MOODY'S ANALYTICS

WEEKLY MARKET OUTLOOK

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Lead Authors

Ryan Sweet
Senior Director-Economic Research

Mark Zandi
Chief Economist

Chris Lafakis
Director

Asia-Pacific

Denise Cheok
Economist

Heron Lim
Economist

Europe

Ross Cioffi
Economist

U.S.

Steven Shields
Economist

Matt Orefice
Data Specialist

Podcast

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Flying Through the Business Cycle, Fed Needs to Land the Plane

The U.S. economy is flying through the different phases of the business cycle; we recently moved the economy from the recovery to expansion phase of the business cycle. This was partly based on the Conference Board's consumer coincident indicator, which recently surpassed its prior peak.

Not everyone differentiates between recoveries and expansions, and the two terms are sometimes used interchangeably. The National Bureau of Economic Research's Business Cycle Dating Committee—the de facto arbiter of the economy's peaks and troughs—defines any period from a trough to a peak as an expansion, labeling the remainder of the cycle a recession.

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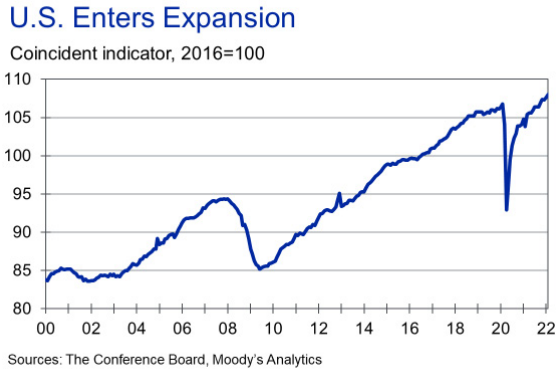


Many economists, however, use "recovery" to mean the period just after a recession, until real GDP surpasses its prerecession level. However, this is a rather narrow definition; GDP often recovers ahead of other indicators. The Conference Board's indicator incorporates a broader range of factors to determine when a recovery becomes an expansion.

There are three phases of an expansion: early-, mid- and late-stage, with the mid-stage usually being the longest. To identify where we are in the expansion, we used a K-means clustering approach to spot patterns and map the economic data. It points toward an early-stage expansion. Considering the nature of the recession and the subsequent recovery, odds are that the economy will likely continue to shift through the different states of the business cycle more quickly than in the past.

Is the Fed panicking?

Our baseline forecast is for what the Federal Reserve will do, rather than what it should do. Therefore, odds are there will be some material changes to our assumptions about monetary policy when we update the April baseline forecast. Fed Chair Jerome Powell's comments on Monday suggest the Fed may not have any patience left and is set to accelerate the removal of monetary policy accommodation. Powell said, "There is an obvious need to move expeditiously to return the stance of monetary policy to a more neutral level." This caused financial markets to adjust their expectations for the path of the target fed funds rate. Markets now expect the fed funds rate to be 2.25% at the end of this year, a significant deviation from their expectations this time last year.

Various measures of the yield curve continue to flatten, which will catch the Fed's attention. Lost in the debate about the yield curve is that the correlation between inversions and recessions doesn't imply causation. The inversion simply reflects the conditions that cause recessions—for example, an overheating economy and tighter monetary policy. Therefore, the Fed cannot lower the risk of recession by simply pausing its current tightening cycle to avoid an inversion in the yield curve. This could increase the odds of recession, since delaying rate hikes would cause the economy to overheat more quickly. Either way, the Fed is in an enormous bind.

Could corporate bond market provide a pause?

Conditions in the U.S. corporate bond market also could appear soon on the Fed's radar. Recently, investment-grade and high-yield U.S. corporate bond spreads widened noticeably, albeit from very low levels. However, the speed of the widening in U.S. corporate bond spreads has caught our attention, even though it is unlikely to have an immediate effect on monetary policy. There have been instances in past tightening cycles where wider spreads in the U.S. corporate bond market caused the Fed to pause. The same likely holds today, but the Fed's tolerance now is for spreads significantly higher than they are right now.

Even with spreads widening, U.S. dollar-denominated corporate bond issuance has held up well. This should temper immediate concerns that wider spreads are going to undermine businesses' access to credit. Corporate balance sheets remain strong and the forecast for defaults remains favorable, so the widening in corporate bond spreads may not ding issuance as much as some fear. For now, the Fed will forge ahead with its aggressive tightening cycle.

Soft landing or hard?

An aggressive Fed is priced in by the bond market as are the odds of a policy error. The current U.S. Treasury futures curve shows that the spread between the 10-year and two-year Treasury yields will invert in the next three to six months. The Treasury futures curve shows an inversion between the 10-year and three-month Treasury yields in the next 12 months. Markets believe a soft landing by the Fed is unlikely.

We will keep a close eye on the yield curve. For the five recessions we focused on, the average number of months between an inversion in the spread for 10-year and two-year Treasury yields and a recession was 24.5 months. However, a more troubling development than an inversion in the yield curve would be a steady rise in the unemployment rate or declines in employment over several months. Both have proven to be more accurate predictors of recessions, and with shorter lead times than the yield curve.

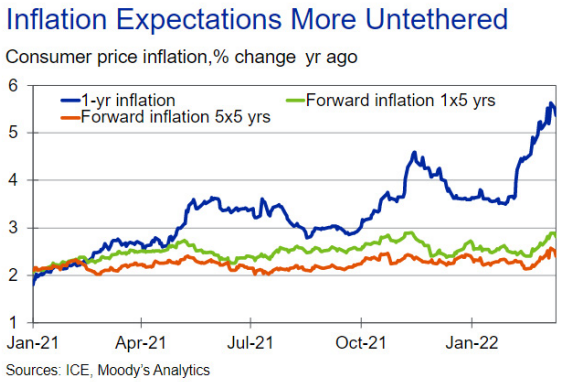
If the unemployment rate begins to steadily increase in the next 12 to 18 months, that would significantly increase the risk of the U.S. experiencing a bout of stagflation.

TOP OF MIND

Tough to Handicap the U.S. Outlook

BY MARK ZANDI and CHRIS LAFAKIS

The Russian invasion of Ukraine is a significant blow to the global economy. Its impact is magnified as the economy continues grappling with the ongoing COVID-19 pandemic. Sudden higher oil, natural gas, agricultural and metal prices are conflating with already painfully high inflation caused by the pandemic disruptions to supply chains and labor markets. Inflation expectations were on the high side of what is comfortable before the Russian invasion and now appear increasingly untethered. The Federal Reserve began normalizing interest rates last week but has much more work to do, more quickly, to ensure that high inflation does not become endemic. How the near-term economic outlook unfolds critically depends on the path of the pandemic, how the Russian invasion of Ukraine plays out, and whether the Fed is successful in calibrating monetary policy to these shocks and any other that may occur.



The most likely near-term outlook—our baseline—remains that the U.S. economic recovery will evolve into a self-sustaining expansion in coming months (a 50% probability). But recession is a serious threat (35% probability), and dreaded stagflation—high inflation and high unemployment—has become a meaningful possibility (10% probability). While more of a stretch (5% probability), events could turn out better for the economy, since there is evidence that underlying productivity growth is reviving.

Despite all the economy has had to deal with, odds are that the current economic recovery will evolve into a self-sustaining expansion. That is, by late this year, the economy will return to full employment. This is consistent with an unemployment rate in the low 3s and an employment-to-population ratio for prime-age workers of over 80%. Real GDP growth will throttle back to the economy's potential growth rate of near 2%. Inflation should also moderate back to the Fed's target of close to 2%, but this will take longer, until late 2023. For this sanguine outlook to come to pass, the pandemic must continue to fade—with each new wave of the virus less disruptive to the economy than the one before it—and the worst of the fallout from the Russian invasion of Ukraine on oil and other commodity prices must be at hand. It is critical that the Fed gets monetary policy more or less right, which means quickly normalizing interest rates over the next 18 months. We also need to catch a break, so that nothing else goes materially wrong for the economy.

While worries about the pandemic—and precautionary efforts to contain the virus—have receded, the economy is still struggling with its fallout. According to the Census Bureau's most recent pandemic-focused Pulse survey from early February, close to 10 million workers said they were not working because they were either sick, taking care of someone who was, or fearful of getting sick. This goes a long way to explain the near-record 11 million unfilled job positions, a situation fanning wage and price pressures. It stands to reason that as the pandemic winds down, people will get back to work, positions will be filled, and wage growth will moderate. Scrambled supply chains will also untangle, easing shortages and prices. Some of the worst bottlenecks have already been ironed out, but things have gotten more complicated with the re-emergence of the virus in China and other parts of Asia, where most supply chains begin and pandemic responses are more restrictive.

