MOODY'S ANALYTICS

WEEKLY MARKET OUTLOOK

Moody's Analytics Research

Weekly Market Outlook Contributors:

Moody's Analytics/New York:

John Lonski
Chief Economist
1.212.553.7144
john.lonski@moodys.com

Yukyung Choi
Quantitative Research

Moody's Analytics/Asia-Pacific:

Shahana Mukherjee
Economist

Moody's Analytics/Europe:

Barbara Teixeira Araujo
Economist

Ross Cioffi
Economist

Moody's Analytics/U.S.:

Ryan Sweet
Economist

Dante DeAntonio
Economist

Michael Ferlez
Economist

Editor
Reid Kanaley

Contact: help@economy.com

High Technology Is North America's Biggest Corporate Borrower

Credit Markets Review and Outlook *by John Lonski*
High Technology Is North America's Biggest Corporate Borrower
» FULL STORY PAGE 2

The Week Ahead
We preview economic reports and forecasts from the US, UK/Europe, and Asia/Pacific regions.
» FULL STORY PAGE 6

The Long View
Full updated stories and key credit market metrics: May could join March and April of 2020 as one of the best months ever for investment-grade bond issuance.

Credit Spreads	Investment Grade: We see the year-end 2020's average investment grade bond spread under its recent 189 basis points. High Yield: Compared with a recent 775 bp, the high-yield spread may approximate 650 bp by year-end 2020.
Defaults	US HY default rate: According to Moody's Investors Service, the U.S.' trailing 12-month high-yield default rate jumped from April 2019's 2.8% to April 2020's 5.4% and may average 12.7% during 2020's final quarter.
Issuance	For 2019's 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 $432 billion. In 2020, US$-denominated corporate bond issuance is expected to grow by 35.2% for IG to $1.770 trillion, while high-yield supply may sink by 11.4% to $383 billion.

» FULL STORY PAGE 11

Ratings Round-Up
Telecom Firm Among Rare Upgrades
» FULL STORY PAGE 15

Market Data
Credit spreads, CDS movers, issuance.
» FULL STORY PAGE 18

Moody's Capital Markets Research *recent publications*
Links to commentaries on: Fed intervention, transcendence, speculation, default risk, credit stress, rate cuts, optimism, coronavirus, corporate credit, spreads, leverage, rate sensitivity, sentiment, VIX, fundamentals, next recession, liquidity and defaults, cheap money.
» FULL STORY PAGE 23

Click here for *Moody's Credit Outlook*, our sister publication containing Moody's rating agency analysis of recent news events, summaries of recent rating changes, and summaries of recent research.

Moody's Analytics markets and distributes all Moody's Capital Markets Research, Inc. materials. Moody's Capital Markets Research, Inc. is a subsidiary of Moody's Corporation. Moody's Analytics does not provide investment advisory services or products. **For further detail, please see the last page.**

Credit Markets Review and Outlook

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

High Technology Is North America's Biggest Corporate Borrower

Across all rating categories, the recent $7.830 trillion of nonfinancial-corporate debt of North American nonfinancial companies rated by Moody's Investors Service was divided among $5.994 trillion of outstanding corporate bonds, $1.392 trillion of outstanding loans, and $444 billion of revolving credit facilities.

By industry, high-technology's $927 billion of rated obligations tops all other categories by a wide margin. Oil and gas is in a distant second place at $745 billion, while the $675 billion of the healthcare and pharmaceutical group is third.

Though high-yield issuers are more numerous than investment-grade companies, April 2020's $4.951 trillion of investment-grade nonfinancial-corporate credit market obligations was well above high-yield's $2.878 trillion. Blue-chip, investment-grade companies are not the norm. Most unrated business debt would probably receive a speculative-grade rating.

Nearly 94%, or $4.643 trillion, of the rated investment-grade credit market instruments of North American nonfinancial companies are bonds. The remaining 6% is split between $212 billion of revolving credit facilities and $97 billion of loans. In terms of outstanding investment-grade obligations, the five largest nonfinancial industries were high-technology's $642 billion, healthcare and pharmaceutical's $478 billion, the oil and gas industry's $449 billion, electric utilities' $441 billion, and beverage, food and tobacco's $437 billion.

Figure 1: Outstanding Investment-Grade Debt of North American Nonfinancial Companies Rated by Moody's Investors Service

in $ billions, April 16, 2020

Rating	Revolving Facilities	Bank Loans	Bonds	Totals
	1	*2*	*3*	*4 = 1 + 2 + 3*
Aaa			**$ 121.9**	**$ 121.9**
Aa1			**$ 136.6**	**$ 136.6**
Aa2			**$ 105.1**	**$ 105.1**
Aa3	**$ 1.1**		**$ 100.2**	**$ 101.3**
A1	**$ 14.4**		**$ 359.3**	**$ 373.7**
A2	**$ 17.0**		**$ 547.8**	**$ 564.8**
A3	**$ 19.3**	**$ 3.3**	**$ 582.8**	**$ 605.4**
Baa1	**$ 28.6**	**$ 1.9**	**$ 1,018.2**	**$ 1,048.7**
Baa2	**$ 74.1**	**$ 22.2**	**$ 1,060.9**	**$ 1,157.1**
Baa3	**$ 57.1**	**$ 69.9**	**$ 609.7**	**$ 736.7**
Total	**$ 211.5**	**$ 97.3**	**$ 4,642.6**	**$ 4,951.4**

The broad Baa category now supplies $2.943 trillion, or 59%, of the investment-grade credit obligations of North American nonfinancial companies. The Baa nonfinancial-company ratings are dominated by the Baa1 and Baa2 notches that supply $2.206 trillion, or 75%, of all Baa-grade debt and $2.079 trillion, or 77%, of Baa-rated corporate bonds.

At the bottom rung of the investment-grade rating's ladder, the $737 billion of Baa3-rated obligations consists of $610 billion of bonds, $70 billion of loans, and $57 billion of revolving credit facilities. By industry, the five largest categories for Baa3-rated credit instruments were oil and gas' $119 billion, high technology's $118 billion, beverage, food and tobacco's $64 billion, REIT's $55 billion, and healthcare and pharmaceutical's $44 billion.

About 25% of Nonfinancial-Company High-Yield Debt Is Rated Less than B2

As of April 16, 2020, the $2.878 trillion of speculative-grade debt of North American nonfinancial companies rated by Moody's Investors Service included $232 billion of revolving credit facilities, $1.294 trillion of loans, and $1.351 trillion of bonds. Most speculative-grade North American nonfinancial-corporate debt was rated greater than B3. Only 25%, or $717 billion, of April 16's rated speculative-grade debt was rated B3 or lower. More specifically, a rating of B3 or lower was assigned to $24 billion, or 10%, of speculative-grade revolving credit facilities, $306 billion, or 24%, of SG loans, and $387 billion, or 29%, of SG bonds. The $1.208 trillion of upper-tier Ba-rated speculative-grade debt consisted of $145 billion of revolving credit facilities, $398 billion of loans, and $666 billion of loans.

For North-American high-yield issuers rated B3 or lower, the biggest industry in terms of outstanding obligations was business services' $110 billion, followed by the oil and gas industry's $104 billion, healthcare and pharmaceutical's $68 billion of, and high-technology's $52 billion. By industry, the debt obligations of high-yield issuers grade B2 or higher were led by high-technology's $232 billion, business service's $219 billion, media broadcasting and subscription's $201 billion, and the oil and gas industry's $192 billion.

High-yield loans have relatively little exposures to the now stressed oil and gas borrowers. The oil and gas industry's $295 billion of high-yield debt obligations consisted mostly of bonds ($251 billion) compared to loans ($41 billion) and revolvers ($4 billion). Unlike oil and gas, where 84.9% of high-yield obligations consisted of bonds, bonds constituted a much smaller 42.6% share of the high-yield obligations of the remaining industries. No other industry approached oil and gas's $251 billion of outstanding high-yield bond debt. The industries having the most high-yield loan debt were business services' $211 billion and high-technology's $198 billion.

