MOODY'S ANALYTICS

WEEKLY MARKET OUTLOOK
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Angst about the near-term outlook for U.S. inflation is beginning to show as some regional Fed presidents who on net lean hawkish have voiced their concerns. Recently Atlanta Fed President Raphael Bostic said the recent acceleration in inflation could last longer than previously thought, and he labeled "transitory" as a dirty word. He is correct that this bout of inflation could persist a little longer than previously thought as the Delta variant magnifies issues in the global supply chain. That and the recent jump in energy prices will both be inflationary. However, we remain comfortable with our forecast for growth in consumer prices to moderate next year.

The Fed appears to be keeping a close eye on a couple of things to assess whether transitory inflation is turning into something worse. The minutes from the September meeting of the Federal Open Market Committee note that many participants pointed out that the owners' equivalent rent component of price indexes should be monitored carefully since rising house prices could lead to upward pressure on rents.

One month isn't a trend, but monthly growth in owners' equivalent rents posted an above-trend gain in September and further acceleration next year is likely as the CPI for rents lags other measures of rents. Though rental inflation will accelerate next year, we expect this to be more than offset by disinflation in those components of the CPI that have been contributing the bulk of the recent runup, including vehicle prices and those components sensitive to the reopening of the economy.

Also, a few FOMC participants noted there was not yet evidence that robust wage growth was exerting significant upward pressure on prices, though the possibility merited close monitoring. Strong growth in average hourly earnings has been garnering a lot of attention, but average hourly earnings are not the best measure of wage growth. We

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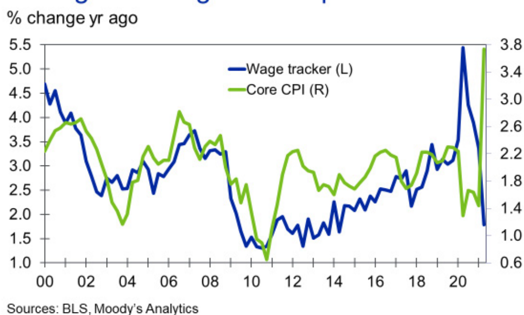
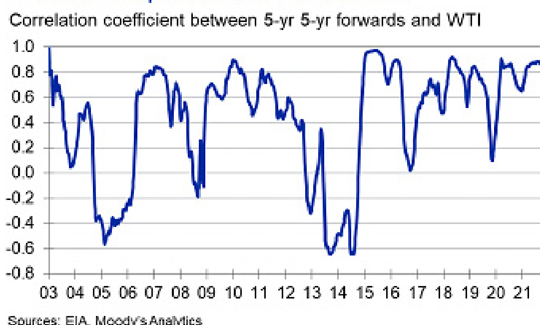
don't put a ton of emphasis on them given the measurement issues. Our takeaway from all the wage data we track is that wage growth has begun to moderate, though some believe this moderation is due to difficult year-over-year comparisons.

This is visible in our wage tracker. In statistical jargon, the measure is defined as the "first principal component" of six wage measures: the employment cost index, average hourly earnings, unit labor costs, the Atlanta Fed Wage Growth Tracker, median usual weekly earnings, and our Current Population Survey-based wage estimate.



Our wage tracker suggests that growth has decelerated recently with year-over-year growth falling below 2%. To confirm that this is not all due to difficult comparisons, annualized growth in our wage tracker remains within the range seen throughout most of the last expansion, suggesting no evidence of a wage-price spiral taking hold. This supports the Fed's transitory view and explains why central bank policymakers are not in a hurry to start discussing raising the target range for the fed funds rate.



The recent rise in market-based measures of long-run inflation expectations hasn't spooked Fed officials, nor should it. The minutes said several participants noted that market measures of inflation expectations were still in ranges broadly consistent with the Fed's long-term inflation objective.

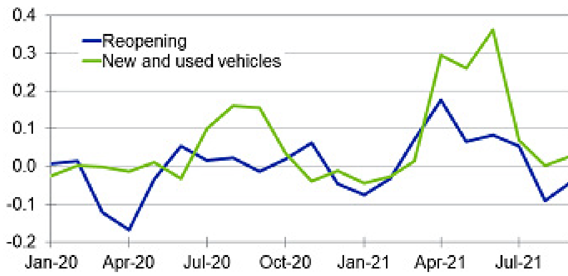
Market-based measures of inflation expectations have risen recently, but when adjusted for the historical gap between the CPI and PCE deflator, inflation expectations are still consistent with the Fed's new policy framework of average inflation targeting. Still, five-year, five-year forward inflation break-even rates are at 2.3%, up 20 basis points over the past month. Inflation swaps have also been on the move; the five-year, five-year forward inflation swap is now at 2.56%, up 19 basis points over the past month. Also, five-year forward inflation break-even rates are following global oil prices; the 52-week correlation coefficient between the two is currently 0.85, at the high end of the range seen over the past few years. Fluctuations in oil prices have a temporary effect on realized inflation and inflation expectations, so the Fed won't be losing any sleep.

Economic roundup

The U.S. consumer price index rose a little more than we anticipated in September, but it didn't alter our high-frequency GDP model's estimate of third-quarter real GDP growth. Our high-frequency GDP model still has third-quarter GDP on track to rise 2.6% at an annualized rate. Risks are weighted to the downside and our tracking estimate could drop later this week with the release of September retail sales. The forecast is for control retail sales, which feed into the Bureau of Economic Analysis' estimate of real consumer spending, to have declined 0.2% in September, compared with the consensus for a 0.5% gain. If our forecast is correct, it will reduce our tracking estimate of fourth-quarter real consumer spending.

Turning back to inflation, the CPI rose 0.4% in September following gains of 0.3% in August and 0.5% in July. The non-reopening components of the CPI such as housing, food and energy were behind the rise in the CPI and suggest that price pressures are broadening. Components of the CPI, including lodging away from home, vehicle rentals, and airfares along with admissions to sporting and other events that are sensitive to the reopening of the economy, subtracted 0.04 percentage point from the September CPI after subtracting 0.1 percentage point in August.

Vehicle prices, which had been providing a big boost to the CPI, were also neutral in September as the gain in new-vehicle prices were offset by the drop in used-car prices. Declines in used-car prices may end in October; the Manheim used-car index has risen recently.



The core CPI was up 0.2% in September, in line with our forecast. September's gain puts the core CPI up 2.7% annualized over the prior three months, compared with the 5.4% gain in August. The core CPI was up 6.6% annualized over the prior six months, a touch less than the 6.8% in each of the prior two months. Odds are that inflation temporarily accelerates in October and November as the impact of higher energy prices bleeds into consumer prices.

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TOP OF MIND

U.S. COVID-19 Cases Shift North

BY ADAM KAMINS

The Delta wave of COVID-19 has crested, and while the damage it has done can be found across a variety of economic measures, improvement is on the horizon. With new cases declining nationally and falling especially sharply in the hardest-hit southern states, there is reason for reassurance. But that comes with caveats.

