Moody's

WEEKLY MARKET OUTLOOK

Stimulatory Monetary and Fiscal Policies Enhance Corporate Credit Outlook

FULL STORY PAGE 2

Moody's Analytics Research

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Credit Markets Review and Outlook by John Lonski

Credit

Spreads

Defaults

Issuance

Corporate Credit Outlook

The Week Ahead

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

Stimulatory Monetary and Fiscal Policies Enhance

FULL STORY PAGE 7

The Long View

Full updated stories and key credit market metrics: Mostly because of financial company offerings, investmentgrade bond issuance thrived at the start of 2021.

<u>Investment Grade:</u> Year-end 2021's average investment grade bond spread may slightly exceed its recent 105 basis points. High Yield: A composite high-yield spread may top its recent 390 bp by year-end 2021. US HY default rate: According to Moody's Investors Service,

the U.S.' trailing 12-month high-yield default rate jumped from November 2019's 4.1% to November 2020's 8.4% and may peak close to its expected 9.5% average for 2021's first quarter.

For 2019's offerings of US\$-denominated corporate bonds, IG bond issuance rose 2.6% to \$1.309 trillion, while highyield bond issuance surged by 55.8% to \$432 billion. In 2020, US\$-denominated corporate bond issuance soared 53.7% for IG to a record \$2.012 trillion, while high-yield advanced 31.8% to a record-high \$570 billion. For 2021, US\$-denominated corporate bond offerings may decline 24% (to \$1.53 trillion) for IG and drop 14% (to \$480 billion) for high-yield, where both forecasts top their respective annual averages for the five years ended 2020 of \$1.494 trillion for IG and \$410 billion for high-yield.

FULL STORY PAGE 12

Ratings Round-Up

Two U.S. Upgrades, One Downgrade in Latest Period

FULL STORY PAGE 15

Market Data

Credit spreads, CDS movers, issuance.

FULL STORY PAGE 17

Moody's Capital Markets Research recent publications

Links to commentaries on: Core profits, yield spreads, resurgent virus, split Congress, misery, issuance boom, default rate, volatility, credit quality, unprecedented stimulus, bond yields, record savings rates, demographic change, high tech, complacency, Fed intervention, speculation, risk, credit stress, rate cuts, optimism, coronavirus, corporate credit, leverage, VIX.

FULL STORY PAGE 22

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Credit Markets Review and Outlook

Credit Markets Review and Outlook

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

Stimulatory Monetary and Fiscal Policies Enhance Corporate Credit Outlook

An extraordinarily accommodative monetary policy helps financial markets view the Democratic Party's takeover of Congress in a positive light. For now, markets expect the Federal Reserve will offset any potential loss of business activity to increased regulation or higher taxes via measures that effectively increase systemic liquidity. Of special importance is how markets seem willing to tolerate an atypically wide federal budget deficit and an even higher ratio of U.S. government debt to GDP.

Markets assume that the Fed's overarching incentive is to achieve full employment as quickly as possible. Thus, the Fed will reverse any rise by Treasury bond yields that might impede the realization of full employment, provided that markets do not disapprove.

When might markets tell the Fed to stop temporarily monetizing the federal deficit and say no to the continuation of federal budget deficits well in excess of 6% of GDP? Perhaps, the economically destructive return of accelerating price inflation and destabilizing exchange rate depreciation might be the developments which bring an end to the Fed's placing the attainment of full employment ahead of price stability.

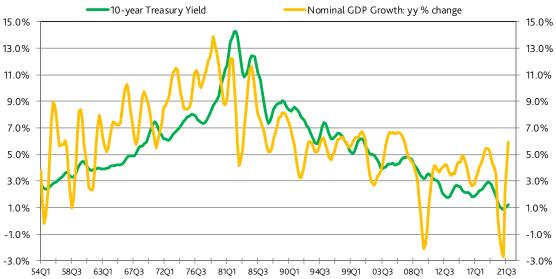
The 1970s supply two prime examples as to what is meant by accelerating price inflation. The first example has the calendar-year average annual rate of PCE price inflation bottoming in 1972 at a relatively brisk 3.4% then rising to 5.4% in 1973 and peaking at 1974's 10.4%. The next episode saw the annual rate of PCE price index inflation climb from a 1976 low of 5.5% to 1977's 6.5%, 1978's 7.0%, 1979's 8.9% and then cresting at 1980's 10.8%. Recessions brought an end to each of those two installments of accelerating price inflation. For now, the good news is that the available evidence favors a much milder rise, if any, by PCE price index inflation.

Not only is PCE price index inflation expected to outrun 2021's average five-year U.S. Treasury yield by 1.25 to 1.5 percentage points, but the 2021's expected average 10-year Treasury yield of 1.25% may trail the accompanying rate of nominal GDP growth by 4.5 to 5.0 percentage points. Thus, 2021 discount of the 10-year Treasury yield to nominal GDP growth may be the deepest since the 5.2 percentage point shortfall of the year-ended March 1979. But that gap did not last; the 10-year Treasury yield's moving yearlong average advanced from March 1979's 8.7% to March 1980's 10.1%, while nominal GDP's trailing yearlong growth rate slowed from the 13.9% of 1979's first-quarter to the 10.7% of 1980's first quarter.

Credit Markets Review and Outlook

Figure 1: 2021's Average Discount of the 10-year Treasury Yield to Nominal GDP Growth May be the Deepest since the -5.2 Percentage Points of 1979's First-Quarter

moving yearlong averages source:s BEA, Federal Reserve, Moody's Analytics



Regardless of the Federal Reserve's now highly accommodative policy tone, the upside potential for Treasury bond yields is well above what markets currently anticipate.

Because of the Fed's perceived willingness to purchase Treasury debt for the purpose of stabilizing Treasury bond yields, the U.S. government does not face the same budgetary constraint that is ordinarily imposed on Washington by the Treasury bond market. However, a soft budgetary constraint may not persist indefinitely.

