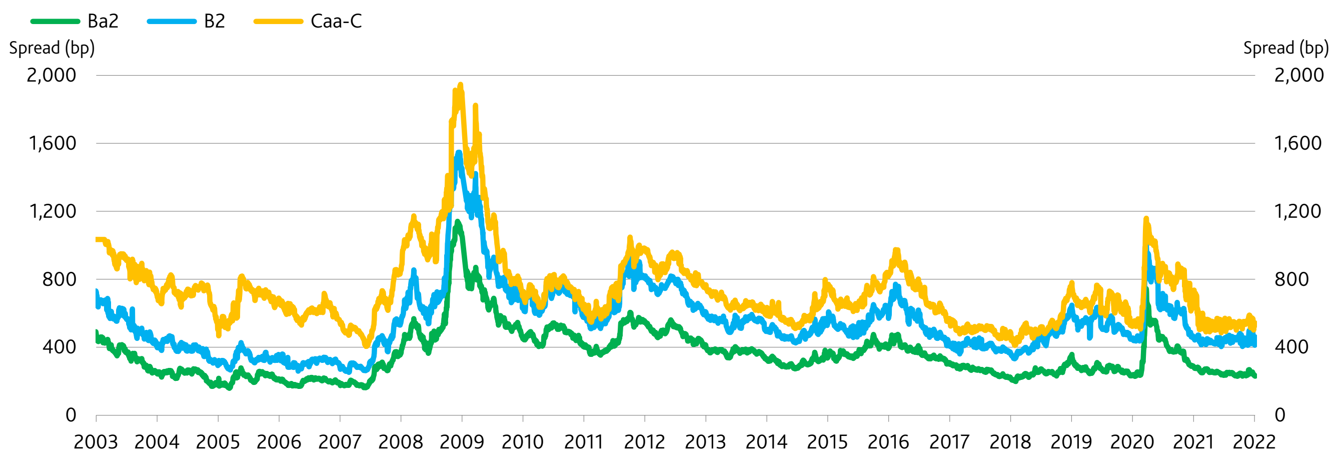
MARKET DATA

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 (December 29, 2021 – January 5, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Jan. 5	Dec. 29	Senior Ratings
International Lease Finance Corporation	Aa3	A2	Baa3
AT&T Inc.	Baa2	Baa3	Baa2
American Express Credit Corporation	A1	A2	A2
Amazon.com, Inc.	Aa3	A1	A1
Coca-Cola Company (The)	Aa1	Aa2	A1
Philip Morris International Inc.	A2	A3	A2
FedEx Corporation	A2	A3	Baa2
Becton, Dickinson and Company	Baa1	Baa2	Baa3
Valero Energy Corporation	Baa3	Ba1	Baa2
Kroger Co. (The)	A3	Baa1	Baa1

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Jan. 5	Dec. 29	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		CDS Spreads		
Issuer	Senior Ratings	Jan. 5	Dec. 29	Spread Diff
Talen Energy Supply, LLC	Caa1	4,339	4,273	67
Domtar Corporation	Ba3	433	372	61
Xcel Energy Inc.	Baa1	71	57	15
DPL Inc.	Ba1	143	128	15
Staples, Inc.	Caa1	1,142	1,128	14
Pitney Bowes Inc.	B1	482	469	13
iStar Inc.	Ba3	303	290	13
Crown Castle International Corp.	Baa3	65	55	10
Cargill, Incorporated	A2	44	34	9
Service Corporation International	Ba3	122	113	9

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Jan. 5	Dec. 29	Spread Diff
Nabors Industries, Inc.	Caa2	685	734	-50
Rite Aid Corporation	Caa2	880	900	-21
United Airlines Holdings, Inc.	Ba3	401	422	-21
Travel + Leisure Co.	B1	171	191	-20
United States Steel Corporation	B1	311	331	-20
United Airlines, Inc.	Ba2	404	423	-19
Calpine Corporation	B2	331	350	-19
American Airlines Group Inc.	Caa1	751	771	-19
Service Properties Trust	Ba2	241	260	-18
Scripps (E.W.) Company (The)	Caa1	214	230	-16

Source: Moody's, CMA

CDS Movers

Figure 4. CDS Movers - Europe (December 29, 2021 – January 5, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Jan. 5	Dec. 29	Senior Ratings
Coca-Cola HBC Finance B.V.	A1	A3	Baa1
Spain, Government of	Aa2	Aa3	Baa1
Banco Santander S.A. (Spain)	A1	A2	A2
ABN AMRO Bank N.V.	A1	A2	A1
Orange	Aa2	Aa3	Baa1
Bayerische Motoren Werke Aktiengesellschaft	A2	A3	A2
Daimler AG	A3	Baa1	A3
Deutsche Telekom AG	A1	A2	Baa1
Norddeutsche Landesbank GZ	Baa2	Baa3	A3
E.ON SE	Aa3	A1	Baa2