Crowded hospitals and still-elevated death rates are a reminder that areas that bore the brunt of Delta are hardly out of the woods. Additionally, conditions are not improving everywhere, with cases on the rise in many cold weather states, a pattern that in many ways resembles last year's.

A (partial) sigh of relief

The frightening upward trajectory in new cases across much of the South has ceased, with the past few weeks bringing much-needed relief. States that were hit hardest by the Delta surge have improved markedly, with 11 seeing new cases drop by more than half over a three-week period. Of the states in which this took place, nine are in the South, indicating the degree to which the nation's least vaccinated region is starting to improve. This owes primarily to the natural progression of the virus but may also reflect a pickup in immunity given the volume of recent infections and an immunization rate in some hard-hit areas that is edging higher after a few months in which COVID-19 raged once again.

Florida, Georgia, Louisiana, Oklahoma and Tennessee all experienced declines of more than 60% from mid-September to early October, a sorely needed development following major outbreaks in each state. This makes the risk of even more widespread school closures a bit less salient, even though many more rural pockets of those states are hardly out of the woods.

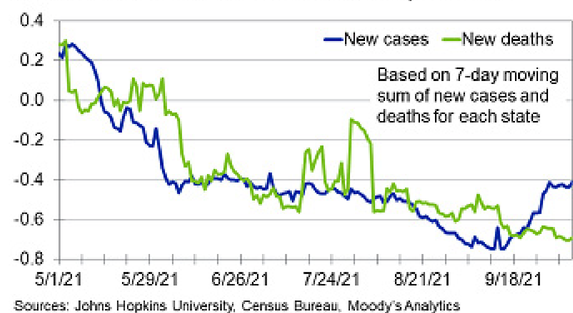
In some ways, this year's pattern is mimicking what took place earlier in the pandemic, with outbreaks in one part of the country eventually dispersing to other regions. Given the idiosyncrasies of the recent wave, including vaccination rate differentials, it was hardly a given that the pattern would persist, but a few weeks into autumn it is becoming increasingly apparent that seasonal patterns have not changed all that much.

Still, an improved trajectory is hardly a cause for celebration. For one, new per capita cases remain close to the national average for most southern states, keeping stretched healthcare systems from experiencing true relief. This means that while most hospitals are no longer stretched beyond capacity, there remains precious little wiggle room.

Further, although the correlation between vaccination rates and new cases is weakening a tad as the virus spreads to states with much higher uptake, the same cannot be said for death rates. The relative concentration of deaths remains far higher in states with a smaller share of residents having received at least one shot. This may partly reflect a lag between cases and deaths, but it also owes in part to the fact that breakthrough infections, while increasing in number, are rarely fatal. In other words, a focus on new positive tests may paint the South in too favorable a light because of a divergence between new cases and deaths.

Cases Shift North, but Deaths Don't Follow

Correlation between vaccination rate as of early Oct and...



Sources: Johns Hopkins University, Census Bureau, Moody's Analytics

Still, it is increasingly clear that the pandemic's center of gravity in the U.S. is again shifting north. While the national infection rate has declined noticeably, there are 15 states that have experienced an uptick since mid-September. Some started from a low base, while others added to a somewhat elevated starting point, but one near-universal characteristic was weather. Every state with an increase in COVID-19 cases, with the exception of Arizona, is located in the northern half of the U.S., and the average annual temperature for all but two of the 15 is below the national average.

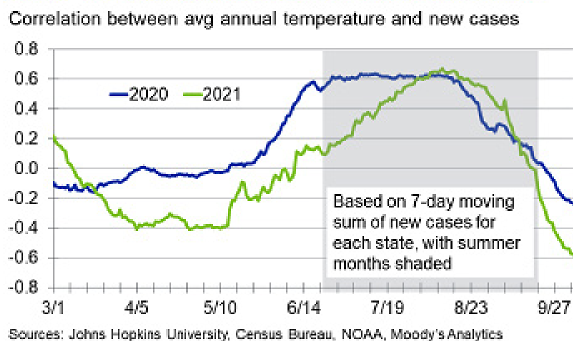
Indeed, the nation's coldest state (Alaska) has reported by far the most new cases in recent weeks, nearly double that of the next-highest set of states. That group is concentrated mostly in the Northern Great Plains and Rocky Mountains. Idaho, Montana, North Dakota and Wyoming are all in the top six for new per capita cases over the past two weeks as well. They are joined by West Virginia, which is located in the South but is home to one of the nation's lowest

vaccination rates and colder temperatures compared with the rest of its region.

This in many ways mirrors the situation last autumn, when the footprint shifted from the Sun Belt to the Upper Midwest. This time around, the movement has begun earlier, and more cases are circulating nationally. But whereas early fall last year marked the beginning of a national surge in cases, the numbers for the U.S. are at least trending in the right direction coming off of their Delta-induced highs.

Still, the persistent link between weather and outbreaks despite the past year's scientific breakthroughs is striking. The relationship between average annual temperature and new cases continues to fluctuate between positive and negative, depending on the season. This suggests that time spent indoors—in the heat during colder months in the northern U.S. or in air conditioning during the summer in the South—remains a key predictor of outbreaks.

Shift Toward Colder Areas Occurs Earlier



It is well-established and easy to understand that the vaccination rate of each state was the most important determinant of its infection rate as the Delta variant surged. But as less vaccinated states improve, does this mean that protection against COVID-19 is not as important to state outcomes?

The short answer is no. To see why, one can regress new per capita cases for each state against the infection rate and average annual temperature. Based on September figures, the impact of each series was strikingly similar. Because the average vaccination rate in percentage terms is larger than the average temperature across states, the similarly sized coefficients suggest that vaccinations still matter a bit more when predicting new cases. But it is also clear that both factors must be considered at this point in the year.

The direction of these relationships is similar to what was observed in October 2020. Both climate and today's vaccination rate were linked to fewer cases. But the magnitude of each effect was less pronounced; this comes as no surprise for the October 2021 vaccination rate, given that no shot had even been submitted for approval a year ago. Instead, it simply signals that states with more vaccinations today were likely those in which residents exhibited more caution a year ago.

Impact of Fall 2021 Vaccination Rate and Average Temperature on New Per Capita COVID-19 Cases

Each observation represents a state

Independent variable	Sep 2021	Oct 2020
Avg annual temperature	-0.229***	0.160***
	(0.034)	(0.035)
Vaccination rate	-0.217***	-0.115***
	(0.034)	(0.034)
Constant	31.654***	20.215***
	(3.125)	(3.170)
N	51	51
Adj. R2	0.576	0.330

*** denotes significance at the 1% level

Sources: Johns Hopkins Univ., NOAA, Moody's Analytics

The enhanced seasonal effects, however, are somewhat surprising and hold up both after controlling for and omitting vaccination rates for each state. They suggest that the shift toward the northern U.S. is no accident and that the broad regional patterns from a year ago are poised to continue. Fortunately, many northern states boast highly vaccinated populations that are less prone to severe illness and death. But those areas that do not, be they entire states or smaller areas within, are now nearly as likely as their southern counterparts to encounter hospital capacity issues, school closures, and the resulting economic disruption.

