MOODY'S ANALYTICS

WEEKLY MARKET OUTLOOK

Moody's Capital Markets Research, Inc.

Weekly Market Outlook Contributors:
David W. Munves, CFA
1.212.553.2844
david.munves@moodys.com
John Lonski
1.212.553.7144
john.lonski@moodys.com
Ben Garber
1.212.553.4732
benjamin.garber@moodys.com
Njundu Sanneh
1.212.553.4036
njundu.sanneh@moodys.com
Yukyung Choi
1.212.553.0906
yukyung.choi@moodys.com
Irina Baron
1.212.553.4307
irina.baron@moodys.com
Franklin Kim
1.212.553.4419
franklin.kim@moodys.com
Xian (Peter) Li
1.212.553.1404
Xian.li@moodys.com

Moody's Analytics/Europe:
Tomas Holinka
+420 (221) 666-384
Tomas.holinka@moodys.com

Moody's Analytics/Asia-Pacific:
Katrina Ell
+61 (2) 9270-8159
Katrina.ell@moodys.com

Editor
Dana Gordon
1.212.553.0398
dana.gordon@moodys.com

follow us on twitter

Near Perfect Equity Market Firms Credit

Credit Markets Review and Outlook *by John Lonski*

Near Perfect Equity Market Firms Credit.

» 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 5

The Long View

Check our chart here for forecast summaries of key credit market metrics. Full updated stories, "Yearlong 2017's sum of bond issuance and new bank loan programs from high-yield companies may top 2013's zenith if defaults drop as expected," begin on page 17.

Credit Spreads	Investment Grade: Year-end 2017 spread to exceed its recent 122 bp. High Yield: After recent spread of 404 bp, it may approximate 480 bp by year-end 2017.
Defaults	US HY default rate: after February 2017's 5.4%, Moody's Credit Policy Group forecasts it near 3.1% during the three-months-ended February 2018.
Issuance	In 2016, US$-denominated IG bond issuance grew by 5.6% to a record $1.412 trillion, while US$-priced high-yield bond issuance fell by -3.5% to $341 billion. For 2017, US$-denominated IG bond issuance may rise by 2.4% to a new zenith of $1.446 trillion, while US$-priced high-yield bond issuance may increase by 14.8% to $391 billion, which would lag 2014's $435 billion.

» FULL STORY PAGE 17

Ratings Round-Up *by Njundu Sanneh*

Positives Reassert.

» FULL STORY PAGE 21

Market Data

Credit spreads, CDS movers, issuance.

» FULL STORY PAGE 23

Moody's Capital Markets Research *recent publications*

Links to commentaries on: Eurozone, hike, global, profits, Korea, Caa, yes, hike, VIX, rates, France, demography, boom, Japan, reform, India, Turkey, risk, UK, deregulation, potential.

» FULL STORY PAGE 27

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.

Near Perfect Equity Market Firms Credit

High-yield bonds endured a wild ride in March. A composite speculative-grade bond yield started the month at 5.65% for its lowest reading since September 2014. However, by March 14 this had swiftly climbed to 6.34%, which was the highest since December 16, 2016, only to suddenly drop to 6.04% as of March 29.

Nevertheless, according to a recent and exceptionally low VIX index of 11.4, investors are confident of a limited scope for downside risk. During the 96 trading days following Election Day, November 8, the VIX index's well-below-trend average of 12.1 was joined by an average of 421 bp for the high-yield bond spread. Both were less than their respective medians for the economic recovery months since year-end 2003 of 15.4 for the VIX index and 458 bp for the high-yield spread. However, when compared to the averages from the 96 days ended November 8, 2016, the subsequent narrowing by the high-yield spread from an above-trend 542 bp was more striking than the drop by the VIX index from an already below-trend 14.3 points.

Apparently, during the three months preceding Election Day the VIX index correctly foresaw a slide by the high-yield spread. The VIX index led the high-yield spread lower throughout much of 2016 and may continue to give direction to both the high-yield and Baa spreads in 2017.

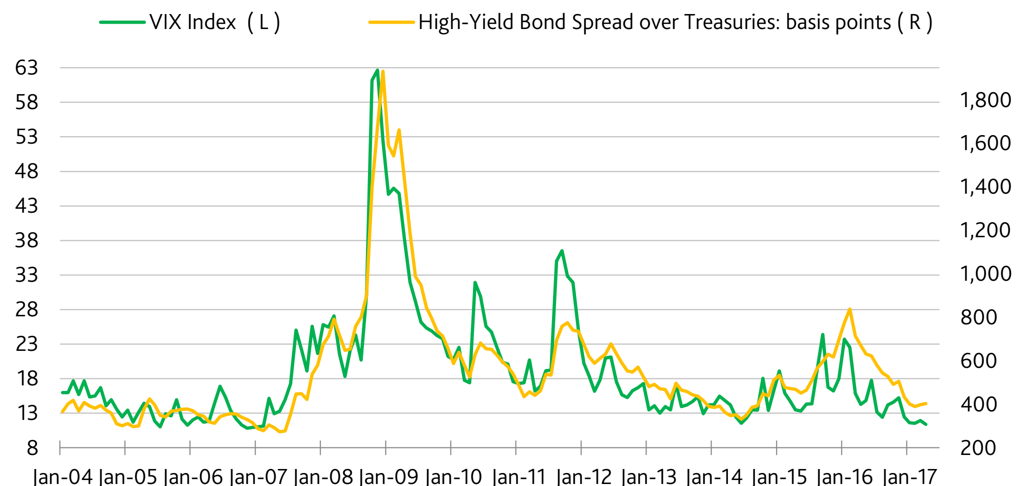
VIX index shows more leadership than the high-yield spread

In moving three-month averages from a sample beginning in 2004, the high-yield spread shows a correlation of 0.85 with the VIX index of three-months earlier. Somewhat differently, the VIX index reveals a softer correlation of 0.67 with the high-yield spread of three-months earlier. Though this exercise falls short of constituting an incontrovertible truth that the VIX index always leads the high-yield spread, it does suggest that the VIX index does a somewhat better job of leading the high-yield spread compared to the spread's ability to lead the VIX index.

Since the VIX index's methodology was changed at the start of 2004, its month-long average generates a very strong coincident correlation of 0.90 with the high-yield bond spread's average. You will be hard put to uncover another month-long average that supplies as strong a coincident correlation with the high-yield spread as the VIX index.

Withstanding heightened uncertainty over prospects for tax cuts and infrastructure spending, the market value of US common stock was recently higher by nearly 11% since November 8's Election Day. Moreover, a still very low VIX index was statistically consistent with a 340 bp midpoint for the high-yield bond spread, which was significantly thinner than its actual gap of 404 bp. (Figure 1.)

