

**WEEKLY MARKET
OUTLOOK**

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Lead Authors

Ryan Sweet
Senior Director-Economic Research

Asia-Pacific

Katrina Ell
Economist

Europe

Ross Cioffi
Economist

U.S.

Adam Kamins
Director

Michael Ferlez
Economist

Ryan Kelly
Data Specialist

Podcast



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Taper, Shutdown and Debt Ceiling, Oh My

The Federal Open Market Committee this week sent its long-promised advance notice on tapering its \$120 billion in monthly asset purchases. The key phrase added to the post-meeting statement is that the economy has made progress toward the central bank's goals and if "progress continues broadly as expected, the Committee judges that a moderation in the pace of asset purchases may soon be warranted."

The other big change to the statement was the acknowledgment that the rise in COVID-19 cases has slowed the recovery in those parts of the economy hurt most by the pandemic. The Fed also altered its description of inflation from "has risen" to "is elevated." This is mostly recognition of the incoming data on inflation, but based on its new Summary of Economic Projections, the Fed hasn't abandoned the view that the inflationary pressures will be transitory. There were no dissents at the September meeting.

There was some movement in the Fed's dot plot: Nine participants now anticipate at least a single rate hike in 2022, compared with seven previously. This was enough to shift the median projection for the target fed funds rate for the end of 2022 to 0.25%. Previously, the first rate hike was penciled in for 2023. The Fed is evenly split between raising rates for the first time in 2022 or 2023, but we believe Fed Chairman Jerome Powell and the Fed governors' dots are in 2023. Corresponding with the first hint that tapering could occur soon, the shift in the median rate projection into 2022 could be a communications change for Powell, who has tried to divorce the Fed's balance sheet and interest rate policies.

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The median projection is for the fed funds rate to be 1% in 2023 and 1.75% in 2024. This is the first time the Fed has released its projections for 2024. The median projection is for the fed funds rate to be below the Fed's estimate of the long-run equilibrium fed funds rate, which remained at 2.5%. This could imply the Fed is factoring in a phase-in of the tightening cycle, since a 25-basis point rate hike per meeting would put the fed funds rate close to 2.5% at the end of 2024. The Fed's expected path of the fed funds rate is between ours, which is more aggressive, and market expectations, which are penciling in a gradual tightening cycle.

We don't put too much stock in the dot plot beyond a year because of the uncertainty in the inflation and growth outlook and because it has a poor track record, as the actual path of the fed funds rate has differed noticeably.

December...no, wait, November

As we were finishing up parsing the post-meeting statement from the September meeting of the FOMC, we felt confident in our baseline forecast for the first reduction in the central bank's \$120 billion in monthly asset purchases to occur in December. But then came Powell's not-so-subtle wink-wink moment.

Powell said that the tapering process could be wrapped up by mid-2022, which would require either an earlier start or larger reductions. In response to a question about the criteria for "substantial further progress" toward meeting the Fed's objectives, a requirement to begin tapering, Powell said progress on the inflation front had been met. He noted that many on the FOMC think progress on the employment front has been met, while Powell thinks it is all but met. In other words, as long as September employment isn't a disaster, the Fed will begin tapering at its November meeting. Therefore, it would skip a formal announcement and a one-meeting delay to dive right into the tapering process. It seems we're headed for an eight-month taper, or \$15 billion reduction per month.

Things can change and the next several weeks could be rocky ones for the economy and financial markets, which could factor into the Fed's timing of tapering. The Fed likes flexibility, which is why it didn't commit to a specific date, because it knew about the potential for a partial government shutdown and a nasty debt-ceiling battle. When asked about the debt ceiling, Powell said it's very important for it to be raised.

The Fed doubled the size of counterparty limits on its reverse repo facility from \$80 billion to \$160 billion. This should ease some pressure on short-end rate markets and the Treasury bill market. The Treasury bill market has been under pressure as the Treasury Department has reduced its

general account balance at the Fed, and there is some angst about the debt ceiling, which has caused a kink in the Treasury bill curve. This week the Treasury Department announced that it is reducing the size of its weekly three- and six-month Treasury bill auctions by \$3 billion to create room under the debt ceiling limit.

Nuts and bolts of partial government shutdown

Our September baseline forecast assumes there isn't a partial government shutdown, but risks are rising. For one, Democrats could pass a short-term extension of spending authority without the debt limit attached. This would be kicking the can down the road a few weeks but would align with the drop-dead date for raising the debt ceiling. Whether Republican, Democrat or Independent, lawmakers know that voting against raising the debt ceiling would have enormous economic costs and be political suicide.

We expect the best, but are quantifying the worst. The debt ceiling will be raised. Not doing so would be catastrophic for the economy, so this is an extremely low probability event. Therefore, let's focus on the economic costs of a partial government shutdown.

Based on past partial government shutdowns, our estimate is that a shutdown reduces GDP growth by 0.1 percentage point per week. In the National Accounts, the main direct or accounting effect on GDP of a shutdown rises because compensation of federal employees is treated as GDP produced by the federal government. However, the distinction between real and nominal compensation is important here. Nominal compensation reflects pay accruing to workers. Real compensation is based on hours actually worked. Therefore, it doesn't matter when the shutdown occurs during the quarter. It will be a drag on growth, because it is unlikely that furloughed workers will make up the lost hours. In 2019, government workers affected by the shutdown received back pay, but there was still a hit to real GDP, since the hours lost weren't recouped.

The spillover effects intensify the longer the shutdown. Putting hours worked and compensation effects aside, a partial government shutdown could cause a lapse in food stamp payments and release of loans via the Small Business Administration. While government-sponsored enterprises Fannie Mae and Freddie Mac are continuing with business as usual during the shutdown—since they don't depend on government money to run—potential homebuyers could run into delays getting mortgages to close on purchases, especially if they rely on Federal Housing Administration or Department of Agriculture loans.

A shutdown will likely increase both policy uncertainty and partisan conflict. We would be more concerned about the drag on the economy from heightened policy uncertainty

than political conflict. The results show that a sudden increase in partisan conflict has a small effect on private employment over the course of three years following the shock. The impact on real nonresidential fixed investment is more noticeable but not enormous. The results may seem a bit surprising. However, partisan conflict can at times be a positive factor for the economy. For example, conflict can cause brinkmanship, preventing fiscal policy from harming the economy.

Our estimate of the weekly drag on GDP from a partial government shutdown may be conservative this time around, because the shutdown would occur only weeks before the drop-dead date for raising the debt ceiling. In the past, government shutdowns that occurred around debt-ceiling deadlines were more disruptive to the economy and financial markets, a-la 2013. It is difficult to gauge the effect on financial market conditions, but a partial government shutdown just weeks before the debt ceiling needs to be raised could be costly and a risk not worth taking.

Debt ceilings past

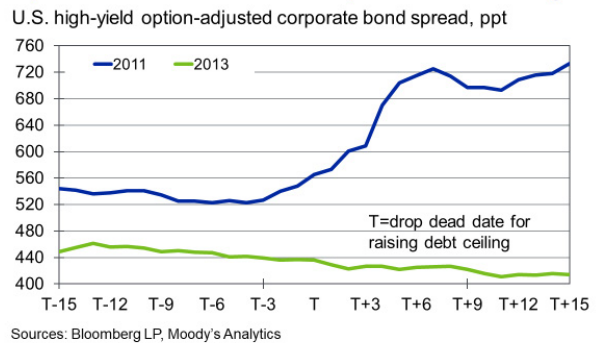
Angst in financial market conditions could intensify over the next several weeks as we draw closer to the drop-dead date for raising the debt ceiling, which we estimate is October 20. In assessing how financial markets fared leading up and shortly after past contentious debt ceiling battles, it's important to note that other problems occurred. The two debt ceiling episodes we focused on were in 2011 and 2013 but each was different. The 2011 deficit led to budget sequestration and there was also a weakening in the European economy while the 2013 deadline occurred during a partial government shutdown. The composition of Congress also differs now; there was a divided government in both 2011 and 2013.