Figure 2: Outstanding Speculative-Grade Debt of North American Nonfinancial Companies Rated by Moody's Investors Service

in $ billions, April 16, 2020

Rating	Revolving Facilities	Bank Loans	Bonds	Totals
	1	*2*	*3*	*4 = 1 + 2 + 3*
Ba1	**$ 51.5**	**$ 105.4**	**$ 260.5**	**$ 417.4**
Ba2	**$ 53.9**	**$ 132.8**	**$ 163.0**	**$ 349.7**
Ba3	**$ 39.4**	**$ 159.4**	**$ 242.4**	**$ 441.2**
B1	**$ 24.6**	**$ 208.3**	**$ 180.5**	**$ 413.4**
B2	**$ 39.4**	**$ 382.5**	**$ 118.1**	**$ 539.9**
B3	**$ 15.2**	**$ 148.0**	**$ 135.0**	**$ 298.2**
Caa1	**$ 5.9**	**$ 59.5**	**$ 85.4**	**$ 150.9**
Caa2	**$ 1.8**	**$ 64.1**	**$ 86.5**	**$ 152.4**
Caa3	**$ 0.7**	**$ 23.3**	**$ 46.9**	**$ 71.0**
Ca + C	**$ 0.2**	**$ 10.9**	**$ 33.1**	**$ 44.2**
Total	**$ 232.7**	**$ 1,294.3**	**$ 1,351.4**	**$ 2,878.4**

Credit Markets Review and Outlook

Leveraged Loan Spreads Remain Under Highs of March 2020 and Great Recession

The rapid growth of the leveraged loan market warns of a record number of loan-related defaults. Nevertheless, not a single leveraged-loan rate spread even remotely approaches the averages that held during the worst months of the Great Recession. Yes, leveraged loan rate spreads foresee a higher loan default rate, but the first-quarter 2021 U.S. loan default rate that can be inferred from recent loan spreads is noticeably less than the 12.1% peak of November 2009.

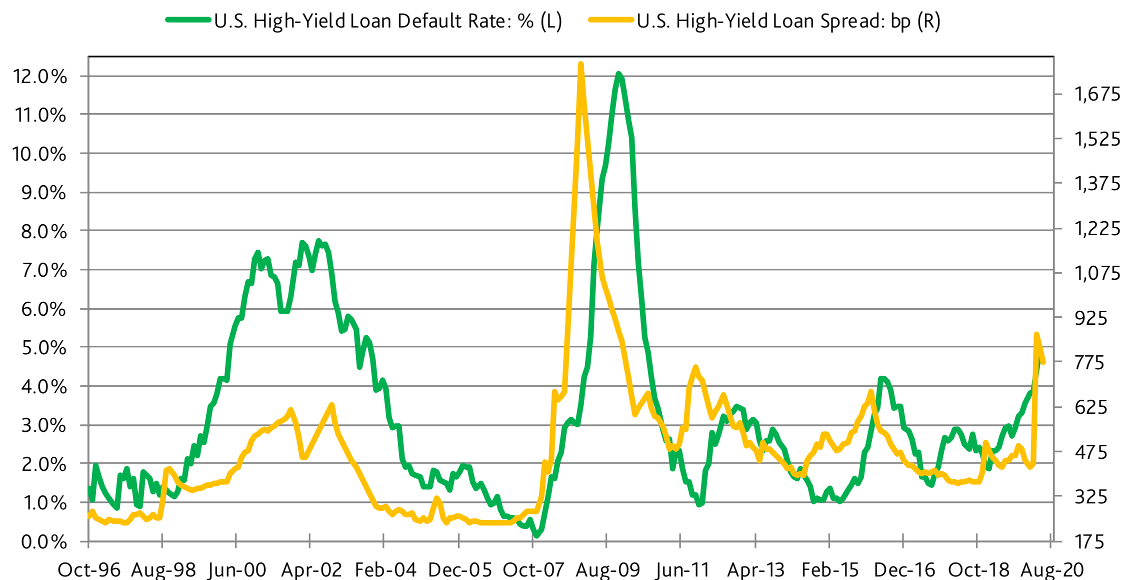
During September 2008 through July 2009—which overlapped the Great Recession's most troubled months of October 2008 through March 2009—a leveraged loan rate spread averaged 1,345 basis points, wherein its month-long average peaked at December 2008's 1,772 bp.

As of May 12, Credit Suisse's spread averaged 821 bp for all leveraged loans and 729 bp for what CS describes as being liquid leveraged loans. Also, Barclays leveraged loan rate spread for May 8 was 689 bp. Each of the loan rate spreads peaked for the current recession around March 23, 2020 at 1,275 bp for all leveraged loans (CS), 1,342 bp for liquid leveraged loans (CS) and 990 bp for Barclays leveraged loan spread.

According to Barclays, May 8's high-yield bond spread of 750 bp was wider than the HY loan spread of 689 bp. However, though the HY bond spread was wider than the loan spread at both the Ba rating (536 bp versus 424 bp) and at the single-B rating (749 bp versus 691 bp), the HY bond spread was narrower than the HY loan spread at the Caa rating (1,431 bp vs. 1,634 bp).

However, on May 12, Credit Suisse's overall high-yield bond spread of 791 bp was less than the overall loan spread of 821 bp, while the accompanying liquid high-yield bond spread of 743 bp was greater than the liquid loan spread of 729 bp. Thus, the more obscure, less liquid leveraged loans now fare considerably worse than more liquid leveraged loans. Nevertheless, the recent spreads of less liquid loans are less than their March 2020 highs.

Figure 3: Recent High-Yield Loan Spread Favors an 8.6% Midpoint for Q1-2021's U.S. High-Yield Loan Default Rate
sources: Moody's Monthly Default Report, Credit Suisse, Moody's Capital Markets



Loan-Only Default Rate May Set New High, While Bond-Only Default Rate Lags Prior Highs

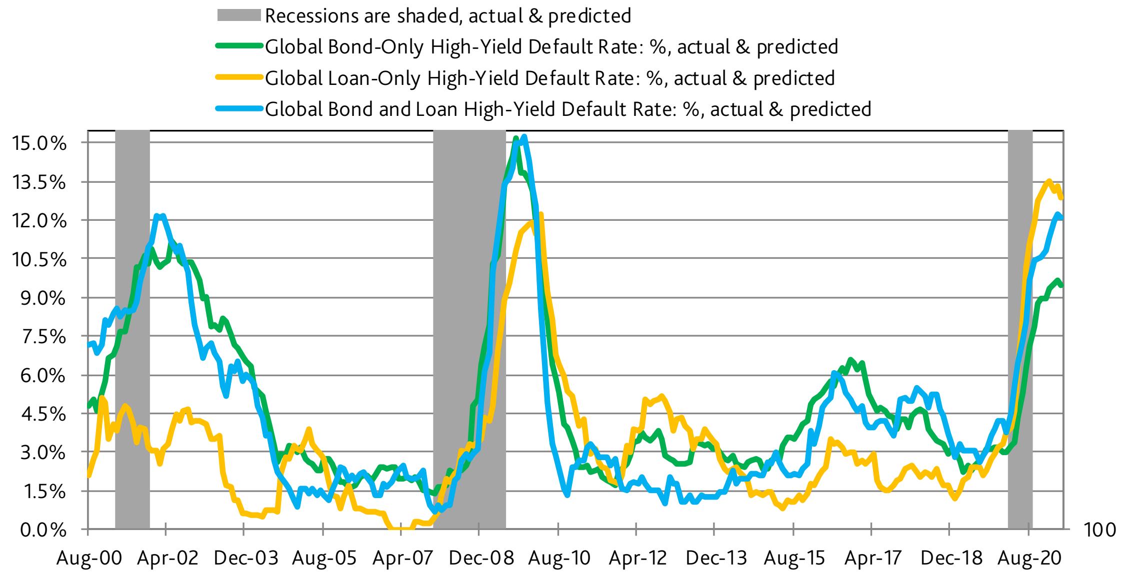
Regardless of what might be inferred from recent leveraged loan spreads, the default research analysts of Moody's Investors Service expect the global loan-only high-yield default rate will climb from April 2020's 4.6% to a record high 13.5% as of January 2021. By comparison, the global bond-only high-yield default rate is expected to rise from April 2020's 3.3% and crest at a relatively low 9.7% in March 2021.

In stark contrast, following 2001's recession, the May 2002's peak bond-only default rate of 11.2% was far above September 2002's 4.7% top for the loan-only default rate. And following 2008-2009's Great Recession, the global bond-only default rate's 15.2% peak of September 2009 was significantly greater than March 2010's 12.2% peak for the loan-only default rate.