Default Risk Falls as Market Value of Business Assets Climbs Higher

As the U.S. equity market rockets higher to new record highs, the market value of the collateral backing business assets increases, especially since the share prices of smaller companies have led the rally by U.S. equities since the end of September 2020. Compared with the impressive 16.1% advance by the broadest readily available estimate of the market value of U.S. common stock, the Russell 2000 index of smaller company stock prices has soared higher by a scintillating 37.9% since September 30, 2020's close. And it is in the Russell 2000, as opposed to the S&P 500, that we are more likely to find companies whose size is comparable to most high-yield issuers.

An increase in the market-value of business assets quickly lowered Moody's Analytics' unweighted average expected default frequency metric for U.S./Canadian high-yield issuers from a September 2020 average of 5.50% to year-end 2020's 3.39% and, most recently, to January 6's 3.09%. The latter was the lowest average high-yield EDF since the 3.07% of March 1, 2019.

The latest dive by the high-yield EDF favors a deep drop by the U.S. high-yield default rate from November 2020's 8.4%. Since the average EDF's 1996 inception there have been six incidents where the high-yield EDF's month-long average descended to and through January 6's 3.09%. For the six incidents, the high-yield default rate of nine and 12 months later would be in a range of 2.7% to 3.0%, on balance. Even the highest default rate of nine to 12 months later of 3.8% was well under November 2020's 8.4%. Thus, if the average high-yield EDF remains under 3.25%, the odds strongly favor a default rate no greater than 4% by the summer of 2021.

Credit Markets Review and Outlook

Figure 2: Declining Trend of High-Yield Expected Default Frequency (EDF) Metric Suggests Default Rate Drops from November 2020's 8.4% to Less-than-4% by Summer of 2021

sources: Moody's Investors Service (MIS), NBER, Moody's Analytics Recessions are shaded Issuer-Weighted U.S. High-Yield Default Rate: % Average Expected Default Frequency (EDF) Metric: % 15.0 14.0 13.0 12.0 11.0 10.0 90 8.0 7.0 6.0 5.0 4.0 3.0 2.0 10 0.0 100

EDF and High-Yield Bond Spread Both Signal Lower Default Rates

Feb-98 Mar-00 Apr-02 May-04 Jun-06

Both the average high-yield EDF metric and the high-yield bond spread serve as predictors of default rates over the next nine to 12 months. For a sample starting in January 1996, the high-yield default rate shows correlations of 0.85 with the high-yield EDF of nine months earlier and 0.76 with the high-yield EDF of 12-months back. The same sample shows the high-yield default rate generating correlations of 0.78 and 0.71 with the high-yield bond spread of nine- and 12-months earlier.

Jul-08

Aug-10 Sep-12

Oct-14 Nov-16

Dec-18

Jan-21

The average high-yield EDF shows a relatively high correlation of 0.71 with the high-yield bond spread. Nevertheless, the relationship between the high-yield EDF and bond spread has differed considerably over time. For example, the averages of January 1996 through June 1998 were 3.4% for the high-yield EDF and 287 basis points for the now Bloomberg/Barclays high-yield bond spread. However, despite how the high-yield EDF fell to 2.85%, on average, during March 2010 through June 2015, the high-yield bond spread widened to 515 bp, on average.

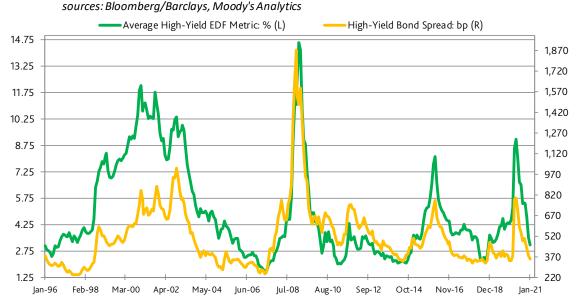
For both of the just cited spans, the high-yield EDF outperformed the high-yield bond spread by a wide margin as far as predicting the high-yield default rate. For the January 1996 to June 1998 observation, the high-yield default rate supplied correlations of 0.71 and -0.51, respectively, with the high-yield EDF and the high-yield bond spread of nine months earlier.

Regarding the March 2010 to June 2015 episode, though the high-yield default rate generated an identical correlation of 0.69 with the both the high-yield EDF and bond spread of nine months earlier, the default rate showed a higher correlation of 0.50 with the EDF of 12-months earlier compared to the correlation of 0.30 with the spread of 12-months back.

Credit Markets Review and Outlook

Figure 3: Recent High-Yield Bond Spread of 360 bp and High-Yield EDF of 3.09% Are Well Under Long-Term Medians of 3.85% and 461 bp, Respectively

month-long averages



Equity Market Surge Helps to Firm High-Yield Credit Ratings

As derived from a methodology adopted back in 1986, fourth-quarter 2020's credit rating revisions of U.S. high-yield companies showed the 91 upgrades surpassing the 69 downgrades. Thus, over the course of 2020, net high-yield downgrades plunged from the 194 of the first quarter, the record-high 368 of the second quarter, and the 29 of the third quarter to the -22 of the final quarter. The upgrades of U.S. high-yield upgrades last outnumbered downgrades in 2018's third quarter, or when net high-yield downgrades equaled -42.

A strong equity market now helps to improve high-yield credit quality. The 91 upgrades of U.S. high-yield issuers from 2020's final quarter included 15 upgrades that were at least partly ascribed to infusions of equity capital. The 37 equity-infusion-related upgrades of the three quarters ended December 2020 were the most since the three-quarter spans ended June 2017 and June 2010. The three-quarter sum of such equity infusion upgrades peaked at the 39 of the spans-ended June 2006 and March 2005.

The year-over-year percentage change of the moving two-quarter average of the market value of U.S. common stock generates meaningful inverse correlations of -0.69 with the latest calendar-quarter average of a composite high-yield bond spread and -0.59 with the moving two-quarter ratio of net high-yield downgrades to the number of high-yield issuers.