By itself, the fallout of Russia's invasion of Ukraine on the U.S. economy should be modest. American businesses and financial institutions have links to Russia, but in part because of previously imposed sanctions on Russia resulting from its takeover of Crimea those links are not consequential. The principal link is through oil prices, as Russia accounts for just over one-tenth of global oil production, including crude and refined products, and a similar share of global oil exports, totaling 7.5 million barrels per day. Prices have jumped more than $30 per barrel to over $100 since a Russian invasion looked possible late last year. This reflects the loss of approximately 3 million barrels a day of Russian oil due to an explicit U.S. ban on imports of Russian oil and self-sanctioning by global energy companies. There is also a risk premium in prices reflecting the possibility of even greater disruptions. A handy rule of thumb is that every $10-per-barrel increase in oil prices results in a 30-cent increase in the price of a gallon of regular unleaded, costing the typical household $30 more per month to fill their tanks and

costing households collectively about $35 billion more over a year. The Russian invasion has thus lifted gas prices by about $1 to a record $4.30 per gallon. While that is a financial hit to households, cushioning the blow to the broader economy is that the U.S. fossil fuel industry, which vies with Saudi Arabia as the world's largest, benefits. A $10-per-barrel increase in the price of oil thus shaves only 0.1% from U.S. real GDP growth over the subsequent year. A $30-per-barrel increase, if sustained, will reduce real GDP by 0.3%. A modest impact.

How Lost Russian Oil Will Be Replaced

Mil bpd

	Self-sustaining expansion $100 per barrel oil	Recession/stagflation $150 per barrel oil
Lost oil supplies	**2.5**	**3.9**
Lost Russian oil	3.0	5.4
Import bans	0.8	4.8
Self-sanctioning	2.0	0.0
Russian capacity loss	0.2	0.6
Demand for Russian oil	-0.5	-1.5
Demand destruction	-0.2	-0.5
Rerouted Russian exports	-0.3	-1.0
Sources of oil supplies	**2.5**	**3.9**
U.S.	0.2	0.4
Saudi Arabia	0.1	0.5
UAE	0.1	0.2
Inventory depletion	2.2	2.9

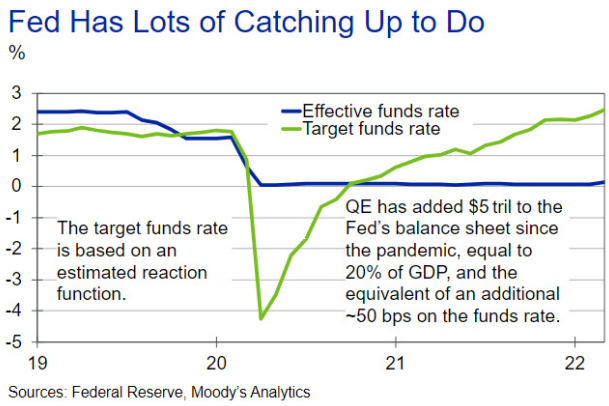
Notes:
Includes both crude oil and refined petroleum products
Rerouted exports are mostly to China and India
Demand destruction reflects less oil demand due to higher price

Sources: EIA, IEA, Moody's Analytics

This is our baseline outlook, as we assume that Russia finds a way to stand down from its invasion, allowing hostilities to abate by this time next year, and there are no greater disruptions to Russian oil exports. Oil prices average about $100 per barrel in coming months, then come down as U.S., Saudi and UAE oil production increases in response. Along with greater global inventory drawdowns, including releases from U.S. and other nations' strategic petroleum reserves, the missing Russian oil is replaced.

Of course, Russia's invasion of Ukraine could take any of a number of darker turns resulting in much more serious economic consequences. Indeed, it is not difficult to envisage a scenario in which the conflict intensifies, resulting in even stiffer sanctions on Russia, including a European ban on Russian oil imports. This would result in the loss of 5.4 million barrels a day of Russian oil, which would take much longer to replace, and oil prices would spike even higher. Oil prices closer to $150 per barrel would result for weeks if not months, pushing U.S. gasoline prices to near $6 per gallon. The previously provided rules of thumb would suggest that GDP growth this year would be reduced by 0.8%. But this surely understates the blow to the economy, as the much higher oil prices and resulting inflation surge would undermine already fragile consumer, business and investor sentiment. Inflation expectations, already high, could be completely dislodged. The Federal Reserve, faced with the Hobson's choice of responding to the struggling economy or higher inflation, would likely ultimately decide to rein in the inflation and inflation expectations. Policymakers will appropriately figure that it is better to risk a near-term recession than stagflation, which, based on the debilitating experience with stagflation in the 1970s and early 1980s, can only be dealt with by a much more severe downturn. As long as Russia continues to pursue its invasion of Ukraine, recession and stagflation will be serious threats.

Whether the economic outlook will be characterized by a self-sustaining expansion, recession or stagflation critically depends on whether the Fed is able to calibrate the normalization of interest rates. That is, raise rates fast enough to sufficiently slow growth and quell inflation and inflation expectations, but not so fast that it undermines growth and the recovery. This will be tricky. Policymakers have much work to do to get rates up to where they need to be consistent with unemployment, inflation, inflation expectations and financial conditions. These are the measures in their so-called reaction function, which Fed officials use to gauge where rates should be. Based on our estimation of their reaction function, the funds rate should be 2.5% and the Fed should be engaged in quantitative tightening by allowing the Treasury and mortgage-backed securities on its balance sheet to mature and prepay. For context, 2.5% is policymakers' estimate, as well as our own, of the so-called equilibrium rate, or r-star—where the funds rate should be in the long run. To be sure, the pandemic and uncertainty created by the Russian invasion are good reasons why the Fed has been slow to begin normalizing policy. But policymakers now need to work quickly—though not too quickly. No wonder recession and stagflation risks are so uncomfortably high.



A prescient gauge of the economic outlook is the shape of the Treasury yield curve. The curve as measured by the difference between 10-year and two-year Treasury yields has been especially accurate in predicting future recessions. Each

time the curve has inverted in the past half-century—meaning two-year yields have risen above 10-year yields—a recession has soon followed. The thought is that the two-year yield is a good barometer of what bond investors think the Fed is going to do with rates. When investors believe the Fed will raise rates aggressively, which will ultimately slow growth and inflation, they sell two-year Treasuries, pushing yields up, and purchase 10-year Treasuries, keeping a lid on those yields.

When investors believe the Fed is going to push rates up too quickly and tip the economy into recession, the curve inverts. Right now, the curve remains positively sloped with 10-year yields higher than two-year yields, but not by much. Of course, the curve already reflects investor expectations that the Fed will aggressively raise rates and normalize them by late 2023. This is similar to our baseline outlook. Investors, like us, continue to believe in a self-sustaining economic expansion. But also like us, they believe recession risks are high.

Given all that has gone wrong over the two years since the pandemic hit, it feels somewhat pollyannaish to argue that there could be an upside surprise for the economy. But there could be. Little noticed is the seeming revival in productivity growth to near its long-run 2% per annum pace. The shackles put on productivity growth since the financial crisis have been broken, and the bounce in business investment and business formations and the widespread adoption of remote work during the pandemic augur well for even stronger productivity gains dead ahead. There is no better antidote for stagflation than stronger productivity, which supports more growth and lower inflation. Of course, lots has to go right for this upside surprise to happen. But we are certainly due.

The Week Ahead in the Global Economy

U.S.

We'll see a packed week for U.S. economic data, and any comments by Fed official will have the potential to rattle financial markets. The Fed is sending a clear signal that it may need to be more aggressive in removing monetary policy accommodation. A 50 basis point rate hike is on the table at the next couple of meetings, if the data cooperate.

The March employment report is due, and early indications are that job growth remains solid. The unemployment rate likely will have dipped from 3.8% to 3.7%. Even if March employment was a dud, the Fed would likely look through one month of data. What will catch its attention are February headline and core PCE deflators. Fed Chair Jerome Powell is looking for a noticeable deceleration in month-to-month growth in consumer prices, but that likely didn't occur in February and will reaccelerate for March because of the jump in global oil prices. We also get the Conference Board's Consumer confidence index for March, revisions to fourth quarter GDP, monthly personal income and spending, and initial claims for unemployment insurance benefits.

Europe

The euro zone's preliminary estimate of the March HICP will stand out in a busy week. We expect inflation to jump to 7% y/y this March from 5.9% in February. Energy will be the main driver. The military conflict in Ukraine has sent a shock to commodity prices, which will show up first in the energy segment and then pass to the food and core baskets. Food prices will be growing strongly, continuing an upward trend predating the conflict, as will those of core goods. Services price growth will be relatively modest, since we don't expect a fuller recovery in the sector until this summer.