Higher Volatility Could Be Ahead



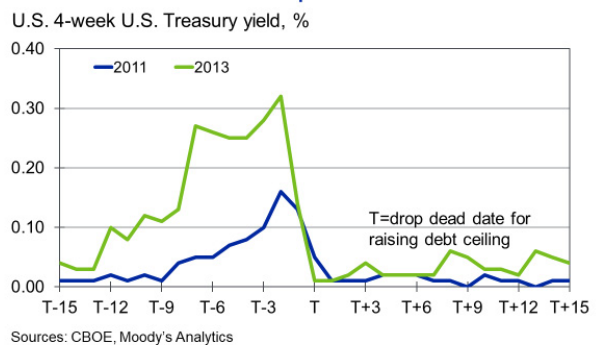
There is clear evidence that both the debt ceiling fights in 2011 and 2013 had an effect on U.S. financial market conditions but the corporate bond market fared better than others. The U.S. high-yield option adjusted corporate bond spread began to widen only a few days before the drop-dead date for raising the debt ceiling in 2011, while it was little changed ahead of the 2013 debt ceiling but tightened afterward. We don't find evidence that U.S. corporate bond issuance was adversely affected leading up to the 2011 or 2013 debt ceiling decisions.

Spreads Weather Lead-Up to Debt Ceiling



Not surprisingly, the 4-week Treasury yield climbed in both 2011 and 2013 but by varying degrees.

Short-term Rates Respond



The jump in the 4-week Treasury yield in 2013 was noticeably larger but that likely was attributable to the debt ceiling battle overlapping with a partial government shutdown. The good news is that rates dropped immediately after it was announced that the debt ceiling would be increased.

Drivers of the August Job Numbers Downer

BY ADAM KAMINS

[U.S. regional and state payroll data](#) released last week provided a glimpse into the drivers of August's disappointing national figure. Pronounced weakness in certain industries nationally, including accommodation and food services, shed some light earlier this month about which states would struggle most, but the actual figures sprinkled some surprises in with a set of mostly expected winners and losers.

Although no sweeping conclusions about regional recoveries can be derived from the regional payroll survey, there were some clear insights and perhaps a final word on the controversial decision by numerous state leaders to end enhanced unemployment insurance benefits early.

Expected vs. actual rankings

Perhaps the most intuitive way to predict state payrolls involves a deconstruction of U.S. data. When the national payroll survey [figures for August](#) were released on the first Friday of this month, among the most striking findings was the sharp decline in accommodation and food services. This provided an immediate hint that reduced confidence and labor supply issues were holding back growth.

Regionally, the implication was that tourism hubs experienced widespread setbacks last month. But that was only part of the story. Hawaii, the nation's second-most tourism-dependent economy, was the nation's worst-performing state from July to August. But Nevada, the only state with a higher share of jobs tied to tourism, ranked near the top. This is a stark reminder that tourism markets cannot all be painted with the same broad brush. Similarly, Maine experienced a slight drop-off in leisure employment as its peak summer season progressed, while Florida backtracked as well but did so primarily because of an abnormally robust July.

While Nevada and its Mountain West counterpart New Mexico defied broader industrial headwinds, the bottom of the monthly growth rankings in August aligned more closely with expectations. In addition to Hawaii, the next four worst-performing states—Mississippi, Iowa, Vermont and Montana—all rely heavily on industries that struggled. Yet leisure/hospitality was not the primary culprit. Instead, a moderate decline in state government jobs weighed heavily on all four relatively small states, with a reliance on university employment in all but Mississippi seemingly playing a role as well. Healthcare and social assistance also helped to drive differential outcomes across states, with the

sector experiencing only its second monthly jobs decline since the pandemic began.

Still, the month's state rankings were more closely aligned with their implied rankings based on industrial composition than in all but one month this year. Typically, the relationship between the expected and actual monthly growth has been weakly positive, but the two most disappointing surveys since spring began—April and August—featured a much stronger link. This is worth keeping in mind should the September national number prove similarly uninspired.

Industrial Composition Can Be Predictive

Correlation coefficient, expected vs. actual payroll employment growth



Sources: BLS, Moody's Analytics

Although applying national industrial growth to each state is a flawed predictor, it can be quite valuable. Using a similar approach to test full-year data for 2018 and 2019 yields promising results when paired with a measure showing same-year or lagged population growth. A simple model using those two inputs explained more than 60% of state job growth in each of those two pre-pandemic years, signaling that after monthly noise is stripped away there is value in applying national growth rates to industry shares across states.

COVID-19 surges

Of course, using industrial composition and national growth rates is limited by idiosyncratic factors in each state's economy. This is true under normal circumstances but is especially pronounced during a global pandemic, when outbreaks and policy decisions can matter far more than a national growth path.

With that in mind, we examined the increase in [COVID-19](#) cases between Bureau of Labor Statistics survey reference weeks in July and August and compared it against monthly growth rates. This relationship has changed direction

numerous times during the course of the pandemic, depending largely on where outbreaks were occurring. Stringent mitigation measures that were undertaken in the Northeast and West Coast, for example, caused the early relationship to be quite strong. By last fall, as the Plains struggled most but governors of those states took a laissez-faire approach, the correlation turned negative.

As of August, the relationship is more neutral, which is noteworthy given that surges are worst in states with fewer restrictions. After incorporating the expected growth measure described earlier into a regression equation, the relationship actually turns somewhat positive. States including Alabama, Florida, Louisiana and Tennessee all turned in a roughly average performance last month. Georgia and Mississippi struggled more than their peers but not enough to suggest that they were outliers. Interestingly, Hawaii experienced a surge in new cases, albeit from a low base. This may have contributed to the state's poor August as much as did its structural vulnerability to tourism.

The interpretation of these results is in the eye of the beholder. On one hand, typically fast-growing southern states are dragging a bit, which could reflect the early impact of surging hospitalizations amid poor vaccination rates. On the other, these findings are hardly proof that the Delta variant wreaked economic havoc this summer.

Still, that proof may be coming. When the September data are released next month, it may support the type of [softness in real-time metrics](#) that is now showing up in harder-hit states amid reduced confidence and an increasing number of schools temporarily shifting to remote learning.

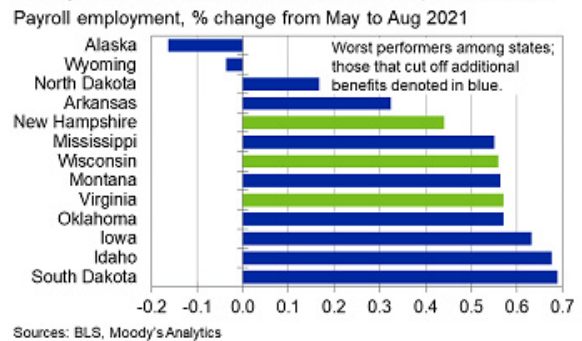
Final word on UI cutoff?

One question that seems definitively answered involves the impact of the early termination of enhanced unemployment insurance benefits. The August payroll data confirm what was already clear from previous months and other sources: Cutting the \$300 per week in additional federal aid was

counterproductive, as states that did so experienced slightly slower monthly growth after faring significantly worse in July. This provides more evidence that more harm than good came out of those policies.

Using a three-month change to reflect the time from when the first announcements were made to the most recent survey month makes this even more clear. There is a negative, statistically significant relationship between states that ended benefits prematurely and job growth over that period. In fact, despite states being roughly evenly split on whether or not they allowed benefits to continue into early September, five of the six worst performers over the past three months and 11 of the bottom 14 cut benefits off by early July.

Early Termination Was Counterproductive



The natural experiment has now concluded, with enhanced federal benefits ending across the U.S. Barring surprisingly large revisions, it now seems safe to assert that workers did not remain sidelined in the first half of the year because unemployment insurance benefits were providing a disincentive. In fact, it appears increasingly likely that reduced disposable income among those without a job following cessation of benefits may have contributed to softness in consumer industries instead.