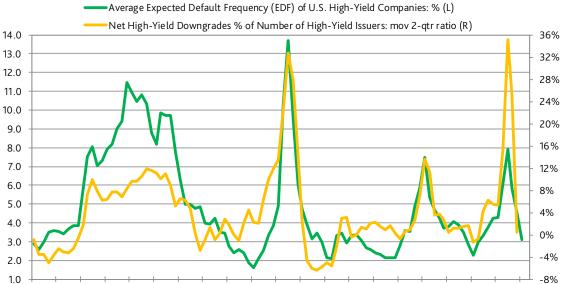
Moreover, the net downgrades of U.S. high-yield issuers tend to move in the direction taken by the average high-yield EDF metric. Thus, as the market value of net worth increases and the volatility of the market value of business assets declines, net downgrades of high-yield issuers decline.

The market value of net worth equals the difference between the market value of business assets less liabilities, where the latter is generally dominated by outstanding debt obligations. Ordinarily, the market value of business assets is more volatile than the par value of outstanding debt.

Credit Markets Review and Outlook

Figure 4: Recent Plunge by the Average High-Yield EDF Complemented an Accompanying Dive by Net Downgrades of U.S. High-Yield Companies

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



96Q1 97Q2 98Q3 99Q4 01Q1 02Q2 03Q3 04Q4 06Q1 07Q2 08Q3 09Q4 11Q1 12Q2 13Q3 14Q4 16Q1 17Q2 18Q3 19Q4 21Q1

The Week Ahead

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

THE U.S.

By Adam Kamins of Moody's Analytics

Seeing the Pandemic's Hit to State Populations

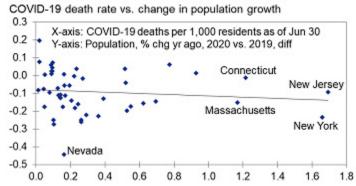
After nearly a year of relying on real-time sources to track the regional demographic effects of <u>COVID-19</u>, official government data are beginning to catch up. With the release of state midyear population estimates for 2020 just before the holidays, the impact of the pandemic in different parts of the country has grown more clear.

More information about the ramifications will emerge when detailed data on components of change, such as net domestic migration, are unveiled in the weeks ahead, but the raw population numbers alone are telling.

Sadly, the first place to look when analyzing the impact of the virus on population growth is the number of lives lost. Using data from Johns Hopkins University on total deaths from COVID-19 through June 30, one can begin to understand more completely the toll of the virus on state-by-state population figures.

A comparison of changes in population growth and COVID-19 deaths reveals a relationship in which higher death rates through midyear are linked to more noticeable demographic issues. This is especially pronounced in states such as New York and New Jersey, where death rates were highest in the early days of the pandemic and sharper population declines than in past years resulted. New York moved from near the bottom of the pack in 2019 for population growth to last place, and while New Jersey held steady, it seemingly failed to capitalize on the migration of many New Yorkers to the suburbs.

Death Rate Means Little for Demographics



Sources: Census Bureau, Johns Hopkins Univ., Moody's Analytics

While the relationship is striking, it appears to be driven by the direct loss of life associated with the pandemic. To see this, one can add back COVID-19 deaths to the 2020 midyear estimates and calculate an assumed growth rate that accounts for migration and natural population growth absent the loss of life from the pandemic. Doing so shifts New York back to the same ranking it had a year

MOODY'S ANALYTICS CAPITAL MARKETS RESEARCH

The Week Ahead

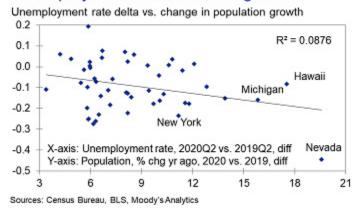
earlier and indicates that New Jersey should have actually improved over 2019. It also reveals that Illinois looks a bit worse than it otherwise would because of lost lives in that state.

On the flip side, states such as West Virginia and Maine look better in relative terms before removing COVID-19 deaths. Both have long struggled demographically because of an aging population and, in the case of West Virginia, the steady loss of coal mining jobs. But each experienced a relatively low death rate through the end of spring, putting them in a marginally better position than in previous years compared with some other states.

All told, the loss of life matters more for its direct impact on the population than it does as an influencer of moving decisions. This corresponds with more recent real-time data showing that the rural areas that were initially hit hardest by the fall and winter wave did not seem to experience any sort of mass exodus.

When looking at the change in the unemployment rate as a predictor of population growth, the results are less ambiguous. The change in the second quarter unemployment rate from a year earlier is far more highly correlated with population changes than a state's COVID-19 death rate. This is true both before and after removing reported COVID-19 deaths. That represents a stark contrast to the far more normal preceding year, as there was actually a slightly positive correlation between unemployment rising and population growth accelerating in 2019.

Unemployment Drives Out-Migration



To see the potency of economic factors as compared with health metrics, look no further than the state that declined most dramatically. Nevada's tourism industry was decimated, and the ensuing loss of jobs appears to have brought in-migration into Las Vegas to a dramatic halt. The shock to migration in Nevada was driven by the Silver State's economic plight, not a particularly devastating COVID-19 outbreak relative to its peers.

Of course, there is a link between a major COVID-19 outbreak and elevated unemployment. The northeastern states that were devastated in the early days of the pandemic had to enact far more severe measures, putting places such as New York and Massachusetts in an unusually bad position. But it is clear from examples such as Nevada that the economic ramifications of the virus appear to be the channel that drove migration patterns across the U.S.

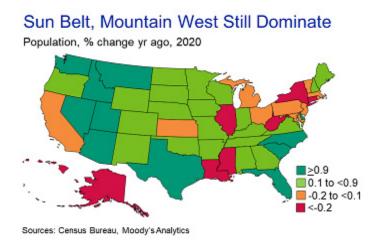
While population growth declined in most states, consistent with a national deceleration, a handful of sparsely populated states showed improvement. Specifically, Alaska, Montana and Wyoming all

The Week Ahead

were among the most improved states from 2019 to 2020 in terms of population growth, accentuating the struggles of large, densely populated urban centers that fell out of favor last year.