The conflict will also impose a shock to business and consumer sentiment this month. We foresee the euro zone's Economic Sentiment Indicator dropping to 100 from 114 previously. There will be hits to consumer, industrial and, to a lesser extent, services sectors. Each will be greatly concerned about inflation; and industry will have an added weight from a worsened view on inventories and supply, not just to the conflict but also to lockdowns in China. Services, namely tourism, may report weaker demand expectations given the absence of Russian tourist flows for the foreseeable future.

The euro zone unemployment rate was likely unchanged at 6.8% in February. Germany's likely slid 0.1 ppt to 4.9%, but we expect Italy's was unchanged at 8.8%. As infections from the Omicron wave of the pandemic fell and countries began loosening social distancing measures, we expect an uptick in hiring by services in anticipation for a more conducive business environment. Since the pandemic was not completely out of the picture, and we expect most post-pandemic demand to be oriented toward services, retail sales should grow tepidly for February. In France, household consumption of goods likely rebounded 0.6% m/m, after a prior 1.5% drop. In Germany, retail sales growth likely slowed to 0.5% m/m from 2%, while in Spain we expect they stabilized with zero growth, after pulling back in the previous two months.

Russian retail sales likely grew 7.2% y/y in February, speeding up from the previous month. The invasion of Ukraine will eventually weigh heavily on the Russian economy, but at the outset, retail sales will be pushed up as consumer's rushed to stockpile food and goods. Regarding the unemployment rate, we are forecasting a small 0.1 ppt increase to 4.5% from the previous month, not due to the invasion but to underlying weakness reflected in the month's PMI releases. As for final estimates of fourth-quarter GDP in France and the U.K., we are not expecting changes from the preliminary estimates of 0.7% and 1% q/q, respectively. There is the risk, however, that consumption was lower than initially forecast. For example, there was a slight downward revision to December retail sales in France.

Asia-Pacific

Japan will release a suite of indicators for February. On balance, we expect a softening given the Omicron wave of COVID-19 subduing domestic demand, the challenging external outlook including higher commodity prices, and the ongoing semiconductor chip shortage. Industrial production likely rose 0.5% m/m in February, partially recovering from January's 1.3% fall. We look for retail trade to fall 0.2% m/m in February after the 1.9% slump in January. The pandemic outlook has improved (daily new infections have declined), but lingering virus concerns and elevated hospitalisations will weigh on near-term household spending. The unemployment rate likely held at 2.8% in February. The Tankan survey diffusion index likely deteriorated to -2 in March from 2 in December. Weak domestic demand and higher commodity prices, especially for energy, have clouded the outlook for manufacturers in the near term.

The Bank of Thailand will keep the policy rate steady at 0.5%. Inflation hit a 13-year high in February at 5.3% y/y amid higher energy costs. Core CPI growth came in at more modest 1.8%. The central bank is reluctant to begin normalising policy settings despite upside risks to inflation from high commodity prices.

Geopolitical Calendar

Date	Country	Event	Economic Importance	Financial Market Risk
28-29-Mar	ASEAN	U.S.-ASEAN summit	Low	Low
10-Apr	France	General elections	Medium	Medium
8-May	Hong Kong	Chief executive election	Low	Low
9-May	Philippines	Presidential election	Low	Low
29-May	Colombia	Presidential election	Medium	Low
Jun	Switzerland	World Economic Forum annual meeting	Medium	Low
29-30-Jun	NATO	NATO Summit, hosted by Madrid	Medium	Medium
Jun/Jul	PNG	National general election	Low	Low
2-Oct	Brazil	Presidential and congressional elections	High	Medium
Oct/Nov	China	National Party Congress	High	Medium
7-Nov	U.N.	U.N. Climate Change Conference 2022 (COP 27)	Medium	Low

THE LONG VIEW: U.S.

Q2 GDP Expected to Rise 4.8% Annualized

BY RYAN SWEET

CREDIT SPREADS

Moody's long-term average corporate bond spread is 162 basis points, 4 bps wider than the 158 bps at this time last week and wider than the 136 bps average in February. The long-term average industrial corporate bond spread widened by 3 bps to 147. It averaged 154 bps in February.

The recent ICE BofA U.S. high-yield option adjusted bond spread is off its recent peak of 420 basis points as its now closer to 370 bps. This is still well above that seen at the beginning of the year, but the recent tightening is encouraging. The Bloomberg Barclays high-yield option adjusted spread has bounced around recently and is currently 358 bps, compared with the 386 bs this time last week. The high-yield option adjusted bond spreads approximate what is suggested by the accompanying long-term Baa industrial company bond yield spread and that implied by a VIX of 23.

Defaults

The trailing 12-month global speculative-grade default rate rose to 2% at the end of February from 1.8% in January. In Europe, the default rate jumped to 2.1% from 1.2%. Under our baseline scenario, Moody's Credit Transition Model predicts that the global speculative-grade corporate default rate will decline to 1.7% in the second quarter before rising to 2.8% at the end of February 2023. That rate would still be well below the long-term average of 4.1%.

Our baseline forecasts assume that the U.S. high-yield spread will widen from about 400 basis points currently to 548 bps over the next four quarters. This widening would be partially offset by improvement in the U.S. unemployment rate, which we assume will decline to 3.5% by the end of February 2023 from the current rate of 3.8%. Our baseline forecasts are underpinned by positive factors such as good corporate fundamentals, low refinancing risk in the near term, and the transition of the global economy from a tentative recovery toward more stable growth, bolstered by improvement in the COVID-19 health situation. However, risks have grown following the invasion of Ukraine and the subsequent sanctions on Russia. Although we expect the Fed to raise interest rates at a pace that will not severely disrupt the U.S. economic recovery and financing conditions, the Russia-Ukraine conflict could add substantial risk to the default outlook through multiple channels, especially in Europe.

U.S. Corporate Bond Issuance

First-quarter 2020's worldwide offerings of corporate bonds revealed annual advances of 14% for IG and 19% for high-yield, wherein US$-denominated offerings increased 45% for IG and grew 12% for high yield.

Second-quarter 2020's worldwide offerings of corporate bonds revealed annual surges of 69% for IG and 32% for high-yield, wherein US$-denominated offerings increased 142% for IG and grew 45% for high yield.

Third-quarter 2020's worldwide offerings of corporate bonds revealed an annual decline of 6% for IG and an annual advance of 44% for high-yield, wherein US$-denominated offerings increased 12% for IG and soared upward 56% for high yield.

Fourth-quarter 2020's worldwide offerings of corporate bonds revealed an annual decline of 3% for IG and an annual advance of 8% for high-yield, wherein US$-denominated offerings increased 16% for IG and 11% for high yield.

First-quarter 2021's worldwide offerings of corporate bonds revealed an annual decline of 4% for IG and an annual advance of 57% for high-yield, wherein US$-denominated offerings sank 9% for IG and advanced 64% for high yield.

Issuance weakened in the second quarter of 2021 as worldwide offerings of corporate bonds revealed a year-over-year decline of 35% for investment grade. High-yield issuance faired noticeably better in the second quarter.

Issuance softened in the third quarter of 2021 as worldwide offerings of corporate bonds revealed a year-over-year decline of 5% for investment grade. U.S. denominated corporate bond issuance also fell, dropping 16% on a year-ago basis. High-yield issuance faired noticeably better in the third quarter.

Fourth-quarter 2021's worldwide offerings of corporate bonds fell 9.4% for investment grade. High-yield US$ denominated high-yield corporate bond issuance fell from $133 billion in the third quarter to $92 billion in the final three months of 2021. December was a disappointment for high-yield corporate bond issuance, since it was 33% below its prior five-year average for the month.

In the week ended March 18, US$-denominated high-yield issuance totaled $1 billion, weaker than then $4 billion

increase in the prior week. This brings the year-to-date total to $52.5 billion. Investment-grade bond issuance rose $31.3 billion in the latest week, bringing its year-to-date total to $427.5 billion. Total US$-denominated issuance is currently tracking that seen in 2018 and 2019.

U.S. ECONOMIC OUTLOOK

There were some adjustments to our forecast between the February and March baselines, as the latest incorporates new assumptions around the effect of the military conflict between Russia and Ukraine. There are many scenarios on how the Russian invasion of Ukraine will unfold, each darker than the next, but the most likely scenario is that Russian troops will go no farther than Ukraine and any disruptions to oil, natural gas and other commodity markets will be limited and temporary. If so, the impact of the Russian invasion on the U.S. economy will be on the margins.

The U.S. banking and trade exposure to either Russia or Ukraine is very small. The primary channels through which the military conflict will adversely impact the U.S. economy is oil prices and financial market conditions. Europe's economy will be hit harder, but its economic recovery will continue. Russia, however, will suffer a debilitating recession, and for Ukraine's economy this is a catastrophe.