Figure 1: Throughout Much of 2016, VIX Index Correctly Hinted of a Thinner High-Yield Bond Spread... Recent VIX Index Favors a 340 bp Midpoint for High-Yield Spread Versus Actual 404 bp (correlation = 0.90)



Credit Markets Review and Outlook

Credit struggled amid stock market's gross overvaluation of late 1990s

Equity market performance matters greatly for medium- and speculative-grade corporate bonds. However, if advances by the broad equity indices are to benefit corporate credit, the gains must be broadly distributed and the VIX index must be no higher than trend. The late 1990s offer a prime example of where very strong showings by the broad equity indices failed to prevent bond yield spreads from widening to above-trend widths. From June 1998 up until March 2000's then cycle high, the market value of US common stock advanced by a stunning 18.9% annualized, on average.

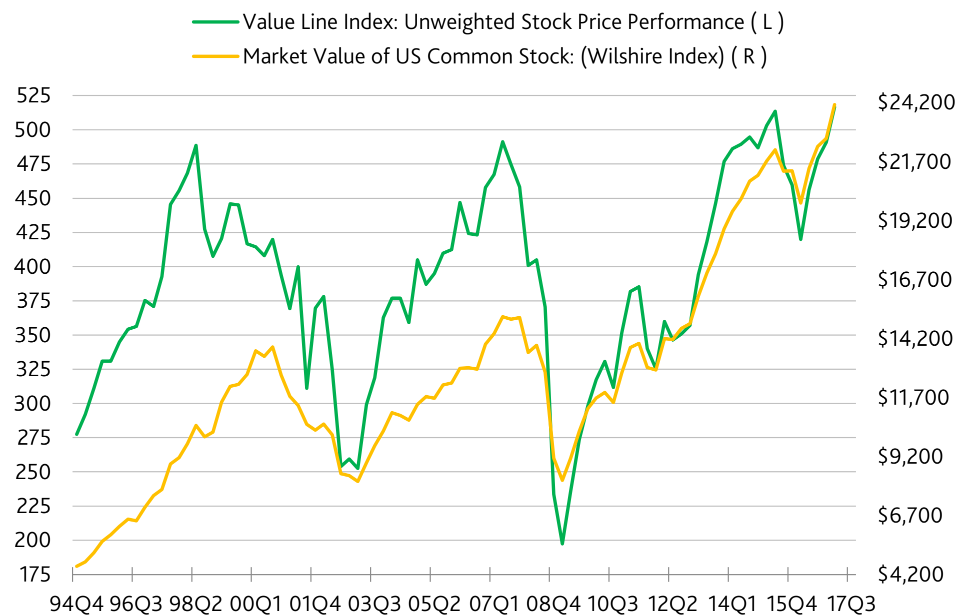
Nevertheless, the high-yield bond spread averaged 539 bp during that 21 month span, which was much wider than its atypically narrow 336 bp average of the 21-months-ended June 1998. Similarly, Moody's long-term industrial company bond yield spread over the long Treasury yield widened from the 122 bp of the 21-months-ended June 1998 to the 193 bp of the 21-months-ended March 2000.

Breadth of an equity rally matters to credit

Spreads widened amid the stupendous equity rally of the late 1990s partly because share price advances were not broadly distributed. The behavior of Value Line's geometric stock price index offers insight regarding how broadly distributed an equity market rally is. In contrast to broad equity indices that weigh the relative importance of changes in share prices by the market value of the company issuing the share, the Value Line index attempts to estimate the unweighted average percent change of share prices. Thus, if higher share prices are limited to very large well-capitalized corporations while the share prices of small- to mid-sized companies fall, the Value Line index would decline despite advances by the market value of common stock. And that is exactly what transpired during 1998-2000.

Unlike the market value of US common stocks, whose average annualized advance slowed from the +29.5% of the 21-months-ended June 1998 to the 18.9% of the 21-months-ended March 2000, the comparably measured annualized percent change of the Value Line index deteriorated badly and sank from an advance of +19.8% to a contraction of -9.0%. (Figure 2.)

Figure 2: Credit May Be Under Pressure When the Value Line Stock Price Index Sinks Despite a Rally by the Market Value of US Common Stock



Often, the Russell 2000 index for the share prices for smaller capitalized companies is cited as one of the more important equity market indices for the high-yield bond market. However, the Russell 2000's 9.8% annualized increase of the 21 months ended March 2000 showed that it outperformed the Value Line index by a wide margin. Thus, when assessing how the equity market influences corporate credit both the Russell 2000 and Value Line indices should be examined. Since Election Day, the 10.9% increase by the market value of US common stock has been joined by credit-friendly advances of 10.9% for the Value Line index and 14.8% for the Russell 2000.

Amid the equity market lift-off of the 21-months-ended March 2000, the VIX index averaged an above-trend 25.8, which is qualitatively consistent with the above-average yield spreads of medium- and spec-grade corporate bonds. Nevertheless, the VIX index's average from the final stretch of the 1990's raging bull market for equities wasn't that much above its 21.4-point average of the 21-months-ended June 1998.

Moreover, despite how the VIX index's moving yearlong average climbed up from December 1995's cycle low of 12.4 to the 23.2 of June 1998, the accompanying yearlong average of the high-yield spread antithetically narrowed from 416 bp to 335 bp. Of course, the high-yield spread would soon heed the warnings of a higher VIX and widen to an above-trend 549 bp, on average, during the year-ended June 1999.

Current equity rally lessens default risk

Regardless of overvaluation, the equity market's strength of late 2016 and 2017-to-date has buttressed credit quality and lowered default expectations. For one thing, the number of high-yield upgrades ascribed to infusions of common equity capital jumped up from the five per quarter, on average, of the two-years-ended June 2016 to the 12 per quarter since then. Also, the improved state of the equity market since early 2016 facilitated asset sales that provided financially stressed companies with cash to fund the retirement of outstanding debt and, thereby, firm their credit standing. Default is easier to avoid if the market value of business assets rise.

The Week Ahead – US, Europe, Asia-Pacific

THE US

By John Lonski and Ben Garber
Moody's Capital Markets Research Group
Estimates are consensus views. Release times are US Eastern Daylight Time
Editor's note: The US Week Ahead data is temporarily curtailed. More to come next week.

THURSDAY, MARCH 30

GDP – Fourth Quarter (Third Estimate)

Time: 8:30 am
Forecast: 2.0%
Though overall GDP growth slipped in the fourth quarter, output still found support from a hearty pace of consumer spending. That may not be the case in the current quarter after January's 0.3% decline in real consumer spending equaled the largest shortfall since 2009. Though GDP growth may once again disappoint in the early months of the year, healthy gains in jobs and improved industrial production trends signal stronger underlying economic progress.