Figure 4: In a Sharp Break from the Past, the Loan-Only High-Yield Default Rate Is Expected to Climb Well Above the Bond-Only Default Rate

One-year global default rates

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



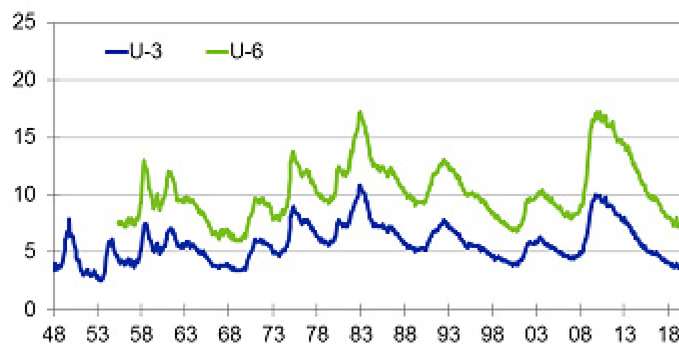
The Week Ahead – U.S., Europe, Asia-Pacific

THE U.S.

By Dante DeAntonio of Moody's Analytics

More Than Meets the Eye

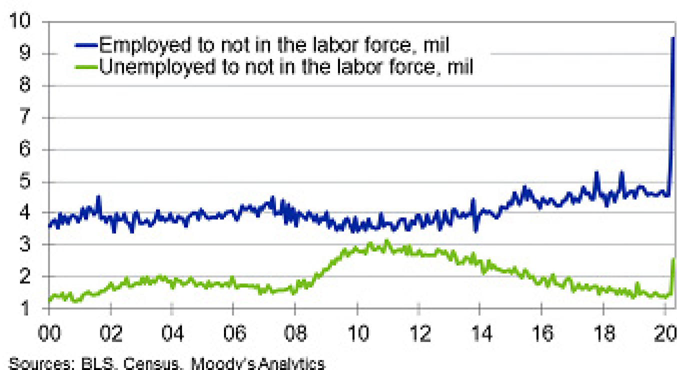
The U.S. unemployment rate spiked in April, but the current state of the labor force is far worse than official data suggest. The Bureau of Labor Statistics reported that the unemployment rate jumped from 4.4% in March to 14.7% in April, far higher than at any point in official recorded history dating back to the late 1940s. The broadest measure of labor underutilization from the BLS, which includes marginally attached workers and those working part time involuntarily, also jumped to a record high at 22.8%.



Both measures undersell the current economic environment for two reasons. For the second month in a row, the BLS noted that non-sampling error had a material impact on the published unemployment rate. Survey takers were instructed that any workers who were absent from work due to COVID-19-related business closures should be classified as unemployed on temporary layoff, as opposed to employed but absent from work. However, this was not the case, as the number of workers recorded as employed but absent from work was far higher than in a typical April. The BLS noted that had these workers correctly been classified as unemployed, the official rate would have been almost 5 percentage points higher, at 19.5%.

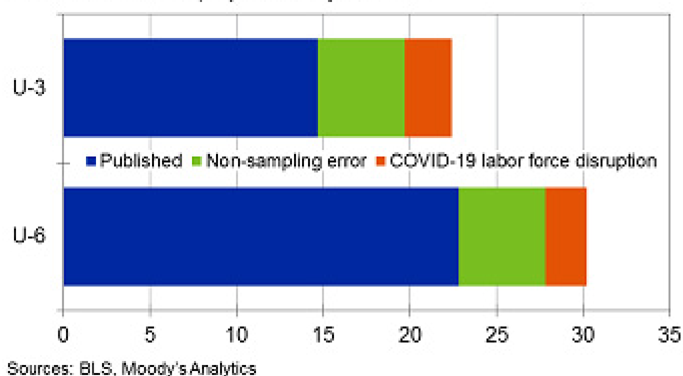
Beyond this non-sampling error, COVID-19 is impacting the labor market in unique ways that cannot be completely accounted for even in the broadest measure of labor underutilization. Given that large swaths of the economy were still shut down in April, it was impractical to think that all recently laid off workers would be actively searching for work or even currently interested in another job.

To be classified as unemployed, workers must have actively searched for work in the last four weeks, or since losing their previous job, and the data make clear that this did not occur for many workers. The number of people who were laid off since March but bypassed unemployment to move directly out of the labor force was historic.



While this type of movement occurs regularly for reasons such as retirement and school attendance, the number of workers shifting from employed to not in the labor force was more than 5 million higher than in a typical April. This is likely the result of COVID-19-induced stress as workers either were not available to take a job, no longer wanted a job, or had nowhere to go to actively search for a job.

While some of these workers who move out of the labor force can still be captured in the U-6 measure of unemployment as being marginally attached to the labor force, even this broadest measure misses the mark. The number of marginally attached workers jumped by 1 million in April, compared with about 6 million workers who shifted from being employed or unemployed to not in the labor force. This means that approximately 5 million of those workers are not being captured in U-6 even though they would presumably still want a job if the COVID-19 crisis ended today. Combining these two sources of underreporting leads to a staggering estimate of "true" unemployment in April.



Factoring in both the non-sampling error reported by the BLS, along with an adjustment to account for workers dropping out of the labor force in response to the COVID-19 crisis, leaves the traditional U-3 measure of unemployment at 22.2% in April. This figure edges close to the estimates of unemployment during the Great Depression, which topped out at 25.6% in 1933. Even more shocking is the broadest measure of labor underutilization which, after both adjustments, totaled 30% in April.

Unfortunately, the labor market damage is likely not over, as unemployment insurance claims since the April reference week have continued to accumulate rapidly, totaling about 7 million over the last two weeks. Official measures of unemployment will rise further in May, and the adjusted measure of labor underutilization will likely suggest that more than one-third of the workforce has been damaged by the crisis.

Next week

The key data next week will be the housing starts, existing-home sales, NAHB housing market index FOMC minutes and initial claims for unemployment insurance benefits.

EUROPE

By Barbara Teixeira Araujo of Moody's Analytics

Watching for Good News as Lockdowns Ease

Lockdown measures will continue to ease next week across Europe, which is great news for the economy. After activity grounded to a halt in April, life has begun to gradually return to normal from the beginning of May, though there is significant disparity across countries. While some governments allowed shops to reopen, others are still enforcing quarantines and shutdowns of nonessential retail. In the spotlight is the U.K.; most shops in the country will remain closed until June 1, while restaurants will remain shut the end of June, making the U.K. one of the last European countries to reopen its economy. This doesn't come as a surprise, as cases and deaths in the U.K. continue to rise at a much steeper rate than recorded in Germany, France, Italy and other countries.

On the data front, next week will bring several economic releases for the U.K. We expect them to confirm that the COVID-19 crisis wreaked havoc on the British economy. First, unemployment likely rose sharply in the three months to March, to 5% from 4% in the February quarter. Worse news is that it should continue to increase in coming months. Universal Credit claims jumped by over 1 million in March, its highest monthly increase on record. If all Universal Claims were for unemployment benefits, the unemployment rate could easily rise to 6.8% over the month. But other benefits fall under the UC umbrella, while it is also important to consider that many people make multiple claims or have their claims denied. We thus estimate that less than half of the total claims will be valid, but this still represents a little under 400,000 that have lost their jobs. And that's not accounting for the people who were furloughed under the Coronavirus Job Retention Scheme, which the latest estimates suggest that could have reached over 7.5 million. Under the scheme, employers can temporarily make their employees redundant while the government will pay to up 80% of their salaries (up to £2,500 a month) until the end of October. And while it is good news that the employees that have been furloughed were able to keep their jobs and should soon go back to work, we still estimate that many companies that made use of the scheme will ultimately fall through the cracks, which means that the job losses will become permanent rather than temporary. The unemployment rate could jump to just over 8% during the summer.

We will see U.K. retail sales results for April, and here there is no sugar coating the prospects. We expect that retail sales fell off a cliff in April as all nonessential retail stores were closed. We are penciling in a fall of over 20% m/m, building on March's 5.1% decline, which was already the worst on record. While food and internet sales likely held up as people were forced to stay at home, we caution that some of the stockpiling that happened in March was likely reversed in April, putting a lid on the performance of supermarkets and online shops. For the other sectors, we expect that the results were very bad, with clothing sales as well as sales of durable consumer goods suffering the hardest blow. Results for May will also be very disappointing—we were previously expecting some rebound—as the government recently announced that most shops will remain closed throughout most of the month. June should bring better figures, but it won't be enough to salvage the results for the second quarter as a whole.