The Week Ahead in the Global Economy

U.S.

The state of the U.S. housing market will be the focus next week. Among the key data being released are September housing starts and existing-home sales. The new data could move the needle on our high-frequency GDP model's tracking estimate of third-quarter real residential investment and GDP. Existing-home sales feeds into GDP via broker commissions.

We also get new data on industrial production, which will likely squeak out a small gain. Initial claims for unemployment insurance benefits will include the payroll reference week, giving us a early read on job growth in October. With the recent slide in initial claims and the Delta variant's loosening grip on the economy, job growth should be much stronger in October than in each of the prior two months. We will release our high-frequency forecasts early next week.

Europe

Final CPI estimates for the U.K. and the euro zone are on tap. The U.K. inflation rate is expected to come in at 3.2% y/y in September, the same as in August. Although there will be a considerable increase in price growth in the energy component, we expect there will also be a decrease in core inflation due to the phasing out of the base-effect from August 2020's Eat-Out campaign. Electricity prices will be center stage in next week's release due to the dramatic rise in natural gas prices during the month.

The same will be true for the euro zone inflation release. We expect the inflation rate was confirmed at 3.4% y/y in September, up from 3% in August. Though the preliminary estimate showed core inflation speeding up significantly, much of the momentum is still being driven by the energy component.

Finally, the Central Bank of Russia will likely hike its policy rate, the 1-week repo rate, 25 basis points to 7%. This will be the sixth rate hike this year. Russia has been suffering strong inflationary pressures due to global supply shortages and a weak ruble.

Asia-Pacific

China's third quarter national accounts will be the highlight on the economic calendar. China's strong trade performance through the month of September adds confidence to our forecast for the country's third-quarter GDP, estimated to hit 5.4% y/y. The forecast has been subject to several downward revisions amid disappointing domestic consumption and production caused by extreme weather and a Delta-led virus outbreak. This pins our full-year forecast at 8% for 2021 and 4.8% in 2022. External demand will remain favourable heading into 2022.

China is facing challenges on a number of fronts. These include supply chain disruptions, power shortages, elevated commodity prices pressuring downstream producers, and a build-up of credit risk in the property market. These challenges are behind an expected deceleration in September's activity data dump. We look for industrial production, fixed asset investment and retail trade to all slow further in year-on-year terms.

Geopolitical Calendar

Date	Country	Event	Economic Importance	Financial Market Risk
Oct	ASEAN	ASEAN summit	Low	Low
31-Oct	Japan	General elections	Low	Low
Oct/Nov	UN	UN Climate Change Conference COP26	Medium	Low
Nov	Asia-Pacific	Asia-Pacific Economic Cooperation forum	Medium	Low
Nov	China	Sixth plenary session of the Central Committee	Medium	Low
Nov	G-20	G-20 Summit	Medium	Low
7-Nov	Nicaragua	Presidential, congressional elections	Low	Low
14-Nov	Argentina	Legislative elections	Medium	Low
21-Nov	Chile	Presidential elections	Medium	Low
28-Nov	Honduras	Presidential, congressional and municipal elections	Low	Low
19-Dec	Hong Kong	Legislative Council elections	Low	Medium
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
2-Oct-22	Brazil	Presidential and congressional elections	High	Medium
Oct/Nov-22	China	National Party Congress	High	Medium

Delta’s Grip Loosens, Supply Chains Bedevil

BY RYAN SWEET

CREDIT SPREADS

Moody's long-term average corporate bond spread is 100 basis points, 3 bp wider than this time last week. This is below its high over the past 12 months of 118 bps and just above its lowest over the past year of 95 bps. This spread may be no wider than 117 bps by year-end 2021, but the potential for a partial government shutdown and debt-limit crisis could cause some volatility in financial markets at the end of the year. The long-term average industrial corporate bond spread widened 2 bp over the past week to 90 bps. This is slightly above the low of 86 over the past 12 months and well below the high of 108 bps.

The long-term investment grade corporate bond spread was 131 basis points, compared with 129 bps last week. It remains well below its recent high of 169 bps. Investment-grade industrial corporate bond spreads widened from 132 bps to 134 bps.

The recent ICE BofA U.S. high-yield option adjusted bond spread of 325 basis points is 4 bps tighter than at this point last week. The high-yield option adjusted bond spread approximates what is suggested by the accompanying long-term Baa industrial company bond yield spread and wider than that implied by a VIX of 17.1.

Defaults

Not only is issuance strong, but defaults remain very low. The latest Moody’s monthly default report showed the trailing 12-month global speculative-grade default rate at 3% at the end of August. That is its lowest level since the end of February 2020, when it stood at 3.3% just before the start of the COVID-19 pandemic. August was the eighth consecutive month to register a decline in the default rate since it hit a cyclical peak of 6.8% in December 2020.

According to our Credit Transition Model, the global default rate will fall from the current rate of 3% to 1.6% by the end of December. After that, it will stabilize in the 1.5% to 1.7% range in the first half of 2022 before edging up to 1.9% by the end of August 2022. These forecasts incorporate our assumptions that the U.S. high-yield spread will gradually widen from about 300 basis points currently to 505 basis points over the course of the next 12 months. This will be offset by an improvement in the unemployment rate.

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.

U.S. dollar denominated investment-grade issuance was $34.7 billion in the week ended Wednesday, bringing the year-to-date total to $1.349 trillion. High-yield corporate bond issuance rose $8.3 billion, bringing the year-to-date total to $542.3 billion.

Fiscal policy assumptions are key to the outlook for the U.S. economy over the next few years, and there were only tweaks to these assumptions in the October baseline. We still assume $2.5 trillion in government spending on infrastructure and President Biden's Build Back Better agenda. We did alter our assumption about the amount of taxes raised over the next decade through greater tax compliance, reducing it from $600 billion in the September baseline to $120 billion in the October baseline. Therefore, the legislation will add more to the deficit than in the September baseline.

Lawmakers raised the federal debt limit by $480 billion. According to the Treasury, this sum would sustain all borrowing until December 3, the same date by which lawmakers will have to extend government funding and avert a shutdown. This sets up significant policy risk toward the end of 2021, when the U.S. economy may be more vulnerable to brinkmanship on Capitol Hill than it is today. The December deadlines will coincide with the holiday spending season and potentially another wintertime surge in infections as cold weather pushes more Americans indoors. The baseline forecast assumes that lawmakers will either approve a full-year appropriations bill by December 3 or pass another short-term extension of government funding into late December or early 2022. The big question is how Democrats will address the next deadline to increase the debt limit.

COVID-19 assumptions

We adjusted our epidemiological assumptions to anticipate that total confirmed COVID-19 cases in the U.S. will be 47.49 million, compared with the 47.9 million in the September baseline. The seven-day moving average of daily confirmed cases has dropped recently, suggesting that we are likely on the other side of this wave of COVID-19.

