

## WEEKLY MARKET OUTLOOK

Moody's Analytics Research

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## High-Yield's Default Risk Metrics Still Trail Worst Stretch of Great Recession

[Credit Markets Review and Outlook](#) by John Lonski

High-Yield's Default Risk Metrics Still Trail Worst Stretch of Great Recession

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We preview economic reports and forecasts from the US, UK/Europe, and Asia/Pacific regions.

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Full updated stories and key credit market metrics: Only an end to the spread of COVID-19 may be capable of stabilizing financial markets.

Credit Spreads	<a href="#">Investment Grade</a> : We see the year-end 2020's average investment grade bond spread under its recent 171 basis points. <a href="#">High Yield</a> : Compared with a recent 701 bp, the high-yield spread may approximate 575 bp by year-end 2020.
Defaults	<a href="#">US HY default rate</a> : Moody's Investors Service's Default Report has the U.S.' trailing 12-month high-yield default rate dipping from January 2020's actual 4.2% to a baseline estimate of 3.8% for January 2021.
Issuance	<a href="#">For 2019's</a> offerings of US\$-denominated corporate bonds, IG bond issuance rose by 2.6% to \$1.309 trillion, while high-yield bond issuance surged by 55.8% to \$432 billion. <a href="#">In 2020</a> , US\$-denominated corporate bond issuance is expected to drop by 5.3% for IG to \$1.24 trillion, while high-yield supply may dip by 1.7% to \$425 billion.

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### [Moody's Capital Markets Research](#) *recent publications*

Links to commentaries on: Rate cuts, optimism, coronavirus, corporate credit, spreads, leverage, rate sensitivity, sentiment, VIX, fundamentals, next recession, liquidity and defaults, cheap money, fallen angels, yields, inversions, unmasking danger, divining markets.

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## Credit Markets Review and Outlook

By John Lonski, Chief Economist, Moody's Capital Markets Research, Inc.

### High-Yield's Default Risk Metrics Still Trail Worst Stretch of Great Recession

A March madness of a different sort continues. As of the afternoon of March 12, the market value of U.S. common stock was a deep 26% under its close of January 17, 2020, or the last trading day before COVID-19 first rattled U.S. financial markets.

By itself, the \$9-trillion plunge in the market value of U.S. common stock since January 17 will slow business and consumer spending, as well as reducing the credit quality of businesses and households. As the market value of business assets declines, so does the value of the collateral backing business-sector debt.

Of critical importance is how the widespread plunge in equity prices and the swelling of corporate credit spreads anticipates a disruptive contraction of core profits. The realization of an expected shrinkage of corporate earnings would probably trigger cutbacks in capital spending and a wave of layoffs. Yes, the equity market and Treasury bond market now signal the likelihood of a recession.

The unknown costs of COVID-19 may continue to lower the value of earnings-sensitive securities. Calling a bottom is a fools game until the spread of COVID-19 halts. For now, policies to limit the spread of COVID-19 are probably much more important to financial markets than are fiscal and monetary stimulus programs.

A widespread pulling back of social interaction in the U.S. may be inevitable. Nevertheless, a self-inflicted near-term shrinkage of U.S. business activity may be preferable to an eventually deeper and involuntary, long-term contraction of activity if COVID-19 risks are not quickly encountered head on. Several weeks of downtime today may be the more attractive choice compared to possibly many months of downtime in the future. The barring of fans from 2020's March Madness college basketball tournament, as well as the suspension of the remainder of the National Basketball Association and National Hockey League seasons, may be important early steps toward incurring some pain today in order to avoid far more misery in the future.

#### Equity Slump Heightens Default Risk

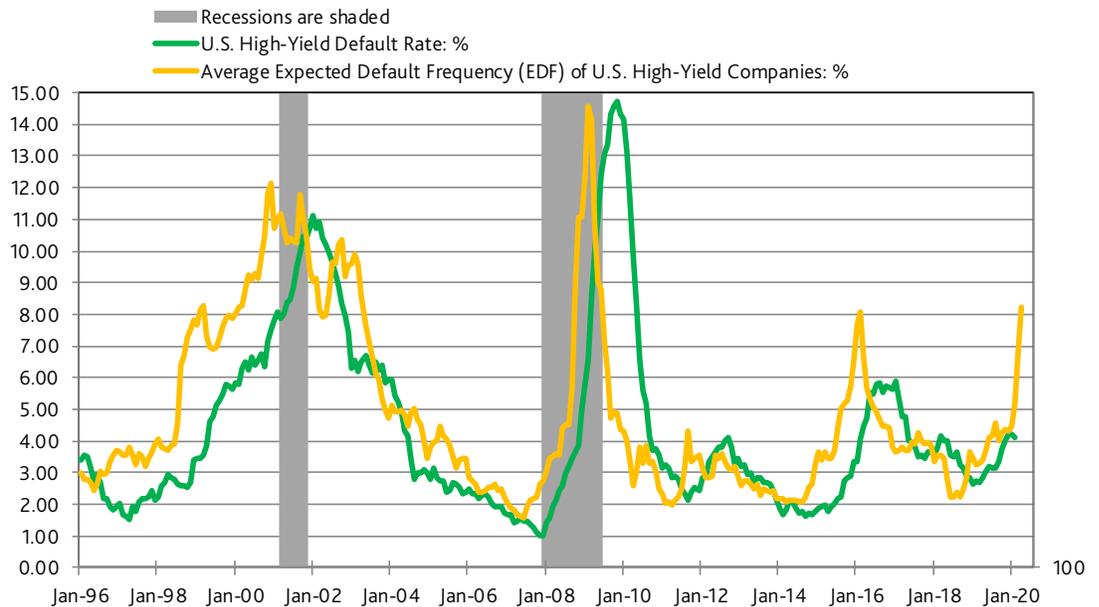
The equity and corporate debt markets are closely linked. Moody's Analytics' expected default frequency metrics provide insight regarding how equity price slumps influence default risk. The EDF, or the estimated probability of default over a one-year span, will be greater the (i) lower is the market value of a firm's net worth, or the market value of business assets less liabilities, and (ii) the more volatile is the market value of a firm's business assets.

The average EDF metric of U.S./Canadian high-yield issuers has increased from January 17's 4.40% to March 11's 8.25%, which is the highest since the 8.30% of February 5, 2016. In all likelihood, the average high-yield EDF will soon surpass February 11, 2016's profits-recession high of 8.51%. However, the high-yield EDF might continue to remain under its most perilous Great Recession averages of 10.16% for 2008's final quarter and 13.07% for 2009's first quarter.

Credit Markets Review and Outlook

**Figure 1: Recession Risks Will Mount If Average High-Yield EDF Metric Extends Its Climb**

*sources: Moody's Investors Service, NBER, Moody's Analytics*

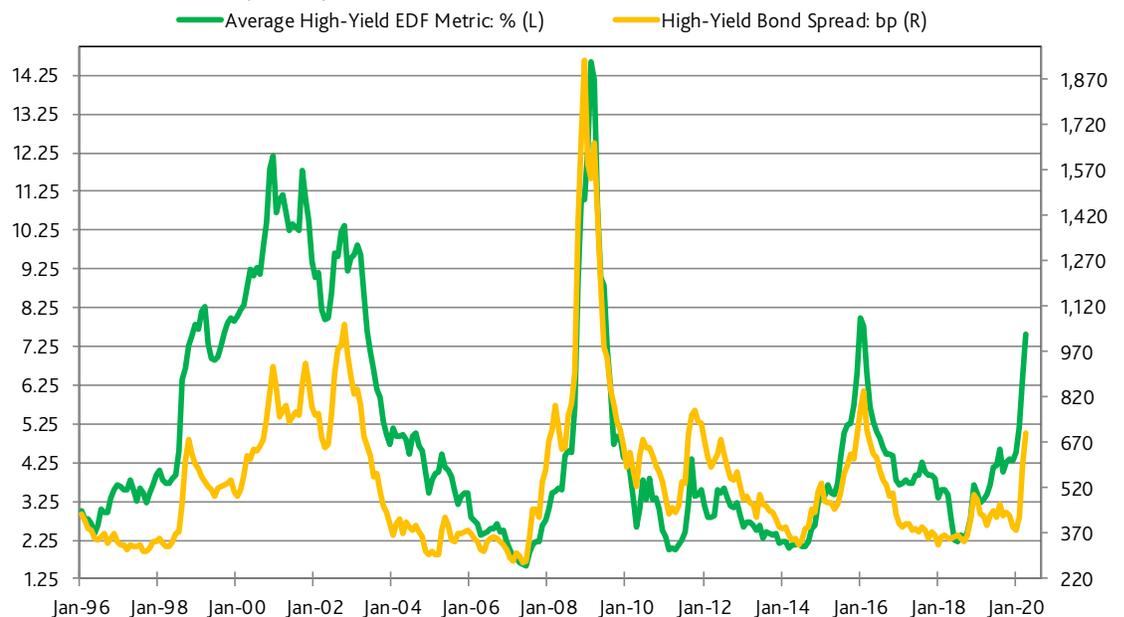


**Average High-Yield EDF Warns of Much Wider High-Yield Bond Spread**

The recent average high-yield EDF of 8.25% and its nearly four percentage point increase over the last three months favor an 879-basis point midpoint for a composite high-yield bond spread. Nevertheless, the high-yield bond spread was recently a narrower 700 bp, which nearly doubled the 362 bp of January 17. However, March 11's composite high-yield bond spread was well under February 11, 2016's 899 bp high of the last profits recession.