Smaller fiscal package

President Biden renamed his economic agenda from "Build Back Better" to "Building a Better America." Prior to Biden's first State of the Union, we revised our BBA assumptions in the March forecast. We no longer assume Democrats pass a $1.2 trillion package of social safety net and climate policies through budget reconciliation, but rather a $600 billion legislation. We jettisoned the following two provisions that had been included in the February forecast: $400 billion in Affordable Care Act premium credits and $200 billion in universal preschool investments.

The BBA package would pass by the end of the third quarter, with implementation starting in the fourth quarter. It would center around $330 billion in clean energy tax credits and $230 billion in direct federal spending to address climate change. The reconciliation bill would also modestly expand the Child Tax Credit by $40 billion by making it fully refundable on a permanent basis. The BBA would be a virtual nonevent for the economy in 2022, but its gross fiscal support would amount to 0.1% of GDP in 2023, peak at 0.25% in 2026, and settle at less than 0.2% by the end of a 10-year budget horizon.

Because we have rolled back the number of BBA investments, the March forecast also assumes a smaller number of pay-fors. We removed the following offsets that were previously part of the February forecast: a new excise tax applying to stock buybacks, higher taxes on global intangible low-taxed income for U.S. multinationals, and other international tax changes.

The March forecast still includes the following changes to the personal tax code: ensuring high-income business owners pay either the 3.8% Medicare tax or the 3.8% net investment income tax and limiting business loss deductions for noncorporate taxpayers. In addition, IRS funding would increase to improve tax compliance. Finally, prescription drug savings would solely come from repealing a Trump-era rule eliminating safe harbor from a federal anti-kickback law for rebates paid by pharmaceutical manufacturers to health plans and pharmacy benefit managers in Medicare Part D. We do not assume Democrats implement other prescription drug reforms such as allowing the federal government to negotiate drug prices in Medicare or requiring drug companies to pay rebates when annual increases in drug prices for Medicare and private insurance exceed the rate of inflation.

In sum, the BBA would include $700 billion in tax increases on well-to-do households, as well as prescription drug savings. As a result, it would lead to a net deficit reduction of $100 billion over the next 10 years. Our BBA assumption in the March forecast is broadly in line with recent comments by Senator Joe Manchin.

COVID-19 assumptions

We adjusted our epidemiological assumptions to anticipate that total confirmed COVID-19 cases in the U.S. will be 81 million, less than the 82.9 million in the February baseline. However, the number of assumed cases is still well above that assumed before the Omicron variant. The seven-day moving average of daily confirmed cases dropped sharply recently and was around 39,000, below its recent peak of 807,000 and among the lowest since July. The date for abatement of the pandemic, where total case growth is less than 0.05% per day, changed slightly, as it has already occurred. We had expected it to abate on April 4.

We have replaced the concept of herd immunity with "effective immunity," which is a rolling number of infections plus vaccinations to account for the fact that immunity is not permanent. The forecast still assumes that COVID-19 will be endemic and seasonal.

Oil bites into GDP

The March baseline factors in the recent jump in energy prices, and that led us to revise our forecast lower for U.S. GDP growth by 0.2 of a percentage point to 3.5% this year. We nudged up the forecast for GDP growth in 2023 from 3% to 3.1%.

The bulk of the downward revision was in the second quarter, when real GDP is expected to rise 4.8% at an

annualized rate, compared with the 6.1% in the February baseline forecast. We now expect oil prices to peak in the second quarter, with West Texas Intermediate crude oil prices averaging $100 per barrel. Our rule of thumb is that every $10 increase in the per barrel price of oil increases U.S. retail gasoline prices by 30 cents a gallon. Every penny increase in retail gasoline prices reduces consumer spending by about $1.5 billion over the course of a year.

GDP growth in the second half of this year will average 2.7% at an annualized rate. The Bloomberg consensus is for real GDP to increase 3.6% this year and 2.4% in 2023.

Oil prices, financial market conditions, inventories, and global supply-chain issues remain downside risks to the near-term forecast. While inventories played an enormous role in the gain in fourth-quarter GDP, they are on track, along with net exports, to be a significant drag on growth early this year. Our high-frequency GDP model's tracking estimate of first-quarter GDP growth keeps heading south, but it has nothing to do with recent geopolitical events. Currently, first-quarter GDP is on track to rise 0.5% at an annualized rate.

Business investment and housing

Fundamentals have turned less supportive for business investment as corporate credit spreads continue to widen. However, corporate profit margins are fairly wide, and banks are easing lending standards.

We have real business equipment spending rising 7.3% this year, compared with 8.2% in the February baseline. The forecast is for real business equipment spending to increase 5.6% in 2023, a touch stronger than the 5.4% gain in the February baseline forecast.

Risks are weighted to the downside for nonenergy business investment, as financial markets could tighten more than we anticipate and corporate credit spreads widen further. The correlation coefficient between monthly changes in the high-yield corporate bond spread and changes in the S&P 500 is -0.71 since 2000. The relationship is still strong if we look at it on a weekly basis. Using no and various lags, the Granger causality tests showed changes in the S&P 500 caused changes in the high-yield corporate bond spread. The causal relationship runs in one direction.

The real nonresidential structures investment is now expected to increase 14.4% this year, compared with the 11% gain in the February forecast. Some of the upward revision is the boost to business investment from higher energy prices, primarily in mining exploration, shafts and wells. The Bureau of Economic Analysis uses the American Petroleum Institute's weighted average of footage drilled along with rotary rig counts from Baker Hughes in its current-quarter estimate of private fixed investment in mining exploration, shafts and wells. This segment now accounts for more than 10% of nominal private fixed investment in nonresidential structures. Therefore, a rise in energy prices would lead to an increase in the number of active rotary rigs.

Separately, growth in the Commercial Property Price Index was revised higher; it is now expected to increase 8.6% this year, compared with 5.2% in the February baseline. We raised the forecast next year from 2% to 7.7%.

Revisions to housing starts were small. Housing starts are expected to be 1.81 million, compared with 1.84 million in the February baseline. Revisions to housing starts next year were also modest. Risks are heavily weighted to the downside. There are likely only so many homes that can be built each year because of labor-supply constraints and lack of buildable lots. Some of the labor-supply issues will ease as the pandemic winds down, but the reduction in immigration is particularly problematic for homebuilders' ability to find workers. Revisions to the forecast for new- and existing-home sales this year were minor, as mortgage rates haven't risen either fast or high enough to cut noticeably into sales.

We nudged up the forecast for the FHFA All-Transactions House Price Index this year, with it rising 11.5%, compared with 9.8% in the February baseline. House price growth moderates noticeably in 2023, as prices are forecast to rise 2.3%, a touch weaker than the 2.4% in the February baseline. This is attributable to rebalancing of supply and demand.

Labor market

The February employment data are incorporated into the March baseline forecast. They led to minor tweaks to the forecast. We have job growth averaging 367,000 per month this year, compared with the February baseline forecast of 384,000. There weren't material changes to the forecast for the unemployment rate this year, as it is still expected to average 3.4% in the final three months of this year and 3.4% in the fourth quarter of next year.

We assume a full-employment economy is one with a 3.5% unemployment rate, around a 62.5% labor force participation rate, and an 80% prime-age employment-to-population ratio. All of these conditions will be met by late this year or early next.

Fed sticks to its plan

Federal Reserve Chair Jerome Powell was explicit during his semiannual testimony to the House Committee on Financial Services. He took away all uncertainty about the outcome of March's Federal Open Market Committee meeting by

throwing his support behind a 25-basis point rate hike and saying that plans to reduce the size of the balance sheet will not be finalized.

Normally, Fed chairs avoid tipping their hands, as it could be seen as front-running the FOMC. However, Russia's invasion of Ukraine has caused a lot of volatility in financial markets and created new uncertainty. Therefore, Powell likely wanted to reduce any uncertainty about the Fed's intention at its upcoming meeting. Powell did leave the door open for larger rate hikes at future meetings.

He sounded optimistic that the Fed can engineer a soft landing, where it raises interest rates enough to curb inflation but not enough to tip the economy into recession. Powell floated the idea that this tightening cycle will end above his estimate of the neutral fed funds rate of 2% to 2.5%.

We maintained our assumption that the Fed raises the target range for the fed funds rate four times this year, 25 basis points each time. Markets are pricing in more hikes, just south of seven hikes over the next 12 months. The tightening in financial market conditions did some of the Fed's work for it. The primary channel through which monetary policy impacts the economy is financial markets. With financial market conditions tightening, the Fed doesn't need to do as much this year.

The Fed is also expected to begin quantitative tightening this summer. That is, the central bank will not replace the Treasury and mortgage securities it owns as they mature or prepay, allowing its balance sheet to slowly shrink, and putting upward pressure on longer-term rates.