The date for abatement of the pandemic changed slightly as it is now November 28, four days later than in the September 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.

Delta eases its grip; supply chains tighten theirs

The Delta variant of COVID-19 weighed more on the economy in the third quarter than previously anticipated. However, the good news is that over recent weeks, a number of high-frequency data we track have improved, suggesting Delta's grip on the economy is loosening. Google mobility at workplaces has increased and is the highest since the pandemic began. Seated diners through OpenTable are also rising, as are box-office receipts. Weekly mortgage purchase applications have resumed rising and oil demand has edged higher.

We cut our forecast for third-quarter GDP growth from 5% at an annualized rate in the September baseline to 3.4% in the October vintage. Risk bias, or the difference between our high-frequency GDP model's estimate of third-quarter GDP growth and our official forecast, is -0.5 percentage point. Therefore, the risks are that third-quarter GDP growth comes in weaker than we expect. We also reduced our forecast for GDP growth in the fourth quarter as it is now expected to increase 6.2% at an annualized rate, compared with 7.5% in the September baseline.

For all of 2021, we now look for GDP to rise 5.8%, a touch lighter than the 6% in the October baseline and in line with the Bloomberg consensus of 5.9%. We look for GDP to rise 4.3% in 2022, identical to the September baseline and slightly stronger than the Bloomberg consensus of 4.1%. GDP growth will continue to moderate in 2023, rising 2.4%, which is still a touch stronger than the economy's potential growth rate.

Global supply-chain issues continue to plague the U.S. economy and have contributed to the acceleration in inflation. One doesn't have to look far to see clear evidence that supply-chain issues are having economic costs. Vehicle inventories are near record lows, driving prices higher. Consumers have responded with unit vehicle sales plunging recently. After running just shy of 19 million annualized units in April, sales dropped to around 12 million in September. Anecdotes in the ISM manufacturing survey remain littered with comments about supply-chain issues.

Easing of the supply-chain bottlenecks is key to our near-term forecast for U.S. manufacturing production, inventory replenishing, and easing in inflationary pressures. To better track the amount of stress on U.S. supply chains, we identified a number of high-frequency metrics and combined them to create a U.S. Supply-Chain Stress Index. The SCSI is indexed such that 100 is the average pre-pandemic stress in U.S. supply chains. Therefore, anything north of 100 indicates greater pressure on supply chains and vice-versa. The SCSI suggests there has been little improvement recently. All three components are well above 100 but, not

surprisingly, transportation is where the most stress lies followed by production and then inventories. We haven't changed our assumptions about when supply-chain issues begin to improve, currently mid-2022, but risks are that it takes longer.

Business investment and housing

There was a small downward revision to the forecast for real business equipment investment this year, but it is still booming. We now look for real business equipment spending to increase 14.5% this year, compared with 15.3% in the September baseline. Growth in equipment spending was revised higher next year to 9.6%, 0.2 percentage point stronger than the September baseline.

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 support investment through the rest of this year and into next. Another favorable development for business investment is that the rate of new-business formations remains strong. The biggest downside risk is 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 revised higher this year. It is forecast to drop 6.2%, less than the 6.7% decline in the September baseline. We expect double-digit growth in real nonresidential structures investment in each of the next two years.

Because of incoming data, we raised our forecast for the commercial price index. We expect it to rise 8.3% this year, compared with 6.2% in the September baseline. We also now look for it to rise 1.9% next year, slightly better than the 1.1% in the prior baseline. We expect a rebasing of asset values across the board if interest rates begin to rise in the near term—retail and office will be hit hard because of longer-term evolutionary dynamics at work for these two property types.

The housing data are going to be volatile because of rebuilding after Hurricane Ida. This is normal after major hurricanes, but there is more uncertainty about the timing because of high construction costs and shortages of materials and labor. The downward revision to the housing starts forecast in the baseline is mostly attributable to incoming data, which we now expect to increase 14.2% this year, compared with 16.3% in the September baseline. Starts are expected to increase by 9.4% next year and 6.6% in 2023.

The gap between housing demand and supply led us to boost our forecast for house price growth this year and next. We have been steadily revising our forecast higher for house prices over the past several months. The forecast is for the FHFA All-Transactions Home Price Index to increase 10.5% this year and 5.8% next year. The August baseline had house prices rising 7.7% this year and 5.8% in 2022.

Bumpy road to year end

To achieve our forecast for fourth-quarter GDP growth, consumers will need to do their part. The trajectory for real consumer spending was on an unfavorable trajectory heading into the quarter as unit vehicle sales declined in September. The trajectory for consumer spending is important in normal times, but these are not normal times. It will take a strong start to the fourth quarter for real consumer spending to come anywhere close to our forecast for around a 6% annualized gain. The mini reopening of the economy following this wave of COVID-19 would help, particularly for spending on consumer services. However, goods spending may be a problem since COVID-19 could alter the timing of holiday shopping.

There is a high probability that the holiday shopping season this year begins sooner than normal or already is underway. Many media reports and retailers have warned consumers to start their holiday shopping early, because supply-chain issues have limited inventory for the season. This is clear in the inventory-to-sales ratio, which is among the lowest in recent memory. Last year, warnings by retailers brought forward some holiday shopping from November into October and from December into November. Also, there were concerns about the timeliness of deliveries from retailers, and these haven't been resolved as job openings in transportation remain extremely elevated.

Earlier-than-normal holiday shopping will wreak havoc with the seasonal adjustment process. After seasonal adjustment, October and November retail sales could be strong, but December would be a big dud. Again, getting back to the trajectory for real consumer spending, a really bad December would lend downside risk to our forecast for consumer spending and GDP growth in the first quarter of 2022. That's because there won't be any idiosyncratic events to help rescue spending early in the quarter, leaving a sizable mountain to climb. Though this

year could end on a high note, next year could get off to a slower-than-expected start. But, blame the holidays.

Another disappointing employment report

Nonfarm employment rose by 194,000 between August and September, but the net revision to the prior two months was sizable, totaling 169,000. Revisions over the past several months have been considerable and there isn't a reason that this won't occur again when September employment is revised. Some of the weakness is misleading. For one, seasonal adjustment issues likely depressed the total gain in nonfarm employment by 150,000 to 200,000 in September. This is clear in the drop in government employment as the seasonal adjustment factor depressed the measure of non-teacher educational workers.

The September baseline incorporates the August employment report. We anticipate some payback in subsequent months and average monthly job growth this year is forecast to average 536,000, compared with 543,000 in the September baseline forecast. Risks are weighted to the upside. Job growth in the fourth quarter could be stronger than expected, since the Delta variant won't be as large of a drag.

One area where we find clear evidence that COVID-19 weighed on the job market in September is in the number of people not at work because of their own illness. The September payroll reference period coincided with the recent peak in COVID-19 cases. Lately, there has been a strong correlation between the number of people not at work because of their own illness and the average confirmed daily COVID-19 cases during the payroll reference period.