**Figure 2: Average High-Yield EDF Metric Warns of a Wider Than 850 Basis Points High-Yield Bond Spread**

*source: Moody's Analytics*



## Credit Markets Review and Outlook

**But, Median High-Yield EDF Metric Favors Thinner High-Yield Bond Spread**

Meanwhile, the median high-yield EDF metric increased from January 17's 0.30% to March 11's 0.94%. The latter is the highest median high-yield EDF since the 0.95% of February 11, 2016. Despite February 11, 2016's very wide 899 bp high-yield bond spread, March 11's median high-yield EDF favors a narrower 594 bp spread from a long-term perspective.

Coincidentally, the 737 bp average for the high-yield bond spread predicted by the average and median high-yield EDFs happens to be relatively close to the actual 701 bp.

**Oil Price Crash Slashes High-Yield Returns**

Reflecting a 47% crash by the per barrel price of WTI crude oil since January 17, Credit Suisse's high-yield bond total returns from the end of 2019 through March 10 show that the -26.4% return from energy-company bonds is much weaker than high-yield's second worst 2020-to-date total return of -8.1% from gaming/leisure company bonds. For all U.S. high-yield bonds, the 2020-to-date total return was -5.7% as of March 10. Energy company bonds comprise roughly 11.5% of the high-yield bond universe.

It is worth noting that MA's industrial metals price index was off by a shallower 10.3% from January 17 through March 11. The base metals price index needs to drop by another 25.8% to return to its low of January 12, 2016, while the price of WTI crude needs to fall by 15.3% to match its \$26.21 per barrel low of February 11, 2016. Perhaps, the lack of a deeper drop by the industrial metals price index may be ascribed to a stabilization of Chinese manufacturing activity.

**Baa Industrial-Company Bond Yield Spread Widens to High of 2015-2016 Profits Recession**

You are guilty of hyperbole if you liken current corporate credit market conditions to those of the Great Recession. For example, though MA's long-term Baa-rated industrial company bond yield spread widened from January 17's 171 bp to March 9's latest high of 288 bp, it was much thinner than its 545 bp average of 2008's final quarter, where the latter included a 589 bp average for December 2008.

Nevertheless, things have turned ugly for the Baa ratings category. After sinking to March 6's 64-year low of 3.56%, MA's long-term Baa industrial company bond yield subsequently rose to March 11's 4.15%. Though the latter barely exceeds its fourth-quarter 2019 average of 4.09%, the widening of the long-term Baa industrial bond yield spread from March 6's already well above average 227 bp to March 11's 276 bp shows that investors are very worried about an impending jump in fallen-angel downgrades. Ordinarily, credit conditions for medium-grade corporate borrowers deteriorate whenever Baa-grade bond yields increase while Treasury bond yields decline.

**Figure 3: Long-Term Baa Industrial Company Bond Yield Spread Does Not Yet Assure an Impending Recession**

*sources: NBER, Moody's Analytics*



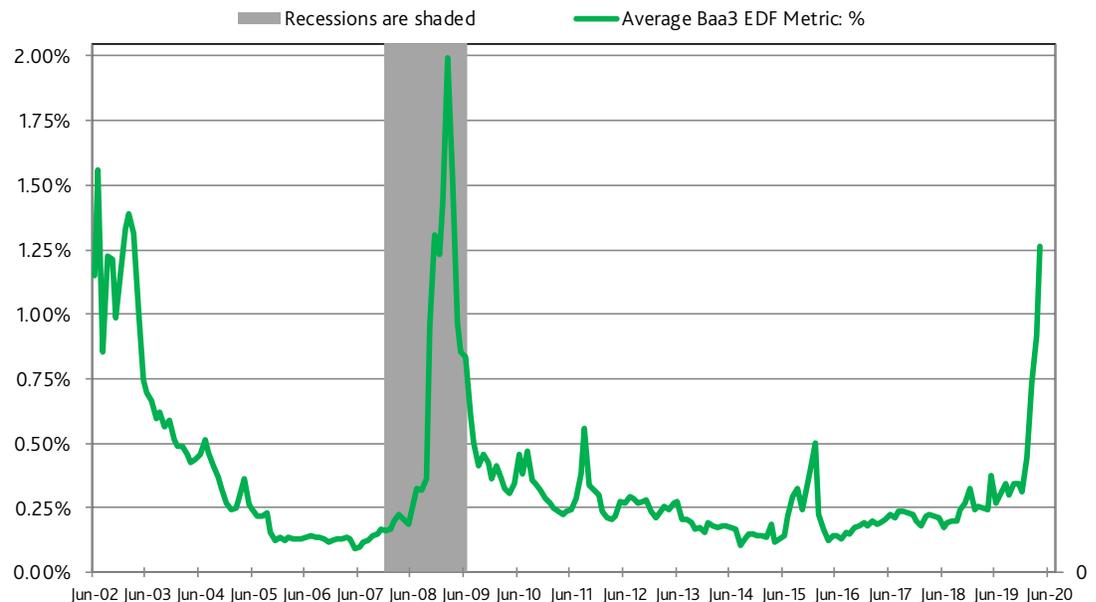
## Credit Markets Review and Outlook

## Average Baa3 EDF Metric Tops Q4-2008's Mean

The rise by the average Baa3 EDF metric from January 17's 0.32% to March 11's 1.27% may seem tame compared to the concurrent rise by the high-yield EDF, but the recent average Baa3 EDF easily surpassed January 19, 2016's 0.64% high of 2015-2016's profits recession. Though the recent average Baa3 EDF is greater than its 1.20% average of 2008's final quarter, it still trails its 1.58% average of 2009's first quarter. Moreover, though March 11's Baa3 EDF metric was the highest since April 8, 2009's 1.35%, it was considerably under its 2.51% record-high of March 9, 2009.

**Figure 4: Average Baa3 EDF Metric Rises to Levels Last Observed During the Great Recession**

sources: NBER, Moody's Analytics



In addition, the average Baa3 EDF is perhaps now being skewed higher by problems emanating from relatively few industries. Such an inference is drawn from March 11's relatively low median Baa3 EDF of 0.12%. By contrast, the statistical record suggests that an average Baa3 EDF of 1.27% is typically accompanied by a higher median Baa3 EDF of 0.36%.

At the seven-year maturity, which is much shorter than the longer than 20-year average maturity of the Moody's Analytics long-term Baa industrial company bond yield, the median Baa3 yield spread widened from January 17's 168 bp to March 11's 272 bp. However, the median seven-year Baa3 yield spread averaged a wider 297 bp during October 2015 through March 2016, during which time it peaked at the 337 bp of February 26, 2016.

## The Week Ahead – U.S., Europe, Asia-Pacific

### THE U.S.

By Ryan Sweet of Moody's Analytics

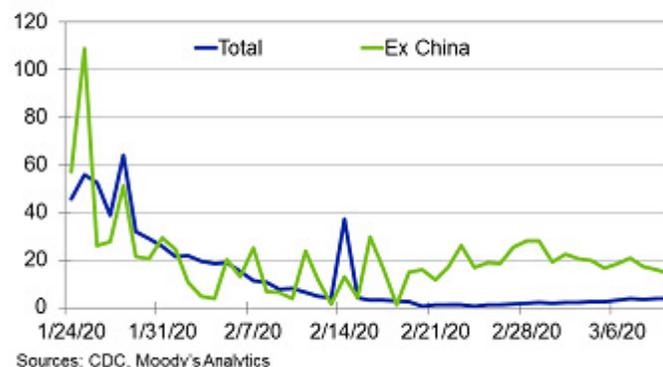
### How Our U.S. Forecast Has Changed

Our U.S. March baseline forecast required some last-minute and notable adjustments because of COVID-19, turmoil in equity markets, and the plunge in global oil prices. We have lowered our forecast for U.S. GDP growth in the first half of this year to 0.4% at an annualized rate, weaker than the 1.5% in the February baseline. Growth picks up in the second half of the year, but this assumes that COVID-19 is contained soon.

The assumption in the baseline about COVID-19 is that there are 1 million global infections and that new infections peak in March or early April. This would imply an average increase in the number of new infections, on average, of 20% per day through the end of this month. This appears to be a reasonable assumption, since growth in the number of new infections globally excluding China has been rising at around that clip since the beginning of March.

### No Sign of Slowing Outside of China

Confirmed COVID-19 cases, % change



The assumption in the forecast is a 1% to 2% mortality rate and a 3% to 4% hospitalization rate. We can't stress enough that we are economists, not epidemiologists, but we needed to make assumptions about the virus, and there is enormous uncertainty about how it will unfold. Hence, we have created a number of alternative scenarios around the coronavirus. For perspective, our February baseline had assumed that the coronavirus remained contained to mainland China, which proved too optimistic.