April Inflation figures for the U.K. and euro zone are also due. In the currency area, we expect final numbers to confirm that inflation fell to 0.4% y/y in April from 0.7% in March. The initial figures showed that most of the hit came from another sharp drop in energy inflation, as the recent plunge in Brent prices depressed fuel and electricity inflation. But the core rate also slowed to 0.9% y/y from 1% as the COVID-19 crisis weighed on prices of manufacturers' goods and services. Food inflation, by contrast, picked up sharply because of stockpiling by households. We expect the story in the U.K. will be similar; we are penciling in a drop in the CPI inflation rate to 0.9% y/y from 1.5% with more downside expected in coming months.

However, the economy's usual price-formation mechanism is currently not in place due to the exceptional situation, which means we should take the short-term CPI developments with a grain of salt. Along with price pressures created by the supply-chain disruptions, price collection has been severely impaired in recent weeks. Most consumer-facing services and nonessential retail shops have been closed, making it almost impossible for the statistical offices to collect prices for nearly half of the CPI basket. This is likely to create a lot of noise in the data in the near term, especially regarding core inflation.

Looking at the medium and longer term, our view is that the demand shock will take the upper hand over the supply shock, depressing overall inflation pressures both in the euro zone and in the U.K. Core and noncore inflation will each plunge this year. In the spotlight is the recent slump in oil prices, which points to energy remaining deep in deflation in coming months. That most other commodity prices have also fallen sharply since the end of February will only add to the downside pressures in noncore inflation.

	Key indicators	Units	Moody's Analytics	Last
Tues @ 9:30 a.m.	U.K.: Unemployment for March	%	5.0	4.0
Wed @ 9:30 a.m.	U.K.: Consumer Price Index for April	% change yr ago	0.9	1.5
Wed @ 10:00 a.m.	Euro Zone: Consumer Price Index for April	% change yr ago	0.4	0.7
Thur @ 1:00 p.m.	Russia: Industrial Production for April	% change yr ago	-9.0	0.3
Fri @ 9:30 a.m.	U.K.: Retail Sales for April	% change yr ago	-22.0	-5.1

ASIA-PACIFIC

By Shahana Mukherjee of Moody's Analytics

Japan Likely Entered Technical Recession in the March Quarter

Japan's March quarter GDP figure will be the highlight on the economic calendar. We expect Japan's GDP contracted by 1% q/q in the March quarter, following a 1.8% contraction in the December quarter. The sources of domestic and external pressures on Japan's economy have changed. The December quarter performance reflected the combined effects from a slump in domestic spending following the October sales tax increase, the temporary disruption caused by the super typhoon that hit Tokyo in October, and the U.S.-China trade tensions that sustained pressure on Japan's external sector through most of 2019.

In comparison, the downside effects for Japan in the March quarter will materialize through multiple channels. On the one side, the slowdown in China during the first two months of the year, followed by the significant and rising hit to global demand from the COVID-19 outbreak, will weigh on Japan's net exports, though this effect will be partially neutralized by lower oil prices. On the other side, the downside risks to domestic demand are likely to have increased over this period due to the internal spread of the coronavirus and the progressively strict containment measures. The combined effect of waning domestic spending and a weakened external sector is likely to cause the economy to contract in the March quarter, and Japan to slip into a technical recession.

In other developments, Singapore's April total exports are expected to have declined by 1.8% y/y, following a 0.6% decline in March. Singapore's March exports had surprised on the upside, led by a

significant 17.6% yearly pickup in nonoil exports, as outbound shipments of electronics, machinery and nonmonetary gold picked up, but a part of the increase was also attributable to a low base effect due to the U.S.-China trade war this time last year. With overseas demand likely to have come under serious pressure in April following the strict restrictions in most parts of Europe and the U.S., Singapore's exports are expected to record a visible decline for this period.

	Key indicators	Units	Confidence	Risk	Moody's Analytics	Last
Mon @ 9:50 a.m.	Japan GDP for Q1	% change	3	↓	-1.01	-1.8
Mon @ 10:30 a.m.	Singapore Nonoil exports for April	% change yr ago	2	↓	-1.0	17.6
Wed @ 9:50 a.m.	Japan Machinery Orders for March	% change	3	↓	-4.1	2.3
Thur @ 9:50 a.m.	Japan Foreign Trade for April	¥ bil	3	↓	-230.0	-190.0
Fri @ 9:50 .a.m.	Japan CPI for April	% change yr ago	2	↓	0.3	0.4

The Long View

May could join March and April of 2020 as one of the best months ever for investment-grade bond issuance.

By John Lonski, Chief Economist, Moody's Capital Markets Research Group
May 14, 2020

CREDIT SPREADS

As measured by Moody's long-term average corporate bond yield, the recent investment grade corporate bond yield spread of 189 basis points far exceeded its 122-point mean of the two previous economic recoveries. This spread may be no wider than 165 bp by year-end 2020.

The recent high-yield bond spread of 775 bp is thinner than what is suggested by the accompanying long-term Baa industrial company bond yield spread of 307 bp and the recent VIX of 32.4 points. The latter has been statistically associated with an 875 bp midpoint for the high-yield bond spread.

DEFAULTS

April 2020's U.S. high-yield default rate of 5.4% was up from April 2019's 2.8% and may approximate 13.3% by 2021's first quarter.

US CORPORATE BOND ISSUANCE

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.

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 by 43.7% for IG and grew by 21.4% 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 a 1.3% rise for IG and a 22.9% drop for high yield.

US ECONOMIC OUTLOOK

An unfolding global recession will rein in Treasury bond yields. As long as the global economy operates below trend, the 10-year Treasury yield may not remain above 1.25% for long. Until COVID-19 risks fade, substantially wider credit spreads are possible.

EUROPE

By Ross Cioffi and Barbara Teixeira Araujo of Moody's Analytics
May 14, 2020

INFLATION

Germany and Spain released their CPI figures for April on Thursday, giving a preview of the French and Italian releases Friday and the euro zone composite next week. German inflation slowed to 0.9% y/y in April from 1.4% in March, while Spain's dipped into deflationary territory, with overall prices retreating by 0.7% after zero growth in March. We expect to see the same pattern in other CPI releases. Energy prices are driving headline inflation down, while food prices are rising under supply constraints and extra demand in supermarkets. Across the euro zone, though, the data will be incomplete, leading to missing, overestimated or underestimated figures especially in the core basket. Most consumer-facing services and nonessential retail shops have been closed, making it almost impossible for the statistical offices to collect prices for nearly half of the CPI basket.

The story behind the German release was oil prices. Excluding heating oil and fuel prices, the inflation rate would be around 1.6% y/y, not so far off target. Oil prices have plummeted since the start of the crisis due to low demand for oil and pervasive pessimism among investors. Lockdown measures dried up demand for oil via a fall in transportation use, but lower production and output in factories will keep demand for oil muted even after these restrictions are lifted. Tepid demand meant Brent oil prices closed on the last day of April at $25.27 per barrel, down from around $59 per barrel near the end of February when the virus broke out in Italy. Our baseline forecast has the price of oil hovering around $30 per barrel through the rest of 2020, a price range that will keep a tight lid on inflation this year.

Finally, news broke this afternoon that France will ramp up its stimulus, with an aim to support its tourism industry. Even discounting greater job insecurity and the hit to income households face after two months of lockdown, individuals may be too nervous to travel this summer. This will do serious damage to a major sector in the European economy. Tourism contributes around 7% of GDP in France, so the €1.3 billion ($1.5 billion) package will be welcome news.