FRIDAY, MARCH 31

Personal Income & Spending – February

Time: 8:30 am
Forecast: 0.4% income, 0.2% spending
Personal income is projected to rise 0.4% for the second straight month in February, aided by somewhat faster wage growth. Annual income growth touched 4% in January for the first time in over a year, partly signaling increased labor market tightness. Further gains must be registered in order for real spending to keep ahead of the recent uptick in inflation.

University of Michigan Consumer Sentiment – March Final

Time: 10:00am
Forecast: 98.0
Sentiment in the final March reading of the Michigan survey is likely to continue to display the strong post-election bounce. The sub-index reading on the assessment of current economic conditions reached the highest level in 17 years in the preliminary March survey. That points to ample consumer resources that can keep the aged economic expansion chugging along.

MONDAY, APRIL 3

Business confidence (week ending March 31; 10:00 a.m. EDT)

Global businesses are upbeat. Despite the unsettled geopolitical environment, business is good. According to the survey results, the global economy is expanding at above its potential rate. Expectations that the good times will continue at least until the summer are strong. Our survey results aren't as strong as various other surveys of business and consumer confidence, which have strengthened since the presidential election. According to a recent New York Federal Reserve study, sentiment surveys that depend on canvassing new respondents each time are probably somewhat biased, because those happy with the election results are more likely to respond. The four-week moving average in our global business confidence index rose from 33.8 to 34.1 in the week ended March 24.

ISM manufacturing index (March; 10:00 a.m. EDT)

The ISM manufacturing index is forecast to have risen from 57.7 in February to 58.6 in March. This would be the seventh consecutive monthly increase and put the index at its highest since 2011. The ISM survey captures both changes in actual activity (hard data) in manufacturing and confidence. The

hard-data and sentiment components of the ISM index aren't observable but can be estimated. To do so, we mapped the five components of the ISM manufacturing survey—new orders, production, supplier deliveries, inventories and employment—to hard data on manufacturing. We then modeled each component based on its respective hard data. The ISM's methodology for constructing its composite index is applied to these new subindexes to create a hard-data ISM index—in other words, an ISM index that is consistent with the actual data on employment, industrial production, new orders, inventories and supplier deliveries.

Our hard-data based index has tracked the official ISM manufacturing index well since 1995, with a correlation coefficient of 0.78. This isn't too surprising, but the value added in this approach is that it allows us to back out a sentiment component of the ISM index, or the difference between the actual and our hard-data ISM index. The results show that the bulk of the improvement in the ISM manufacturing index over the past several months has been attributable to an increase in sentiment, which would explain the increasing disconnect between the ISM survey and the actual data on factory conditions. Sentiment has remained strong in March. The regional Fed manufacturing surveys were generally favorable, with most of the ISM composites rising.

Vehicle sales (March; 4:00 p.m. EDT)

Vehicle sales likely fell from 17.59 million annualized units in February to 17.3 million in March. This will put the first quarter in the books, and vehicle sales would have averaged 17.5 million annualized units per month, compared with 18.1 million in the fourth quarter. This is one reason why first quarter real consumer spending is coming in soft. There is evidence that vehicle sales are harder to come by: Inventories are rising, manufacturers are increasingly aggressive with incentives. and loan duration is increasing.

TUESDAY, APRIL 4

Trade deficit (February; 8:30 a.m. EDT)

We look for the nominal trade deficit to have narrowed from $48.5 billion in January to $44 billion in February. The early Lunar New Year distorted the U.S. trade deficit in January, pulling forward some imports. This effect likely faded in February. Already-released data on the advance goods deficit for February showed imports fell 2.1% while exports slipped 0.1%. The forecast assumes the services surplus improved modestly in February. Through February, the total nominal trade deficit would be averaging $46.2 billion per month, compared with $44.1 billion in the fourth quarter. Therefore, net exports would still be on track to be a small drag on first quarter GDP growth.

WEDNESDAY, APRIL 5

ADP National Employment Report (March; 8:15 a.m. EDT)

A mild winter, high consumer confidence, and strong economic fundamentals pushed private payrolls up by 298,000 in February, according to the ADP National Employment Report. Services maintained their steady climb, but it was the very strong performance of goods-producing industries that led to the outsize job growth in February. Small business hiring, which has been flagging recently, picked up further in February with 104,000 net new jobs. The gains were evenly distributed between the smallest companies with fewer than 20 employees and those with 20 to 49 employees. Midsize businesses with 50 to 499 workers added 122,000, and large businesses added 72,000, of which 43,000 net new jobs were in companies with more than 1,000 employees.

March will be the sixth month using new methodology. ADP overestimated the Bureau of Labor Statistics estimate of private employment by 71,000 in February, compared with 9,000 in each of the prior two months.

ISM nonmanufacturing index (March; 10:00 a.m. EDT)

The ISM nonmanufacturing survey's composite index likely remain solid in March, coming in at 57.3, compared with February's 57.6. Fundamentals remain supportive for the nonmanufacturing segment of the economy, which accounts for 88% of GDP. Higher energy prices are helping mining as active rotary rig counts increase. Household balance sheets are in good shape and consumers are expected to keep

leading economic growth, a positive for nonmanufacturing. Housing is improving, but supply constraints, including the labor supply issues and lack of buildable lots, could keep downward pressure on single-family residential investment.

The employment index will be important. A regression that uses the employment-weighted employment indexes from the ISM nonmanufacturing and manufacturing surveys has done a fairly good job recently in predicting changes in the BLS estimate of total nonfarm payrolls. For example, the model estimate an above-trend 228,000 increase in nonfarm employment from January to February, compared with the actual gain of 235,000.

THURSDAY, APRIL 6

Jobless claims (week ending April 1; 8:30 a.m. EDT)

Initial claims for unemployment insurance benefits are forecast to have fallen from 258,000 to 252,000 in the week ended April 1. This would more than reverse the 3,000 gain in the prior week. Assuming no revisions to the prior week, the four-week moving average would increase by 1,000 to 255,000—weaker than that earlier this year. The softening in the trend for initial claims isn't concerning. It had been depressed in January and February by temporary factors, including weather, seasonal adjustment issues, and fewer holiday-related layoffs in retail. Based on our past work, the trend in initial claims absent these temporary factors should be between 250,000 and 260,000.

FRIDAY, APRIL 7

Employment situation (March; 8:30 a.m. EDT)

We look for nonfarm employment to have risen by a net 160,000 in March, compared with the 194,000 average gain over the prior six months. This is still a solid gain in employment, above the 100,000 needed to keep up with growth in the working-age population.