Given the forecast and assumptions have been evolving quickly, we wanted to highlight how the March baseline compares to the consensus and what changes we made and did not make along with the rationale.

#### How we stack up to the consensus

Our new baseline forecast is for real GDP to rise 1.3% this year (annual average), compared with the 1.7% in the February baseline. The consensus, according to FocusEconomics, is for GDP to rise 1.7% this year. It is important to note that FocusEconomics' panelist forecasts were collected prior to the Fed's intra-meeting rate cut, additional volatility in equity markets, and the plunge in oil prices. Our March baseline incorporates the potential impact of all of these.

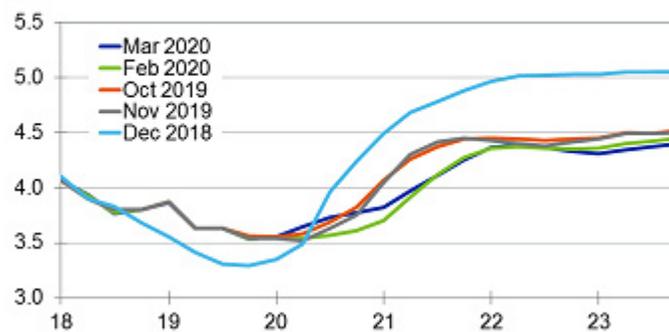
## The Week Ahead

Our estimate of the economy's potential growth remains at 2%. Therefore, our forecast is for subpotential growth, and that will weigh on the labor market. Job growth was strong in both January and February, but unseasonably warm weather and fewer winter storms juiced it. Payback is coming, and this is on top of the impact from the coronavirus. We expect monthly job growth to moderate in the second quarter, and that includes the anticipated boost from hiring associated with the 2020 census. Excluding the census, hiring will be less impressive. Relative to the February forecast, job growth in the second half of this year will be weaker and below our estimate of the break-even level.

Our estimate of the number of new jobs needed to keep the unemployment rate stable remains near 100,000 per month. This estimate is the function of the size of the civilian population, the labor force participation rate, the employment-to-labor force ratio, and the ratio of payroll to household employment. Because average monthly job growth will fall below this break-even level in the second half of the year, the unemployment rate is now expected to average 3.8% in the fourth quarter, compared with 3.6% in the February baseline. For the year, the unemployment rate will average 3.7%, compared with the consensus of 3.6%.

### Unemployment Rate Still Set to Rise

Unemployment rate, %, by forecast vintage



Sources: BLS, Moody's Analytics

We are more downbeat on industrial production, relative to the consensus. We expect a 0.1% decline in industrial production this year while the consensus anticipates a 0.4% gain. The coronavirus has significantly disrupted global supply chains. Add to that Boeing's decision to halt production of the 737 MAX in January, and manufacturing is going to struggle. Boeing plans to resume production later this year, but there have been setbacks; it is unclear if the company can secure FAA approval to resume flying the planes. This would lend some downside risk to the forecast for industrial production, since we anticipate that Boeing would resume production later this year.

Another reason for our below-consensus forecast for industrial production is the plunge in global oil prices. Industrial production includes mining. The forecast for West Texas Intermediate oil prices has been revised lower, and that will weigh on mining output.

Real consumer spending is now forecast to have risen 1.8% this year, a touch lighter than in the February baseline and weaker than the consensus for 2.2%.

#### A big change

We have altered our forecast for the fed funds rate and now anticipate it hitting the zero lower bound. The Fed cut interest rates by 50 basis points before its scheduled meeting this month. This is the ninth intra-meeting rate change since 1994. Emergency rate cuts since 1994 have not provided a big boost to equity markets. Based on past experience, when the Fed adjusts interest rates intra-meeting, it usually follows up with another move at the next scheduled meeting. However, we don't see any compelling reason for the Fed not to cut rates to the zero lower bound in March. For messaging, the Fed could lean

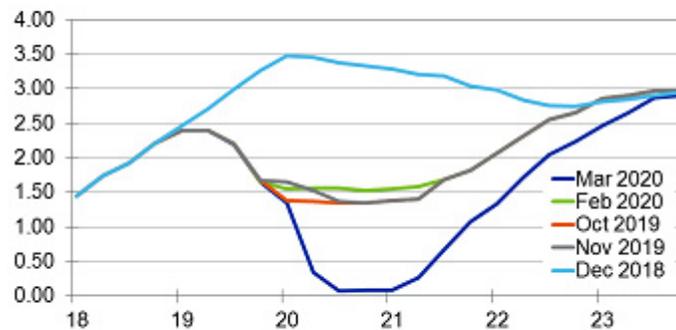
## The Week Ahead

on the academic research that has shown it is better to be more aggressive early at times when interest rates are near the zero lower bound.

The Fed could signal that it is trying to get ahead of the expected weakness in the economy by slashing rates now. Also, there is no compelling case for the Fed to keep some powder dry. If the Fed falls behind the curve, the fed funds rate would end up at 0% anyway. If rates return to the zero lower bound, the Fed will likely consider aggressive forward guidance, quantitative easing, and yield curve control. However, given that the 10-year Treasury yield is around 0.75%, these won't pack as much of a punch.

### Next Stop Is 0% for the Fed

Effective fed funds rate, %, by forecast vintage



Sources: Federal Reserve, Moody's Analytics

The forecast does not assume the Fed will adopt untested policies. For example, there has been some debate about whether the Fed would buy stocks. Former Fed Chair Janet Yellen floated this idea in 2016, arguing that if quantitative easing reached its limits, it could be useful for the central bank to intervene directly in assets, where prices have a more direct link to spending decisions. In other words, the Fed would consider buying equities and corporate bonds. The biggest hurdle is that the Federal Reserve Act prevents the Fed from buying stocks. However, the act allows lending to nonfinancial borrowers in unusual and exigent circumstances, suggesting the Fed could dust off the Term Asset-Backed Securities Loan Facility, or TALF.

The Fed has tools to help address funding issues and stress in credit markets. The Federal Reserve Bank of New York recently announced an increase in the current monthly schedule of repo transactions designed to deal with short-term liquidity problems for primary dealers and certain other market participants: from \$100 billion to \$150 billion in overnight repos and from \$20 billion to \$45 billion for two-week term repos.

Elsewhere, the central bank could ease pressures in bank funding markets via its liquidity swaps with other central banks. The key is dollar liquidity swap lines. The Fed could restart its credit facilities, but the banking system already is well funded. One idea is for the Fed to support credit extension to the COVID-19-exposed industries, but the Fed is not well equipped for this.

The forecast assumes that the Fed does not resume raising interest rates until the second quarter of 2021. We have not altered our estimate of the long-run equilibrium fed funds rate, which is 3%.

#### Lower long-term rates

The new forecast for the fed funds rate led to a downward revision to the forecast for the 10-year U.S. Treasury yield. The 10-year Treasury yield is expected to average 1.2% in the fourth quarter of this year, compared with the 2.11% in the February baseline.

## The Week Ahead

To assess where long-term rates are headed, we decomposed the 10-year into three components: expected inflation over the term of the security, the expected path of short-term real interest rates, and a residual component known as the term premium. Long-term inflation expectations have dropped noticeably, but there is a strong correlation between inflation expectations and global oil prices. As for the Fed, markets anticipate that the Fed is headed toward the zero lower bound. Because this is priced in, the next rate cut is unlikely to push the 10-year significantly lower, all else being equal. However, if the Fed restarts quantitative easing, that would put additional downward pressure on the 10-year Treasury yield via the term premium. Therefore, we view the risks to our 10-year Treasury yield as weighted to the downside.

We didn't make any changes to our long-run forecast for the 10-year, it just takes longer to normalize. The 10-year Treasury yield has historically equaled nominal GDP growth. The relationship can break down from year to year, but our forecast for where the 10-year will peak is based on this historical relationship. COVID-19 and rate cuts by the Fed do not alter the long-run forecast for the 10-year.

### Oh, oil

The collapse in cooperation between Saudi Arabia and Russia has triggered a plunge in oil prices that shows no sign of abating. Saudi Arabia has been cooperating with Russia to limit supply to the oil market and prop up prices. Market participants had expected OPEC+ (the OPEC nations plus 10 non-OPEC oil-producing countries including Russia) to extend production cuts set to expire in March. But faced with the news that Russia would not participate, Saudi Arabia has decided not to go it alone. The kingdom has signaled it will boost production above 10 million barrels per day.

The result is a crisis for oil producers. With COVID-19 already savaging demand for travel and transportation, the last thing oil producers needed was a supply shock that would hit their pocketbooks even more. The world is now drowning in a glut of crude oil that appears likely to persist for months.

We now expect West Texas Intermediate oil prices to average \$52.50 per barrel in the fourth quarter of this year, \$7 per barrel less than in the February baseline. Oil prices rise in 2021 and return to the February baseline in 2022, a touch north of \$60 per barrel.