The Week Ahead in the Global Economy

U.S.

The U.S. economic calendar ends September on a busy note. Among the key data are durable goods orders, the Conference Board consumer confidence index, pending-home sales, initial claims for unemployment insurance benefits, along with August personal income and spending and PCE deflators. The ISM manufacturing survey for September will also be released. And we will be keeping close watch on any developments in Washington DC as well as COVID-19 cases, hospitalizations and school closures.

On the policy front, the Biden administration and Congress have much to resolve in the coming weeks. There are the massive legislative efforts to increase spending on infrastructure and fiscal support for a range of social programs and climate change. But even more pressing, Congress has a September 30 deadline to renew expiring government spending authority for the 2022 fiscal year that begins October 1. Failure to do so would result in a government shutdown. Then there is the Treasury debt limit, which was reinstated on August 1 of this year.

Europe

We expect the euro zone's preliminary inflation rate for September to come in next week at 3.3% y/y, speeding up from 3% in August. Energy prices will remain the driver of inflationary pressures, in light of both the base effects in oil markets and now following the surge in natural gas prices affecting electricity costs. Core prices will also remain on the rise. Meanwhile, business and consumer sentiment in the bloc likely decreased only

slightly in September, with the ESI sliding to 117 from 117.5 a month earlier. Although expectations about the economy are upbeat, supply side disruptions, rising inflation rates, and outbreaks of the Delta variant of COVID-19 are shaking confidence.

Labor markets likely continued to recover in August in France, Italy and Germany. The number of job seekers in France was likely down to 3.3 million, the unemployment rate in Italy likely slid to 9.2%, and the unemployment rate in Germany likely eased to 5.4%. Strong growth in the third quarter has helped employment pick up. That said, progress will slow in the final months of the year now that we are passing the peak of the post-lockdown rebound.

Asia-Pacific

China's manufacturing sentiment likely improved in September. We look for the official manufacturing PMI to rise to 50.7 from 50.1 in August. China was battling the Delta variant through most of August, which caused widespread disruption to factories and transportation. Manufacturing faced fewer local disruptions in September, supporting an improvement in sentiment. However, new export orders will have remained under pressure as elevated infections in other key markets yielded disruption and hurt demand.

Elsewhere, Japan's Tankan survey will likely show improvement in the September quarter thanks to rising vaccination rates and new infections trending lower, paving the way for a more sustained improvement in domestic demand.

Geopolitical Calendar

| Date | Country | Event | Economic Importance | Financial Market Risk |
|------------------|--------------|---|---------------------|-----------------------|
| 15-Sep to 15-Oct | Italy | Local elections | Low | Low |
| 26-Sep | Germany | Federal elections | Medium | Medium |
| 2-Oct | Brazil | Presidential and congressional elections | High | Medium |
| Oct/Nov | Japan | General elections | Low | Low |
| Oct/Nov | ASEAN | ASEAN summit | Low | Low |
| Nov | Asia-Pacific | Asia-Pacific Economic Cooperation forum | 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 | Low | Low |
| 28-Nov | Honduras | Presidential, congressional and municipal elections | Low | Low |
| 19-Dec | Hong Kong | Legislative Council elections | Low | Medium |
| 10-Apr | France | General elections | Medium | Medium |
| 29-May | Colombia | Presidential elections | High | Low |

Eye on China Corporate Debt

BY RYAN SWEET

CREDIT SPREADS

Concerns about China's corporate debt are unlikely to cause high-yield corporate bond spreads to widen noticeably. However, there are risks. A sudden tightening in financial market conditions could weigh on U.S. GDP growth, and that would put downward pressure on global oil prices. The correlation coefficient between changes in the high-yield corporate bond spread and changes in West Texas Intermediate crude oil prices is -0.63.

Correlation does not imply causality. Therefore, we used Granger causality tests to see if there is a causal relationship between the high-yield corporate bond spread and West Texas Intermediate crude oil prices. With no lags, fluctuations in WTI crude oil prices were found to Granger-cause changes in the high-yield corporate bond spread. The results showed that the causality runs one way, which isn't surprising. For now, we are not altering our forecast for the high-yield corporate bond spread or issuance, but downside risks are mounting.

Moody's long-term average corporate bond spread is 102 basis points, 6 bp wider than this time last week. This is below its high over the past 12 months of 132 bps and just above its lowest over the past year of 95 bps. This spread may be no wider than 118 bps by year-end 2021, and some of the recent widening should be reversed as financial markets settle down. The long-term average industrial corporate bond spread widened 6 bp over the past week to 92 bps. This is above its low over the past 12 months of 86 bps and is well below its high of 122 bps.

The long-term investment grade corporate bond spread was 138 basis points, compared with 132 bp last week. It remains well below its recent high of 187 bps. Investment-grade industrial corporate bond spreads widened from 133 bps to 138 bps.

The recent ICE BofA U.S. high-yield option adjusted bond spread of 309 basis points was 5 bps wider 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 a little tighter than that implied by a VIX of 18.6.

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 fared noticeably better in the second quarter.

U.S. dollar denominated investment-grade issuance was \$47.7 billion in the week ended Wednesday, bringing the year-to-date total to \$1.275 trillion. High-yield corporate bond issuance rose \$19.2 million, bringing the year-to-date total to \$500.7 billion.

U.S. ECONOMIC OUTLOOK

Because of Democratic divisions over President Biden's Build Back Better agenda, we reduced the price tag of an assumed reconciliation package that funds a range of social investments from \$3 trillion in the August forecast to \$2.5 trillion in the September vintage. Specifically, we nixed \$500 billion in federal support of private industry, which included funding for manufacturing supply chains, R&D investments, and small-business support, among others. Our prior assumptions regarding investments in education, family leave, housing, and climate change initiatives, as well as household tax credits, are unchanged from August. The new baseline forecast assumes that all but \$500 billion of the reconciliation package will be paid for by higher taxes on corporations and high-income individuals. We did not make changes to our assumptions around the Infrastructure Investment and Jobs Act.

The baseline forecast assumes the debt ceiling is raised but the drop-dead date could be in October, rather than November. The bond market is showing a little angst about the debt ceiling. This isn't surprising, but it's important to note that the amount of concern is small because the bond market has been through numerous debt-ceiling episodes and knows how it will play out—it will ultimately be raised. Currently, all Treasury bills from late October to November, which is likely the drop-dead date for raising the debt ceiling, are trading a touch cheaper than other Treasury bills. This is similar to what happened leading up to prior debt-ceiling drop-dead dates.

COVID-19 assumptions

We adjusted our epidemiological assumptions to anticipate that total confirmed COVID-19 cases in the U.S. will be 47.9 million, compared with 41.1 million in the August baseline. The change is due to the recent

increase in confirmed cases because of the Delta variant. The seven-day moving average of daily confirmed cases dropped recently but that is likely due to the Labor Day holiday, which reduced testing and reporting. Despite the recent drop, the seven-day moving average of confirmed COVID-19 cases remains well above 100,000.

The date for abatement of the pandemic has been pushed out to this November because of the Delta variant. Herd resiliency, which is a 65%-or-greater share of the adult population being fully vaccinated or previously infected, was achieved on August 30, a few days earlier than the assumption of September 2 in the August baseline. Also, COVID-19 will be endemic and seasonal.

The economy is feeling the effects of the current wave of COVID-19 cases. Consumer sentiment dropped sharply in August and a number of high-frequency measures of economic activity we closely track have all weakened, including number of people passing through TSA checkpoints, seated diners from OpenTable, movie box-office revenues, and Google mobility.

We expect the variant to start fading soon, much like it has in the U.K., which seems to be leading the U.S. by a few weeks, and thus not affect the economy to an extent that we will need to downgrade our economic outlook.