The 2020 figures mostly reflect a continuation of the long-term trend of movement out of the Northeast and Midwest and into the South and West. But there is some nuance in this year's figures. For one, after either zero or one Census division experienced an outright population decline in the years leading up to 2020, three did last year. Not surprisingly, they are the Great Lakes and both Northeast divisions: the Mid-Atlantic and New England.

On the flip side, the Mountain West remains well ahead of its peers, with Idaho leading the nation in population growth for the third time in four years. Arizona is second, and despite its struggles Nevada placed third, followed by Utah. That division's low costs, skilled workforce, and ample open space provide an enviable combination.



Meanwhile, Texas ranks fifth in population growth, and placed in the top 10 for pace of acceleration. As a result, the West South Central division was the only one to feature faster-growing population in 2020 than in 2019.

These state-level strengths mirror broader patterns, as the South and West fared far better not just with respect to overall population growth but the change from a year prior. Still, there are pockets of strength elsewhere. Specifically, New England looks especially good when removing COVID-19 deaths from its population counts, but even with them included two of the region's states—New Hampshire and Rhode Island—grew at a faster clip than they did a year earlier. This may partially reflect a movement out of Boston amid widespread closures and a shift to widespread telecommuting. Meanwhile, Washington DC and Delaware fared better than a year earlier; the former is especially interesting as a test case in how a stable economic driver—the federal government—can supplant struggles with the virus as a driver of demographic trends.

Next Week

Economic indicators coming due include December retail sales. November retail was above year-ago levels but struggling under increased COVID-19 infections and restrictions. Labor market measures will include the job openings and labor turnover survey and weekly jobless claims, which unexpectedly fell this week. The NFIB survey of small business optimism for December is coming. It weakened in November but likely didn't capture recent positive develoments on fiscal stimulus. Inflation measures will include CPI, PPI and import and export prices. We will also see new numbers for industrial production, the Philadelphia Fed surveys and the New York Empire State manufacturing survey.

The Week Ahead

EUROPE

By Ross Cioffi of Moody's Analytics

Clarifying Effects of the Second Wave

Releases next week will further clarify the effects of the second wave of COVID-19 on the euro zone economy. We expect Spanish industrial production fell 3% y/y in November following the 1.6% decline in October. Spanish industry is suffering from the fall in consumer demand in the domestic and European markets, though it does have upsides thanks to sustained demand for new motor vehicles. Italian production, meanwhile, faces a similar issue, but we expect it weathered November thanks to household goods and furniture industries. As a result, we think Italian industrial production will slide just 1.4% m/m for November. However, Italian retail sales like took a harder hit during the month. Following the re-imposition of social distancing measures, retail sales likely fell 3% m/m after a 0.6% gain in October.

Euro zone industrial production, meanwhile, likely rose 0.7% in November. The euro zone aggregate will be buoyed by continued growth in Germany which has benefitted from export demand coming from Asia. Demand for consumer goods, which drove the recovery in the third quarter, has given way to demand for intermediate and capital goods, and transport equipment in particular. As manufacturing is currently one of the few sources of growth, differences in European industrial production figures will highlight the various outlooks for fourth quarter GDP among euro zone countries. Indeed, Germany will outperform the other major economies.

Final estimates of Spanish and French consumer price indexes for December will also be released next week. We think the preliminary estimates will be confirmed, with Spain's CPI falling 0.5% y/y in December and France's stalling after a 0.2% increase in November. Energy price decreases likely weakened during the month as Brent crude prices rose higher than we expected and breached \$50 per barrel by the end of the month. That said, demand remains a weak spot, so the core basket will weigh on inflation dynamics as well.

The euro zone external surplus likely came in at €25 billion in November after rising to €30 billion in October. Trade among euro zone countries will have suffered from the re-imposition of lockdown measures that cut demand for consumer goods. Asian demand likely buoyed euro zone exports during the month.

Finally, the monthly GDP estimate for November in the U.K. likely registered a 3% m/m decline. The U.K.'s second lockdown will have cut into private consumption and investments, which moreover suffered under the weight of Brexit uncertainty as well. The lockdown wasn't as strict as it was last spring though, so there won't be the same degree of contraction.

Key indicators	Units	Moody's Analytics	Last
Spain: Industrial Production for November	% change yr ago	-3.0	-1.6
Italy: Retail Sales for November	% change	-3.0	0.6
Russia: Consumer Price Index for November	% change yr ago	4.7	4.4
Italy: Industrial Production for November	% change	-1.4	1.3
Euro Zone: Industrial Production for November	% change	0.7	2.1
Spain: Consumer Price Index for December	% change yr ago	-0.5	-0.8
Euro Zone: External Trade for November	€bil	25.0	30.0
France: Consumer Price Index for December	% change yr ago	0.0	0.2
U.K.: Monthly GDP for November	% change	-3.0	0.4
Russia: Foreign Trade for November	\$ bil	7.1	6.4
	Spain: Industrial Production for November Italy: Retail Sales for November Russia: Consumer Price Index for November Italy: Industrial Production for November Euro Zone: Industrial Production for November Spain: Consumer Price Index for December Euro Zone: External Trade for November France: Consumer Price Index for December U.K.: Monthly GDP for November	Spain: Industrial Production for November % change yr ago Italy: Retail Sales for November % change Russia: Consumer Price Index for November % change yr ago Italy: Industrial Production for November % change Euro Zone: Industrial Production for November % change Spain: Consumer Price Index for December % change yr ago Euro Zone: External Trade for November € bil France: Consumer Price Index for December % change yr ago U.K.: Monthly GDP for November % change	Spain: Industrial Production for November % change yr ago -3.0 Italy: Retail Sales for November % change -3.0 Russia: Consumer Price Index for November % change yr ago 4.7 Italy: Industrial Production for November % change -1.4 Euro Zone: Industrial Production for November % change 0.7 Spain: Consumer Price Index for December % change yr ago -0.5 Euro Zone: External Trade for November € bil 25.0 France: Consumer Price Index for December % change yr ago 0.0 U.K.: Monthly GDP for November % change -3.0

The Week Ahead

Asia-Pacific

By Shahana Mukherjee of Moody's Analytics

Bank of Korea Will Likely Hold Steady in January

We expect the Bank of Korea to keep the key policy rate unchanged at the record low 0.5% in its January announcement. South Korea's economy rebounded with a strong 1.9% expansion in the September quarter, and in recent months the country has consolidated its trade position. However, the intense third wave of COVID-19 and associated restrictions have undermined the scope for sustaining the revival, with an unreliable change in consumer spending persistently weighing unfavourably on employment. The prevailing uncertainty has built pressure on policymakers to do more, but another easing is unlikely at this stage, given the limited bandwidth for further accommodation and the risk of exacerbating domestic financial imbalances.