### Medical spending and prices

We made very minor adjustments to both real consumer spending on healthcare along with prices. Medicine is not substitutable. The coronavirus only increases demand for specific treatments. In this case, there is no pharmaceutical cure, so the only treatment is hospitalization, and demand for hospital services will increase because of COVID-19.

To assess the coronavirus impact on spending, we draw on our past work that has shown a strong correlation between prescription sales and Google Trend searches for flu. Google searches also correlate with CDC data on influenza-like illness. Over the past few weeks, Google searches for COVID-19 and coronavirus have increased. Our work has shown that in instances of a severe flu season, the impact on retail sales is often modest. However, this time could be different because the media coverage and awareness of coronavirus is more significant than in a bad flu season. This lends some upside risk to the forecast for consumer spending in the first quarter.

For most people these prices for hospital services have already been negotiated between hospitals and insurers. Therefore, the immediate increase in cost of care has to mostly cut into hospital and insurer profits. We are digging more into this but it's possible that there will be a greater impact on prices later in 2020 and in 2021, as hospitals and insurers will reprice all the risk. We then will probably see a noticeable rise in premiums.

### Fiscal policy

In our March baseline, the \$8.3 billion in federal funding already approved for the coronavirus was incorporated, but we assumed no additional fiscal stimulus. The rationale is that it is still unclear what type of stimulus will be passed and the timing of it. To avoid being whipsawed, our forecasting approach is not to incorporate potential fiscal policy until we are confident that it will be implemented.

## The Week Ahead

With any fiscal stimulus, the key is for it to be targeted, temporary and transitory. Tried-and-true fiscal stimulus measures are needed and include payroll tax holidays, tax rebate checks, expanded unemployment insurance benefits, added funding for the SNAP (food stamp) program, and easier loan terms and loan guarantees for small businesses via the Small Business Administration and the Export-Import Bank.

Trump's proposal hit on some of these but fell short elsewhere. Trump called on Congress to deliver paid leave for hourly workers who are sick or are taking care of sick ones. He is deferring tax payments for certain individuals and businesses impacted by COVID-19. This is potentially an interest-free loan as individuals and businesses can get ready to extend their tax returns but are still required to pay by April 15.

The Small Business Administration will provide emergency funding to impacted businesses. Trump proposed a payroll tax cut but didn't elaborate on the size of the decline or the duration. Still, the payroll tax holiday will help but the multiplier is less sensitive to where we are in the business cycle.

A fiscal multiplier is defined as the dollar change in GDP for a given dollar increase in spending or decrease in taxes. The payroll tax cut has the second largest fiscal multiplier, no matter where we are in the business cycle, as far as taxes are concerned. Payroll taxes on employees are regressive, since they levy a flat rate on wages and salaries and have no deductions or credits.

Within the first year of a payroll tax cut in a recession and early-cycle expansion, the multiplier leaps out of the starting gate, besting even a refundable tax credit multiplier. It peaks at 1.33 one year after the shock. However, it declines sharply thereafter, falling as low as 0.76 and hovering not too far above the estimated multiplier for a mid- to late-cycle expansion in the remainder of the five-year horizon. There is a good reason for this. Unlike personal income taxes, lawmakers shy away from making permanent reductions to payroll taxes because they fund critical entitlement programs—Social Security and Medicare Part A.

Trump also announced travel restrictions from Europe, with the U.K. being exempt. During his address, he said that applied to cargo but later issued a correction, noting cargo wasn't included. This was necessary but will still have economic costs, hence the need for a larger stimulus package. Our initial take is that this proposal would not have a material positive impact on our forecast for this year.

Though not mentioned in his address, SNAP time limits for able-bodied adults are still planned to be tightened on April 1. Tougher application of the 90-day limit on benefits is expected to end SNAP for 700,000 people and SNAP has a large economic multiplier.

### Risks

Risks to the forecast remain weighted to the downside because of the coronavirus and the uncertainty surrounding the fiscal policy response. Handicapping the path of COVID-19 and its economic fallout is all but impossible. There are too many known unknowns. It is possible that the path the economy heads down will be darker than our baseline. In our pandemic scenario, the U.S. economy contracts in all four quarters of 2020, with real GDP falling by approximately 1.5 percentage points peak to trough and the unemployment rate rising by 175 basis points. The struggling manufacturing, transportation, agriculture and energy industries are hit hard, but so too are the travel and tourism industries and the construction trades. However, there are significant layoffs across nearly all industries, with healthcare and government being the notable exceptions.

### Next week

The key data next week include retail sales, industrial production, housing starts, existing home sales initial claims and the a couple regional Fed manufacturing surveys. The March FOMC meeting will also be held.

## EUROPE

By Barbara Teixeira Araujo of Moody's Analytics

### What Can Governments Do to Contain the Outbreak?

The week ahead brings several economic datapoints for Europe, but markets won't care about them. With the euro zone economy on the brink of collapse, what matters now is how fast the COVID-19 spreads across the Continent and to what extent governments manage to contain the outbreak. Financial markets are in meltdown, with almost all stock indexes having entered a bear market on Thursday. There could be some rebound in the short term, but we expect that the bloodbath will carry into next week, especially if cases and deaths in other European countries spike at the same rate as they did in Italy. We estimate that several European countries are around two weeks behind Italy with regard to the spread of the virus, meaning that coming weeks will remain chaotic. Cases and deaths are surging in Germany, France and Spain, while there is currently no European country without recorded infections.

To avoid shutting down an entire economy—which is what is happening to Italy right now—some governments have announced forceful containment measures in recent days. School and university closures became the norm, but some countries also have banned public events, limited travel, closed gyms, saunas and other establishments, and reduced opening hours for restaurants and cafes. Slovakia, the Czech Republic and Hungary have even declared states of emergency. There is now little doubt that consumer spending across the euro zone will be hit hard by the virus, with services spending suffering the most. Granted, some offset will come from households stockpiling on primary necessity goods such as food and medicine, but such a boost won't be enough to counterbalance the dent to discretionary spending.

This chaotic situation is putting business under increased financial pressure, with the focus on small and medium-size enterprises in the retail, hospitality and leisure sectors. On the upside, the European Central Bank and other central banks in Europe have loosened monetary conditions over the past week. The ECB, for instance, put in place liquidity operations aimed at providing cheaper and more available loans for SMEs, while at the same time it increased its quantitative easing programme and focused it on purchases of private bonds. The Bank of England did the same, launching a Term Funding Scheme with special incentives for SMEs on Wednesday. But there is only so much that monetary policy can do. This is why the focus next week will be on the response of euro zone governments to the crisis. As of now, not much has been done. Italy, the hardest hit country, has announced a €25 billion fiscal package to support the economy, but other governments left much to be desired. ECB President Christine Lagarde insisted several times during the ECB press conference that immediate and coordinated fiscal action is needed, but this only raised fears that, as of now, there has been no consensus among euro zone governments. Germany is in the spotlight—the country has substantial space to loosen policy and increase spending, but its politicians are known for being extremely averse to stimulus measures. Our view is that some fiscal stimulus in the euro zone will come, but maybe not as quickly as needed. Elsewhere outside the euro zone, the U.K. led by example, announcing a coronavirus package worth £12 billion on Thursday, with unlimited resources promised to its health system.

The outlook for the euro zone is grim. Consumer spending is expected to fall off a cliff in most euro zone economies in March and April, with risks tilted to the downside, since disruptions could be extended until May or June if the virus isn't contained. Investment is also expected to plunge, because no one will dare to push through big ticket decisions given the state of affairs. Exports are also expected to decline, as demand from other countries is similarly being depressed. Only government spending is likely to support the economy in coming months. We still don't have a euro zone recession in our baseline, but such a scenario is now looking the most likely. Italy's GDP is already certain to contract sharply in the three months to March, with odds that other countries will follow suit. The numbers for the second quarter should also be horrendous, though forecasting now is extremely hard given the high levels of uncertainty. We continue to expect the economy will rebound in the third quarter—assuming the virus is contained by summer—with the announced monetary stimulus and the expected fiscal

## The Week Ahead

loosening creating upside risks for growth in the second half of the year. But too much could go wrong in the meantime, so we are updating our assessments on a daily basis.