Delta hits GDP

There were some changes to our forecast for GDP growth through the remainder of this year. We cut our forecast for third-quarter GDP growth from 8.2% at an annualized rate in the August baseline to 5% in the September vintage. Risks are weighted to the downside. Our high-frequency GDP model's tracking estimate of third-quarter GDP growth has been sinking like a rock lately. It also reflects only one piece of source data for August, which would capture the impact of the recent surge in COVID-19 cases. Though we don't expect that this wave of coronavirus will have significant economic costs, there is a lot less cushion now.

August vehicle sales delivered a big hit to our estimate of third-quarter GDP. Vehicle sales fell from 14.62 million to 13.06 million annualized units in August and are 16.6% below their second-quarter average. This bodes ill for real consumer spending in the third quarter. Our high-frequency GDP model has third-quarter GDP growth tracking at 3.9% at an annualized rate, less than the official forecast. The model anticipates inventories doing the bulk of the heavy lifting this quarter, and the Delta

variant is causing supply-chain issues, which could slow the rebuilding of stockpiles. Also, Hurricane Ida is another potential issue for inventory rebuilding and trade. U.S. soybean exports plunged last week, and though they account for a small share of total exports, this highlights the hurricane's downstream effects.

The September baseline includes our assumptions about Hurricane Ida's economic costs. Though Ida was a severe hurricane and devastated some regional economies, it likely won't be an enormous drag on U.S. GDP because of how GDP is calculated. The primary damage from natural disasters is done to productive capacity through the destruction of existing assets.

This destruction is accounted for in the National Income and Product Accounts under the Changes in Net Stock of Produced Assets table but is not included directly in the GDP calculation. Nonetheless, natural disasters will affect GDP through a number of channels. Rebuilding will be captured in the regular source data on residential and nonresidential construction.

The consumer spending component is also likely to be affected to the extent that federal aid and insurance payouts to households are a supplement to income rather than a replacement for lost income. As with Hurricane Katrina, Ida could have a more significant impact on GDP via higher energy prices. According to the Bureau of Safety and Environmental Enforcement, 95% of oil production and 94% of natural gas production were shut down because of Ida. Based on wholesale U.S. gasoline prices, relief at the pump is coming and this will limit Hurricane Ida's hit to U.S. GDP growth.

Though we cut GDP growth this quarter, the September baseline has stronger growth in the final three months of this year, with GDP rising 7.5% at an annualized rate, compared with 6.4% in the baseline forecast. Some of the lost economic activity because of the Delta variant and Hurricane Ida, like oil production, will be made up in the fourth quarter.

For all of 2021, we look for GDP to now rise 6%, a touch lighter than the 6.3% in the August baseline and in line with the Bloomberg consensus of 6.1%. We look for GDP to rise 4.3% in 2022, compared with the 4.5% in the prior baseline and identical to the Bloomberg consensus. Though growth slows next year because of the fading fiscal impulse and less boost from the reopening of the economy, growth will be nearly double the economy's potential growth rate.

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 15.3% this year, compared with the 15.7% in the August baseline. Growth in equipment spending was revised higher for next year to 9.4%, 0.3 percentage point stronger than the August 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 the strong rate of new business formations. The biggest downside risk is a sudden tightening in financial market conditions.

The real nonresidential structures forecast was revised slightly this year. It is forecast to drop 6.7%, a bit less than the 6.9% drop in the August baseline. This will be another rough year for real nonresidential structures investment. A modest recovery will begin next year.

There were no material changes to the commercial price index forecast, which is expected to rise 6.2% this year and 1.1% in 2022. 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.

Housing data are going to be volatile because of rebuilding after Hurricane Ida. This is normal after major hurricanes, but there is more uncertainty now 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 due to incoming data. We now look for starts to increase 16.3% this year compared with the 18.8% in the August baseline. Growth in starts will be stronger next year partly because of ongoing rebuilding, and we now look for them to rise 11.5%, compared with 8.6% in the prior baseline.

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 higher our forecast 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.

Death, taxes, and a disappointing August jobs report

The August U.S. employment report was a letdown. Nonfarm employment increased a net 235,000 in August following a revised 1.053 million (previously 943,000). Revisions have been noticeable recently; the net two-month revision to nonfarm employment was 134,000.

The Delta variant clearly weighed on the labor market. Daily confirmed cases were surging during the August payroll reference week. According to the Bureau of Labor Statistics, 5.6 million people reported being unable to work because their employer closed or lost business due to the pandemic—that is, they did not work at all or worked fewer hours at some point in the prior four weeks due to the pandemic. Among these individuals, 13.9% received some pay from their employer for the hours not worked, up from 9.1% in July. Similar to July, there were 1.5 million individuals not in the labor force that were unable to look for work because of the pandemic.

There is a clear downward bias in August employment. The month's job growth normally comes in weaker than the consensus, and we don't see a reason why the pandemic would have altered this. The August bias is noticeable. Over the past five years, the initial estimate of August job growth has been revised higher by an average of 75,000 jobs between the initial and third estimates. Low response rates to the preliminary survey are the primary culprit behind the tendency for August job growth to come in weaker than the consensus. This struck again. The response rate for this August was 70.5%, compared with the 76.8% last August and the 75% average over the past prior five years.

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 543,000, compared with the 532,000 in the August baseline forecast. Odds are that August's job growth is revised higher.

The unemployment rate is forecast to average 4.5% in the fourth quarter, compared with the 4.6% in the prior baseline. The unemployment rate was revised lower for next year and is now expected to average 3.4% in the fourth quarter of 2022. Risks to the labor market forecast are weighted to the downside. The Delta variant could delay the return to the labor force for many because of childcare and health concerns. Lack of labor supply is the biggest problem; businesses had 10.9 million open

positions at the end of July. 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 higher our forecast for the core PCE deflator. It is now expected to rise 3.9% on a year-ago basis in the fourth quarter of this year, compared with 3.5% in the August baseline. We look for inflation to moderate next year, with the core PCE deflator up 2.2% on a year-ago basis in the fourth quarter of 2022, only 0.1 of a percentage point higher than in the prior baseline.

We altered our assumptions about when the Fed begins tapering its \$120 billion in monthly asset purchases. We now expect the Fed to start tapering in December by cutting its asset purchases by \$15 billion, to \$105 billion. The August baseline had tapering beginning in January 2022, so the change is fairly minor. We expect this process to be on autopilot and the assumption is for a \$15 billion reduction at each Federal Open Market Committee meeting, which would wrap it up before the end of next year. The Fed will then reinvest the proceeds from its maturing assets to ensure the balance sheet doesn't decline. We still assume the first rate hike in early 2023. The fed funds rate reaches its equilibrium rate, a touch above 2.5%, in the second half of 2025. Markets are still pricing in a noticeably more gradual tightening cycle than our baseline.

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

Inflation expectations are also important in the future path of inflation. The Fed is keeping close tabs on various measures of inflation expectations, which appear to be anchored. The five-year, five-year forward inflation expectation rate is currently around 2.2%. This is based on the consumer price index, and if we adjust this for the tendency for the CPI to run ahead of the PCE deflator—the Fed's preferred measure of inflation—investors are expecting inflation to be on the Fed's target. One caveat is that the Fed could be distorting this a little, since the five-year, five-year forward inflation expectation rate incorporates Treasury Inflation-Protected Securities, and the Fed holds 2% of the TIPS market. As the Fed begins to taper, TIPS yields might climb.

We didn't make any significant changes to the 10-year Treasury yield forecast. A bottom could be forming in long-term rates with the current yield below our estimate of the economic fair value of 1.58%. Also, seasonals favor an increase in the 10-year Treasury yield in September. On average, over the past several years, Treasury returns

have declined in September. Further, the 10-year Treasury yield has risen in four of the last five Septembers. We don't anticipate a jump in interest rates this fall, but with seasonals turning less favorable, odds are rates will rise rather than continuing to drop.