We expect China's trade surplus to have narrowed to US\$66 billion in December from US\$75.4 billion in November. China's exports in November rose by 21% in yearly terms, but this performance was partially overstated by a low base effect from the previous year and a weaker dollar. China continues to lead the manufacturing revival and the December trade report will mark further gains, especially as strong demand for personal protective and medical equipment holds up. However, the pace will moderate, especially as the renewed restrictions in several Western economies likely weighed on durable goods consumption.

South Korea's unemployment rate likely held steady at 4.1% in December. Despite being one of the few Asian economies to have experienced a strong trade revival in the second half of 2020, South Korea's employment prospects have remained weak because of the uneven gains in overseas sales and volatility in domestic spending, due to repeated COVID-19 outbreaks in small clusters. With the domestic third wave having strengthened through December and overseas demand for manufactured goods again under pressure, the strain from retreated spending is expected to have prevented any sizeable gains across manufacturing and services industries.

India's industrial output likely increased by 3.7% in yearly terms in November, a touch above the 3.6% increase in October. Domestic conditions are on the mend in the post-restrictions phase, and local auto sales, a key gauge of consumer spending, have revived in recent months, indicative of improving confidence among households. We expect this trend to have held up in November and bolstered industrial activity, though the net increase will be partially offset by the weaker foreign sales recorded in November.

Australia's retail sales are expected to have risen by 7% in monthly terms in November after a 1.4% increase in October. The Australian economy is firmly on a recovery course following the easing of restrictions in Victoria in October. The sharp pickup in November retail activity is expected to have been driven by higher spending in Victoria on the back of pent-up demand and improving sentiment across other states. It is also likely to have benefitted from higher spending ahead of the holiday season and the positive income effects from the additional monetary and fiscal stimulus measures.

	Key indicators	Units	Moody's Analytic	Confidence	Risk	Last
Mon @ 11:30 a.m.	Australia Retail Sales for November	% change	7	4	•	1.4
Mon @ 12:30 p.m.	China CPI for December	% change yr ago	-0.6	3		-0.5
Mon @ 12:30 p.m.	China Producer Prices for December	% change yr ago	-1.2	3	•	-1.5
Mon @ 3:00 p.m.	Malaysia Industrial Production for November	% change yr ago	-0.8	3		-0.5
Tues @ 11:00 p.m.	India Industrial Production for November	% change yr ago	3.7	3	•	3.6
Tues @ 11:00 p.m.	India CPI for November	% change yr ago	6.7	3		6.93
Wed @ 10:00 a.m.	South Korea Employment for December	%	4.1	3	•	4.1
Thur @ 10:50 a.m.	Japan Machinery Orders for November	% change	3.5	2	•	17.1
Thur @ 2:00 p.m.	China Foreign Trade for December	US\$ bil	66	3	•	75.4
Thur @ 4:00 p.m.	China Monetary Aggregates for December	% change yr ago	10.6	4		10.7
Fri @ 12:00 p.m.	South Korea Monetary Policy for January	%	0.5	4	•	0.5
Fri @ 11:20 p.m.	India Foreign Trade for December	US\$ bil	-14	3		-9.9

The Long View

The Long View

Mostly because of financial company offerings, investment-grade bond issuance thrived at the start of 2021.

By John Lonski, Chief Capital Markets Economist, Moody's Capital Markets Research January 7, 2021

CREDIT SPREADS

As measured by Moody's long-term average corporate bond yield, the recent investment grade corporate bond yield spread of 105 basis points was less than its 116 basis-point median of the 30 years ended 2019. This spread may be no wider than 110 bp by year-end 2021.

The recent composite high-yield bond spread of 390 bp is wider than what is suggested by the accompanying long-term Baa industrial company bond yield spread of 158 bp but is narrower than what might be inferred from the recent VIX of 22.4 points. The latter has been historically associated with a 630-bp midpoint for a composite high-yield bond spread.

DEFAULTS

November 2020's U.S. high-yield default rate of 8.4% was up from November 2019's 4.1%. The recent average high-yield EDF metric of 3.09% portend a less-than-4% default rate by October 2021.

US CORPORATE BOND ISSUANCE

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.

First-quarter 2020's worldwide offerings of corporate bonds revealed annual advances of 17.7% for IG and 26.5% for high-yield, wherein US\$-denominated offerings increased 43.7% for IG and grew 21.4% for high yield.

Second-quarter 2020's worldwide offerings of corporate bonds revealed annual surges of 69% for IG and 31% 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 11.9% for IG and an annual advance of 4.4% for high-yield, wherein US\$-denominated offerings increased by 15.3% for IG and by 10.6% 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 annual percent increases for 2020's worldwide corporate bond offerings are a 18.4% (to \$2.899 trillion) for IG and 25.8% (to \$706 billion) for high yield. The expected annual declines for 2021's worldwide rated corporate bond issuance are 14% for investment-grade and 10% for high-yield.

US ECONOMIC OUTLOOK

Unacceptably high unemployment and other low rates of resource utilization will rein in Treasury bond yields. As long as the global economy operates below trend, 1.25% will serve as the upper bound for the 10-year Treasury yield. Until COVID-19 risks fade substantially, wider credit spreads are possible. For now, the corporate credit market has priced in the widespread distribution of a COVID-19 vaccine by mid-2021.