Risks are weighted toward more rate hikes this year. Higher energy prices are going to cause inflation to peak higher than we had previously expected. We look for year-over-year growth in the consumer price index to be 7.4% in the first quarter, compared with 7% in the February baseline. The inflation forecast follows a similar trajectory as past baseline forecasts, just higher. Inflation moderates through the remainder of the year, returning to the Fed's target in the first half of next year. Key to this forecast is that oil prices average $100 per barrel in the second quarter, with that being the peak. Also, supply-chain issues are expected to ease, leading to significant disinflation in goods prices.

We didn't make significant changes to the forecast for the 10-year Treasury yield. The forecast is that the Dow Jones Industrial Average incorporates the recent developments. The new baseline will have the Dow Jones Industrial Average lower than its February baseline. The recent decline accounted for the bulk of the decline we expected to occur throughout the year. Therefore, the March baseline has another leg lower in equity prices, which we expect will remain within a tight range through the end of next year.

Invasion Exacerbates Inflation Across Continent

BY ROSS CIOFFI

The Russian invasion of Ukraine has exacerbated inflation across Europe and worsened an already elevated cost-of-living crisis in Spain. Surging energy costs have triggered protests by truck drivers, fishermen and farmers, who are all on the front line of rapidly increasing fuel prices. Households and businesses across the country are also facing soaring fuel and electricity bills. The situation in Spain is among the most acute in the euro zone given the prevalence of variably rated utility contracts in the country. The government has already rolled over VAT cuts on utilities, initially debuted last fall. It plans to unveil another relief package on March 29 with more direct measures. The government agreed this past Monday on an aid package of €500 million to help with transporters' fuel costs.

Germany's government, meanwhile, announced another set of measures on Thursday aimed at alleviating rising energy costs. These include a €300 rebate to all taxpayers and an extra €100 for child support, a three-month reduction in taxes on fuels, and a three-month cost reduction for monthly public transport tickets. These come on top of similar measures announced a month ago, the total of which could cost around €30 billion (there have not been precise estimates of costs yet).

European PMIs outperform expectations

The flash estimate of the euro zone's March PMI beat our expectations. The reading for the composite index slumped modestly to 54.5 from 55.5 in February. We were not expecting the surveys to signal a contraction in activity (reflected by a below-50 reading), but we did suspect the reading might fall more significantly. Ultimately, with COVID-19 restrictions easing, demand got a boost, particularly for services. The military conflict in Ukraine has worsened global supply conditions, though, which had a worse effect on the manufacturing PMI. That said, services and manufacturing surveys reported significant inflation pressures and faltering confidence. The flash reading of the manufacturing survey fell to 57 from 58.2 previously, while the services reading inched lower to 54.8 from 55.5.

The U.K.'s composite PMI reading did even better, falling just 0.2 percentage point to 59.7 in March. The details of the survey were similar, given the effects of the Russian invasion of Ukraine on global supply conditions and prices. However, the services PMI increased during the month, supported by a wave of post-pandemic demand. The services PMI reading rose to 61 from 60.5 a month earlier, while the manufacturing PMI fell to 55.5 from 58 previously. The flash readings for the euro zone and the U.K. support our view of continued stability in labor markets, struggling output despite resilient demand, and a continued acceleration in inflation in the first quarter.

Swiss National Bank holds rates steady

The Swiss National Bank maintained its policy rate at -0.75% at its March meeting. The inflation rate rose above target to 2.2% y/y in February on the back of higher oil prices and global supply bottlenecks. The SNB upwardly revised its 2022 inflation forecast to 2.1%. A strong franc is mitigating inflation pressures, however. The monetary authority maintained its commitment to intervene in foreign exchange markets to limit appreciation. The SNB expects the inflation rate to fall back below target to 0.9% in 2023 and 2024, so the currently more expansionary policy stance is still in line with the bank's mandate for price stability and economic growth. Our March baseline foresees a similar path for inflation, expecting no rate hikes in the short term.

Norges Bank hikes

The Norges Bank raised the sight deposit rate by 25 basis points to 0.75%. Policymakers are battling headline and core inflation, both of which are above target as of the February release (3.7% y/y and 2.1%, respectively). Inflation pressures on producers and consumers will remain strong in the form of elevated input and energy prices due to global supply disruptions and the military conflict in Ukraine. But on top of this, wage inflation has been stronger than anticipated, which has pushed up prospects for robust inflation in the medium term. We expect policymakers will act on their guidance and respond with another rate hike in June; the bank's forward guidance furthermore specified hikes culminating in a 2.5% policy rate by the end of 2023.

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Singapore Inflation Soars

BY DENISE CHEOK and HERON LIM

Singapore's headline inflation soared to 4.3% in February, the largest increase since February 2013. Much of the rise was due to an increase in car prices caused by higher taxes rather than supply-chain issues. Core inflation, which excludes accommodation and private transportation, saw a slower rate of increase compared with the previous month's reading. Prices of food and energy increased at a slower rate than in January, although downside risks still abound. Singapore imports almost all of its fresh food and energy, making it highly susceptible to external shocks.

The Russian invasion of Ukraine has pushed oil prices above $100 per barrel, and we expect energy prices to stay high in the first half of the year. This should ease in the second half, which will quell inflation pressures in countries including Singapore. Supply-chain disruptions from the COVID-19 pandemic are ongoing as well. Although most of the world has transitioned to living with the virus; China is a notable exception. Several key Chinese cities such as Shenzhen were locked down because of COVID-19 outbreaks. The country is unlikely to relax its stance against the virus in coming months, and this will weigh heavily on global supply chains.

The Monetary Authority of Singapore noted that core inflation "could reach 3% by the middle of the year" before easing in the latter half. This will bring core inflation near the upper bound of the central bank's projection of 2% to 3%. February's CPI reading is the last before the MAS meets next month. With headline inflation exceeding the central bank's projections for the fourth straight month, we expect to see further tightening of monetary policy at the April meeting.

...While Hong Kong's inflation remains subdued

Hong Kong's headline composite consumer price index rose by 1.6% over the year in February, a 0.4-percentage point increase from January. After netting out the effect of one-off relief measures, consumer prices still saw a year-on-year increase of 1.6% in February. This was expected because demand-side pressures were subdued by tightened social distancing measures designed to keep an outbreak of the Omicron variant of COVID-19 in check. There was reduced demand in consumer services and the housing market. The housing market plays an oversize role in Hong Kong's CPI, making up more than 40% of the current CPI basket, and weaknesses in the housing market, which saw a 0.3% decrease over the year, will lead to softer CPI increases overall.

However, prices increased in other categories. Clothing and footwear saw the biggest spike over the year at 8%, while transport and food prices increased 8% and 3.6%, respectively. Even though the headline inflation rate is relatively low compared with regional peers such as Singapore and Taiwan, Hong Kong has not been immune to the inflation tailwinds caused by climbing commodity and energy prices.

Hong Kong's zero-COVID policy has put significant strain on its healthcare system as the city deals with its worst virus surge. However, Hong Kong has seen a steep decline in new cases since early March. Officials are looking to gradually lift restrictions from April.

Still, there are headwinds to inflation. The housing market is expected to remain subdued in the near term, as demand from Mainland China is expected to remain soft for 2022 (a reopening with China is still in the works with no set date at the time of writing). We also see interest rate normalisation by U.S. Federal Reserve increasing borrowing costs within Hong Kong; borrowing rates in Hong Kong largely reflect those in the U.S. due to the hard currency peg. This will reduce consumption activity and keep overall consumer inflation slow. We currently expect the annual inflation rate to reach 2.8% for 2022.

Europe Changes Turn Overwhelmingly Positive

BY STEVEN SHIELDS

U.S.

U.S. corporate credit quality improved in the latest period with credit upgrades accounting for nearly two-thirds of changes and 60% of the affected debt. The changes spanned a diverse set of industrial groups with investment-grade firms accounting for three of the seven upgrades. Endeavor Energy Resources L.P. was the largest change in terms of total debt affected at $1.6 billion. Moody's Investors Service raised Endeavor's senior unsecured notes to Ba2 from Ba3, raised its Corporate Family Rating to Ba1 from Ba2, and revised the outlook to stable from positive. The upgrade reflects Endeavor's increased scale, reduced debt balance and our expectation of continued growth and free cash flow generation under favorable price conditions through 2023.

Meanwhile, Toll Road Investors Partnership II L.P. and Jets Stadium Development LLC both received an upgrade on their respective senior unsecured notes to A1. Moody's Investors Service lowered TPC Group Inc.'s first lien priming notes to B3 from B2, first lien notes to Caa3 from Caa2, and its CFR to Caa3 from Caa1. The downgrade follows TPC's forbearance agreement in early February after a missed interest payment. The CFR downgrade to Caa3 reflects the fact that in bankruptcy, noteholders could be required to take a meaningful haircut to outstanding debt at TPC, given the uncertainty over future cash outflows related to the explosion and fire at TPC's Port Neches facility in November 2019. It also reflects Moody's view of an average recovery on TPC's debt given the value of the business and the potential proceeds from its insurance policies. While the company's financial performance has been unusually weak since the pandemic, Moody's expects a meaningful recovery in 2022 due to higher C4 Processing volumes owing to ongoing improvements at its facilities, and increased profitability in the Performance Products segment.