A good portion of the deceleration in job growth in March is attributable to more seasonally normal weather. The four-week moving average in heating degree-days was well below normal in both the January and February payroll survey periods. By our calculations, this boosted employment growth in January and February by a combined 50,000 to 75,000. The payback could come in March or be spread out over a couple of months, but we expected that weather would go from a support to drag on employment growth, weighing on employment in construction and leisure/hospitality.

According to the Northeast Snowfall Impact Scale, the storm that hit during the March payroll reference week was considered major. The storm could have caused businesses to delay hiring and firing. Also, a severe winter storm increases the number of people who are unable to work. For a job not to be counted in the payroll survey, an employee would have to be out of work because of the weather for the entire pay period that includes the 12th day of the month. For workers who are paid on a weekly basis—about one-half of the workforce—a weather-related disruption can result in a full week away from work. This is unlikely to have happened in March since the storm hit after the beginning of the workweek.

There are possible offsets to consider, since the cleanup and snow removal may have boosted demand for some workers. Our forecast assumes a small net drag on March employment because the brunt of the storm missed the large population centers in the Northeast. However, the storm is expected to affect hours worked. We forecast that the average workweek fell from 34.4 hours in February to 34.3 hours in March.

Job growth could be affected by the federal government hiring freeze. President Trump signed an executive order in late January mandating that no vacant positions existing at noon on January 22, 2017, may be filled and no positions may be created, except in limited circumstances. It exempts military personnel and those deemed necessary to meet national security or public safety responsibilities as well as others as determined by the director of the Office of Personnel Management. This will weigh on job growth in March but only modestly, we anticipate a decline of 5,000 in federal employment.

March employment has shown a recent tendency to come in below consensus expectations, having done so in seven of the past 10 years. The average difference between the government's first estimate and consensus expectations for March over this span is -39,000.

We look for average hourly earnings for all private workers to have risen 0.2% in March, matching the gain in each of the prior two months. This will leave average hourly earnings up 2.7% on a year-ago basis, compared with 2.8% in March.

EUROPE

By the Dismal (Europe) staff in London and Prague

Editor's note: The Europe "Week Ahead" material is now provided on Friday, whereas our Weekly Market Outlook is published on Thursday. Accordingly, we will update this material after publication, online, on Friday or Monday.

Summary, March 31: The week ahead will shed light on the euro zone's and U.K.'s industrial performance in February. We expect industrial production in the currency area mean-reverted from a 0.9% rise in January, dragged down by falling capital goods production in Germany. Capital goods output has been volatile in the euro zone's biggest economy lately, and the 6.1% surge in January was probably temporary, likely because of a one-off spike in the production of aircraft, military equipment and train stock. Poor new orders figures for January, when they fell by 9.9% m/m, already suggest that the production of investment goods plunged in February. The survey data are more positive, however, with Germany's manufacturing PMI rising to a 69-month high of 56.8. This points to a continuation of the upbeat trend despite the volatile monthly changes.

The situation in France is a little better, as we expect industrial production to have expanded slightly in February. But this follows downbeat results for December and January, which contrasted strongly with the robust survey data. A rebound in oil production should have boosted the headline, but a fall in utilities output should have provided an offset, as February's warmer than average temperatures likely dampened demand for heating. Elsewhere, we expect that production of machinery and equipment goods rose slightly, as did manufacturing of transport equipment.

In the U.K., by contrast, the trend in industrial production is much weaker. The headline should have contracted again in February, building on the 0.4% fall recorded for the previous month. Risks are nonetheless tilted to the upside, as a rebound in the volatile pharmaceuticals output following a 13.5% plunge in January could support overall production. Output in the energy sector likely sagged because of the unusually mild weather, while oil producers' estimates of output volumes suggest that mining and quarrying production also decreased over the month. Overall, we expect factory production to expand in 2017 but to be softer than in 2016, as the weak currency will likely provide a little less support than anticipated to export-led manufacturing growth.

Elsewhere, euro zone retail sales should have bounced back in February following three consecutive disappointing months. Data released on Friday showed that Germany was likely the main driver of growth in sales, with its headline adding 1.8% and more than reversing the 1% dip in January. But data for France are also encouraging; they suggest that household spending on goods remained solid over the month, boosted mainly by a sharp increase in clothing spending on the back of aggressive summer sales. Data for Spain were a little less upbeat; sales increased by only 0.2%. But we expect further upside in March.

FRIDAY, MARCH 31

France: Household Consumption Survey (February; 7:45 a.m. GMT)

French household expenditures on goods likely ticked up 0.2% m/m in February, after adding 0.6% m/m in the previous month and also strengthening in annual terms. Still-low oil prices as well as low prices of most goods, an improving labor market, and a slow but firming recovery in the country are helping consumption creep forward on a yearly basis. The retail PMI dipped to 51.7 in February from 53.1 in the previous month, while employment increased and gross margins were still squeezed, chiefly because of a pickup in the rate of wholesale price inflation. Stock levels grew somewhat despite lower purchasing activity. Also, an increase in the number of promotional offers contributed to the expansion, despite the slowdown. Still, French households are prudent and their precautionary savings remain high at close to 15%, limiting discretionary spending.

Spain: Retail Sales (February; 8:05 a.m. GMT)

Spain's real retail sales likely remained subdued, adding only a marginal 0.2% in February after an unexpected 1.1% fall in the first month of the year. Consumer confidence slid in February for the second month in a row as Spanish households were more cautious about the current economic situation; the future outlook also worsened. Despite moderating in recent months, overall the index remains above its long-term average and above the trough in August and September 2016. Consumer prices rose 3% y/y in February, with food and energy prices boosting the headline. The price of Brent crude in euro terms added 70% y/y in February, down from the 80% y/y surge in the previous month. Rising prices will drag on consumer spending in the coming months before the base effects from low energy prices dissipate. On the upside, economic activity in Spain and the euro area remains robust, with PMI numbers for January and February pointing to a solid start of the year. Composite PMI output accelerated to an 18-month high in Spain in February, in line with robust performance in its major euro zone trade partners. We expect retail sales to recover in coming months, consistent with the overall buoyant state of the economy, despite somewhat muted consumer confidence and mounting inflation pressures.

Euro Zone: Preliminary CPI (March; 10:00 a.m. GMT)

The euro zone's annual harmonized inflation likely slowed a bit to 1.9% in March from a four-year high of 2% in the previous month. Inflation should not spike too much in the longer term, and we think it has reached this year's high. Besides cooling headline figures, this release will likely show that core inflation remains subdued, especially in southern European countries. Weaker wage growth due to elevated unemployment is creating a low-inflation environment. Therefore, we don't expect the ECB to turn hawkish before the last quarter of 2017 when political uncertainty eases and secondary-round inflation effects of higher commodity prices materialize.