On a seven-day moving average, COVID-19 cases totaled 57,715 on October 10. For the October payroll reference week, new data on COVID-19 suggests there should be a significant improvement relative to the September payroll reference period. Based on the relationship with COVID-19 cases, the number of people not at work because of their own illness could drop closer to 1.3 million in October after being near 1.6 million in September.

The unemployment rate is forecast to average 4.6% in the fourth quarter of this year, compared with 4.5% in the prior baseline. The unemployment rate was revised lower next year and is now expected to average 3.5% in the fourth quarter of 2022. Risks to the forecast for the labor market are weighted to the downside, as the Delta variant delayed the return to the labor force for many because of childcare and health concerns. Lack of labor supply is the biggest problem; businesses had 10.4 million open positions at the end of August. Still, we expect the economy to hit full employment by the end of 2022 or early 2023.

Inflation and the Fed

New historical data and the Delta variant led us to revise our forecast higher for the core PCE deflator, now expected to rise 4% on a year-ago basis in the fourth quarter of this year, compared with 3.9% in the September baseline. Though we have been revising our forecast for core inflation higher recently, it is still driven by transitory factors. We look for inflation to moderate next year, with the core PCE deflator up 2.3% on a year-ago basis in the fourth quarter of 2022, only 0.1 percentage point higher than in the prior baseline. The headline PCE deflator could rise more than anticipated through the remainder of this year because of the jump in oil, natural gas and retail gasoline prices. The upward revision to the forecast for natural gas prices in the October baseline incorporates what has happened in markets recently.

We are sticking with our assumption about when the Fed begins tapering its $120 billion in monthly asset purchases. We expect the Fed to start tapering in December by cutting its monthly asset purchases by $15 billion to $105 billion. The Fed will reduce these purchases by $15 billion per month, completing the tapering process by mid-2022. After that, the Fed will reinvest the proceeds from maturing assets to ensure its balance sheet doesn't contract.

We still assume the first rate hike will occur in early 2023. The fed funds rate reaches its equilibrium rate in the second half of 2025, a touch above 2.5%. Markets have adjusted their expectations for tightening but still anticipate a more gradual pace than our baseline.

Tapering won't impact inflation. Though tapering won't be disinflationary, it could help keep market-based measures of inflation expectations anchored, since tapering is the preamble to the Fed beginning to tighten monetary policy either by allowing its balance sheet to decline and/or by increasing the target range for the fed funds rate.

The October baseline also incorporates the recent runup in the 10-year Treasury yield, which is around 1.6%. A good chunk of the increase in the 10-year is attributable

to the term premium, or the extra compensation investors need to hold long-term Treasuries rather than shorter-maturity ones. One reason for the rise in the term premium is the more aggressive, eight-month tapering timeline laid out by the Fed recently. Also, tapering could start sooner, with the first reduction occurring in November. The new tapering timeline also means the Fed will buy $600 billion less in Treasuries and mortgage-backed securities. This puts some upward pressure on the 10-year term premium.

Our past work has shown that not only does realized inflation raise the term premium, but so do energy prices. Global energy prices continue to climb; this is helping to raise the 10-year term premium. Better headlines on the Delta variant could also push the term premium higher, and there are signs that the worst of this coronavirus wave is behind us. The 10-year Treasury yield is expected to end this year at 1.8% and end 2022 at just south of 2.4%.

The forecast is that the Dow Jones Industrial Average has peaked and will gradually decline during the next year. Risks are heavily weighted to the upside, but peak growth, inflation uncertainty around fiscal policy, and the Fed tapering could weigh on equity markets.

Germany Update: Supply Disruptions Take Hold

BY EVAN KARSON

Following last week's disappointing German industrial production release covering August, we made modest but material changes to our forecasts. Instead of a 1.5% q/q gain, the baseline scenario now estimates that Germany's industrial production index will decline 1.7% q/q once all the data come in for the third quarter of 2021. This adjustment reflects the inclusion of new, weaker-than-expected figures for August and a dimmer projection for September.

Tough Stretch Ahead for German Factories

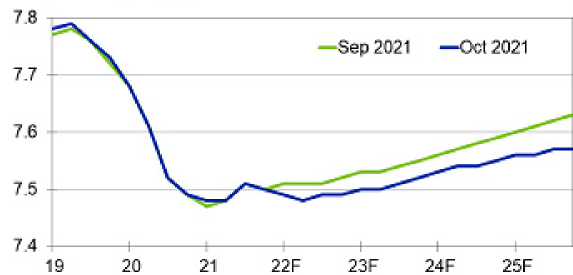
Industrial production, 2015=100

Sources: Deutsche Bundesbank, Moody's Analytics

The baseline forecast projects a slow recovery after that as supply-chain disruptions keep industrial production growth anemic into early 2022. Supply issues are assumed to begin easing in mid-2022, paving the way for speedy gains in factory output. Growth slows in 2023, but the level of production temporarily exceeds the trend as factories work through backlogged orders. This feature of the forecast depends on the assumption that factory orders, which rose swiftly through July, do not shrink significantly.

Employment Forecast Changes

Manufacturing employment, # mil, SA



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

Our forecast for manufacturing payrolls suffered a slight downgrade in the October vintage, but the markdown stemmed predominantly from changes to projections for demographics and labor force. We continue to expect that supply-chain disruptions will not damage factory payrolls significantly thanks to Germany's trademark Kurzarbeit, or short-time work program.

With the October vintage, we switched to a labor force forecast path that tracked growth in the prime-age population more closely. The new labor force trajectory follows a slower growth path and yields a labor force-to-prime age population ratio closer to historical trends. This change led to weaker employment growth forecasts across all industries for Germany.

China Market Outlook

BY Christina Zhu and Xiao Chun Xu

China's foreign trade performance beat expectations again in September, with higher prices underpinning a 3.9% rise in exports over the month and a 1.3% rise in imports. In yearly terms, exports surged 28.1% and imports increased 17.6%. As export growth outpaced import growth, the trade surplus widened to US$66.8 billion in September from $58.3 billion in August.

External demand improved as more economies eased lockdown measures and moved toward a "living-with-COVID" approach. Demand for medical equipment remained strong as countries prepared for higher caseloads after the lifting of movement restrictions. The reopening of major economies and stockpiling by retailers ahead of the Western holiday shopping season buoyed exports across a range of consumer goods from toys and home appliances to mobile phones.

China's strong trade performance adds confidence to our forecast for the country's third-quarter GDP, which has been downwardly revised several times due to disappointing domestic consumption and production caused by extreme weather and a Delta-led virus outbreak over the past two months. We look for China's GDP to slow to 5.4% y/y, from 7.7% in the June quarter. External demand will remain favourable, but the question is whether China will be able to fully capitalise on the opportunity given domestic supply challenges such as power shortages and elevated producer prices.

Meanwhile, producer prices in China rose at a record pace driven by a coal shortage bidding up energy prices. China's producer price inflation rose to 10.7% y/y in September from 9.5% in August, exceeding expectations. Inflation expectations will be elevated for the next six months, with rising oil prices, robust export demand, and the cold season pushing up energy prices. In contrast to earlier in the year when metal price hikes were absorbed by the producer, electricity price rises due to the coal shortage will be passed to the consumer. These disruptions in coal supplies could add to bottlenecks in the global supply chain.