Europe

Ratings activity was once again elevated across Western Europe with the region receiving 44 rating changes in the period. However, unlike the previous week, activity was overwhelmingly positive. All but four of the changes occurred to firms located within the United Kingdom. The change reflects Moody's recent upgrade of Assured Guaranty and its subsidiaries following the resolution of the group's exposure to the general obligation bonds issued by the Commonwealth of Puerto Rico. As a result, Moody's ratings on securities that are guaranteed or "wrapped" by Assured Guaranty were also upgraded.
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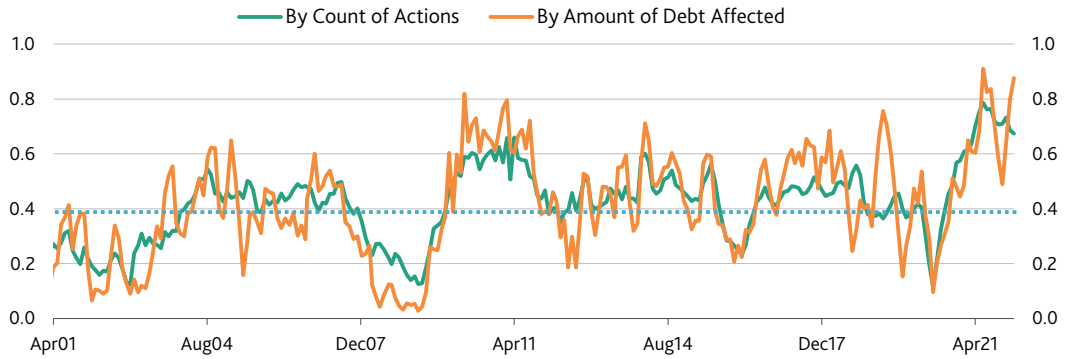
RATINGS ROUND-UP

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



* Trailing 3-month average

Source: Moody's

FIGURE 2
Rating Key

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

FIGURE 3

Rating Changes: Corporate & Financial Institutions - US

Date	Company	Sector	Rating	Amount ($ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/SG
3/17/2022	WW INTERNATIONAL, INC.	Industrial	SrSec/BCF/LTCFR/PDR	500.00	D	Ba3	B1	SG
3/17/2022	GREIF, INC.	Industrial	LTCFR/PDR		U	Ba2	Ba1	SG
3/18/2022	TOLL ROAD INVESTORS PARTNERSHIP II, L.P.	Industrial	SrUnsec	571.10	U	A2	A1	IG
3/18/2022	JETS STADIUM DEVELOPMENT, LLC	Industrial	SrUnsec	455.00	U	A2	A1	IG
3/18/2022	BROOKLYN ARENA LOCAL DEVELOPMENT CORPORATION	Industrial	SrSec		U	A2	A1	IG
3/18/2022	GOGO INC.	Industrial	SrSec/BCF/LTCFR/PDR		U	B3	B2	SG
3/18/2022	HORIZON THERAPEUTICS PLC-HORIZON THERAPEUTICS USA, INC.	Industrial	SrUnsec/LTCFR/PDR	600.00	U	Ba3	Ba2	SG
3/21/2022	TPC GROUP INC.	Industrial	SrSec/LTCFR/PDR	1083.00	D	B2	B3	SG
3/22/2022	ENDEAVOR ENERGY RESOURCES, L.P.	Industrial	SrUnsec/LTCFR/PDR	1600.00	U	Ba3	Ba2	SG
3/22/2022	KINDER MORGAN, INC.-RUBY PIPELINE, LLC	Industrial	SrUnsec/LTCFR/PDR	693.75	D	Caa1	Ca	SG
3/22/2022	JHW CJF TOPCO, INC.-ALPHIA, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	Caa1	SG