	Key indicators	Units	Moody's Analytics	Last
Mon @ 10:00 a.m.	Italy: Consumer Price Index for February	% change yr ago	0.3	0.4
Tues @ 9:30 a.m.	U.K.: Unemployment for January	%	3.8	3.8
Tues @ 1:00 p.m.	Russia: Industrial Production for February	% change yr ago	0.8	1.1
Wed @ 10:00 a.m.	Euro Zone: External Trade for January	€ bil	18.0	23.1
Wed @ 10:00 a.m.	Euro Zone: Consumer Price Index for February	% change yr ago	1.2	1.4
Fri @ 11:30 a.m.	Russia: Monetary Policy for March	%	5.75	6.0
Fri @ 2:00 p.m.	Russia: Retail Sales for February	% change yr ago	2.9	2.7
Fri @ 2:00 p.m.	Russia: Unemployment for February	%	4.7	4.7

## ASIA-PACIFIC

By Katrina Ell of Moody's Analytics

## New Data Will Help Show the Coronavirus' Economic Toll on China

China's activity data for the combined January-February period will be released. The data will be closely watched as it will provide further insights into the immense economic toll that the coronavirus has had on the Chinese economy. The forecasts have a higher degree of uncertainty than usual, as the depth of disruption that has occurred with the virus is not clear. We look for deep slumps to be recorded across industrial production, fixed asset investment and retail trade for January-February given that in these months, particularly most of February, cities were in lockdown, workers were prevented from returning from their hometowns to places of work after the Lunar New Year celebrations, and travel and consumption plans were widely abandoned as authorities prioritized containing the further spread of the virus over economic activity.

The Bank of Japan is expected to keep monetary settings steady at its March policy meeting. Pressure has eased on the BoJ to act after the government announced on 10 March an additional stimulus package aimed at supporting households and businesses impacted by COVID-19. The spending package is worth US\$9.6 billion and mostly aimed at supporting businesses impacted by the virus. It includes zero-interest loans for small to medium-size businesses hurt by sales that are at least 15% and 20% lower, respectively. Firms and individuals with sales dropping by 5% to 14% can apply for loans with an interest rate of less than 1%. There are also subsidies for workers who need to take time away because of school closures following the outbreak. This is in addition to the spending package announced in early February to provide low-interest loans to virus-exposed sectors including tourism. Our recently downwardly revised baseline assumption is that Japan's GDP will contract by 0.6% in 2020.

Bank Indonesia will likely cut the policy rate by a further 25 basis points in March to 4.5%. BI has flagged an easing bias and with odds elevated that the Federal Reserve will follow its recent 50-basis point reduction with further easing, the path has cleared for Indonesia's central bank to continue easing. BI last cut the seven-day repo by 25 basis points in February to 4.75%. BI needs to tread carefully given its external vulnerability, but with major central banks also easing to shore up domestic demand amid the COVID-19 threat, Indonesia has some easing space.

## The Week Ahead

	Key indicators	Units	Confidence	Risk	Moody's Analytics	Last
Mon @ 10:50 a.m.	Japan Core machinery orders for January	% change	3	↓	5.4	-12.5
Mon @ 1:00 p.m.	China Fixed asset investment for January-February	% change yr ago YTD	2	←	2.9	5.4
Mon @ 1:00 p.m.	China Industrial production for January-February	% change yr ago	2	←	1.5	6.9
Mon @ 1:00 p.m.	China Retail sales for January-February	% change yr ago	2	←	1.0	8.0
Mon @ 3:00 p.m.	Indonesia Foreign trade for February	US\$ bil	3	←	-1.9	0.9
Mon @ Unknown	India Foreign trade for February	US\$ bil	2	↓	-16.7	-15.2
Tues @ Unknown	Singapore Nonoil domestic exports for February	% change yr ago	3	←	-8.6	-3.3
Wed @ 10:50 a.m.	Japan Foreign trade for February	¥ bil	3	←	-253	-224
Thurs @ 8:45 a.m.	New Zealand GDP for Q4	% change	3	←	0.4	0.7
Thurs @ 10:30 a.m.	Japan Core CPI for February	% change yr ago	3	←	0.6	0.8
Thurs @ 11:30 a.m.	Australia Unemployment rate for February	%	4	←	5.3	5.3
Thurs @ Unknown	Japan Monetary policy for March	¥ tril.	3	←	80	80
Thurs @ Unknown	Indonesia Monetary policy for March	%	3	↑	4.50	4.75

## The Long View

### Only an end to the spread of COVID-19 may be capable of stabilizing financial markets.

By John Lonski, Chief Economist, Moody's Capital Markets Research Group  
March 12, 2020

#### CREDIT SPREADS

As measured by Moody's long-term average corporate bond yield, the recent investment grade corporate bond yield spread of 171 basis points was wider than its 122-point mean of the two previous economic recoveries. This spread may be no wider than 125 bp by year-end 2020.

The recent high-yield bond spread of 701 bp is thinner than what is suggested by the accompanying long-term Baa industrial company bond yield spread of 276 bp and the recent VIX of 75.2 points. By the way, the latter has been statistically associated with a wider than 1,500 bp midpoint for the high-yield bond spread.

#### DEFAULTS

January 2020's U.S. high-yield default rate of 4.2% was up from January 2019's 2.6% and may average 3.8% during 2020's final quarter according to Moody's Investors Service.

#### US CORPORATE BOND ISSUANCE

Fourth-quarter 2018's worldwide offerings of corporate bonds incurred annual setbacks of 23.4% for IG and 75.5% for high-yield, wherein US\$-denominated offerings plunged by 26.1% for IG and by 74.1% for high yield.

First-quarter 2019's worldwide offerings of corporate bonds revealed annual setbacks of 0.5% for IG and 3.6% for high-yield, wherein US\$-denominated offerings fell by 3.0% for IG and grew by 7.1% for high yield.

Second-quarter 2019's worldwide offerings of corporate bonds revealed an annual setback of 2.5% for IG and an annual advance of 17.6% for high-yield, wherein US\$-denominated offerings sank by 12.4% for IG and surged by 30.3% for high yield.

Third-quarter 2019's worldwide offerings of corporate bonds revealed annual advances of 15.2% for IG and 56.8% for high-yield, wherein US\$-denominated offerings soared higher by 36.8% for IG and 81.3% for high yield.

Fourth-quarter 2019's worldwide offerings of corporate bonds revealed annual advances of 15.3% for IG and 329% for high-yield, wherein US\$-denominated offerings dipped by 0.8% for IG and surged higher by 330% for high yield.

For 2019, worldwide corporate bond offerings grew by 5.4% annually (to \$2.447 trillion) for IG and advanced by 49.2% for high yield (to \$561 billion). The projected annual percent changes for 2020's worldwide corporate bond offerings are -15.3% for IG and -4.0% for high yield.

#### US ECONOMIC OUTLOOK

In view of the underutilization of the world's productive resources, low inflation should help to rein in Treasury bond yields. As long as the global economy operates below trend, the 10-year Treasury yield may not remain above 1.75% for long. A fundamentally excessive climb by Treasury bond yields and a pronounced slowing by expenditures in dynamic emerging market countries are among the biggest threats to the adequacy of economic growth and credit spreads.

## The Long View

### EUROPE

By Barbara Teixeira Araujo of Moody's Analytics  
March 12, 2020

#### EUROPEAN CENTRAL BANK

It was a bloodbath Thursday in financial markets. Stock markets in Europe suffered their worst daily losses ever, with falls even steeper than those recorded during the 2008 crisis. Volatility also spiked, with the VIX jumping to over 70. President Donald Trump's shock announcement of a Europe travel ban was to blame for much of the selloff, but that several European countries announced further containment measures on Thursday only added fuel to the fire.

The European Central Bank had all it took to calm the situation, as it held its March monetary policy meeting Thursday. Everyone was expecting the bank to go big. Unfortunately, it missed the opportunity. Although it did announce a comprehensive policy package, the bank's president, Christine Lagarde, held a disastrous press conference that sent markets into a dramatic slide. Lagarde's comments did little to allay fears; instead they heightened anxiety among investors, suggesting that the ECB isn't ready to do much more to prevent the economy from heading into a tailspin. That she kept insisting that fiscal measures should come as the first and foremost response to the crisis only added to the fears, as this suggested that currently there is little prospect of an upcoming big coordinated fiscal stimulus by euro zone governments. The real downer, however, was when Lagarde claimed that the euro zone's job is not to close spreads. This prompted a meltdown in Italy's financial markets; stock prices plunged sharply while bond spreads jumped by over 50 basis points. Lagarde's comment is odd and misplaced, especially because the ECB could potentially resort to Outright Monetary Transactions (the same as Mario Draghi did in 2012) to support euro zone governments in the event their interest rates jumped sharply, and their debts became unsustainable.

Markets were also disappointed that there were no rate cuts. Given that the deposit rate is already at -0.5%, our view is that rate cuts wouldn't be nearly as efficient as the other measures announced by the ECB. Those range from further quantitative easing focused on private purchases, to a beefed-up TLTRO-II programme focused on providing liquidity to SMEs, to slashing banks' capital requirement ratios. In our view, these measures are substantial enough to provide banks and firms with the liquidity they need at a very cheap price. But there is only so much monetary policy can do, so fiscal policy needs to be significantly stepped up to prevent the euro zone from falling deep into recession in the first half of this year.

#### UNITED KINGDOM

The Bank of England and the U.K. government delivered on Wednesday a substantial coordinated stimulus package in an attempt to shelter the U.K. economy from any hit related to the rapid spread of COVID-19. In a shock announcement at daybreak, the BoE slashed interest rates to a record low of 0.25% from 0.75%—the biggest cut since the financial crisis. It also put in place a Term Funding Scheme with additional incentives to SMEs, while at the same time it reduced the U.K. countercyclical capital buffer to 0% from 1%. Together, these two measures are expected to unleash an additional £290 billion of bank lending to the U.K. economy, amounting to 13.1% of the U.K.'s GDP. These measures should ensure that those businesses most hit by the coronavirus disruptions have access to cheap and widely available loans so as to preserve their working capital.