The Long View

Europe

By Ross Cioffi of Moody's Analytics January 7, 2021

GERMANY

German factory orders surprised to the upside in November, rising by 2.3% m/m after a 3.3% increase in October. Orders from abroad rose faster than those from the domestic market; those from the euro zone soared by 6.1% m/m, adding to the 0.2% gain previously, while orders from non-euro zone countries were up 0.9% after a 5.3% increase previously. Intermediate goods led new orders, but consumer goods orders also made up some lost ground from October. Capital goods orders carried on, and transport equipment in particular made strong gains.

We believe the story in November has a lot to do with stock building, because the growth in orders was largely from the euro zone where countries were simultaneously tightening lockdown measures. The stronger-than-expected reading therefore reflects pandemic uncertainty rather than fundamentally resilient demand. Although euro zone countries allowed more firms to continue operating than they did last spring, and they put looser restrictions on cross-border travel, factories and firms still needed to plan for the possibility that lockdowns would be tightened. The two-day closure of the ports at Calais in December proves that there were no guarantees supply chains wouldn't falter, even if governments were committed to protecting them this time around. We do think, however, that orders coming from outside the euro zone were linked to more stable demand as the recoveries in Asia continued during the month. The surge in transport equipment orders from the euro zone was also an encouraging sign for one of Germany's leading sectors.

The factory orders release, together with upbeat PMIs and truck toll mileage figures, signals that industrial production will likely contribute to German GDP in the fourth quarter. But we want to caution against reading too much into Thursday's unexpectedly positive release. Consumption and investment seem to have tread water in autumn, but the pandemic is dragging on at home and abroad. With lockdowns extended across Europe, demand won't have much air to breathe heading into the new year.

Retail

German retail sales rose by 1.9% m/m in November, building on the 2.6% increase in October. The numbers beat the consensus expectation of a 2% fall, and our own less pessimistic forecast of a 0.5% decline. The risk had been to the downside, as Germany imposed social distancing measures at the start of the month.

That said, restrictions had focused mainly on services, creating less of a supply crunch on retail goods, especially considering that German consumers have continued to use online shopping. Online sales soared by nearly 32% y/y in November. Consumers also took advantage of Black Friday sales at the end of the month, boosting the November figures. By subsector, sales trended as expected, with sizeable increases in ICT goods and in furniture and domestic appliances, and further declines in textile, clothing, footwear and leather sales.

There are some signs that consumers carried on spending in December, salvaging the final quarter. The labor market outperformed expectations over the month, with the unemployment rate unchanged at 6.1%, backed by the continued recovery in manufacturing due to capital and intermediate goods demand from abroad. Consumer confidence also improved during December. But the uplifting effects from news about COVID-19 vaccines, and the stable unemployment rate thanks to the extension of short-time work benefits, might not translate into sustained consumer spending. The federal government tightened lockdown measures on 16 December, closing nonessential shops and services until 10 January; these measures will likely be extended for at least another three weeks. And no matter how good the retail sales numbers are, household spending on services contributes more to overall private consumption.

November's retail release has made us more optimistic about the fourth quarter, but sales of goods may easily die down in December. Even if consumption holds up in December, thanks to holiday shopping and continued stability in the labor market, things won't likely go as well in January. On top of the lockdown measures and the typical recoil following the holiday shopping season, VAT cuts expire during the month.

The Long View

Asia Pacific

By Denise Cheok and Shahana Mukherjee of Moody's Analytics January 7, 2021

SINGAPORE

Singapore's fourth quarter GDP showed a 3.8% yearly contraction, improving on the third quarter's revised 5.6% decline. This brought full-year GDP for 2020 to a 5.8% contraction, a marked fall from 2019's 0.7% expansion and the steepest decline historically. Manufacturing led the improvement with a 9.5% yearly increase, whereas construction continued to disappoint, remaining below pre-pandemic levels and declining almost 30%. Despite the diverging readings, all sectors have improved steadily since the economy reopened in June from the strict "circuit breaker" lockdown measures.

International travel restrictions and relatively softer external demand continue to weigh on the services industries. Wholesale and retail trade contracted amidst sluggish external demand as lockdowns were reinstated in major trade partners. Similarly, accommodation and food services fell from the dearth of international tourism, as well as domestic social distancing measures that constrain shop capacity. On the upside, finance and IT held up well, as companies transited relatively smoothly into remote working conditions. This sector will continue to spur growth in services.

Tentative optimism

The prospects for 2021 look tentatively optimistic, buoyed by the vaccine rollouts and the gradual reopening of the economy. Domestically, daily COVID-19 cases have remained below 40 since October due to strict social distancing measures and swift contact-tracing. On the vaccine front, healthcare workers started receiving doses of the Pfizer-BioNTech vaccine before the new year. The programme will be expanded to the elderly from February and gradually cover the entire population by the third quarter. Fiscal policy will continue to play a critical role in the recovery, with this year's fiscal budget likely to run into a deficit after the SGD74.2 billion deficit in 2020.

International visitors have gradually been allowed into Singapore through "green lanes" for business travellers. Proposed "travel bubbles" would allow visitors from selected countries to enter without being quarantined. Widespread distribution of the vaccine would support the travel industry further, although it would likely not reach pre-pandemic levels until at least the second half of 2021.

Downside risks still cloud the outlook, however. The rising number of infections in major economies in Asia, Europe and the U.S. do not bode well for Singapore. The city-state is highly dependent on trade, and a strong rebound in manufacturing is key to a sustained economic revival. Vaccine rollouts are also uneven globally and may delay the revival of international tourism, which depends on countries being able to control domestic outbreaks. In Asia, procurement and logistical issues are likely to plague lower-income countries, slowing down the recovery. Altogether, Singapore's recovery in 2021 is likely to be uneven across sectors given its heavy exposure to external developments.