Euro Zone Flash PMI Still Upbeat

BY ROSS CIOFFI

The euro zone's flash reading of the composite PMI slid to 56.3 in September from 59 in August. The manufacturing index decreased to 58.7 from 61.4, and the services index dropped to 56.3 from 59. As each reading is above the break-even score, the PMI points to continued growth in the economy during September. The demand environment remains favorable, with new orders still on the rise. That said, orders did slow after the peak of the post-lockdown rebound this summer, and Delta-variant outbreaks of COVID-19 around the globe ate into activity. The supply side, however, remains the big problem that has prevented strong demand from translating into equally strong production throughout the year. Delivery times and backlogs continued to rise in manufacturing, while input costs heated up further across sectors, prompting further hikes in output prices. The PMI does not change much in our outlook, as we were expecting such results. It still points to the fact that the recovery will persist despite supply-side constraints weighing on activity.

The flash reading of the U.K.'s composite PMI reported a similar situation. The composite index slid to 54.1 in August from 54.8 in July. The manufacturing index tumbled to 56.3 from 60.3, and the services index slid to 54.6 from 55. Orders continued to grow, though at a slowing pace. The same was true for employment and output generally. But input cost inflation accelerated, forcing companies to hike selling prices at the strongest rate on record. Input bottlenecks also pushed manufacturing firms to delay output, and backlogs extended for another month.

The readings in the U.K. and the euro zone paint a picture of rising inflation at a time that growth is slowing. At this point, however, it is still premature to talk about stagflation. Although the growth rate has slowed, it is still strong, and it is only natural that it has slowed from this summer's peak. More importantly, we still see the supply constraints as predominantly temporary. There are some structural components to them, such as Brexit, but the bottlenecks are

largely situational; that is, they are mostly due to the global pandemic. They will ease as the virus abates, investments made this year come on line, and countries return to producing at capacity. This does not mean the short-term effects on prices and output are inconsequential, but that we are not yet changing our baseline assumption of an improvement in 2022.

A busy Thursday for central banks

The Swiss National Bank held its policy rate unchanged at -0.75% at its September meeting. Although the bank reported an upbeat outlook for economic growth, inflation remains well below target and the exchange rate highly valued. This means that the SNB is unlikely to hike rates again soon.

Norway's central bank, meanwhile, hiked its rate to 0.25% from 0%. This was in line with the bank's guidance and market expectations. Given progress made in the economic recovery and above-target inflation rates, the bank expects another hike at its December meeting. However, with core low, the increase will likely be small.

The Bank of England left its policy rate unchanged at 0.1%. Despite progress being made in its recovery, rising employment, and above-target inflation, downside risks are still considerable. The recent surge in energy prices from gas markets will undoubtedly play a role in BoE consideration, as public tolerance for above-target inflation will weaken now that there is a direct and immediate effect on utility bills.

Finally, the Central Bank of Turkey cut its interest rate to 18% from 19% previously. The decision comes contrary to the bank's guidance that it would keep its rate higher than the inflation rate. The central bank argued that the high interest rate had caused a larger than expected contraction in commercial loans and that the currently high inflation rates are still transitory. The headline inflation rate picked up to 19.2% y/y in August from 18.9% in July.

Australia Delayed, Not Derailed

BY KATRINA ELL

The outbreak of the Delta variant of the COVID-19 virus in several states has delayed but not derailed Australia's economic recovery. In our September baseline we downwardly revised our expectation for GDP growth in 2021 to 4%, markedly lower than our pre-lockdown forecast of 5.4%.

Third stanza decimated

The lion's share of our adjustment occurred in the September quarter. GDP is forecast to have contracted 1.5% q/q in the third stanza thanks to extended movement controls in both New South Wales and Victoria, which together account for 50% of Australia's GDP. Other states were also in lockdowns for some of the quarter.

The Reserve Bank of Australia estimates that household consumption is about 15% lower during a lockdown compared with normal conditions. In addition, there's been marked disruption to numerous industries from construction to transportation and manufacturing.

The Australian economy's near-term path has become more sombre since our June baseline update. This has been driven by the renewed infection wave, alongside the reality that easing of restrictions will be slower.

Our base case is that the aggressive movement controls in the states of New South Wales and Victoria will be concentrated in the September quarter and gradually ease over the December quarter.

Easing of restrictions will occur on the back of rising vaccinations. The national vaccination program has gathered momentum in recent months, overcoming supply constraints, and vaccine hesitancy in some corners has eased. Around 40% of the population is fully vaccinated, and 70% has received one dose.

Australia is on track to herd resilience—with over 70% of the adult population fully vaccinated—around November.

Uncertain path out of lockdown

The pandemic has consistently proven that the recovery is bumpy and near-term improvement is not guaranteed. Australia's latest lockdown and the recovery when restrictions ease are carrying heightened uncertainty and different circumstances than the first time around.

Unlike prior lockdowns, easing of restrictions in Australia will happen with community transmission of COVID-19 still occurring. With heightened risk aversion in some corners, it is not known how households will respond. It is encouraging that consumer confidence has not deteriorated to the same degree as in 2020. This suggests that, for the most part, consumers will take "living with COVID" in their stride.

In addition, while household wealth has increased on net with the lockdowns (thanks to the buoyant housing market, strong equity market, and gains in household savings), there are some households in a markedly worse position due to loss of income, so their discretionary spending will not vigorously respond to easing of restrictions.

An important downside risk is that high vaccine coverage may potentially not be effective against new virus strains. That could necessitate renewed movement restrictions.

Policy path

The Reserve Bank of Australia announced this month that it has begun gradually tapering asset purchases. The board will purchase government securities at the reduced rate of A\$4 billion per week, from A\$5 billion previously. This is a small adjustment and further tapering is unlikely to occur until mid-February at the earliest.

Monetary policy will remain extremely accommodative to support the economy as it moves out of movement controls. Interest rate hikes are not pencilled in until late 2023 at the earliest. The RBA has indicated that full employment and a sustained return to the inflation target of 2% to 3% needs to occur. The extended movement controls in the second half of 2021 have delayed the timing of the recovery in these conditions.

Fresh fiscal support deployed by the federal and state governments has done the heavy lifting through this latest round of lockdowns, with targeted measures to impacted households and businesses being deployed in a fairly timely manner that helps cushion the blow from nonessential businesses in impacted states being forced to close.

However, the size of the fiscal support has been more limited than during the first wave of the pandemic early in 2020. This is contributing to our expectation of a sizeable contraction in the current quarter.

U.S. Trend Remains Positive

BY MICHAEL FERLEZ

U.S. rating change activity was mixed in the latest period. For the week ended September 21, upgrades narrowly outnumbered downgrades, though upgrades accounted for only about a fifth of affected debt. Although rating change activity has been more volatile in recent weeks, the overall trend in rating change activity has positive remain positive. The largest change in terms of affected debt was made to PBF Holding Company LLC, which saw both its corporate family rating and senior secured debt rating downgraded to B2, while PBF's senior unsecured debt was downgraded to Caa1. Moody's Investors Services also changed the outlook for PBF Logistics LP to negative and downgraded its corporate family rating and senior unsecured debt rating.

Western European rating change activity increased significantly last week and was overwhelmingly positive.

Upgrades accounted for all but one rating change and all the affected debt. Portugal led the way with six upgrades, driven by the recent upgrade of Portugal's government bond rating. The upgrades included Caixa Geral de Depositos, S.A., Portugal's largest bank. Moody's Investors Services upgraded several of CGD's ratings, including upgrading the bank's senior unsecured debt ratings to Baa2. In its rating rationale for the upgrade of CGD's senior unsecured debt rating, Moody Investors Services cited the upgrade of CGD's Baseline Credit Assessment and adjusted BCA, Moody's Advanced Loss Given Failure analysis, and unchanged assumptions about government support for CGD. Moody's also upgraded the firm's preferred stock non-cumulative (domestic) rating to Ba3.