The costs of a persistent coal shortage cannot be understated. Power shortages will continue to reduce industrial power consumption in the fourth quarter. Manufacturing will be significantly affected, which will flow through to the global supply chain. Conditions will dramatically worsen as winter approaches if the government cannot ensure energy supply security. Energy supply issues are significantly more deleterious than the commodity price booms due to their pervasive nature and the fact that the issue cannot be resolved by simply letting the producers cannot absorb the rising costs. Without sufficient power supply, factories will need to shut down and export prices will be bid up. Furthermore, authorities were forced to allow coal-fired power plants to charge more for electricity supply, which directly adds to the consumer prices.

The rise in producer prices and coal crunch led to a marked dropoff in China manufacturing PMI. The manufacturing PMI slipped to 49.6 from 50.1 in August, marking the first contractionary reading since March last year. Small and medium-sized producers were most affected as their PMI index sank deeper in the contractionary zone while the index for large enterprises remained above the neutral 50 mark. We will update our forecast view for the Chinese economy once it becomes clearer how quickly coal supply security can be restored.

RATINGS ROUNDUP

Steady Improvement

BY STEVEN SHIELDS

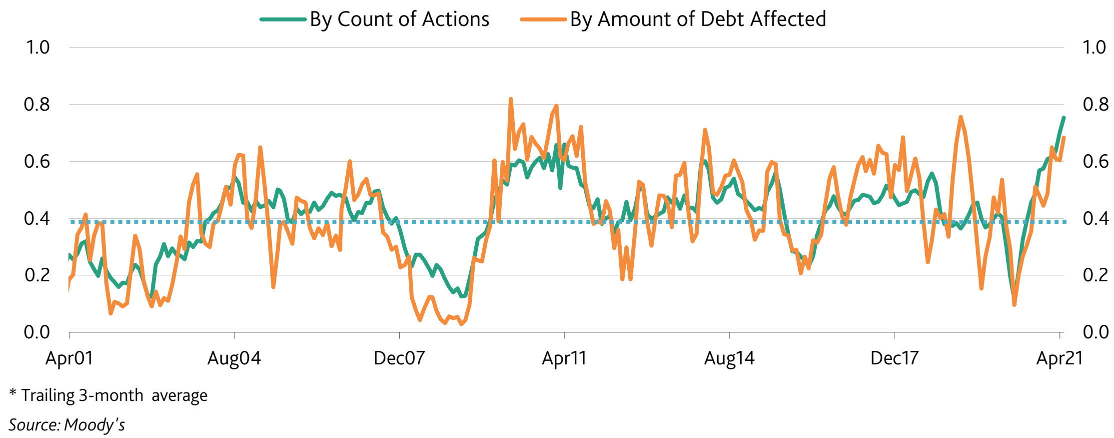
U.S. corporate credit quality continues to steadily improve as the adverse impacts from the COVID-19 pandemic recede. For the week ended October 13, upgrades comprised nearly 80% of rating changes issued by Moody's Investors Service. The most notable upgrades were issued to Antero Midstream Partners LP and Antero Resources Corp. with its senior unsecured rating raised to Ba3 from B1. According to the report, Antero Resources Corp.'s credit profile reflects its much improved financial leverage and maturity profile following roughly $1.7 billion of debt reduction in 2020-21, sharp increases in global natural gas and NGLs prices, reduced capital spending plans, and declining firm-transport volume commitment costs that should boost future margins. Antero Midstream Partners LP's credit profile reflects its heavy reliance on Antero Resources, concentrated geographic focus in the Appalachian Basin, and indirect exposure to highly volatile natural gas and natural gas liquids prices. Meanwhile all three U.S. downgrades in the period were issued to investment-grade firms. Public Service Enterprise Group Inc.'s first mortgage bond rating was lowered to A1 from Aa3, impacting approximately $14.9B in outstanding debt. The ratings action reflects PSEG's deteriorating credit metrics and increased debt levels at the parent company to fund offshore wind expansion and a high level of utility capital investment, which will keep its metrics at lower levels over the next few years.

Europe

Rating activity was low across Europe with only three ratings changes issued in the period. Two of the three changes were upgrades, and they accounted for nearly all the affected debt. Danaos Corp.'s senior unsecured bond ratings were upgraded one notch to B3 from Caa1 on October 11. The action reflected the currently very strong market demand for container transport, where a capacity shortage to meet demand has elevated charter rates to unprecedented levels, combined with an ongoing deleveraging of Danaos capital structure.

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
10/6/2021	RANGE RESOURCES CORPORATION	Industrial	SrUnsec/LTCFR/PDR	3830.7	U	B2	B1	SG
10/6/2021	SONIC AUTOMOTIVE, INC.	Industrial	LTCFR/SrSub/PDR	250.0	U	Ba3	Ba2	SG
10/6/2021	FIRST BANCORP-FIRSTBANK PUERTO RICO	Financial	LTIR/LTD		U	B2	B1	SG
10/6/2021	REGIONAL TRANSPORTATION DISTRICT, CO	Industrial	SrSec		U	Baa2	Baa1	IG
10/6/2021	ANTERO RESOURCES CORPORATION	Industrial	SrUnsec/LTCFR/PDR	6300.0	U	B1	Ba3	SG
10/6/2021	ANTERO MIDSTREAM PARTNERS LP	Industrial	SrUnsec/LTCFR/PDR	6500.0	U	B1	Ba3	SG
10/7/2021	GENERAL DYNAMICS CORPORATION	Industrial	SrUnsec/CP	11500.0	D	A2	A3	IG
10/7/2021	THE OCTAVE MUSIC GROUP, INC.	Industrial	SrSec/BCF/LTCFR/PDR		U	B3	B2	SG
10/7/2021	GUITAR CENTER INC. (NEW)	Industrial	SrSec/LTCFR/PDR	350.0	U	Caa1	B3	SG
10/8/2021	ECOLAB INC.	Industrial	SrUnsec	6431.0	U	Baa1	A3	IG
10/8/2021	PUBLIC SERVICE ENTERPRISE GROUP INCORPORATED	Utility	SrSec/SrUnsec/LTIR/Sub/MTN/PS/CP	14860.7	D	Aa3	A1	IG
10/8/2021	NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY	Financial	SrSec		D	Aa3	A1	IG
10/12/2021	LIFE TIME, INC.	Industrial	SrSec/SrUnsec/SrSec/BCF/LTCFR/PDR	1875.0	U	B3	B2	SG