Ratings Round-Up

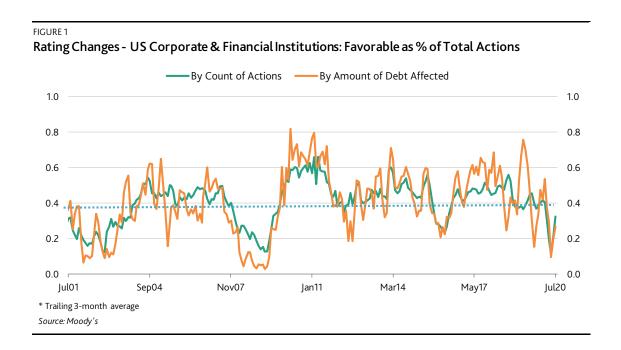
Ratings Round-Up

Two U.S. Upgrades, One Downgrade in Latest Period

By Steven Shields January 7, 2021

Three U.S. credit rating changes were issued in the week ending January 5. There were two upgrades and one downgrade, and the upgrades accounted for 81% of the total debt affected. The largest upgrade was made to Range Resources Corp. with Moody's Investors Service raising its senior unsecured debt rating to B3 from B2. The upgrade reflects Range Resource's meaningfully reduced refinancing risk, modest debt reduction and improved cost structure. However, Range's ratings are constrained by its sensitivity to volatile natural gas and natural gas liquids prices, with natural gas contributing about 70% of production, and an unhedged production profile after 2021. Approximately \$3.8 billion in outstanding debt was impacted. Following its merger with affiliate Florida Power & Light Co., Moody's Investors Service upgraded Gulf Power Company's senior unsecured debt rating to A1 from A2. The lone downgrade in the period was made to Security Life of Denver Insurance Co. following the company's sale by former owner Voya Financial Inc. The downgrade reflects the expectation that its new owners will incrementally increase the risk of SLD's investment portfolio from current low-risk levels and lower its strong NAIC Risk Based Capital ratio, although still maintaining good asset quality and capital adequacy.

Moody's Investors Service did not issue any changes to European firm credit ratings in the period.



Ratings Round-Up

FIGURE 2 Rating Ke	v		
BCF	Bank Credit Facility Rating	MM	Money-Market
CFR	Corporate Family Rating	MTN	MTN Program Rating
СР	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	FIGURE 3 Rating Changes: Corporate & Financial Institutions – US									
Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	Old LGD	New LGD	IG/SG
12/23/20	LIBERTY GLOBAL PLC -TELENET FINANCING USD LLC	Industrial	LGD	1,731	D			LGD-3	LGD-4	
1/4/21	NEXTERA ENERGY, INCGULF POWER COMPANY	Utility	SrUnsec	815	U	A2	A1			IG
1/5/21	VOYA FINANCIAL, INCSECURITY LIFE OF DENVER INSURANCE COMPANY	Financial	IFSR		D	А3	Baa1			IG

SrUnsec/LTCFR

/SrSub/PDR

3,710

U B3 B2

SG

Industrial

1/5/21 RANGE RESOURCES CORPORATION

Source: Moody's

FIGURE 4 Rating C	hanges: Corporate & Fina	ncial Ins	stitutions – Eu	rope					
Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/SG	Country
12/24/20	GOLDEN CONCORD GROUP LIMITED-GCL NEW ENERGY HOLDINGS LIMITED	Utility	SrUnsec/LTCFR	500	D	Caa1	Caa2	SG	BERMUDA

Market Data

Spreads

Figure 1: 5-Year Median Spreads-Global Data (High Grade)

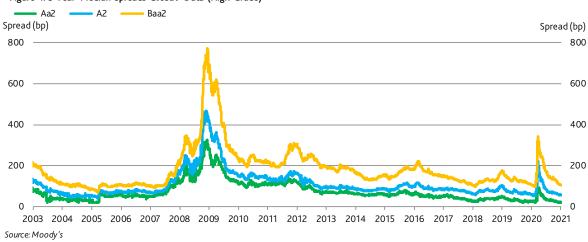
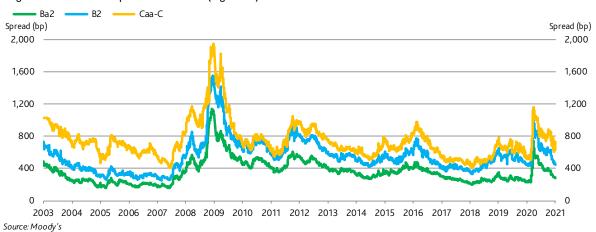


Figure 2: 5-Year Median Spreads-Global Data (High Yield)



CDS Movers

Figure 3. CDS Movers - US (December 30, 2020 – January 6, 2021)

CDS Implied Rating Rises	CDS Impl	_	
Issuer	Jan. 6	Dec. 30	Senior Ratings
Martin Marietta Materials, Inc.	A3	Baa2	Baa2
United States of America, Government of	Aaa	Aa1	Aaa
Citigroup Inc.	Baa1	Baa2	А3
Citibank, N.A.	Baa2	Baa3	Aa3
Walmart Inc.	Aa2	Aa3	Aa2
PepsiCo, Inc.	A1	A2	A1
Johnson & Johnson	Aa2	Aa3	Aaa
Procter & Gamble Company (The)	Aa1	Aa2	Aa3
Capital One Financial Corporation	Baa3	Ba1	Baa1
General Electric Company	Baa3	Ba1	Baa1

CDS Implied Rating Declines	CDS Impl	_	
Issuer	Jan. 6	Dec. 30	Senior Ratings
Verizon Communications Inc.	Baa1	A3	Baa1
Apple Inc.	A1	Aa3	Aa1
United Airlines, Inc.	Caa3	Caa2	Ba3
Delta Air Lines, Inc.	Caa1	В3	Baa3
Dish DBS Corporation	Caa2	Caa1	B2
CenterPoint Energy, Inc.	Baa2	Baa1	Baa2
Linde Inc.	A3	A2	A2
Texas Instruments, Incorporated	Ba1	Baa3	A1
Rite Aid Corporation	Caa3	Caa2	Caa3
Royal Caribbean Cruises Ltd.	Ca	Caa3	B2