RATINGS ROUND-UP

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

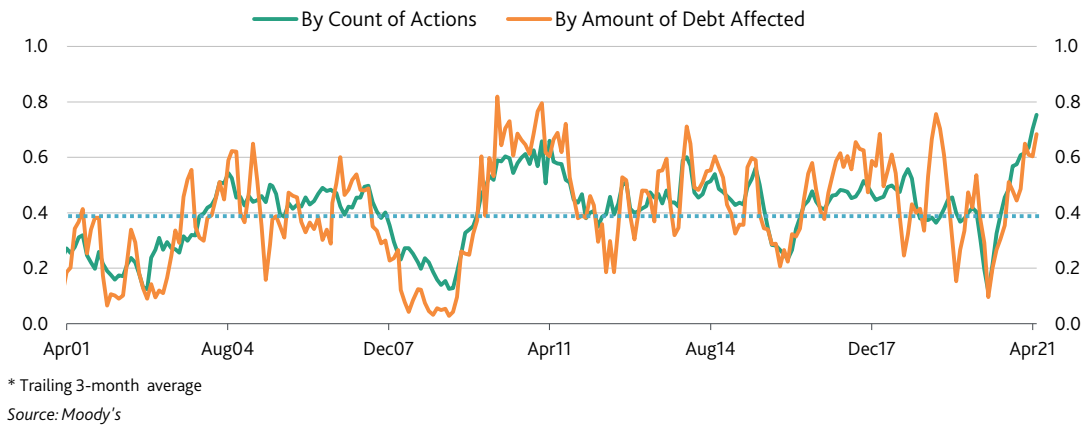


FIGURE 2
Rating Key

| | | | |
|--------------|-------------------------------------|----------------|-------------------------------------|
| 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 |
|-----------|--|------------|-----------------------------|---------------------|---------|----------------|----------------|-------|
| 9/15/2021 | ALLY FINANCIAL INC.-ALLY BANK | Financial | LTIR | | U | Baa3 | Baa2 | IG |
| 9/15/2021 | SEALED AIR CORP. | Industrial | SrSec/BCF | 2595.54 | D | Baa1 | Baa2 | IG |
| 9/15/2021 | KCC CORPORATION-MOMENTIVE PERFORMANCE MATERIALS INC. | Industrial | SrSec/BCF/LTCFR/PDR | | U | B2 | B1 | SG |
| 9/15/2021 | VERICAST CORP. | Industrial | LTCFR/PDR/SrSec/BCF | | U | Caa3 | Caa1 | SG |
| 9/15/2021 | PBF ENERGY COMPANY LLC-PBF HOLDING COMPANY LLC | Industrial | SrSec/SrUnsec/LTCFR/PDR | 3500.00 | D | Ba3 | B2 | SG |
| 9/20/2021 | GCI LIBERTY, INC.-GCI, LLC | Industrial | LTCFR/PDR | | U | B2 | B1 | SG |
| 9/20/2021 | DOMTAR CORPORATION | Industrial | SrUnsec | 500.00 | D | Baa3 | Ba3 | IG |
| 9/20/2021 | CYXTERA DC HOLDINGS, INC. | Industrial | LTCFR/PDR | | U | Caa1 | B3 | SG |
| 9/20/2021 | CINCINNATI BELL INC. (NEW) | Industrial | SrSec | 56.00 | D | Ba3 | B2 | SG |
| 9/21/2021 | REALOGY GROUP LLC | Industrial | SrUnsec/SrSec | 2500.00 | U | B3 | B2 | SG |
| 9/21/2021 | GENWORTH FINANCIAL, INC.-GENWORTH HOLDINGS, INC. | Financial | JrSub/SrUnsec/Sub/IFSR/LTIR | | U | Caa2 | B2 | SG |
| 9/21/2021 | ELANCO ANIMAL HEALTH INCORPORATED | Industrial | SrSec/BCF/LTCFR/PDR/SrUnsec | 3000.00 | D | Baa3 | Ba1 | SG |
| 9/21/2021 | WAND NEWCO 3, INC. | Industrial | LTCFR/PDR/SrSec/BCF | | D | B2 | B3 | SG |

Source: Moody's

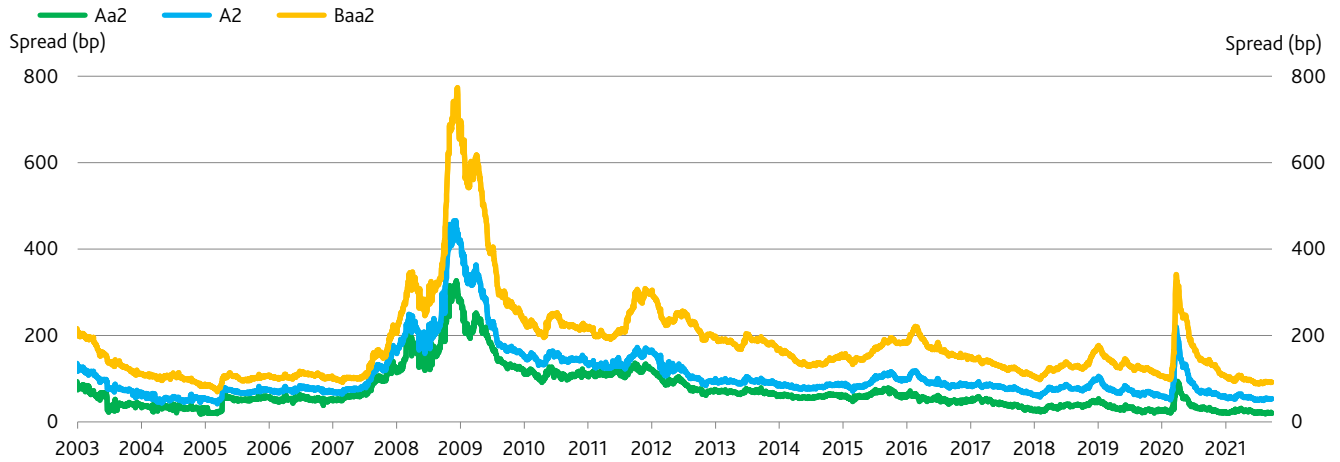
FIGURE 4
Rating Changes: Corporate & Financial Institutions - Europe

| Date | Company | Sector | Rating | Amount (\$ Million) | Up/Down | Old LTD Rating | New LTD Rating | IG/SG | Country |
|-----------|--|------------|-----------------------------|---------------------|---------|----------------|----------------|-------|----------------|
| 9/15/2021 | EVRAZ PLC | Industrial | SrUnsec | 1450.00 | U | Ba2 | Ba1 | SG | UNITED KINGDOM |
| 9/15/2021 | CENTRIENT HOLDING B.V. | Industrial | LTCFR/PDR/SrSec/BCF/SrUnsec | | D | B2 | B3 | SG | NETHERLANDS |
| 9/20/2021 | NATIONAL BANK OF GREECE S.A. | Financial | MTN/LTD/Sub | 470.54 | U | Caa1 | B3 | SG | GREECE |
| 9/20/2021 | ALPHA SERVICES AND HOLDINGS S.A. | Financial | PS/LTD/LTIR/SrUnsec/Sub | 2117.42 | U | Ca1 | Caa3 | SG | GREECE |
| 9/20/2021 | EUROBANK ERGASIAS SERVICES AND HOLDINGS S.A.-EUROBANK S.A. | Financial | LTD/MTN/SrUnsec | 1176.35 | U | Caa1 | B2 | SG | GREECE |
| 9/20/2021 | PIRAEUS FINANCIAL HOLDINGS S.A. | Financial | Sub/LTD/LTIR | 1058.71 | U | Caa3 | Caa2 | SG | GREECE |
| 9/20/2021 | INFRAESTRUTURAS DE PORTUGAL, S.A. | Industrial | SrUnsec/MTN | 1176.35 | U | Baa3 | Baa2 | IG | PORTUGAL |
| 9/21/2021 | CAIXA GERAL DE DEPOSITOS, S.A. | Financial | CP/PS/SrUnsec/MTN/STD/Sub | 2660.06 | U | B1 | Ba3 | SG | PORTUGAL |
| 9/21/2021 | BANCO SANTANDER S.A. (SPAIN)-BANCO SANTANDER TOTTA, S.A. | Financial | LTD | | U | Baa1 | A3 | IG | PORTUGAL |
| 9/21/2021 | BANCO COMERCIAL PORTUGUES, S.A. | Financial | LTD/STD | | U | Baa3 | Baa2 | IG | PORTUGAL |
| 9/21/2021 | FUNDACION BANCARIA, LA CAIXA-BANCO BPI S.A. | Financial | LTD | | U | Baa1 | A3 | IG | PORTUGAL |
| 9/21/2021 | EUROPCAR MOBILITY GROUP S.A. | Industrial | SrSec/LTCFR/PDR | 588.17 | U | B3 | B2 | SG | FRANCE |
| 9/21/2021 | BRISA CONCESSAO RODOVIARIA S.A. | Industrial | SrSec/MTN | 1317.51 | U | Baa2 | Baa1 | IG | PORTUGAL |