MONDAY, APRIL 3

Russia: GDP (Q4; 7:30 a.m. BST)

Sagging domestic demand likely weighed heavily on Russian y/y GDP in the fourth quarter. Real disposable wages continued to lag, with consumers facing price inflation. National retail sales linger near their six-year low, with fourth quarter volumes down from a year earlier. Business confidence and industrial production improved over last year in the fourth quarter, but the drag from consumer demand remains a considerable weight. The data are expected to show the Russian recession continuing through the fourth quarter of 2016. Minor gains from oil, lower imports, and higher capital formation won't provide enough of a lift.

Italy: Unemployment (February; 9:00 a.m. BST)

Italy's unemployment rate likely remained at 11.9% in February, because of anemic recovery and structural rigidities. The higher participation rate combined with fewer job openings and a skills mismatch has contributed to Italy's soaring joblessness. The unemployment rate has been hovering around 12% recently, the highest since June 2015, while youth unemployment is still flirting with 40%. Italy's labor market has the highest share of under-skilled workers among all OECD countries, with the south clearly underperforming the north of Italy. Without more job openings and improved

skills, Italy's labor market will remain stuck and household spending will languish. Nevertheless, the latest confidence indicators suggest that employment could increase a bit in coming months after seasonal workers return to the labor market. Yet this won't boost employment much.

Euro Zone: Unemployment (February; 10:00 a.m. BST)

The euro zone's unemployment rate likely slid to 9.5% in February, from 9.6% in the previous month. Compared with February 2016, the rate decreased from 10.4%. Nevertheless, headline unemployment and youth unemployment remain elevated, especially in periphery countries. The euro zone economy expanded at the outset of 2017, with March's Flash Composite PMI for the euro at 56.7, up from the previous month. This was the highest reading in almost six years. Also, employment growth strengthened for the fifth month running, reaching its fastest rate since July 2007. These latest figures attest to the resilience of the single-currency area, at least so far, despite the U.K. vote to leave the EU and market fears of a downturn. The downward trend in joblessness should persist in coming months, with improving economic conditions around the monetary bloc, labor market reforms, and a stronger industrial base in Spain, Ireland and Portugal.

TUESDAY, APRIL 4

Euro Zone: Retail Sales (February; 10:00 a.m. BST)

Euro zone retail sales likely increased by 0.5% m/m in February, more than reversing the 0.1% decline in the previous month. Upbeat data for Germany were likely the main driver of the headline, as sales are expected to have bounced back by 1.8% m/m from a 1% decline in January. Higher sales in France should have also contributed, boosted by a sharp increase in spending in clothing after France's aggressive summer sales. The picture was likely less rosy for Spain and Italy. We expect that sales in Spain increased only slightly, while sales in Italy should have contracted following a spectacular January. Italy's retail PMI shows the headline index at a five-month low of 45.5. This means that Italy's official retail results, which are not out yet, could lend downside risks to our forecast, and there is a chance that the final headline for the euro zone could print lower, at 0.4% m/m.

WEDNESDAY, APRIL 5

No major indicators are scheduled for this day.

THURSDAY, APRIL 6

No major indicators are scheduled for this day.

FRIDAY, APRIL 7

Germany: Foreign Trade (February; 8:00 a.m. BST)

Germany's trade surplus likely increased to €19.5 billion in February, after rising marginally to €18.5 billion in the previous month. The surplus was at €20 billion in December 2015. The monthly and annual increases were likely driven by a further strong recovery in exports due to the weak euro. Moreover, robust expansion in the U.S. and some recovery in Chinese growth have been supporting German exports. Still, foreign demand for German goods will likely be subdued because of the buildup of unfavorable external conditions. With rising geopolitical tensions in Europe and the U.S., upcoming difficult Brexit negotiations, weak recovery in the euro area, and a slowdown in emerging markets, external trade will likely contribute little to economic growth. Net exports weighed on the economic expansion in 2016, subtracting 0.1 percentage point from GDP growth, and they will likely not contribute significantly to the expansion this year.

France: Industrial Production (February; 8:00 a.m. BST)

France's industrial production likely increased 0.2% m/m in February, after dropping 0.3% in the previous month. In year-ago terms, production likely rose 0.9%. Meanwhile, the manufacturing PMI rose to 53.4 in March from 52.2 previously. Output expanded again, albeit a little less than in February, while exports surprised on the upside. Price pressures increased as well in most subsectors. Despite some improvements, manufactured products in France lack higher sophistication. France's trade balance is currently in surplus only for services related to tourism, slightly positive for

agricultural products, and close to zero for intermediate goods, which is in line with the low value-added of production. The low quality of new fixed investment is partly to blame. Investment in automation as measured by the number of industrial robots, for example, has been lagging because many French entrepreneurs are either risk averse or fearful they will not find skilled enough labor force.

Spain: Industrial Production (February; 8:05 a.m. BST)

Spain's industrial production likely gained 0.2% in February following a 0.3% m/m gain in the first month of this year. In year-ago terms, we expect a 3.1% uptick, up from 2.5% previously. Spain's manufacturing PMI softened slightly in February to 54.8 from 55.6 in the previous month, but still signaled strong improvement in the sector. Meanwhile, the euro area manufacturing PMI rose to a 70-month high. Provided that export growth follows the robust trend observed in January, buoyant economic activity in the region will boost demand for Spain's manufactured goods. Economic fundamentals in Spain remain healthy, with its 3.2% growth rate in 2016 outpacing most of its euro zone peers, but we expect the rate of expansion to moderate. Industrial production will likely track GDP, but given that the current level of industrial output remains well below the precrisis levels, there may be room to regain the lost potential and grow at a faster pace.

Italy: Retail Sales (February; 9:00 a.m. BST)

High unemployment and subdued wage growth have clamped down on retail sales, which likely retreated by 0.4% m/m in February. Although Italy's economy has steadily expanded since 2014, the jobless rate remained at 11.9% in January, the highest since June 2015. Besides elevated unemployment, tepid wage growth is undermining household spending. Average annual wage growth over the last year was negative in Italy, the lowest among the euro zone countries. Labor productivity needs to shift into higher gear if wages and salaries are to rise. Although it has started to recover, labor productivity remains woefully low, undermining potential growth and hindering labor market improvements. Surging inflation may also unnerve households and erode their spending power, especially amid such soft wage growth.