Later in the day, the ball was in the U.K. government's court. The 2020 budget delivered by Chancellor Rishi Sunak was massive to say the least. The near-term fiscal stimulus measures announced came in well above market and our expectations; for fiscal 2020-2021, Sunak announced a huge £30 billion fiscal package, which amounts to 1.4% of GDP. Of this sum, £12 billion is made up of measures designed to fight the coronavirus hit to the economy. Those measures are comprehensive, ranging from more money for the National Health Service to more generous sick pay, faster access to benefits for the self-employed, extra local support for the most vulnerable, as well as tax cuts, loans and grants for businesses. The remaining £18 billion encompasses longer-term measures such as a reduction in the national insurance contribution threshold and higher public spending. Adding to that, Sunak announced an extra £175 billion of public investment over the next five years, leading the Office for Budget Responsibility to frame the current budget as being the largest sustained fiscal loosening since 1992.

Both moves came at a good time, as data showed the U.K. economy stalled in January, suggesting it was weak even before the hit from February's floods and from any coronavirus-related disruptions. This is why we haven't revised up our forecasts for GDP growth following the budget and the BoE's decision—even accounting for them, GDP is set to barely grow in the first half of this year.

## The Long View

### ASIA PACIFIC

By Katrina Ell of Moody's Analytics  
March 12, 2020

#### GLOBAL

The coronavirus has knocked global growth expectations for 2020 off course. Expectations that the global economy would be on a stronger footing in 2020, following the signing by the U.S. and China of the Phase One trade agreement mid-January, never happened. The coronavirus has led to significant downward revisions in our expectations for GDP growth across the major economies in 2020. While a health epidemic typically brings a strong revival in activity after containment, the COVID-19 outbreak has not reached that point, and the economic toll has increased. The economic cost of the virus on the global economy will ultimately be determined by the length of time taken to contain it and the number of infections.

Global growth is expected to be 1.9% in 2020, according to our March baseline update, after an expected 2.6% in our January update, which is also referred to as our pre-COVID-19 baseline. China's GDP is expected rise by 4.6% in 2020, 1.6 percentage points weaker than our expectations in January.

#### CHINA

The hit to China's economy has been severe. Large cities were shut down for an extended period, impacting business operations, disrupting supply chains, cancelling travel plans, and halting discretionary consumption. China's economy is returning to work but is not expected to be back to full capacity soon. The virus has not been contained, so quarantine restrictions remain in some parts. The government's encouragement to resume work adds to risks of a secondary flare-up in infections.

To cushion the blow to households and firms, China's policy response has been targeted and varied since the COVID-19 outbreak. Monetary measures have included reductions to loan prime rates, medium-term lending facilities, and reserve requirement ratio reductions. In addition, the government has provided a number of measures including support for small and medium-size enterprises, or SMEs, including postponed interest payments, no penalties on overdue loans within a specified period, reduced government fees, and interest payments in some circumstances deferred until 30 June. The government also introduced subsidies to eligible firms impacted by COVID-19. These include partially or completely waiving government rent and refunding social insurance payments for some firms. Other moves include easier provisioning of social security benefits to households.

#### ASIA

Outside of China, substantial fiscal stimulus measures have been announced by Hong Kong, South Korea, Singapore, Malaysia, Indonesia, Thailand, and most recently, Japan. Hong Kong has announced a record budget deficit for this financial year and the next. In Singapore, the budget deficit will widen to 2.1% in fiscal 2020, its largest in a decade.

Japan's spending package is worth US\$9.6 billion and mostly aimed at supporting businesses impacted by the virus. It includes zero-interest loans for small to medium-size businesses hurt by sales that are at least 15% and 20% lower, respectively. Firms and individuals with sales dropping by 5% to 14% can apply for loans with an interest rate of less than 1%. There are also subsidies for workers who need to take time away because of school closures following the outbreak. This is in addition to the spending package announced in early February to provide low-interest loans to virus-exposed sectors including tourism.

Whether Japan will proceed with the Tokyo Summer Olympics, scheduled for late July through early August, remains unclear. With the number of infections still rising and travel restrictions in place across the globe, the situation is highly uncertain. But if the planned Olympics were to be cancelled, rather than postponed, this would be a significant blow to Japan's economy, which struggled through 2019 with the U.S.-China trade war hurting trade flows and the consumption tax hike on 1 October, as consumption was already on a shaky footing. COVID-19 has only deepened the pain. Our baseline assumption is that Japan's GDP will contract by 0.6% in 2020.

On the monetary policy front, Indonesia, the Philippines and Thailand reduced their policy rates in February. Each of these central banks cited concerns about the damage the coronavirus has already caused and dampened outlooks. In March, Malaysia and Australia reduced their policy rates and South Korea unveiled targeted liquidity support to impacted businesses.

## Ratings Round-Up

## Ratings Round-Up

## All U.S. Changes Are Downgrades

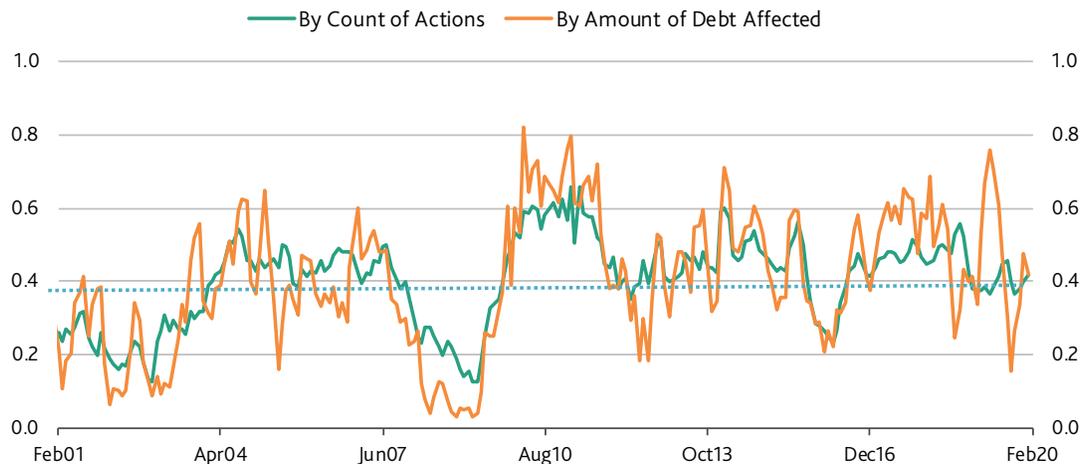
By Steven Shields

U.S. rating changes were decisively negative as risks associated with the novel coronavirus and the oil price collapse weigh on company credit outlooks. For the week ended January 28, downgrades accounted for all 12 rating changes. Like last week, U.S. energy firms experienced the most drastic downgrades in the week. CenterPoint Energy Houston was among the largest downgrades in terms of debt affected (\$4.1 billion), with its senior secured notes falling down one notch to A2 from A1. CenterPoint Energy Houston Electric LLC's credit profile reflects its low business risk as a transmission and distribution utility operating in Texas, where we view the regulatory environment to be generally credit supportive. Diamond Offshore Drilling Inc.'s credit outlook was downgraded as the firm contends with weak fundamentals across the offshore drilling industry with credit metrics continuing to worsen in 2020 as utilization for the Ocean GreatWhite semisubmersible rig looks to be lower than Moody's Investors Service anticipated. As a result, Diamond's senior unsecured notes were lowered to Caa2 from B3 previously. Moody's downgraded Newell Brands Inc. unsecured rating to Ba1 on March 9. The company outlook remains negative as weak operating performance, a rising dividend payout ratio, and the firm's decision to retain a collection of commercial products businesses will result in continued high financial leverage.

European rating activity was only marginally better in the period with upgrades accounting for two of the 10 total changes. Moody's Investors Service downgraded Sasol Limited's long-term rating to Ba1 from Baa3. The decision to downgrade the rating reflects Moody's view that Sasol's financial leverage will remain elevated over the next two years and that the pace of deleveraging is vulnerable to event risks and challenging market conditions globally and domestically. Moody's issued a credit opinion on March 10 for Wessex Water Services Finance Plc, which resulted in its senior unsecured notes to be downgraded from A3 to Baa1. The outlook remains stable, but more demanding efficiency and performance targets, along with a material cut in allowed returns for the next regulatory period, will likely increase cash flow volatility and worsen other financial metrics. The ratings adjustment affected roughly \$2.1 billion in outstanding debt.