Source: Moody's

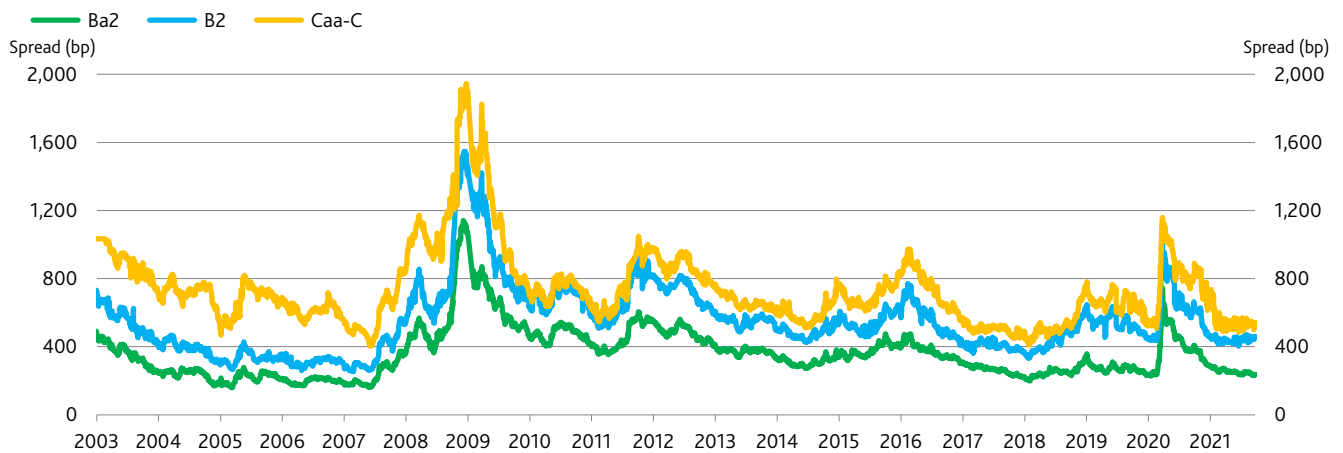
MARKET DATA

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 (September 15, 2021 – September 22, 2021)

| CDS Implied Rating Rises Issuer | CDS Implied Ratings | | Senior Ratings |
|---|---------------------|---------|----------------|
| | Sep. 22 | Sep. 15 | |
| Carnival Corporation | B3 | Caa2 | B2 |
| Automatic Data Processing, Inc. | Aa2 | A1 | Aa3 |
| John Deere Capital Corporation | A2 | A3 | A2 |
| PepsiCo, Inc. | A2 | A3 | A1 |
| Bank of New York Mellon Corporation (The) | A1 | A2 | A1 |
| Charles Schwab Corporation (The) | A3 | Baa1 | A2 |
| Chevron Corporation | Aa2 | Aa3 | Aa2 |
| United Airlines, Inc. | Caa1 | Caa2 | Ba3 |
| Burlington Northern Santa Fe, LLC | Aa3 | A1 | A3 |
| Consolidated Edison Company of New York, Inc. | A2 | A3 | Baa1 |

| CDS Implied Rating Declines Issuer | CDS Implied Ratings | | Senior Ratings |
|---|---------------------|---------|----------------|
| | Sep. 22 | Sep. 15 | |
| Philip Morris International Inc. | A1 | Aa2 | A2 |
| FedEx Corporation | A2 | Aa3 | Baa2 |
| Archer-Daniels-Midland Company | A2 | Aa3 | A2 |
| Apple Inc. | Aa2 | Aa1 | Aa1 |
| Oracle Corporation | A2 | A1 | Baa2 |
| Microsoft Corporation | Aa2 | Aa1 | Aaa |
| American Express Credit Corporation | A3 | A2 | A2 |
| International Business Machines Corporation | A1 | Aa3 | A2 |
| Coca-Cola Company (The) | Aa3 | Aa2 | A1 |
| 3M Company | Aa3 | Aa2 | A1 |

| CDS Spread Increases Issuer | Senior Ratings | CDS Spreads | | |
|-------------------------------------|----------------|-------------|---------|-------------|
| | | Sep. 22 | Sep. 15 | Spread Diff |
| Rite Aid Corporation | Caa3 | 838 | 714 | 124 |
| United States Steel Corporation | B3 | 362 | 268 | 94 |
| TEGNA Inc. | Ba3 | 275 | 185 | 89 |
| R.R. Donnelley & Sons Company | B3 | 546 | 468 | 78 |
| Domtar Corporation | Ba3 | 373 | 297 | 76 |
| Pactiv LLC | Caa1 | 432 | 374 | 58 |
| American Axle & Manufacturing, Inc. | B2 | 422 | 365 | 57 |
| Nabors Industries, Inc. | Caa2 | 750 | 699 | 51 |
| Pitney Bowes Inc. | B1 | 419 | 372 | 46 |
| Xerox Corporation | Ba1 | 257 | 214 | 43 |

| CDS Spread Decreases Issuer | Senior Ratings | CDS Spreads | | |
|---------------------------------|----------------|-------------|---------|-------------|
| | | Sep. 22 | Sep. 15 | Spread Diff |
| Talen Energy Supply, LLC | Caa1 | 2,859 | 3,829 | -970 |
| American Airlines Group Inc. | Caa1 | 723 | 746 | -22 |
| Yellow Corporation | Caa2 | 901 | 914 | -13 |
| Carnival Corporation | B2 | 393 | 402 | -9 |
| TJX Companies, Inc. (The) | A2 | 45 | 48 | -4 |
| SITE Centers Corp. | Baa3 | 113 | 117 | -4 |
| PPG Industries, Inc. | A3 | 46 | 48 | -2 |
| Vulcan Materials Company | Baa2 | 64 | 66 | -2 |
| Scripps (E.W.) Company (The) | Caa1 | 222 | 224 | -2 |
| Duke Realty Limited Partnership | Baa1 | 47 | 49 | -2 |