Germany: Industrial Production (February; 9:00 a.m. BST)

German industrial production likely dipped in February after recovering at the start of the year. However, in year-ago terms production likely rose for the first time in two months, albeit marginally. Weak demand will likely keep industrial production muted. German manufacturing orders plummeted unexpectedly in January, down 7.4% after adding 5.2% in December. On the other hand, Germany's Markit manufacturing PMI for February rose to a 69-month high of 56.8 from 56.4 in January, signaling stronger improvement in business conditions in coming months. Details of the report showed that new orders grew for the 27th consecutive month, rising at the fastest pace since January 2014, with external demand picking up in Asia and Europe. Demand from outside the euro area should strengthen in the coming months thanks to the weakening of the euro. However, the outlook remains uncertain, as the expected protectionism of U.S. trade could curb German manufacturing.

U.K.: Industrial Production (February; 9:30 a.m. BST)

Industrial production in the U.K. likely retreated by 0.1% m/m in February, building on a 0.4% drop in the previous month. In year-ago terms, however, production likely ticked up to 3.3%, from 3.2% in January. We expect a mean-reversion in pharmaceuticals output to be the main driver of production growth over the month, following a 13.5% plunge in January. Energy supply production should have nonetheless been a drag, as February's unseasonally mild weather should have depressed demand for heating. The mining and quarrying industry likely didn't fare so well either, as oil producers reported falling output at the start of the month. Rising prices are expected to weigh on domestic demand and curb production of consumer goods in the medium term, offsetting the gains that the weaker pound should bring to the export-led manufacturing industry.

ASIA-PACIFIC

By Katrina Ell and the Asia-Pacific economics team of Moody's Analytics

Australia's central bank will stand pat as it weighs the housing risk

Japanese consumers are feeling more upbeat in 2017, as strong employment conditions and rising stock prices boost sentiment. However, pessimists persistently outnumber optimists, with the index below the neutral 50 mark for more than 10 years. Manufacturers in Japan are also expected to start 2017 on an upbeat note. The Tankan survey will likely tick up in the first quarter as a weak yen supports export competitiveness.

Australian retail trade rose strongly in January. We expect spending lost momentum in February, decelerating slightly as household budgets come under strain. Rising property prices were supporting spending in related household items, but the high debt-to-income ratio is starting to bite. The risk that the housing sector poses to the Australian economy is also weighing on the Reserve Bank of Australia. We expect the central bank will stand pat as it assesses the effectiveness of macro-prudential policies on reining in investor lending.

Australia's export sector is performing well, supported by rising global commodity prices. The aussie's strength is also reducing the price of imports, providing a further boon to the trade balance.

Korean exporters are benefiting from strong global demand for electronics. Strong demand for parts and components will support double-digit export growth for March, but rising global commodity prices will push up the import bill and weigh on the monthly trade balance. Meanwhile, Malaysian exports likely rebounded in February after the Lunar New Year dented growth in January. Higher commodity receipts combined with strong demand for electronics will support export growth in 2017.

Inflation pressures are building in Asia, with headline CPI expected to strengthen in March in Korea and Taiwan. The Lunar New Year creates volatility around the estimate, but rising commodity prices are expected to push up the headline figure. Underlying measures are less upbeat as difficult labor market conditions in both countries weigh on domestic demand.

FRIDAY, MARCH 31

South Korea – Industrial Production – February

Time: 10:00 a.m. AEDT (Thursday 11:00 p.m. GMT)
Forecast: 3.7%
Korean producers started 2017 on better footing than 2016 as global demand for electronics supports manufacturing. We expect industrial production expanded 3.7% y/y in February, up from January's 1.7% y/y gain. The release of new Apple and Samsung smartphones in the coming months is supporting demand for components, which will likely outperform other areas. The impeachment of President Park Geun-hye and resulting election cycle are likely to increase uncertainty in the near term.

South Korea – Retail Sales – February

Time: 10:00 a.m. AEDT (Thursday 11:00 p.m. GMT)
Forecast: 0.8%
Korean consumers are struggling with high private debt and weak labor market outcomes, and this is keeping a lid on spending. Retail sales likely expanded 0.8% in February, stronger than January's 2.2% decline as the drag from the Lunar New Year fades. Rising commodity prices and a weaker won are pushing up the price of goods, but with wages subdued, households are cutting back on consumption. Looking at the trend, retail spending remains muted.

Japan – Consumer Price Index – February

Time: 10:30 a.m. AEDT (Thursday 11:30 p.m. GMT)

Forecast: 0.2%
Japan's core consumer prices likely grew 0.2% y/y in February, up from 0.1% the month prior. Inflation likely accelerated on the back of rising fuel prices. Japan's core consumer prices exclude fresh food, but not oil. We expect the rebound in commodity prices will drive Japan's inflation higher over the coming year. However, domestic demand is unlikely to rise meaningfully, and prices will remain well below the Bank of Japan's 2% target. That said, we don't expect the BoJ will provide any more stimulus measures this year.

Japan – Employment Situation – February

Time: 10:30 a.m. AEDT (Thursday 11:30 p.m. GMT)
Forecast: 3% Unemployed
Japan's unemployment rate was likely unchanged in February at 3%. The jobless rate has gyrated around 3% over the past year, with solid job gains across various sectors. The jobs-to-application ratio will remain elevated, which suggests that demand for labor remains strong. This will likely persist over the coming year, especially with higher demand for part-time workers than for their full-time counterparts. A tight labor market is unlikely to spur wages because companies remain reluctant to spend more.

Japan – Household Expenditures Survey – February

Time: 10:30 a.m. AEDT (Thursday 11:30 p.m. GMT)
Japan's nominal workers' household consumption likely rose 0.3% in February after a 1.7% fall in January. The economic cycle in Japan is mildly above trend but could deteriorate again. Although fuel and food prices are low, and contributed to the drop in nominal spending in January, core inflation is still mildly positive. Rising inflation pressures are unlikely to add to impetus for households to loosen the purse strings.

Japan – Industrial Production – February

Time: 10:50 a.m. AEDT (Thursday 11:50 p.m. GMT)
Forecast: 2.1%
Japan's industrial production likely rebounded a brisk 2.1% m/m in February, after a 0.8% decline in January. Production likely fell in January because of the Lunar New Year holidays, so a strong February rebound is in the offing. Overall, the production trend has risen because of the yen's recent depreciation, which has increased demand for manufacturing exports. This will likely persist in the first half of 2017.

China – Manufacturing PMI – March

Time: 12:00 p.m. AEDT (1:00 a.m. GMT)
Forecast: 51.4
China's official manufacturing PMI reached a three-month high in February at 51.6, but sentiment likely cooled slightly in March. Manufacturers are buoyed by higher global demand and lower input costs. But import costs are starting to rise. Subsidies on energy-efficient vehicles have faded, hurting domestic demand.