Source: Moody's

FIGURE 4

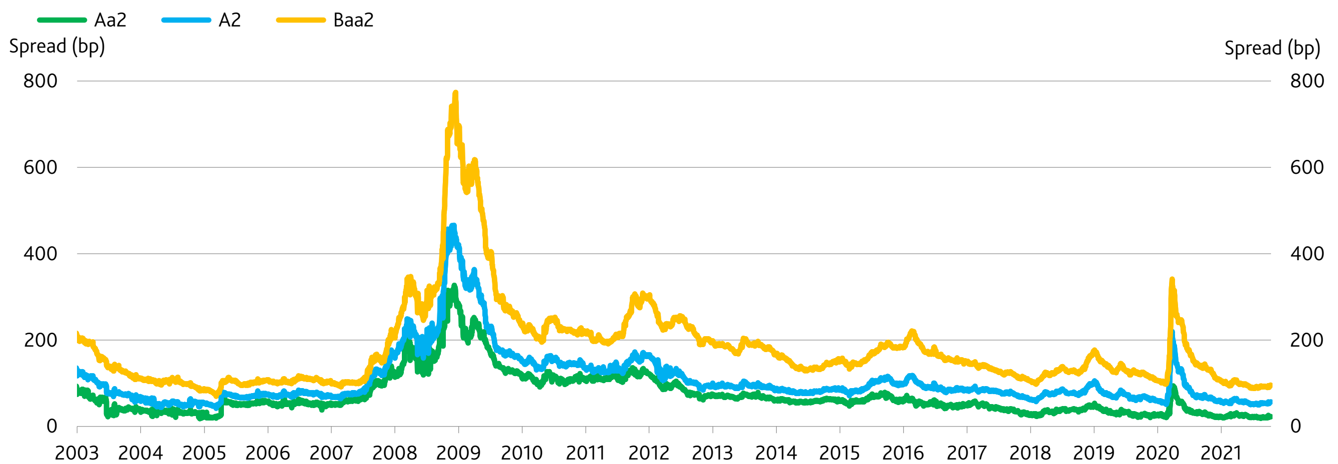
Rating Changes: Corporate & Financial Institutions - Europe

Date	Company	Sector	Rating	Amount ($ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/ SG	Country
10/8/2021	KUTXABANK, S.A	Financial	LTD		U	Baa2	Baa1	IG	SPAIN
10/11/2021	DANAOS CORPORATION	Industrial	SrUnsec/LTCFR/PDR	300.0	U	Caa1	B3	SG	GREECE
10/12/2021	STAN HOLDING S.A.S.	Industrial	SrSec/BCF/LTCFR/PDR		D	Ba3	B1	SG	FRANCE

Source: Moody's

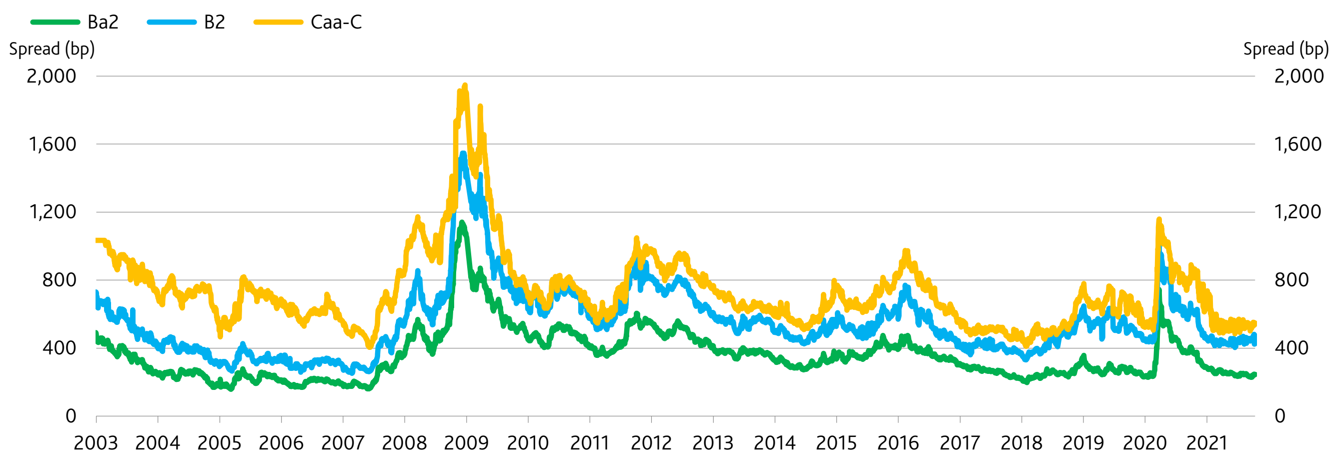
MARKET DATA

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 (October 6, 2021 – October 13, 2021)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Oct. 13	Oct. 6	Senior Ratings
R.R. Donnelley & Sons Company	B1	Caa2	B3
Baker Hughes Holdings LLC	A2	Baa1	A3
Camden Property Trust	A3	Baa2	A3
Clorox Company (The)	Aa3	A2	Baa1
Caterpillar Financial Services Corporation	A1	A2	A2
Raytheon Technologies Corporation	Aa3	A1	Baa1
United Airlines, Inc.	B3	Caa1	Ba3
Consolidated Edison Company of New York, Inc.	A1	A2	Baa1
Cargill, Incorporated	A2	A3	A2
Caterpillar Inc.	Aa3	A1	A2

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Oct. 13	Oct. 6	Senior Ratings
Philip Morris International Inc.	A2	Aa3	A2
Citigroup Inc.	Baa2	Baa1	A3
Verizon Communications Inc.	Baa2	Baa1	Baa1
Oracle Corporation	A2	A1	Baa2
Citibank, N.A.	Baa3	Baa2	Aa3
HCA Inc.	Ba1	Baa3	Baa3
Bank of New York Mellon Corporation (The)	A1	Aa3	A1
FedEx Corporation	A2	A1	Baa2
Cox Communications, Inc.	Baa1	A3	Baa2
Eli Lilly and Company	Aa2	Aa1	A2

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Oct. 13	Oct. 6	Spread Diff
K. Hovnanian Enterprises, Inc.	Caa3	813	784	29
TEGNA Inc.	Ba3	382	356	27
Liberty Interactive LLC	B2	404	380	24
Carnival Corporation	B2	400	377	23
Pitney Bowes Inc.	B1	487	469	18
CSC Holdings, LLC	B3	357	341	16
Univision Communications Inc.	Caa2	403	390	14
Delta Air Lines, Inc.	Baa3	246	232	14
Tenet Healthcare Corporation	Caa1	305	292	13
Calpine Corporation	B2	355	342	12

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Oct. 13	Oct. 6	Spread Diff
R.R. Donnelley & Sons Company	B3	307	546	-239
Nabors Industries, Inc.	Caa2	570	595	-25
MGM Resorts International	Ba3	210	232	-22
American Axle & Manufacturing, Inc.	B2	420	440	-20
Rite Aid Corporation	Caa2	963	981	-18
Wendy's International, LLC	Caa2	182	200	-18
Avis Budget Car Rental, LLC	B3	234	250	-15
Baker Hughes Holdings LLC	A3	40	55	-15
Southern California Edison Company	Baa2	75	88	-14
Domtar Corporation	Ba3	386	400	-14