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Jan. 5	Dec. 29	Senior Ratings
Banque Federative du Credit Mutuel	A2	Aa1	Aa3
Elisa Corporation	Baa2	A3	Baa2
Lloyds Bank plc	Aa3	Aa2	A1
Natixis	A1	Aa3	A1
DZ BANK AG	Aa2	Aa1	Aa2
Proximus SA de droit public	Baa1	A3	A1
3i Group plc	Ba1	Baa3	Baa1
NIBC Bank N.V.	Baa2	Baa1	Baa1
ABB Ltd	A1	Aa3	A3
United Kingdom, Government of	Aaa	Aaa	Aa3

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Jan. 5	Dec. 29	Spread Diff
Boparan Finance plc	Caa1	1,312	1,248	63
Iceland Bondco plc	Caa2	544	531	14
Banque Federative du Credit Mutuel	Aa3	37	26	12
Elisa Corporation	Baa2	53	43	10
Proximus SA de droit public	A1	50	42	7
DZ BANK AG	Aa2	32	26	6
3i Group plc	Baa1	97	92	5
Telecom Italia S.p.A.	Ba2	233	230	3
NIBC Bank N.V.	Baa1	56	52	3
KBC Group N.V.	Baa1	70	68	2

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Jan. 5	Dec. 29	Spread Diff
Vedanta Resources Limited	B3	722	801	-79
Deutsche Lufthansa Aktiengesellschaft	Ba2	231	255	-25
CMA CGM S.A.	B2	288	308	-21
Premier Foods Finance plc	B3	184	201	-17
Novafives S.A.S.	Caa2	586	602	-16
Piraeus Financial Holdings S.A.	Caa2	544	554	-10
Greece, Government of	Ba3	102	110	-8
Rolls-Royce plc	Ba3	156	164	-8
Alpha Services and Holdings S.A.	Caa1	293	301	-8
Unibail-Rodamco-Westfield SE	Baa2	111	118	-7

Source: Moody's, CMA

CDS Movers

Figure 5. CDS Movers - APAC (December 29, 2021 – January 5, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Jan. 5	Dec. 29	Senior Ratings
Westpac Banking Corporation	Aa2	Aa3	Aa3
Philippines, Government of	Baa1	Baa2	Baa2
Thailand, Government of	Aa1	Aa2	Baa1
Macquarie Bank Limited	A1	A2	A2
Suncorp-Metway Limited	A2	A3	A1
Oversea-Chinese Banking Corp Ltd	A1	A2	Aa1
Export-Import Bank of China (The)	A1	A2	A1
Hong Kong SAR, China, Government of	Aa1	Aa2	Aa3
Bank of China Limited	Baa1	Baa2	A1
Central Japan Railway Company	Aa1	Aa2	A2

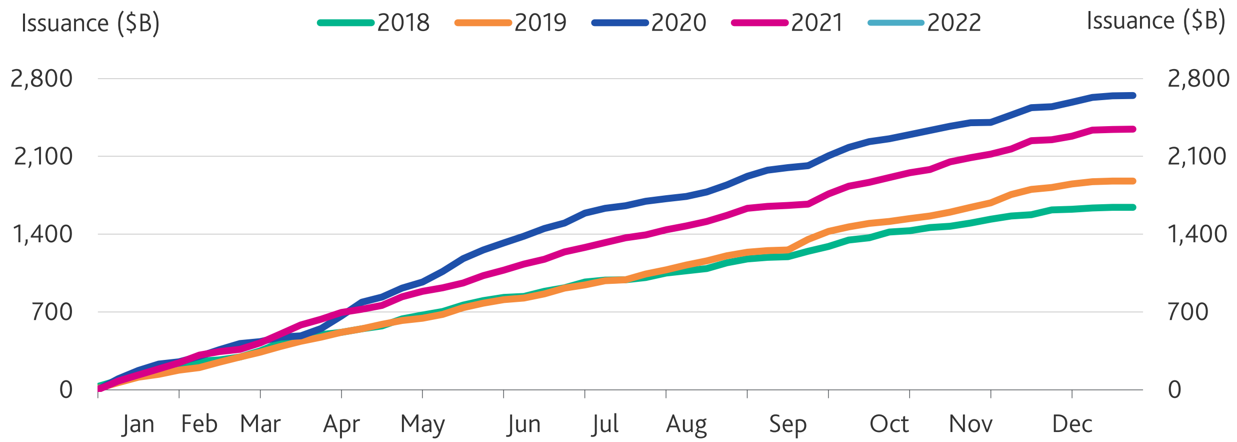
CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Jan. 5	Dec. 29	Senior Ratings
JFE Holdings, Inc.	A2	A1	Baa3
Pakistan, Government of	B3	B2	B3
Korea Expressway Corporation	Aa2	Aa1	Aa2
ITOCHU Corporation	Aa1	Aaa	A3
SK Hynix Inc.	Baa3	Baa2	Baa2
Vietnam, Government of	Ba1	Baa3	Ba3
SK Innovation Co. Ltd.	Ba1	Baa3	Baa3
Japan, Government of	Aaa	Aaa	A1
China, Government of	A2	A2	A1
Australia, Government of	Aaa	Aaa	Aaa