Japan – Housing Starts – February

Time: 4:00 p.m. AEDT (5:00 a.m. GMT)
Forecast: 8.3%
Japan's housing starts growth likely decelerated to 8.3% in February after a strong rise in January. The rise in January owed to base effects, but the trend in Japan's housing, especially in its capital cities, remains relatively buoyant. Low interest rates are buttressing housing demand. However, this is unlikely to last long because of the declining population, which will lift up housing supply over the next decade.

Thailand – Private Consumption – February

Time: 6:30 p.m. AEDT (7:30 a.m. GMT)
Forecast: 1.7%
Thai private consumption growth is forecast to have improved slightly, to 1.7% y/y in February, compared with January's 1.3%. Nevertheless, the trend in consumption remains soft. Persistently low

wage growth means that households are less willing to commit to purchasing big-ticket items. Meanwhile, service spending growth has slowed as a result of an easing in tourism. Although there are early signs of an improvement in foreign visitors, growth will not return to the heights of the first half of 2016.

Thailand – Industrial Production – February

Time: 6:30 p.m. AEDT (7:30 a.m. GMT)
Forecast: 2%
Thailand's industrial production growth is forecast to have accelerated to 2% y/y in February, from 1.3% in January. Stronger export demand is boosting Thai manufacturers. This is clearest in electronics, but automobile production should also improve. The Nikkei/Markit Purchasing Manufacturers' Index supports this, showing that output increased in each of the three months to February. Particularly promising is that new order growth accelerated in February, suggesting that the improvement in production will persist into the second quarter.

Thailand – Foreign Trade – February

Time: 6:30 p.m. AEDT (7:30 a.m. GMT)
Forecast: US$3 billion
We expect Thailand's trade surplus widened to US$3 billion in February from January's US$1.9 billion, driven by an upward swing in export growth. Thailand's exporters have been buoyed by improved global demand. In particular, electronics and general manufacturing exports have been rising. Import growth has also picked up in recent months, largely because manufacturers increased their demand for raw materials and intermediate products.

MONDAY, APRIL 3

South Korea – Foreign Trade – March

Time: Unknown
Forecast: US$6.1 billion
Korea's trade surplus likely narrowed in March as the boost from higher import prices outweighs a strong export performance. Export growth will likely remain in double-digit territory as the upswing in global demand for electronics boosts shipments. Electronic parts and components will remain the standout, while auto shipments struggle with increased competition from Japan and China. The release of Samsung's new smartphone should bolster shipments in coming months. On the import side, low base effects will push up the import bill as a result of high commodity prices.

Japan – Tankan Survey – 2017Q1

Time: 9:50 a.m. AEST (Sunday 11:50 p.m. GMT)
Forecast: 12
The yen's depreciation over the past few months has given large manufacturers an unexpected tailwind, boosting export competitiveness. The trade balance is now firmly in surplus as a result, with lower global commodity prices also improving margins for firms. Domestic demand remains flat, but conditions overall should improve business confidence slightly in early 2017. The Tankan survey likely rose to 12 in the first quarter, up from 10 in the fourth quarter of 2016.

Australia – Retail Sales – February

Time: 11:30 a.m. AEST (1:30 a.m. GMT)
Forecast: 0.3%
Australian retail trade growth likely softened in February, as weak income growth and high household debt weigh on spending. Retail trade likely expanded 0.3% over the month compared with January's 0.4% gain. Rising house prices boosted demand for related goods, but growth is now waning as mortgage rates start to strengthen. New South Wales and Victoria outperform other states and territories because of stronger job growth and an influx of visitors.

TUESDAY, APRIL 4

South Korea – Consumer Price Index – March

Time: 9:00 a.m. AEST (Monday 11:00 p.m. GMT)
Forecast: 2.2%
Headline inflation likely rebounded in March on account of higher energy and food costs. The CPI likely rose 2.2% y/y, up from February's 1.9% y/y gain. But underlying measures remain weak as subdued wage growth and high private debt limit domestic demand. Manufacturing firms are benefiting from stronger global demand for electronics, but this has done little to boost employment as restructuring activities result in job losses across the country. This is keeping a lid on wage growth and hampering spending. Consumer confidence plunged in late 2016 as the bribery scandal involving major corporations and key government officials came to light, further dampening domestic demand. But the impeachment of President Park Geun-hye has lifted spirits in recent months as households feel more confident that corruption will be addressed. This should support domestic demand in the coming months.

Australia – Foreign Trade – February

Time: 11:30 a.m. AEST (1:30 a.m. GMT)
Forecast: A$3.4 billion
Australian exports benefit from higher commodity prices. The monthly trade surplus likely expanded to A$3.4 billion in February as the gain in exports outweighs stronger imports. Iron ore prices rallied in February, and this is bolstering export receipts. Increased capacity in liquefied natural gas is also boosting commodity shipments in 2017. Increased demand for Australian commodities is putting upward pressure on the aussie, and this will bring down the import bill. We expect the aussie to depreciate as monetary policy between the U.S. and Australia diverges in 2017, and this will push up the import bill and keep a lid on the monthly trade surplus.

Australia – Monetary Policy – April

Time: 2:30 p.m. AEST (4:30 a.m. GMT)
Forecast: 1.5%
The Reserve Bank of Australia is expected to stand pat at the April monetary policy meeting. The official overnight cash rate has been on hold at 1.5% since August after weak inflation prompted the central bank to ease monetary conditions. Household demand is hampered by tepid wage growth and rising debt, and this is keeping inflation below the lower bound of the RBA's target range. But interest rate cuts in 2016 resulted in stronger demand for housing, especially in the investor space. The central bank is concerned that further easing would push up already-high demand for lending, which poses a risk to financial stability. Although the regulator is working with lending institutions to rein in investor lending, these measures have done little to limit credit growth in the opening months of 2017. The RBA will likely remain on the sidelines through 2017.

WEDNESDAY, APRIL 5

Malaysia – Foreign Trade – February

Time: 2:00 p.m. AEST (4:00 a.m. GMT)
Forecast: MYR7.9 billion
Malaysia's monthly trade surplus likely widened in February, from January's MYR4.7 billion surplus. Shipments in January were affected by Lunar New Year celebrations in some of Malaysia's key trading partners including China. Crude petroleum and palm oil are faring better thanks to higher prices, while electronics are faring well thanks to a sustained uptick in the global tech cycle driven by stronger U.S. consumer demand and product launches later in 2017.

THURSDAY, APRIL 6

Taiwan – Consumer Price Index – March

Time: 10:30 a.m. AEST (12:30 a.m. GMT)
Forecast: 0.3%

Taiwan's consumer price index likely picked up in March after a disappointing start to the year. Headline CPI is expected to have risen 0.3% y/y compared with no change in February. The decline in food prices is unlikely to persist into March, and this will support stronger inflation. However, tepid wage growth is crimping household budgets and this is dampening underlying demand. We expect the central bank will maintain monetary policy at the current rate of 1.375%, before rising global interest rates and stronger inflation pressures prompt monetary tightening in the second half of 2017.