Source: Moody's, CMA

CDS Movers

Figure 4. CDS Movers - Europe (October 6, 2021 – October 13, 2021)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Oct. 13	Oct. 6	Senior Ratings
Societe Generale	Aa3	A1	A1
Banque Federative du Credit Mutuel	Aa3	A1	Aa3
ING Groep N.V.	A1	A2	Baa1
Credit Agricole Corporate and Investment Bank	Aa2	Aa3	Aa3
Landesbank Hessen-Thueringen GZ	Aa2	Aa3	Aa3
GlaxoSmithKline plc	Aa1	Aa2	A2
BASF (SE)	Aa1	Aa2	A3
Renault S.A.	Ba2	Ba3	Ba2
Eni S.p.A.	A3	Baa1	Baa1
Air Liquide S.A.	Aa1	Aa2	A3

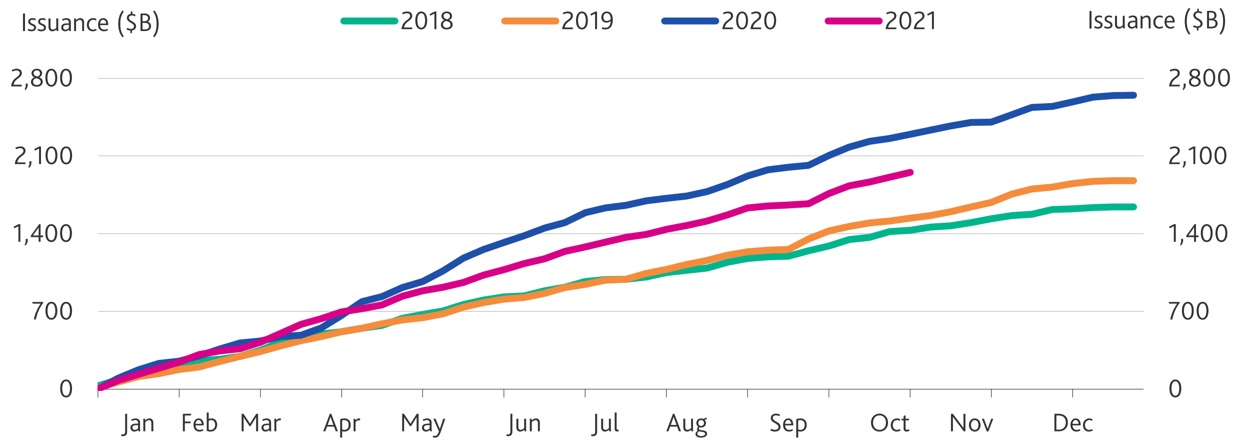
CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Oct. 13	Oct. 6	Senior Ratings
Banco Santander S.A. (Spain)	A1	Aa3	A2
Intesa Sanpaolo S.p.A.	Baa2	Baa1	Baa1
Barclays PLC	Baa2	Baa1	Baa2
Banco Bilbao Vizcaya Argentaria, S.A.	A2	A1	A3
CaixaBank, S.A.	A3	A2	Baa1
Lloyds Bank plc	Aa3	Aa2	A1
Danske Bank A/S	Aa3	Aa2	A3
NatWest Group plc	Baa1	A3	Baa1
Vodafone Group Plc	Baa2	Baa1	Baa2
Nationwide Building Society	A2	A1	A1

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Oct. 13	Oct. 6	Spread Diff
Boparan Finance plc	Caa1	1,136	1,065	71
Iceland Bondco plc	Caa2	598	536	62
Casino Guichard-Perrachon SA	Caa1	605	576	29
Ineos Group Holdings S.A.	B2	277	248	28
Piraeus Financial Holdings S.A.	Caa2	577	555	22
Novafives S.A.S.	Caa2	712	690	22
Avon Products, Inc.	Ba3	225	213	12
Permanent tsb p.l.c.	Baa2	224	217	7
thyssenkrupp AG	B1	236	230	6
Hammerson Plc	Baa3	171	165	6

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Oct. 13	Oct. 6	Spread Diff
Jaguar Land Rover Automotive Plc	B1	361	419	-58
Banca Monte dei Paschi di Siena S.p.A.	Caa1	146	179	-33
Ziggo Bond Company B.V.	B3	232	246	-14
Premier Foods Finance plc	B3	207	220	-12
Rolls-Royce plc	Ba3	164	171	-8
Caixa Geral de Depositos, S.A.	Baa2	91	98	-7
UPC Holding B.V.	B3	185	192	-7
Anglo American plc	Baa2	122	128	-6
Stena AB	Caa1	454	460	-6
Virgin Media Finance PLC	B2	253	258	-5

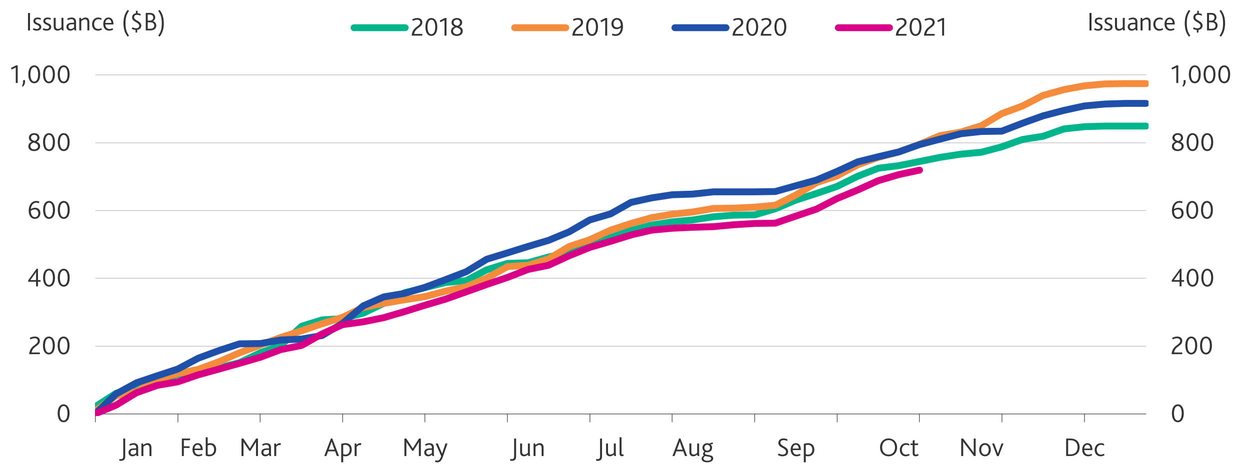
Source: Moody's, CMA

Figure 5. Market Cumulative Issuance - Corporate & Financial Institutions: USD Denominated



Source: Moody's / Dealogic

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



Source: Moody's / Dealogic

Figure 7. Issuance: Corporate & Financial Institutions

	USD Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	34.745	8.315	43.935
Year-to-Date	1,349.196	542.332	1,953.063

	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	9.506	3.803	13.308
Year-to-Date	569.019	131.130	718.963

* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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