UNITED KINGDOM

The preliminary estimate of U.K. first-quarter GDP confirmed that the COVID-19 crisis wreaked havoc on the British economy. The country's GDP plunged by 2% q/q, its fastest rate since the 2008 financial crisis, mainly as a result of the lockdown imposed on March 23 to prevent the coronavirus from spreading. Nonessential shops, restaurants and cafes were closed, public gatherings were banned, and people were ordered to stay at home; together, this brought the economy to a standstill. The bad news is that the story will be even worse in April and May, as the full restrictions were in place only for seven working days in March but covered the whole of April and will last at least until mid-May. Activity should gradually recover from the second half of May, but some restrictions have been extended until the end of June (notably in the accommodation and food sector), which will keep a lid on GDP growth. We are thus penciling in a 14% q/q decline in GDP in the second quarter, which would be by far the worst on record, though the risks are tilted to the downside.

Back to the quarterly results, the expenditure breakdown of growth confirmed that household spending was hit hard by the social distancing measures and the closure of consumer-facing businesses. While food and drink as well as alcohol and tobacco spending increased because people were forced to eat their meals at home, spending on transport, restaurants and hotels, and on clothing and footwear slumped at record rates during the quarter. We were disappointed that government spending also fell sharply, since we had expected an increase due to rising healthcare spending. But healthcare expenditure declined as an increase in COVID-19-related spending was offset by slumps in elective operations as well as accident and emergency. Government spending on education also plunged, as schools were closed from March 23. Investment also declined, but by less than we had expected, which is good news. The main upside came from the fact that business investment managed to hold steady over the quarter, while by contrast government investment and investment in dwellings each plunged. Inventories also nose-dived. The statistical office noted that stock levels in wholesale fell because of supply chain disruptions, which made it hard for British businesses to obtain stock from within the U.K. and abroad, while stock levels in retail plunged as households hoarded primary necessity goods in the runup to the lockdown.

Outside domestic demand, net trade dragged sharply on growth as exports plummeted while imports also decreased, but to a lesser extent, which was in line with our expectations of dwindling external trade flows.

In all, the first-quarter numbers were poor but nothing we had not already penciled in given the sheer scale of the COVID-19 crisis. On the bright side, the results for the U.K. were not as bad as those for its major European peers; GDP contracted by 5.8% q/q in France, by 5.2% in Spain, and by 4.7% in Italy. But this is only because the lockdown was introduced at least a week later in the country. Given that restrictions have already started to be lifted in France, Italy and Spain but not in the U.K., we expect that this outperformance in March will be fully offset by lesser activity in May. As we expect jobs to be lost and companies to fail because of the crisis, our view is that the recovery won't be a V-shaped one; it is more likely to be a swoosh-type rebound, with output remaining below its precrisis levels at least until 2022, as companies and households will remain cautious for some time still.

ASIA PACIFIC

By Shahana Mukherjee of Moody's Analytics
May 14, 2020

NEW ZEALAND

Policymakers in the Asia-Pacific region continue to mobilize financial resources to combat the significant economic costs of the COVID-19 crisis. This week saw major advancements as the Reserve Bank of New Zealand stepped up its quantitative easing program by almost doubling its bond-purchases to NZ$60 billion from NZ$33 billion. The quantitative easing programme was expanded to include New Zealand inflation-indexed bonds. The official cash rate, however, was left unchanged at 0.25%. The central bank reaffirmed its forward guidance to keep the cash rate at 0.25% until early 2021. However, it signalled a willingness to use additional monetary tools "if and when needed", which could include taking the official cash rate below 0%, expanding its quantitative purchases further, and providing fixed-term loans to banks.

The latest decision follows a 50-basis point rate cut delivered in March, which took the cash rate to 0.25% to stem the impact from the COVID-19 outbreak. The economic situation for New Zealand has weakened further since then. On the one side, while it is one of the few countries to have successfully contained the internal spread of the coronavirus, there are fears that the fallout from the outbreak will be greater than initially anticipated. With March-quarter growth figures yet to be released, markets have factored in a sharp slump in growth during this quarter, as the government imposed one of the strictest lockdowns to contain the domestic spread.

The latest available metrics paint a mixed picture. While the unemployment rate inched up to 4.2% in the March quarter from 4% in the December quarter, inflation rose by a larger-than-expected 2.5% on yearly terms over this period, and inched closer to the upper bound of the central bank's target range of 1% to 3%, following a 1.9% increase in the December quarter. Trade figures have not disappointed. After rising by 3.4% in February, March exports rose by 3.8% on yearly terms, boosted by higher sales of fruits, meat and dairy products, though machinery exports plummeted over this period. While these movements seem counterintuitive, neither one of these indicators fully capture the effect of the domestic or external lockdowns, which will be more clearly reflected in the GDP figures for the June quarter.

RBNZ's limitations

Central banks in major economies have stepped up asset purchases to keep borrowing costs low, and while RBNZ's actions align with the global trend, a consideration of negative interest rates—likely to prove more complex for New Zealand—underscores the extent of damage inflicted by the COVID-19 crisis. Further, it highlights that central banks are fast approaching their limits, which will intensify the pressure on fiscal policy. This is because cheaper loans can do little to spur consumer spending and investment if employment conditions have weakened dramatically. Increased fiscal support will thus be necessary, and the New Zealand government has been proactive on this front, as it unveiled a significant US$30 billion stimulus package this week to revive the economy following the easing of the lockdown. The package, designed to be spent over a four-year period, has provisions for large-scale expenditures on infrastructure spending, housing, wage-subsidy schemes, and healthcare, with a focus on job creation to cushion the significant blow to labour market as several businesses come under pressure due to the COVID-19 crisis.

Despite the sizeable support, policy measures have their limitations. New Zealand's economy is heavily dependent on tourism and trade, and with international travel restrictions likely to last for several more months, the hit to tourism-exposed sectors will be a protracted one, with significant growth-deterring effects that will weigh heavily on labour market conditions. The generous fiscal commitment will assume an important role in mitigating these effects, but the liabilities created by the additional spend will substantially increase its fiscal deficit and add to its

debt burden. In the current setting, policy efforts geared towards stemming job losses address the need of the hour, but with external demand likely to remain weak through the June quarter and grim prospects for tourism in 2020, the downside risks for New Zealand remain elevated, the effects of which, will be prominently reflected in the June quarter estimates.

Ratings Round-Up

Telecom Firm Among Rare Upgrades

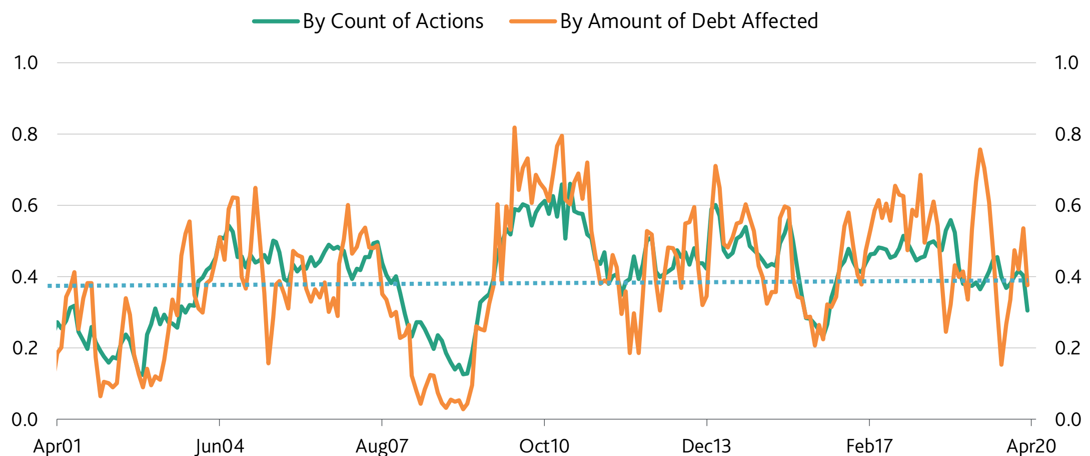
By Michael Ferlez

Corporate credit quality continues to deteriorate as a result of the shock from the COVID-19 pandemic. Energy and consumer-dependent industries, such as hotels and retail establishments, are suffering most downgrades as their operations have been hit hardest by the pandemic. For the week ended May 12, downgrades accounts for 90% of rating activity and three-quarters of affected debt. Equinix Inc, one of only two upgrades for the reference period, was among the week's most notable rating changes. Moody's Investors Service upgraded the telecommunications firm's senior unsecured credit rating to Baa3 from Ba1. The upgrade reflects Moody's expectations that the firm will register a strong financial performance. The upgrade was also supported by the Equinix's balanced use of debt and equity financing in its capital structure. On the downgrade side, the most notable change was made to L Brands Inc. The U.S. retailer saw its senior unsecured credit rating cut to B2 from B1, affecting $6 billion in debt. Moody's downgrade reflects L Brand's weaker credit profile as well as its exposure to the coronavirus pandemic.