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Jan. 5	Dec. 29	Spread Diff
SK Hynix Inc.	Baa2	72	64	8
Development Bank of Kazakhstan	Baa2	143	137	6
Nissan Motor Co., Ltd.	Baa3	77	74	3
SK Innovation Co. Ltd.	Baa3	95	92	3
Korea, Government of	Aa2	22	21	2
Norinchukin Bank (The)	A1	32	30	2
Korea Expressway Corporation	Aa2	29	27	2
Nomura Holdings, Inc.	Baa1	75	74	1
JFE Holdings, Inc.	Baa3	37	36	1
Kazakhstan, Government of	Baa2	62	61	1

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Jan. 5	Dec. 29	Spread Diff
Amcor Pty Ltd	Baa2	73	79	-6
Suncorp-Metway Limited	A1	40	45	-5
SoftBank Group Corp.	Ba3	256	261	-5
Central Japan Railway Company	A2	23	28	-5
Flex Ltd.	Baa3	73	78	-5
Tata Motors Limited	B1	244	249	-5
Commonwealth Bank of Australia	Aa3	27	30	-3
National Australia Bank Limited	Aa3	28	31	-3
Thailand, Government of	Baa1	24	27	-3
Australia and New Zealand Banking Grp. Ltd.	Aa3	27	29	-3

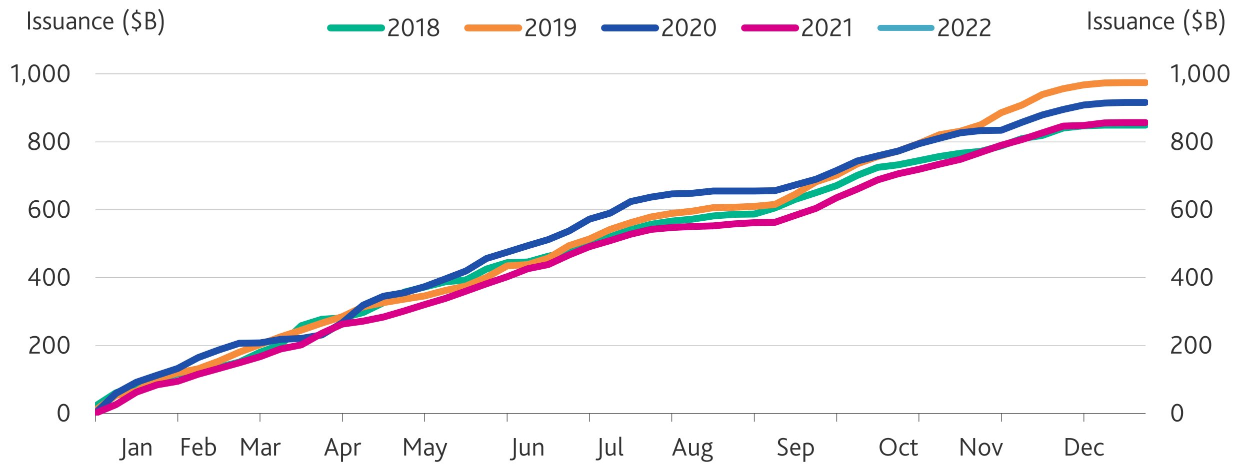
Source: Moody's, CMA

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	0.000	0.000	0.080
Year-to-Date	0.000	0.000	0.080

	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	0.000	0.000	0.000
Year-to-Date	0.000	0.000	0.000

* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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