Source: Moody's

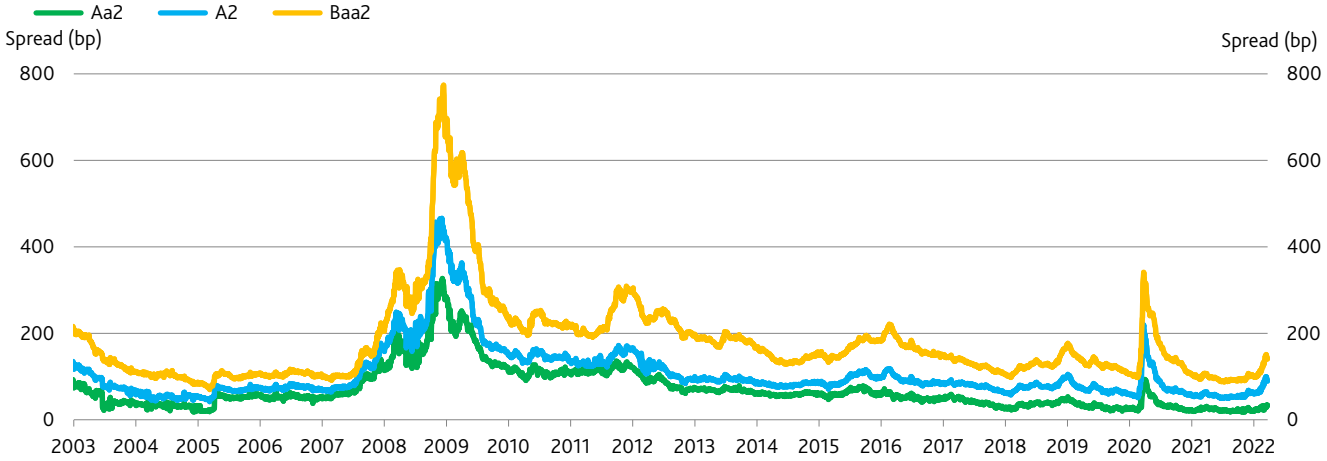
FIGURE 4

Rating Changes: Corporate & Financial Institutions - Europe

Date	Company	Sector	Rating	Amount ($ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/ SG	Country
3/18/2022	KELDA GROUP LIMITED-YORKSHIRE WATER SERVICES FINANCE LIMITED	Utility	SrSec	447.61	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	AUTOLINK CONCESSIONAIRES (M6) PLC	Industrial	SrSec	171.88	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	STIRLING WATER SEAFIELD FINANCE PLC	Utility	SrSec	141.72	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	WORCESTERSHIRE HOSPITAL SPC PLC	Industrial	SrSec	133.87	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	CRITERION HEALTHCARE PLC	Industrial	SrSec	89.03	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	ENDEAVOUR SCH PLC	Industrial	SrSec	189.37	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	HPC KING'S COLLEGE HOSPITAL (ISSUER) PLC	Industrial	SrSec	127.31	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	BAGLAN MOOR HEALTHCARE PLC	Industrial	SrSec	90.83	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	SUTTON AND EAST SURREY WATER PLC	Utility	SrSec	137.73	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	DWR CYMRU (HOLDINGS) LIMITED-DWR CYMRU (FINANCING) UK PLC	Utility	SrSec	1101.81	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	ELLENBROOK DEVELOPMENTS PLC	Industrial	SrSec	82.59	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	INVESTORS IN THE COMMUNITY (BUXTON) LTD	Industrial	SrSec	89.21	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	FRIGOGLASS SAIC	Industrial	SrSec/LTCFR/PDR	302.81	D	Caa1	Caa2	SG	NETHERLANDS
3/18/2022	ENTERPRISE CIVIC BUILDINGS LIMITED	Industrial	SrSec	29.58	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	HOSPITAL COMPANY (DARTFORD) ISSUER PLC (THE)	Industrial	SrSec	210.07	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	MOYLE INTERCONNECTOR (FINANCING) PLC	Utility	SrSec	185.94	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	DERBY HEALTHCARE PLC	Industrial	SrSec	615.07	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	CATALYST HEALTHCARE (ROMFORD) FINANCING PLC	Industrial	SrSec/BCF	176.84	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	OCTAGON HEALTHCARE FUNDING PLC	Industrial	SrSec	421.89	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	UNITED HEALTHCARE (BROMLEY) LIMITED	Industrial	SrSec	190.66	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	HOSPITAL COMPANY (QAH PORTSMOUTH) LIMITED	Industrial	SrSec/BCF		U	A2	A1	IG	UNITED KINGDOM
3/18/2022	CENTRAL NOTTINGHAMSHIRE HOSPITALS PLC	Industrial	SrSec	484.66	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	CAPITAL HOSPITALS (ISSUER) PLC	Industrial	SrSec/BCF	702.68	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	ARTESIAN FINANCE III PLC	Utility	SrSec	153.43	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	HIGHWAY MANAGEMENT (CITY) FINANCE PLC	Industrial	SrSec/BCF	101.50	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	ASPIRE DEFENCE FINANCE PLC	Industrial	SrSec	1007.57	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	CATALYST HIGHER EDUCATION (SHEFFIELD) PLC	Industrial	SrSec	215.95	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	NEWHOSPITALS (ST. HELENS AND KNOWSLEY) FINANCE PLC	Industrial	SrSec/BCF	236.20	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	INSPIRED EDUCATION (SOUTH LANARKSHIRE) PLC	Industrial	SrSec	485.14	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	HOSPITAL COMPANY (SWINDON AND MARLBOROUGH) LTD	Industrial	SrSec	220.36	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	COVENTRY AND RUGBY HOSPITAL COMPANY PLC (THE)	Industrial	SrSec	560.87	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	HEALTHCARE SUPPORT (NORTH STAFFS) FINANCE PLC	Industrial	SrSec/BCF	261.70	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	CHANNEL LINK ENTERPRISES FINANCE PLC	Industrial	SrSub	584.38	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	WALSALL HOSPITAL COMPANY PLC	Industrial	SrSec	220.84	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	AUTOVIA DE LA MANCHA S.A.	Industrial	SrSec/BCF		U	A2	A1	IG	SPAIN
3/18/2022	OSPREY ACQUISITIONS LIMITED-ANGLIAN WATER SERVICES FINANCING PLC	Utility	SrSec	495.81	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	HOLYROOD STUDENT ACCOMMODATION PLC	Industrial	SrSec	86.78	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	SUSTAINABLE COMMUNITIES FOR LEEDS (FINANCE) PLC	Industrial	SrSec	140.25	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	SOLUTIONS 4 NORTH TYNESIDE (FINANCE) PLC	Industrial	SrSec	105.55	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	S4B (ISSUER) PLC	Industrial	SrSec	101.26	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	SCOTIA GAS NETWORKS LIMITED-SCOTLAND GAS NETWORKS PLC	Utility	SrUnsec	743.72	U	A2	A1	IG	UNITED KINGDOM
3/18/2022	SBANKEN ASA	Financial	LTD/MTN		U	A2	Aa2	IG	NORWAY
3/18/2022	QAH FINANCE PLC	Industrial	SrSec	451.02	U	A2	A1	IG	UNITED KINGDOM
3/21/2022	WEPA HYGIENEPRODUKTE GMBH	Industrial	SrSec/LTCFR/PDR	698.79	D	B1	B2	SG	GERMANY

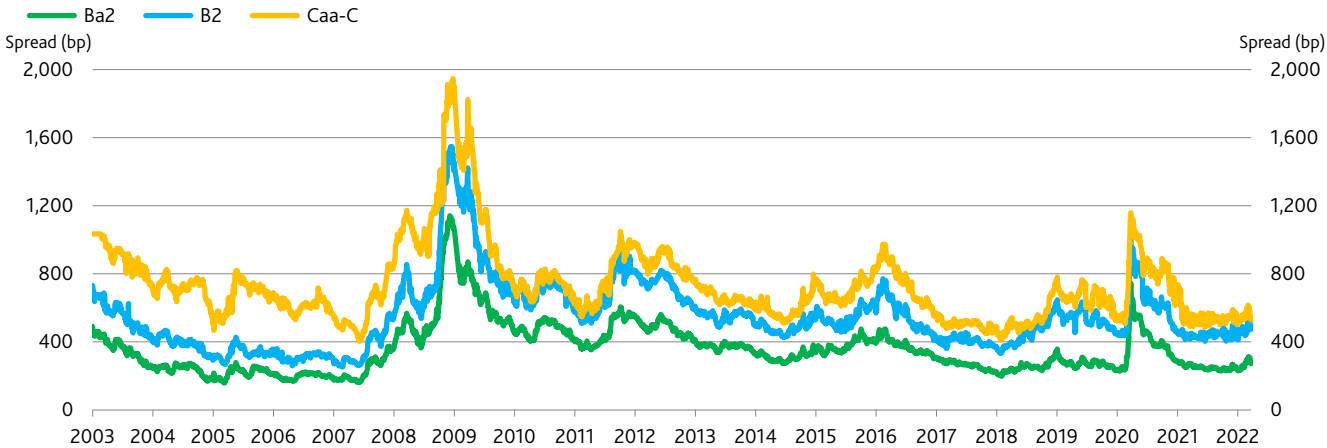
Source: Moody's

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



Source: Moody's

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



Source: Moody's

CDS MOVERS

Figure 3. CDS Movers - US (March 16, 2022 – March 23, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Mar. 23	Mar. 16	Senior Ratings
Abbott Laboratories	Aa2	A1	A1
JPMorgan Chase & Co.	Baa1	Baa2	A2
Citigroup Inc.	Baa2	Baa3	A3
Goldman Sachs Group, Inc. (The)	Baa2	Baa3	A2
Wells Fargo & Company	Baa1	Baa2	A1
JPMorgan Chase Bank, N.A.	A3	Baa1	Aa2
Comcast Corporation	A2	A3	A3
Oracle Corporation	Baa2	Baa3	Baa2
CVS Health Corporation	A1	A2	Baa2
Exxon Mobil Corporation	Aa1	Aa2	Aa2

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Mar. 23	Mar. 16	Senior Ratings
CenterPoint Energy, Inc.	Baa2	A3	Baa2
PepsiCo, Inc.	A2	A1	A1
Philip Morris International Inc.	A2	A1	A2
General Electric Company	Baa3	Baa2	Baa1
Eli Lilly and Company	Aa2	Aa1	A2
FirstEnergy Corp.	Baa3	Baa2	Ba1
Emerson Electric Company	Baa1	A3	A2
Danaher Corporation	A3	A2	Baa1
Archer-Daniels-Midland Company	A2	A1	A2
United Rentals (North America), Inc.	Ba2	Ba1	Ba2

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Mar. 23	Mar. 16	Spread Diff
Talen Energy Supply, LLC	Caa2	10,691	7,717	2,973
American Airlines Group Inc.	Caa1	1,192	1,014	178
United Airlines Holdings, Inc.	Ba3	728	637	91
Liberty Interactive LLC	B2	761	703	58
Goodyear Tire & Rubber Company (The)	B2	432	387	45
Macy's Retail Holdings, LLC	Ba2	360	325	35
American Axle & Manufacturing, Inc.	B2	525	493	32
Embarq Corporation	Ba2	315	285	30
Xerox Corporation	Ba2	358	330	28
Beazer Homes USA, Inc.	B3	469	446	24

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 23	Mar. 16	Spread Diff
Nabors Industries, Inc.	Caa2	502	583	-82
Staples, Inc.	Caa2	1,231	1,311	-80
Rite Aid Corporation	Caa2	1,356	1,412	-56
Murphy Oil Corporation	Ba3	263	318	-54
Nissan Motor Acceptance Company LLC	Baa3	247	275	-28
Avis Budget Car Rental, LLC	B2	332	357	-26
Tenet Healthcare Corporation	B3	281	302	-21
Travel + Leisure Co.	B1	217	237	-21
Occidental Petroleum Corporation	Ba1	129	149	-20
Calpine Corporation	B2	424	444	-19

Source: Moody's, CMA

CDS Movers

Figure 4. CDS Movers - Europe (March 16, 2022 – March 23, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Mar. 23	Mar. 16	Senior Ratings
ASML Holding N.V.	Aa2	A1	A2
UniCredit Bank AG	A2	A3	A2
ENEL S.p.A.	Baa2	Baa3	Baa1
Anheuser-Busch InBev SA/NV	A3	Baa1	Baa1
Heineken N.V.	Aa1	Aa2	Baa1
Telia Company AB	A1	A2	Baa1
Iberdrola International B.V.	A3	Baa1	Baa1
Veolia Environnement S.A.	A2	A3	Baa1
Autoroutes du Sud de la France (ASF)	A2	A3	A3
National Grid Electricity Transmission plc	A2	A3	Baa1

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Mar. 23	Mar. 16	Senior Ratings
Spain, Government of	Aa3	Aa2	Baa1
NatWest Markets Plc	Baa1	A3	A2
Swedbank AB	A2	A1	Aa3
Landesbank Hessen-Thueringen GZ	Aa3	Aa2	Aa3
SEB AB	A1	Aa3	Aa3
EnBW Energie Baden-Wuerttemberg AG	A3	A2	Baa1
thyssenkrupp AG	Ba3	Ba2	B1
Coca-Cola HBC Finance B.V.	A3	A2	Baa1
NatWest Markets N.V.	Aa2	Aa1	A2
adidas AG	Aa3	Aa2	A2