European rating change activity volume declined, though the overall trend remained poor. In the period ended May 12, there were a total of six rating changes, all downgrades. Rating change activity was spread across a number of industries and rating classes. Geographically, downgrades were concentrated most in Luxembourg (three) and Spain (two). The most notable change for the reference period was made to ArcelorMittal, which saw its senior unsecured credit rating cut to Ba1 from Baa3. Moody's Investors Service's downgrade of the Luxembourgian steelmaker reflects both the weaknesses in the firm's credit profile as well as the dour outlook for the steel industry more broadly. The downgrade affected $9 billion in outstanding debt.

FIGURE 1

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



* Trailing 3-month average

Source: Moody's

Ratings Round-Up

FIGURE 2
Rating Key

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

FIGURE 3
Rating Changes: Corporate & Financial Institutions – US

Date	Company	Sector	Rating	Amount ($ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/SG
5/6/20	L BRANDS, INC.	Industrial	SrUnsec/LTCFR/PDR	5,722	D	B1	B2	SG
5/6/20	PITNEY BOWES INC.	Industrial	SrUnsec/LTCFR/PDR	1,813	D	Ba3	B1	SG
5/6/20	WYNDHAM DESTINATIONS	Industrial	SrSec/LTCFR/PDR	2,700	D	Ba2	Ba3	SG
5/6/20	GREENHILL & CO., INC.	Financial	SrSec/BCF/LTCFR		D	Ba2	Ba3	SG
5/6/20	MARRIOTT VACATIONS WORLDWIDE CORPORATION -MARRIOTT OWNERSHIP RESORTS, INC.	Industrial	SrUnsec/SrSec /BCF/LTCFR/PDR	1,100	D	Ba3	B1	SG
5/6/20	MARRIOTT VACATIONS WORLDWIDE CORPORATION -MARRIOTT OWNERSHIP RESORTS, INC.	Industrial	SrSec/BCF	1,100	D	Baa3	Ba1	IG
5/6/20	OUTPUT SERVICES GROUP, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	B3	Caa1	SG
5/6/20	EPIC Y-GRADE, LP-EPIC Y-GRADE SERVICES, LP	Industrial	SrSec/BCF/LTCFR/PDR		D	Ba3	B1	SG
5/6/20	EPIC CRUDE HOLDINGS, LP-EPIC CRUDE SERVICES, LP	Industrial	SrSec/BCF/LTCFR/PDR		D	B3	Caa1	SG
5/7/20	TITAN INTERNATIONAL, INC.	Industrial	SrSec/LTCFR/PDR	400	D	Caa2	Ca	SG
5/7/20	OUTERSTUFF LLC	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa3	Ca	SG
5/8/20	MACANDREWS & FORBES HOLDINGS INC -REVLON CONSUMER PRODUCTS CORPORATION	Industrial	SrUnsec/SrSec/BCF	1,900	D	Ca	C	SG
5/8/20	MORAN FOODS LLC	Industrial	LTCFR/PDR		U	Caa3	B3	SG
5/8/20	VENATOR MATERIALS PLC-VENATOR MATERIALS LLC	Industrial	SrUnsec	375	D	B3	Caa1	SG
5/11/20	VISKASE COMPANIES, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	B3	Caa3	SG
5/11/20	LAMAR ADVERTISING COMPANY	Industrial	SrUnsec/LTCFR /SrSub/PDR	2,185	D	Ba2	Ba3	SG
5/11/20	EQUINIX, INC.	Industrial	SrUnsec	8,140	U	Ba1	Baa3	SG
5/11/20	OMNIMAX HOLDINGS, INC. -OMNIMAX INTERNATIONAL, INC.	Industrial	SrSec/LTCFR/PDR	385	D	Caa1	Caa3	SG
5/11/20	NEIMAN MARCUS GROUP LTD LLC	Industrial	PDR		D	Caa3	D	SG
5/11/20	FTS INTERNATIONAL, INC.	Industrial	SrSec/BCF/LTCFR/PDR	398	D	Caa2	Ca	SG
5/11/20	MISA INVESTMENTS LIMITED -VIKING OCEAN CRUISES LTD.	Industrial	SrSec	675	D	Ba3	B1	SG
5/11/20	OUTFRONT MEDIA INC.-OUTFRONT MEDIA CAPITAL LLC	Industrial	SrUnsec	3,300	D	B1	B2	SG
5/11/20	OUTFRONT MEDIA INC.	Industrial	SrUnsec/LTCFR/PDR	3,300	D	B1	B2	SG
5/11/20	NATIONAL VISION, INC.	Industrial	LTCFR/PDR		D	Ba3	B1	SG
5/11/20	PLAZE, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	B3	SG
5/12/20	CLEAVER-BROOKS, INC.	Industrial	SrSec/LTCFR/PDR	375	D	B3	Caa1	SG
5/12/20	SBP HOLDING LP-SEI HOLDING I CORPORATION	Industrial	SrSec/BCF/LTCFR/PDR		D	B3	Caa1	SG
5/12/20	AIP/HARDWOODS FUNDING, INC. -NORTHWEST HARDWOODS, INC.	Industrial	SrSec/LTCFR/PDR	435	D	Caa3	Ca	SG
5/12/20	SPECTRUM HOLDINGS III CORP.	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa3	Ca	SG
5/12/20	WYNDHAM HOTELS & RESORTS	Industrial	SrSec/BCF	500	D	Baa3	Ba1	IG

Source: Moody's

Ratings Round-Up

FIGURE 4

Rating Changes: Corporate & Financial Institutions – Europe

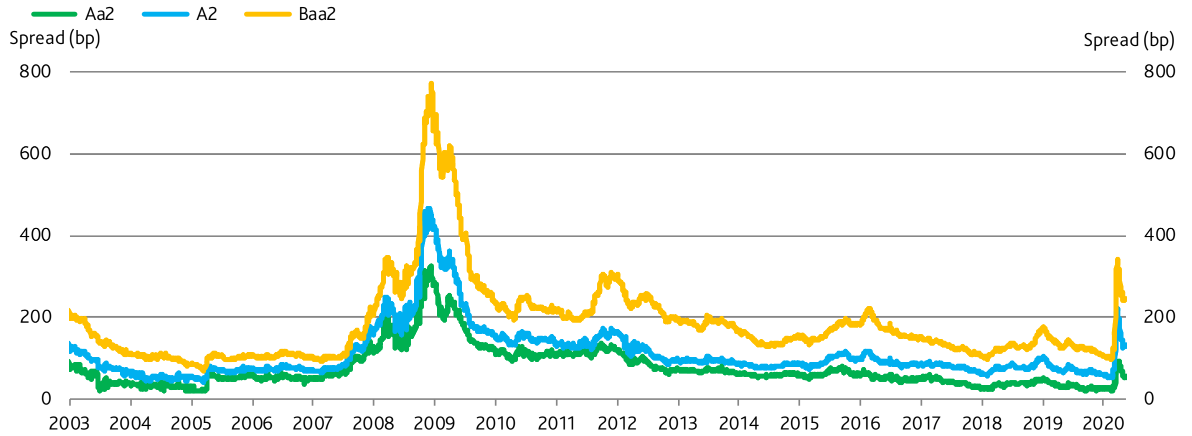
Date	Company	Sector	Rating	Amount ($ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG /SG	Country
5/6/20	BERTELSMANN SE & CO. KGAA	Industrial	SrUnsec/LTIR /JrSub/MTN	5,545	D	Baa1	Baa2	IG	GERMANY
5/6/20	TELEPIZZA GROUP S.A. -FOODCO BONDCO, S.A.U.	Industrial	SrSec	364	D	B2	B3	SG	SPAIN
5/7/20	CODERE S.A.	Industrial	SrSec/LTCFR/PDR	844	D	Caa1	Caa3	SG	SPAIN
5/7/20	EVERGREEN SKILLS INTERMEDIATE LUX S.A R.L.-EVERGREEN SKILLS LUX S.A R.L.	Industrial	SrSec/BCF /LTCFR/PDR		D	Caa2	Caa3	SG	LUXEMBOURG
5/8/20	ARCELORMITTAL (OLD)-ARCELORMITTAL	Industrial	SrUnsec/MTN/CP	9,126	D	Baa3	Ba1	IG	LUXEMBOURG
5/11/20	BCP VII JADE HOLDCO (CAYMAN) LTD	Industrial	SrSec/BCF /LTCFR/PDR		D	B2	B3	SG	LUXEMBOURG