FIGURE 1

## Rating Changes - US Corporate &amp; Financial Institutions: Favorable as % of Total Actions



\* Trailing 3-month average

Source: Moody's

## Ratings Round-Up

FIGURE 2

## Rating Key

<b>BCF</b>	Bank Credit Facility Rating	<b>MM</b>	Money-Market
<b>CFR</b>	Corporate Family Rating	<b>MTN</b>	MTN Program Rating
<b>CP</b>	Commercial Paper Rating	<b>Notes</b>	Notes
<b>FSR</b>	Bank Financial Strength Rating	<b>PDR</b>	Probability of Default Rating
<b>IFS</b>	Insurance Financial Strength Rating	<b>PS</b>	Preferred Stock Rating
<b>IR</b>	Issuer Rating	<b>SGLR</b>	Speculative-Grade Liquidity Rating
<b>JrSub</b>	Junior Subordinated Rating	<b>SLTD</b>	Short- and Long-Term Deposit Rating
<b>LGD</b>	Loss Given Default Rating	<b>SrSec</b>	Senior Secured Rating
<b>LTCF</b>	Long-Term Corporate Family Rating	<b>SrUnsec</b>	Senior Unsecured Rating
<b>LTD</b>	Long-Term Deposit Rating	<b>SrSub</b>	Senior Subordinated
<b>LTIR</b>	Long-Term Issuer Rating	<b>STD</b>	Short-Term Deposit Rating

FIGURE 3

## Rating Changes: Corporate &amp; Financial Institutions – US

Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	Old STD Rating	New STD Rating	IG/SG
3/4/20	CENTERPOINT ENERGY, INC.- CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	Utility	SrSec/BCF/LTIR	4,015	D	A1	A2			IG
3/4/20	PIONEER ENERGY SERVICES CORP.	Industrial	SrUnsec/SrSec /BCF/LTCFR/PDR	300	D	Caa2	Ca			SG
3/4/20	LSC COMMUNICATIONS, INC.	Industrial	SrSec/BCF /LTCFR/PDR	900	D	B3	Ca			SG
3/5/20	HUNT OIL COMPANY	Industrial	LTIR		D	B2	B3			SG
3/5/20	LONGVIEW INTERMEDIATE HOLDINGS C, LLC	Utility	SrSec/BCF		D	Caa1	Ca			SG
3/5/20	CHIEF POWER FINANCE, LLC	Industrial	SrSec/BCF		D	Caa1	Ca			SG
3/6/20	NEENAH ENTERPRISES, INC. -NEENAH FOUNDRY COMPANY	Industrial	SrSec/BCF /LTCFR/PDR		D	Caa1	Caa2			SG
3/6/20	VINE OIL & GAS, LP	Industrial	SrUnsec /LTCFR/PDR	910	D	Caa2	Ca			SG
3/9/20	LOEWS CORPORATION -DIAMOND OFFSHORE DRILLING, INC.	Industrial	SrUnsec /LTCFR/PDR	2,000	D	B3	Caa2			SG
3/9/20	NEWELL BRANDS INC.	Industrial	SrUnsec /MTN/CP	5,685	D	Baa3	Ba1	P-3	NP	IG
3/9/20	JILL HOLDINGS LLC -JILL ACQUISITION LLC	Industrial	SrSec/BCF /LTCFR/PDR		D	B2	Caa1			SG
3/9/20	STRATEGIC MATERIALS HOLDING CORP.	Industrial	SrSec/BCF /LTCFR/PDR		D	B3	Caa3			SG

Source: Moody's

## Ratings Round-Up

FIGURE 4

## Rating Changes: Corporate &amp; Financial Institutions – Europe

Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	Old STD Rating	New STD Rating	IG/ SG	Country
3/5/20	SPAREBANK 1 NORD-NORGE	Financial	SrUnsec/LTIR/LTD/MTN/PS	865	U	A1	Aa3			IG	NORWAY
3/5/20	YTL POWER INTERNATIONAL BERHAD-WESSEX WATER SERVICES FINANCE PLC	Industrial	SrUnsec	2,085	D	A3	Baa1			IG	UNITED KINGDOM
3/5/20	SASOL LIMITED-SASOL FINANCING INTERNATIONAL LIMITED	Industrial	SrUnsec/STIR	3,250	D	Baa3	Ba1	P-3	NP	IG	ISLE OF MAN
3/5/20	SPAREBANK 1 OSTLANDET	Financial	SrUnsec/LTIR/LTD/MTN	1,608	U	A1	Aa3			IG	NORWAY
3/5/20	TRAVELEX HOLDINGS LIMITED-TRAVELEX FINANCING PLC	Industrial	SrSec/LTCFR/PDR	407	D	B3	Caa1			SG	UNITED KINGDOM
3/5/20	THE VERY GROUP LIMITED	Industrial	SrSec/LTCFR/PDR	717	D	B2	B3			SG	UNITED KINGDOM
3/9/20	INTRALOT S.A.	Industrial	SrUnsec/LTCFR/PDR	848	D	Caa1	Caa2			SG	GREECE
3/10/20	ENCE ENERGIA Y CELULOSA, S.A.	Industrial	LTCFR/PDR		D	Ba2	Ba3			SG	SPAIN

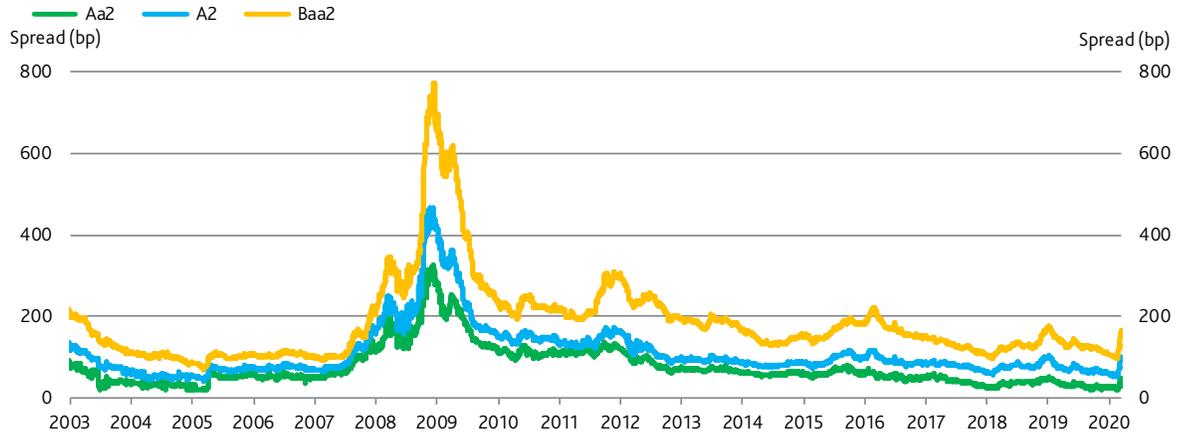
Source: Moody's

Market Data

Market Data

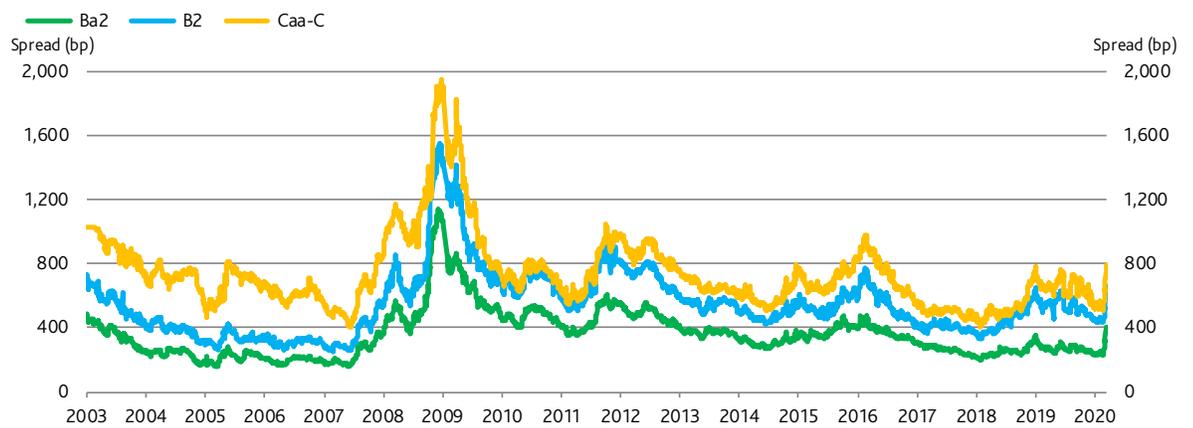
Spreads

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

## Market Data

## CDS Movers

Figure 3. CDS Movers - US (March 5, 2020 – March 11, 2020)

CDS Implied Rating Rises		CDS Implied Ratings		
Issuer	Mar. 11	Mar. 4	Senior Ratings	
YRC Worldwide Inc.	Caa1	C	Caa1	
American Tower Corporation	Ba1	B1	Baa3	
Qwest Corporation	Ba2	B2	Ba2	
Rite Aid Corporation	Caa2	C	Caa3	
Service Corporation International	Ba1	B1	Ba3	
Clorox Company (The)	A2	Baa2	Baa1	
Scripps (E.W.) Company (The)	A2	Baa2	B3	
Cummins, Inc.	A2	Baa2	A2	
Intuit Inc.	A3	Baa3	A3	
Credit Suisse (USA), Inc.	A3	Baa3	A1	