Source: Moody's, CMA

CDS Movers

Figure 4. CDS Movers - Europe (September 15, 2021 – September 22, 2021)

| CDS Implied Rating Rises | CDS Implied Ratings | | |
|---------------------------------|---------------------|---------|---------|
| | Issuer | Sep. 22 | Sep. 15 |
| Alliander N.V. | Aa2 | A2 | Aa3 |
| Orsted A/S | Aa2 | A1 | Baa1 |
| Piraeus Financial Holdings S.A. | Caa2 | Ca | Caa2 |
| TUI AG | Caa3 | C | Caa1 |
| Intesa Sanpaolo S.p.A. | Baa1 | Baa2 | Baa1 |
| CaixaBank, S.A. | A1 | A2 | Baa1 |
| Portugal, Government of | Aa1 | Aa2 | Baa2 |
| Commerzbank AG | A2 | A3 | A1 |
| Landesbank Hessen-Thuringen GZ | A1 | A2 | Aa3 |
| BAWAG P.S.K. AG | Baa1 | Baa2 | A2 |

| CDS Implied Rating Declines | CDS Implied Ratings | | |
|---------------------------------------|---------------------|---------|---------|
| | Issuer | Sep. 22 | Sep. 15 |
| ENGIE SA | A1 | Aa2 | Baa1 |
| Banco Bilbao Vizcaya Argentaria, S.A. | Aa3 | Aa2 | A3 |
| HSBC Holdings plc | Baa1 | A3 | A3 |
| ING Groep N.V. | A1 | Aa3 | Baa1 |
| Natixis | Aa3 | Aa2 | A1 |
| Electricite de France | Baa1 | A3 | A3 |
| Standard Chartered Bank | Aa3 | Aa2 | A1 |
| Standard Chartered PLC | Baa2 | Baa1 | A3 |
| SEB AB | Aa2 | Aa1 | Aa2 |
| GlaxoSmithKline plc | Aa2 | Aa1 | A2 |

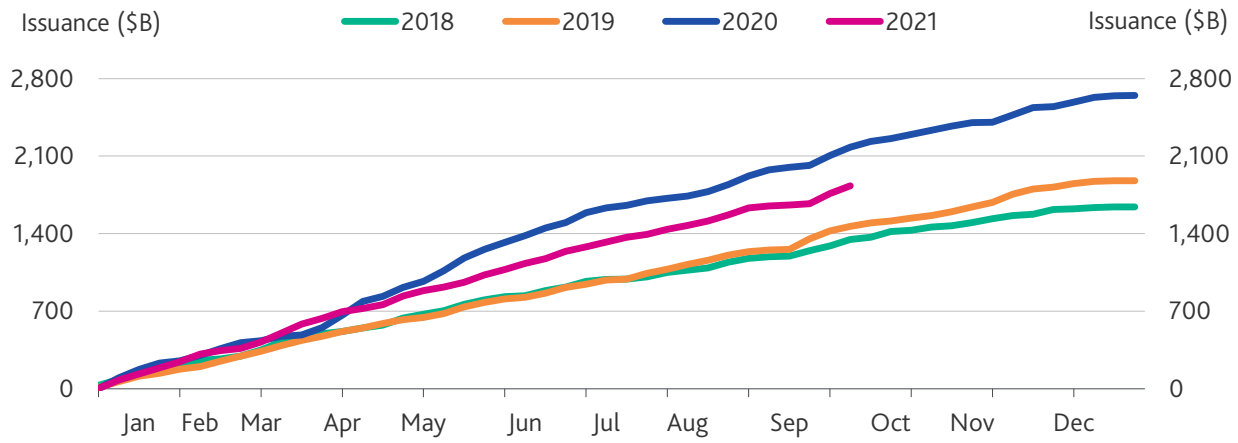
| CDS Spread Increases | Senior Ratings | CDS Spreads | | |
|--|----------------|-------------|---------|---------|
| | | Issuer | Sep. 22 | Sep. 15 |
| Casino Guichard-Perrachon SA | Caa1 | 513 | 441 | 72 |
| Vedanta Resources Limited | B3 | 698 | 644 | 55 |
| Jaguar Land Rover Automotive Plc | B1 | 383 | 345 | 38 |
| Iceland Bondco plc | Caa2 | 509 | 474 | 35 |
| Premier Foods Finance plc | B3 | 186 | 151 | 35 |
| Banca Monte dei Paschi di Siena S.p.A. | Caa1 | 190 | 160 | 29 |
| Ineos Group Holdings S.A. | B2 | 221 | 196 | 25 |
| Anglo American plc | Baa2 | 114 | 90 | 24 |
| Ardagh Packaging Finance plc | Caa1 | 227 | 203 | 24 |
| Stena AB | Caa1 | 395 | 372 | 23 |

| CDS Spread Decreases | Senior Ratings | CDS Spreads | | |
|---------------------------------------|----------------|-------------|---------|---------|
| | | Issuer | Sep. 22 | Sep. 15 |
| TUI AG | Caa1 | 688 | 727 | -39 |
| UPC Holding B.V. | B3 | 154 | 178 | -25 |
| Vue International Bidco plc | Ca | 643 | 664 | -21 |
| Deutsche Lufthansa Aktiengesellschaft | Ba2 | 208 | 225 | -17 |
| Novafives S.A.S. | Caa2 | 639 | 655 | -16 |
| Alliander N.V. | Aa3 | 34 | 36 | -3 |
| VERBUND AG | A3 | 32 | 33 | -2 |
| Piraeus Financial Holdings S.A. | Caa2 | 557 | 559 | -2 |
| Landesbank Hessen-Thuringen GZ | Aa3 | 36 | 37 | -1 |
| ASML Holding N.V. | A2 | 55 | 56 | -1 |

Source: Moody's, CMA

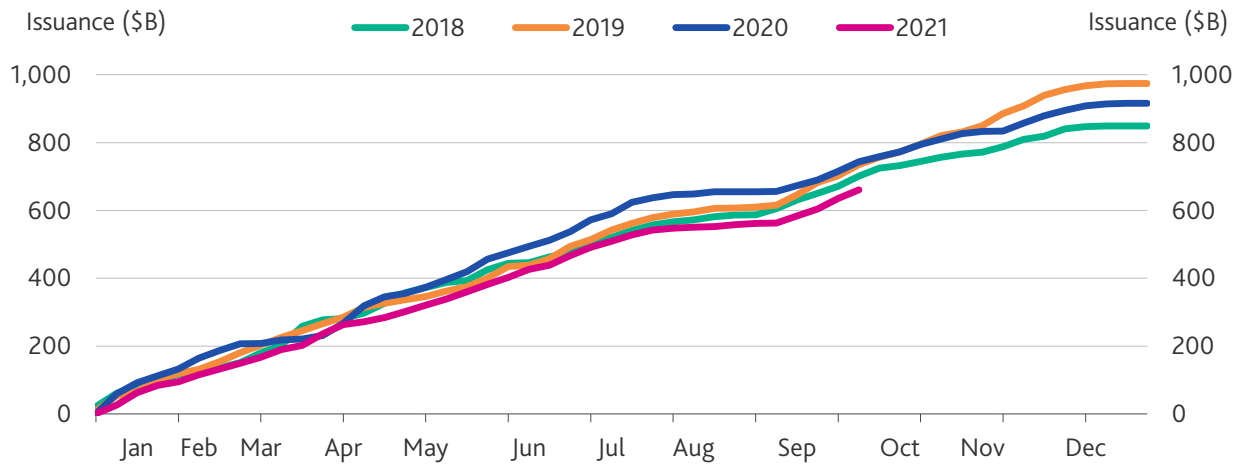
ISSUANCE

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

ISSUANCE

Figure 7. Issuance: Corporate & Financial Institutions

| | USD Denominated | | |
|--------------|------------------|---------------|---------------|
| | Investment-Grade | High-Yield | Total* |
| | Amount \$B | Amount \$B | Amount \$B |
| Weekly | 47.743 | 19.203 | 69.866 |
| Year-to-Date | 1,275.390 | 500.700 | 1,832.495 |

| | Euro Denominated | | |
|--------------|------------------|---------------|---------------|
| | Investment-Grade | High-Yield | Total* |
| | Amount \$B | Amount \$B | Amount \$B |
| Weekly | 20.551 | 3.366 | 24.744 |
| Year-to-Date | 523.075 | 119.276 | 660.260 |

* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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Editor

Reid Kanaley

help@economy.com

Contact Us

Americas

+1.212.553.1658

clientservices@moodys.com

Europe

+44.20.7772.5454

clientservices.emea@moodys.com

Asia (Excluding Japan)

+85 2 2916 1121

clientservices.asia@moodys.com

Japan

+81 3 5408 4100

clientservices.japan@moodys.com

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