CDS Spread Increases			CDS Spreads	
Issuer	Senior Ratings	Jan. 6	Dec. 30	Spread Diff
Rite Aid Corporation	Caa3	641	588	52
American Airlines Group Inc.	Caa1	1,284	1,233	51
Royal Caribbean Cruises Ltd.	B2	706	674	32
United Airlines, Inc.	Ba3	601	577	24
Carnival Corporation	B2	525	501	24
DPL Inc.	Ba1	363	339	24
Beazer Homes USA, Inc.	В3	297	276	21
Commercial Metals Company	Ba2	302	281	21
Nordstrom, Inc.	Baa3	295	277	17
Gap, Inc. (The)	Ba3	207	190	17

CDS Spread Decreases			CDS Spreads	
Issuer	Senior Ratings	Jan. 6	Dec. 30	Spread Diff
Nabors Industries, Inc.	Caa2	1,626	1,797	-170
Mack-Cali Realty, L.P.	B1	474	584	-110
Occidental Petroleum Corporation	Ba2	383	449	-66
United States Steel Corporation	Caa2	500	550	-51
R.R. Donnelley & Sons Company	В3	544	589	-46
Pitney Bowes Inc.	B1	414	455	-41
Talen Energy Supply, LLC	В3	1,059	1,092	-34
SLM Corporation	Ba1	355	386	-31
Apache Corporation	Ba1	251	277	-26
Staples, Inc.	В3	647	672	-25

Source: Moody's, CMA

Figure 4. CDS Movers - Europe (December 30, 2020 - January 6, 2021)

CDS Implied Rating Rises	CDS Impl	_	
Issuer	Jan. 6	Dec. 30	Senior Ratings
Bank of Scotland plc	A3	Baa3	A1
United Kingdom, Government of	Aa1	Aa2	Aa3
Bankia, S.A.	Baa2	Baa3	Baa3
ING Bank N.V.	Aa2	Aa3	Aa3
Greece, Government of	Baa3	Ba1	Ba3
Svenska Handelsbanken AB	Aa3	A1	Aa2
Vodafone Group Plc	Baa1	Baa2	Baa2
Swedbank AB	A1	A2	Aa3
Deutsche Bahn AG	Aa1	Aa2	Aa1
Merck KGaA	Aa2	Aa3	Baa1

CDS Implied Rating Declines	CDS Impl	CDS Implied Ratings		
Issuer	Jan. 6	Dec. 30	Senior Ratings	
Santander UK plc	Baa2	Baa1	A1	
Landesbank Hessen-Thueringen GZ	Baa2	Baa1	Aa3	
Standard Chartered PLC	A3	A2	A2	
Landesbank Baden-Wuerttemberg	A3	A2	Aa3	
Alpha Bank AE	Caa1	В3	Caa1	
Veolia Environnement S.A.	A3	A2	Baa1	
Novo Banco, S.A.	В3	B2	Caa2	
Gecina SA	Baa1	A3	A3	
Jaguar Land Rover Automotive Plc	Caa3	Caa2	B1	
Swisscom AG	A2	A1	A2	

CDS Spread Increases			CDS Spreads	
Issuer	Senior Ratings	Jan. 6	Dec. 30	Spread Diff
Vue International Bidco plc	Ca	730	705	25
Novafives S.A.S.	Caa2	758	738	21
Permanent tsb p.l.c.	Baa2	219	206	14
Ardagh Packaging Finance plc	Caa1	200	191	9
EWE AG	Baa1	113	105	8
3i Group plc	Baa1	99	92	7
Electrabel SA	Baa1	80	74	6
Stagecoach Group Plc	Baa3	82	76	6
KBC Group N.V.	Baa1	73	68	5
Smiths Group plc	Baa2	81	76	5

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Jan. 6	Dec. 30	Spread Diff
Vedanta Resources Limited	Caa1	1,269	1,424	-155
Bankia, S.A.	Baa3	54	84	-30
Jaguar Land Rover Automotive Plc	B1	575	599	-23
Bank of Scotland plc	A1	47	69	-22
TUI AG	Caa1	724	741	-17
CMA CGM S.A.	Caa1	449	464	-15
Casino Guichard-Perrachon SA	Caa1	661	675	-13
Boparan Finance plc	Caa1	524	534	-10
Fiat Chrysler Automobiles N.V.	Ba2	117	126	-8
Stena AB	Caa1	527	535	-8

Source: Moody's, CMA

Market Data

Issuance

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

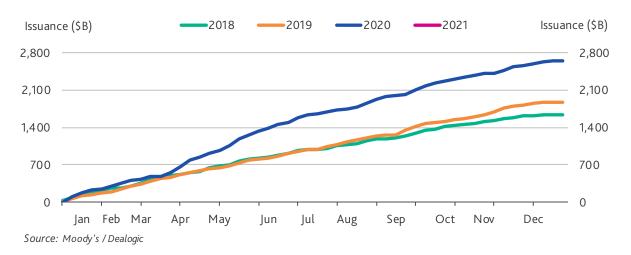


Figure 6. Market Cumulative Issuance - Corporate & Financial Institutions: Euro Denominated

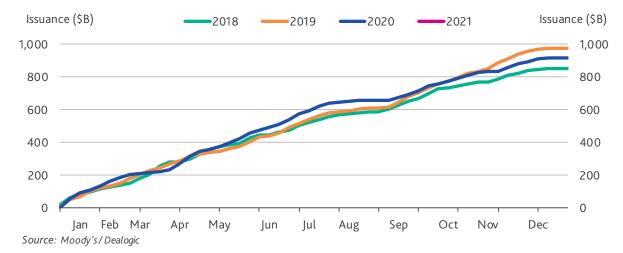


Figure 7. Issuance: Corporate & Financial Institutions

	USD Denominated			
	Investment-Grade	High-Yield	Total*	
	Amount \$B	Amount \$B	Amount \$B	
Weekly	0.115	0.000	0.115	
Year-to-Date	0.115	0.000	0.115	

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

^{*} Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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