CDS Implied Rating Declines		CDS Implied Ratings		
Issuer	Mar. 11	Mar. 4	Senior Ratings	
Darden Restaurants, Inc.	Baa3	Aa3	Baa2	
Boeing Company (The)	B2	Baa3	Baa1	
Chevron Corporation	Baa2	Aa3	Aa2	
Kinder Morgan Energy Partners, L.P.	Baa2	Aa3	Baa2	
Halliburton Company	B2	Baa3	Baa1	
Noble Energy, Inc.	B3	Ba1	Baa3	
Toyota Motor Credit Corporation	A2	Aa1	Aa3	
Williams Companies, Inc. (The)	B2	Ba1	Baa3	
Plains All American Pipeline L.P.	B2	Ba1	Ba1	
United Rentals (North America), Inc.	B2	Ba1	Ba3	

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Mar. 11	Mar. 4	Spread Diff
Frontier Communications Corporation	Caa3	22,626	7,470	15,156
Chesapeake Energy Corporation	Caa3	10,056	6,122	3,934
Nabors Industries, Inc.	B1	3,952	928	3,023
Diamond Offshore Drilling, Inc.	Caa2	2,901	1,261	1,640
Neiman Marcus Group LTD LLC	Ca	6,251	4,812	1,438
Penney (J.C.) Corporation, Inc.	Caa3	4,462	3,144	1,318
Occidental Petroleum Corporation	Baa3	666	172	494
American Airlines Group Inc.	B1	964	486	478
Royal Caribbean Cruises Ltd.	Baa2	726	258	468
Apache Corporation	Baa3	619	152	466

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 11	Mar. 4	Spread Diff
AutoNation, Inc.	Baa3	410	463	-53
Cablevision Systems Corporation	B3	393	443	-50
DPL Inc.	Ba1	327	371	-45
AmerisourceBergen Corporation	Baa2	78	96	-18
United States Cellular Corporation	Ba1	148	166	-18
Computer Sciences Corporation	Baa2	158	175	-17
Mack-Cali Realty, L.P.	Ba2	112	128	-16
Qwest Corporation	Ba2	206	221	-15
Service Corporation International	Ba3	156	171	-15
Juniper Networks, Inc.	Baa2	100	112	-13

Source: Moody's, CMA

## Market Data

Figure 4. CDS Movers - Europe (March 5, 2020 – March 11, 2020)

CDS Implied Rating Rises		CDS Implied Ratings		
Issuer		Mar. 11	Mar. 4	Senior Ratings
DZ BANK AG		A2	Baa2	Aa1
Iceland Bondco plc		Caa2	C	Caa2
Allied Irish Banks, p.l.c.		A3	Baa2	A2
Investor AB		A1	A3	Aa3
EWE AG		Baa3	Ba2	Baa1
Atlas Copco AB		A3	Baa2	A2
Novafives S.A.S.		Caa3	C	Caa2
Stagecoach Group Plc		Baa1	Baa3	Baa3
Dexia Credit Local		Ba1	Ba2	Baa3
UniCredit Bank AG		A2	A3	A2

CDS Implied Rating Declines		CDS Implied Ratings		
Issuer		Mar. 11	Mar. 4	Senior Ratings
Total S.A.		Baa2	Aa2	Aa3
Equinor ASA		A3	Aa1	Aa2
Royal Dutch Shell Plc		Baa2	Aa3	Aa2
Banco Santander S.A. (Spain)		A3	Aa2	A2
Credit Agricole S.A.		A2	Aa1	Aa3
Credit Agricole Corporate and Investment Bank		A2	Aa1	Aa3
Vinci S.A.		A2	Aa1	A3
Deutsche Lufthansa Aktiengesellschaft		B2	Ba1	Baa3
France, Government of		Aa3	Aaa	Aa2
Spain, Government of		Baa1	A1	Baa1

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Mar. 11	Mar. 4	Spread Diff
PizzaExpress Financing 1 plc	Ca	7,941	5,768	2,173
Boparan Finance plc	Caa1	2,439	1,736	703
Selecta Group B.V.	Caa1	859	424	436
Matalan Finance plc	Caa1	1,496	1,098	398
Novafives S.A.S.	Caa2	1,322	940	382
Jaguar Land Rover Automotive Plc	B1	960	584	376
Stena AB	B3	850	494	356
Iceland Bondco plc	Caa2	1,243	921	322
CMA CGM S.A.	Caa1	2,184	1,893	291
Atlantia S.p.A.	Ba3	445	225	219

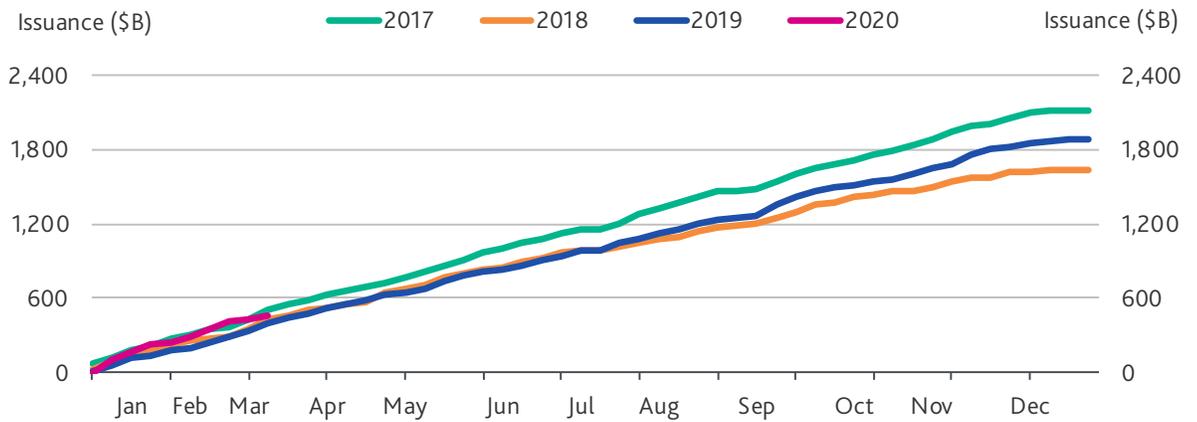
CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 11	Mar. 4	Spread Diff
DZ BANK AG	Aa1	59	71	-12
Landesbank Baden-Wuerttemberg	Aa3	42	49	-7
Landesbank Hessen-Thuringen GZ	Aa3	43	47	-4
Investor AB	Aa3	47	52	-4
Allied Irish Banks, p.l.c.	A2	69	72	-3
EWE AG	Baa1	130	131	-2
Electrabel SA	Baa1	92	93	-1
Alpha Bank AE	Caa1	616	616	0
Eksportfinans ASA	Baa1	475	475	0
Eurobank Ergasias S.A.	Caa1	699	699	0

Source: Moody's, CMA

Market Data

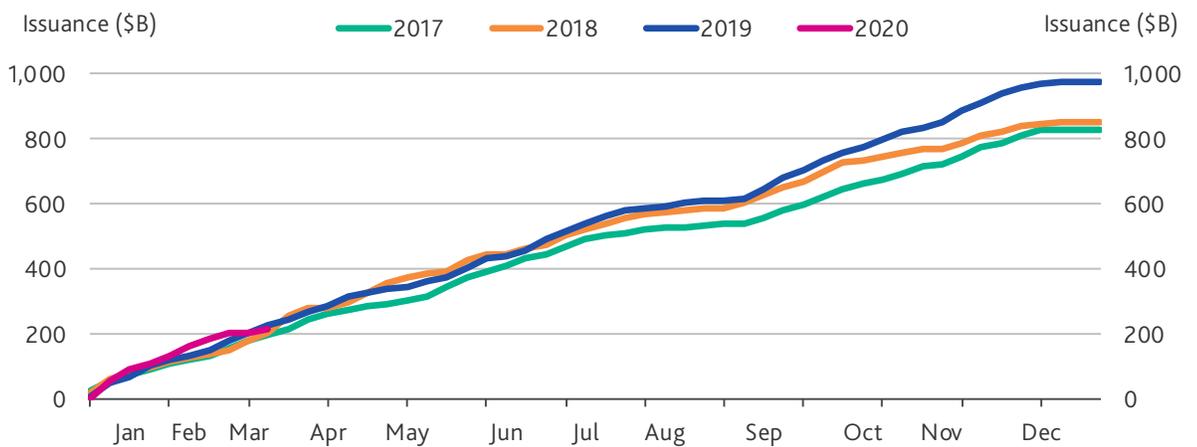
Issuance

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

## Market Data

Figure 7. Issuance: Corporate &amp; Financial Institutions

	USD Denominated		
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	31.695	5.255	38.565
Year-to-Date	305.828	129.909	459.959

	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	9.857	0.000	9.915
Year-to-Date	174.590	35.572	215.420

\* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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