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Mar. 23	Mar. 16	Spread Diff
Vue International Bidco plc	Ca	1,122	835	287
Banco Comercial Portugues, S.A.	Ba1	252	205	47
thyssenkrupp AG	B1	306	259	47
Casino Guichard-Perrachon SA	Caa1	956	911	45
Sappi Papier Holding GmbH	Ba2	353	333	19
Valeo S.E.	Baa3	243	227	16
Piraeus Financial Holdings S.A.	Caa2	698	684	14
Renault S.A.	Ba2	308	295	14
Ziggo Bond Company B.V.	B3	306	292	14
TDC Holding A/S	B2	186	172	14

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 23	Mar. 16	Spread Diff
Boparan Finance plc	Caa1	1,758	2,100	-341
Novafives S.A.S.	Caa2	1,041	1,092	-51
Vedanta Resources Limited	B3	856	900	-44
UPC Holding B.V.	B3	205	230	-25
Fortum Oyj	Baa2	195	213	-19
Banca Monte dei Paschi di Siena S.p.A.	Caa1	463	477	-14
Hammerson Plc	Baa3	187	200	-13
FCE Bank plc	Baa3	182	191	-9
Deutsche Lufthansa Aktiengesellschaft	Ba2	309	316	-7
Jaguar Land Rover Automotive Plc	B1	552	559	-7

Source: Moody's, CMA

CDS Movers

Figure 5. CDS Movers - APAC (March 16, 2022 – March 23, 2022)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Mar. 23	Mar. 16	Senior Ratings
Nippon Yusen Kabushiki Kaisha	A1	Baa1	Ba3
JFE Holdings, Inc.	Aa3	A2	Baa3
Honda Motor Co., Ltd.	Aa1	Aa3	A3
Indonesia, Government of	Baa2	Baa3	Baa2
Export-Import Bank of Korea (The)	Aa1	Aa2	Aa2
China Development Bank	Baa1	Baa2	A1
Export-Import Bank of China (The)	A3	Baa1	A1
SoftBank Group Corp.	B1	B2	Ba3
Chubu Electric Power Company, Incorporated	Aa1	Aa2	A3
Industrial & Commercial Bank of China Ltd	Baa1	Baa2	A1

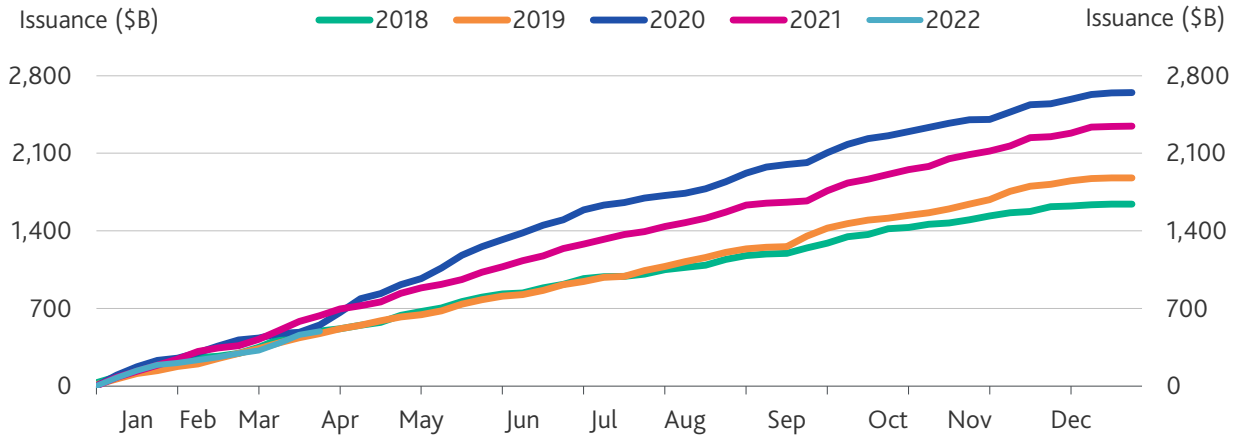
CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Mar. 23	Mar. 16	Senior Ratings
Westpac Banking Corporation	A2	A1	Aa3
National Australia Bank Limited	A1	Aa3	Aa3
Commonwealth Bank of Australia	A1	Aa3	Aa3
DBS Bank Ltd.	A1	Aa3	Aa1
Wesfarmers Limited	A2	A1	A3
Nippon Telegraph and Telephone Corporation	Aa1	Aaa	A1
Singapore Telecommunications Limited	A2	A1	A1
Japan, Government of	Aaa	Aaa	A1
China, Government of	A3	A3	A1
Australia, Government of	Aaa	Aaa	Aaa

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Mar. 23	Mar. 16	Spread Diff
Halyk Savings Bank of Kazakhstan	Ba2	437	402	35
Macquarie Group Limited	A3	79	71	7
Chorus Limited	Baa2	81	74	7
Westpac Banking Corporation	Aa3	52	46	6
National Australia Bank Limited	Aa3	47	41	6
East Japan Railway Company	A1	31	25	6
Woolworths Group Limited	Baa2	68	62	6
Commonwealth Bank of Australia	Aa3	45	40	5
Macquarie Bank Limited	A2	52	47	5
Telstra Corporation Limited	A2	55	50	5

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 23	Mar. 16	Spread Diff
Development Bank of Kazakhstan	Baa2	298	362	-64
SoftBank Group Corp.	Ba3	372	423	-50
Kazakhstan, Government of	Baa2	167	201	-34
Nissan Motor Co., Ltd.	Baa3	141	161	-20
Nippon Yusen Kabushiki Kaisha	Ba3	47	63	-16
Mitsui O.S.K. Lines, Ltd.	B1	64	80	-15
Industrial & Commercial Bank of China Ltd	A1	66	80	-14
Bank of China Limited	A1	66	78	-13
Bank of East Asia, Limited	A3	70	81	-12
China Development Bank	A1	68	78	-9

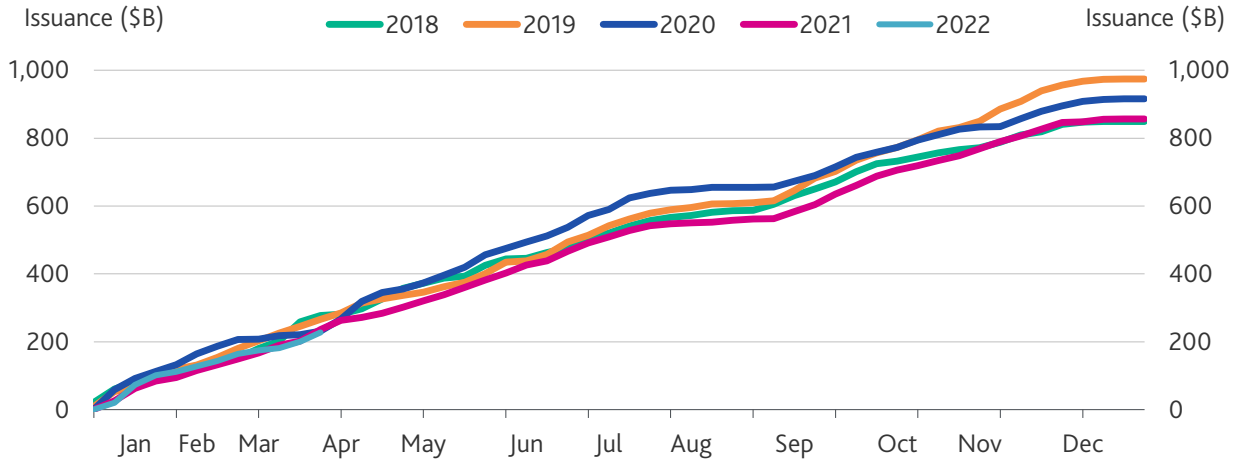
Source: Moody's, CMA

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



Source: Moody's / Dealogic

Figure 7. Market Cumulative Issuance - Corporate & Financial Institutions: Euro Denominated



Source: Moody's / Dealogic

Figure 8. Issuance: Corporate & Financial Institutions

	USD Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	31.280	1.000	33.507
Year-to-Date	427.545	52.496	494.796

	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	21.572	2.472	26.792
Year-to-Date	207.595	15.423	227.031

* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

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Report Number: 1323358

Editor
Reid Kanaley
help@economy.com

Contact Us
Americas
+1.212.553.1658
clientservices@moodys.com

Europe
+44.20.7772.5454
clientservices.emea@moodys.com

Asia (Excluding Japan)
+85 2 2916 1121
clientservices.asia@moodys.com

Japan
+81 3 5408 4100
clientservices.japan@moodys.com