Source: Moody's

Market Data

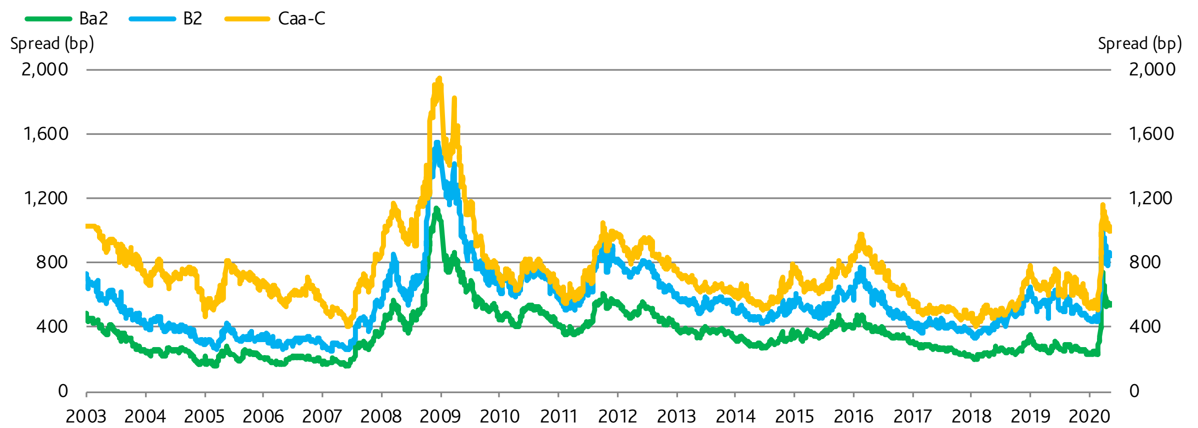
Spreads

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 (May 6, 2020 – May 13, 2020)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	May. 13	May. 6	Senior Ratings
Republic Services, Inc.	A3	Baa2	Baa2
American Axle & Manufacturing, Inc.	Caa1	Caa3	B2
El Paso Holdco LLC	A1	A3	Baa2
Ford Motor Credit Company LLC	B3	Caa1	Ba2
Apple Inc.	Aa2	Aa3	Aa1
Microsoft Corporation	Aa3	A1	Aaa
Exxon Mobil Corporation	A3	Baa1	Aa1
General Motors Company	B1	B2	Baa3
Energy Transfer Operating, L.P.	Ba1	Ba2	Baa3
Enterprise Products Operating, LLC	A2	A3	Baa1

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	May. 13	May. 6	Senior Ratings
Boeing Capital Corporation	B2	Aaa	Baa2
Motorola Solutions, Inc.	A2	Aa3	Baa3
E.I. du Pont de Nemours and Company	A1	Aa2	A3
JPMorgan Chase & Co.	Baa1	A3	A2
Bank of America Corporation	Baa2	Baa1	A2
Wells Fargo & Company	Baa2	Baa1	A2
Goldman Sachs Group, Inc. (The)	Baa3	Baa2	A3
JPMorgan Chase Bank, N.A.	A3	A2	Aa2
Bristol-Myers Squibb Company	Aa2	Aa1	A2
Home Depot, Inc. (The)	Aa2	Aa1	A2

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	May. 13	May. 6	Spread Diff
Penney (J.C.) Corporation, Inc.	C	35,994	32,957	3,037
American Airlines Group Inc.	B1	8,062	5,325	2,737
United Airlines Holdings, Inc.	Ba3	3,163	2,272	891
Avis Budget Car Rental, LLC	B3	3,155	2,461	694
United Airlines, Inc.	Ba3	2,696	2,150	546
Staples, Inc.	B3	1,690	1,280	410
Royal Caribbean Cruises Ltd.	Baa3	2,017	1,630	387
Boeing Capital Corporation	Baa2	380	9	371
K. Hovnanian Enterprises, Inc.	Caa3	4,912	4,636	276
Delta Air Lines, Inc.	Baa3	1,270	1,077	193

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	May. 13	May. 6	Spread Diff
Chesapeake Energy Corporation	C	30,580	39,059	-8,480
Hertz Corporation (The)	Ca	12,153	15,594	-3,441
Nabors Industries, Inc.	B3	4,547	5,139	-592
American Axle & Manufacturing, Inc.	B2	759	1,010	-251
Murphy Oil Corporation	Ba3	608	700	-92
Ford Motor Company	Ba2	827	911	-84
Realogy Group LLC	Caa1	1,345	1,420	-75
Beazer Homes USA, Inc.	B3	676	751	-75
General Motors Company	Baa3	354	410	-56
Avon Products, Inc.	B3	538	583	-45

Source: Moody's, CMA

Market Data

Figure 4. CDS Movers - Europe (May 6, 2020 – May 13, 2020)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	May. 13	May. 6	Senior Ratings
France, Government of	Aa3	A1	Aa2
Germany, Government of	Aa1	Aa2	Aaa
Belgium, Government of	Aa3	A1	Aa3
Netherlands, Government of	Aaa	Aa1	Aaa
Ireland, Government of	Aa3	A1	A2
Banco Bilbao Vizcaya Argentaria, S.A.	Baa1	Baa2	A3
HSBC Holdings plc	Baa1	Baa2	A2
Bank of Ireland	A1	A2	A2
EDP - Energias de Portugal, S.A.	Baa1	Baa2	Baa3
SSE plc	A2	A3	Baa1

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	May. 13	May. 6	Senior Ratings
ENEL S.p.A.	Baa2	Baa1	Baa2
Anheuser-Busch InBev SA/NV	Baa3	Baa2	Baa1
Unibail-Rodamco-Westfield SE	Ba3	Ba2	A3
Danone	Aa2	Aa1	Baa1
SES S.A.	Ba1	Baa3	Baa2
Bouygues S.A.	A1	Aa3	A3
Heathrow Finance plc	Ba3	Ba2	Ba1
UPC Holding B.V.	B1	Ba3	B2
TUI AG	C	Ca	B2
Italy, Government of	Ba2	Ba2	Baa3

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	May. 13	May. 6	Spread Diff
Selecta Group B.V.	Caa2	7,791	4,405	3,386
PizzaExpress Financing 1 plc	C	13,870	12,237	1,633
Matalan Finance plc	Caa2	5,981	5,175	805
TUI AG	B2	2,063	1,471	592
thyssenkrupp AG	B1	557	472	85
Boparan Finance plc	Caa1	1,077	1,035	42
Airbus SE	A2	245	210	35
Jaguar Land Rover Automotive Plc	B1	1,235	1,201	34
Heathrow Finance plc	Ba1	280	246	34
Peugeot S.A.	Baa3	302	274	28

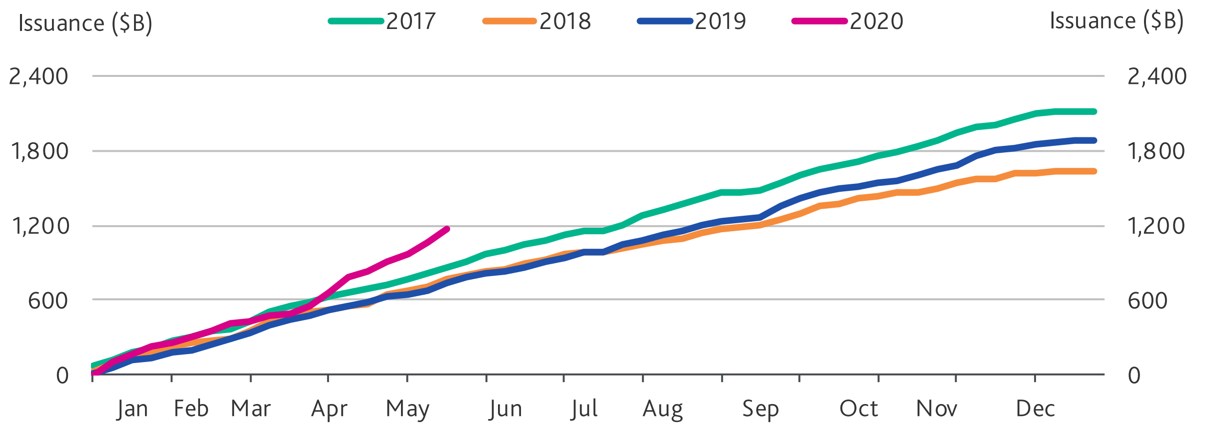
CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	May. 13	May. 6	Spread Diff
CMA CGM S.A.	Caa1	1,716	2,051	-336
Novafives S.A.S.	Caa2	2,025	2,180	-155
ArcelorMittal	Ba1	384	412	-28
Greece, Government of	B1	248	260	-12
Italy, Government of	Baa3	213	224	-11
Spain, Government of	Baa1	108	118	-11
Unione di Banche Italiane S.p.A.	Baa3	227	239	-11
Portugal, Government of	Baa3	106	116	-10
Stena AB	Caa1	874	882	-8
Telefonica S.A.	Baa3	103	110	-7

Source: Moody's, CMA

Market Data

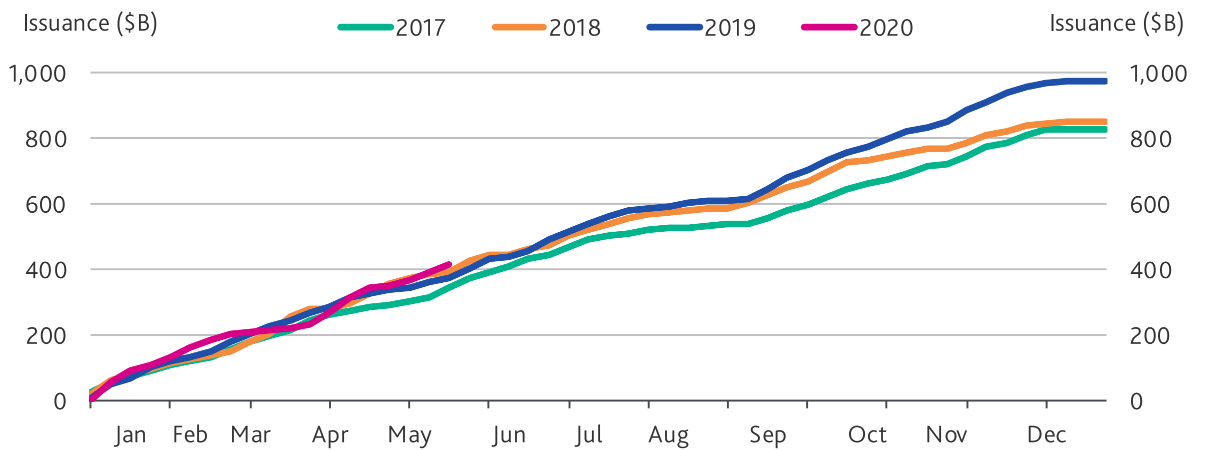
Issuance

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 & Financial Institutions

	USD Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	105.335	5.550	113.245
Year-to-Date	951.753	174.046	1,170.641

	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	19.307	1.312	22.945
Year-to-Date	357.989	39.134	414.642

* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

Moody's Capital Markets Research recent publications

Fed Intervention Sparks Back-to-Back Record Highs for IG Issuance (Capital Markets Research)

April's Financial Markets Transcend Miserable Economic Data (Capital Markets Research)

Speculation Powers Recent Rallies by Corporate Bonds (Capital Markets Research)

Fed Extends Support to Some High-Yield Issuers (Capital Markets Research)

Ample Liquidity Shores Up Investment-Grade Credits (Capital Markets Research)

Unlike 2008-2009, Few Speak of a Credit Crunch (Capital Markets Research)

Equity Market Volatility Resembles 2008's Final Quarter (Capital Markets Research)

High-Yield's Default Risk Metrics Still Trail Worst Stretch of Great Recession (Capital Markets Research)

Ultra-Low Treasury Yields and Very High VIX Warn of Credit Stress Ahead (Capital Markets Research)

Fed Rate Cuts May Fall Short of Stabilizing Markets (Capital Markets Research)

Optimism Rules Despite Unfinished Slowing of Core Business Sales (Capital Markets Research)

Baa-Rated Corporates Fared Better in 2019 (Capital Markets Research)

Richly Priced Stocks Fall Short of 1999-2000's Gross Overvaluation (Capital Markets Research)

Coronavirus May Be a Black Swan Like No Other (Capital Markets Research)

How Corporate Credit Might Burst an Equity Bubble (Capital Markets Research)

Positive Earnings Outlook Requires Flat to Lower Interest Rates (Capital Markets Research)

Overvalued Equities Increase Corporate Credit's Downside Risk (Capital Markets Research)

High-Yield Rating Changes Say High-Yield Bond Spread Is Too Thin (Capital Markets Research)

Return of Christmas Past Does Not Impend (Capital Markets Research)

Next Plunge by Profits to Drive Leverage Up to 2009 High (Capital Markets Research)

Corporate Bond Issuance Reflects Business Activity's Heightened Sensitivity to Rates (Capital Markets Research)

Equities Advanced for 95% of the Yearly Declines by High-Yield Bond Spread (Capital Markets Research)

Improved Market Sentiment Is Mostly Speculative (Capital Markets Research)

Loans Impart an Upward Bias to High-Yield Downgrade per Upgrade Ratio (Capital Markets Research)

VIX, EDF and National Activity Index Go Far at Explaining the High-Yield Spread (Capital Markets Research)

Worsened Fundamentals Lift Downgrades Well Above Upgrades (Capital Markets Research)

Next Recession May Lower 10-year Treasury Yield to Range of 0.5% to 1% (Capital Markets Research)

Abundant Liquidity Suppresses Defaults (Capital Markets Research)

Cheap Money in Action (Capital Markets Research)

Bond Implied Ratings Hint of More Fallen-Angel Downgrades (Capital Markets Research)

Leading Credit-Risk Indicator Signals A Rising Default Rate (Capital Markets Research)

Upon Further review, Aggregate Financial Metrics Worsen (Capital Markets Research)

Faster Loan Growth Would Bode Poorly for Corporate Credit Quality (Capital Markets Research)

Likelihood of a 1.88% Fed Funds Rate by End of July Soars (Capital Markets Research)

Market Implied Ratings Differ on the Likely Direction of Baa3 Ratings (Capital Markets Research)

To order reprints of this report (100 copies minimum), please call 212.553.1658.

Report Number: 1229126

Editor
Reid Kanaley
help@economy.com

Contact Us

Americas:	1.212.553.4399
Europe:	+44 (0) 20.7772.5588
Asia:	813.5408.4131

© 2020 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for ratings opinions and services rendered by it fees ranging from $1,000 to approximately $2,700,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for ratings opinions and services rendered by its fees ranging from JPY125,000 to approximately JPY250,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

For Publications Issued by Moody's Capital Markets Research, Inc. only:

The statements contained in this research report are based solely upon the opinions of Moody's Capital Markets Research, Inc. and the data and information available to the authors at the time of publication of this report. There is no assurance that any predicted results will actually occur. Past performance is no guarantee of future results.

The analysis in this report has not been made available to any issuer prior to publication.

When making an investment decision, investors should use additional sources of information and consult with their investment advisor. Investing in securities involves certain risks including possible fluctuations in investment return and loss of principal. Investing in bonds presents additional risks, including changes in interest rates and credit risk.

Moody's Capital Markets Research, Inc., is a subsidiary of MCO. Please note that Moody's Analytics, Inc., an affiliate of Moody's Capital Markets Research, Inc. and a subsidiary of MCO, provides a wide range of research and analytical products and services to corporations and participants in the financial markets. Customers of Moody's Analytics, Inc. may include companies mentioned in this report. Please be advised that a conflict may exist and that any investment decisions you make are your own responsibility. The Moody's Analytics logo is used on certain Moody's Capital Markets Research, Inc. products for marketing purposes only. Moody's Analytics, Inc. is a separate company from Moody's Capital Markets Research, Inc.