Japan – Consumer Confidence – March

Time: 3:00 p.m. AEST (5:00 a.m. GMT)
Forecast: 43.4
Consumer confidence has been improving somewhat from the latter half of 2016, although consumers remain pessimistic on net. Employment conditions are close to the best they have been in recent memory, although this has yet to lead to meaningful wage growth. The higher stock market would have lifted household wealth, though. The BoJ's index of consumer confidence likely rose to 43.4 in March, up from 43.1 in February.

FRIDAY, APRIL 7

No major economic indicators are scheduled for release.

The Long View

The US: Yearlong 2017's sum of bond issuance and new bank loan programs from high-yield companies may top 2013's zenith if defaults drop as expected

By John Lonski, Chief Economist, and Ben Garber, Economist, Moody's Capital Markets Research Group, March 30, 2017

CREDIT SPREADS

As measured by Moody's long-term average corporate bond yield, the recent investment grade corporate bond yield spread of 122 bp matches its 122-point mean of the two previous economic recoveries. Any narrowing by this spread may be limited by more cash- or debt-funded acquisitions, spin-offs, stock buybacks, and dividends. Subpar growth by business sales and pretax profits will also add to credit risk, as will a rising risk of high-yield defaults.

The recent high-yield bond spread of 404 bp is less than what is predicted by the spread's macroeconomic drivers and the high-yield EDF metric, but it is wider than what might be inferred from a now below-trend VIX index. The implications for liquidity of regulatory changes merit scrutiny. If regulatory change enhances the market making capabilities of banks, If regulatory change enhances the market making capabilities of banks, corporate bond yield spreads may be thinner than otherwise.

DEFAULTS

After setting its current cycle high at January 2016's 5.9%, the US high-yield default rate fell to 5.4% in February. Moody's credit policy group predicts that the default rate will quickly ease to 3.3%, on average, during 2017's final quarter. A deeper slide to its 1.85% average of the 18-months-ended June 2015 is unlikely for now.

US CORPORATE BOND ISSUANCE

For 2016, US$-denominated bond issuance rose by 5.5% annually for IG, to $1.411 trillion and dropped by -3.5% to $341 billion for high yield. Across broad rating categories, 2016's newly rated bank loan programs from high-yield issuers advanced by 45% to $98 billion for Baa, rose by 2% to $212 billion for Ba, and soared by 43% to $208 billion for programs graded less than Ba.

Q4-2015's worldwide offerings of corporate bonds showed annual percent declines of -8.7% for IG and -51.4% for high-yield, wherein US$-denominated offerings dipped by +1.3% for IG and plunged by -45.1% for high yield.

Q1-2016's worldwide offerings of corporate bonds showed annual percent declines of -4.9% for IG and -51.4% for high-yield, wherein US$-denominated offerings rose by +1.3% from Q1-2015 for IG, but plunged by -45.1% annually for high yield.

Q2-2016's worldwide offerings of corporate bonds showed an annual increase of +6.3% for IG and an annual drop of -5.2% for high-yield, wherein US$-denominated offerings dipped by -2.2% for IG and sank by -6.3% for high yield.

Third-quarter 2016's worldwide offerings of corporate bonds showed an annual advances of +19.5% for IG and +42.8% for high-yield, wherein US$-denominated offerings soared higher by +34.1% for IG and by +46.4% for high yield.

Fourth-quarter 2016's worldwide offerings of corporate bonds showed annual percent changes of -10.2% for IG and +24.9% for high-yield, wherein US$-denominated offerings fell by -8.5% for IG and advanced by +24.9% for high yield.

For yearlong 2016, worldwide corporate bond offerings rose by 2.3% annually for IG (to $2.402 trillion) and sank by -7.8% for high yield (to $426 billion).

In 2017, worldwide corporate bond offerings may grow by 1.7% annually for IG and may advance by 14.7% for high yield.

The Long View

The financing of acquisitions and shareholder compensation will stand out among 2016's uses of funds obtained via bond issues and newly-rated bank loan programs. Companies will resort to acquisitions and divestitures in order to better cope with the US's subpar recovery. To the degree companies fear significantly higher bond yields, pre-fundings will rise.

US ECONOMIC OUTLOOK

The mid-point of the range for fed funds should finish 2017 no greater than 1.125%. In view of the considerable underutilization of the world's productive resources, low inflation should help to rein in Treasury bond yields. As long as the global economy operates below trend, the 10-year Treasury yield may not remain above 2.45% for long. A fundamentally excessive climb by Treasury bond yields and a pronounced slowing by expenditures in dynamic emerging market countries are among the biggest threats to the adequacy of economic growth and credit spreads going forward.

EUROPE

By Tomas Holinka of Moody's Analytics
March 30, 2017

Eurozone

The euro zone economy expanded by 0.4% q/q in the fourth quarter, a rate similar to the one registered in the September stanza. Although expansion was driven mainly by stronger domestic demand, net exports disappointed in contrast with expectations of a rebound on the back of the weaker euro and firming foreign demand. Faster growth in imports, however, was largely to blame for the drop in net exports. High-frequency indicators suggest that expansion should accelerate in the first quarter. The composite PMI climbed to a six-year high of 56.7 in March from 56 in the previous month, signaling the euro zone real GDP could grow 0.6% in the first quarter of 2017. Stronger output, new total and export orders, plus the fastest job creation since July 2007 led the gain. Similarly, the German Ifo Business Climate Index jumped to 112.3, the highest since July 2011, from 111.1 in February.

A strengthening labor market is helping to boost household spending. The unemployment rate remained at 9.6% in January, the lowest since May 2009, and forward-looking indicators signal that employment growth should continue in coming months. But not all the labor market data are rosy. Although euro zone joblessness has been falling since the second quarter of 2013, it hasn't reached its pre-crisis rate. Structural rigidities, especially in the southern European countries, might explain the slow adjustments in labor markets. Fewer job openings and a skills mismatch could upset the balance between labor demand and supply, pushing the unemployment rate up and limiting wage growth. Differences among countries are stark. Households in Germany, Austria and the Netherlands benefit from higher wage rises thanks to lower unemployment, but average annual wage growth over the last year was lower in Spain, Italy and France, where joblessness is elevated.

The U.S. push for fair and reciprocal trade with the rest of the world, aimed at narrowing the trade deficit, may harm European exporters such as auto producers in the medium term. The U.S. administration has already threatened German carmakers with a 35% import tariff if they set up plants in Mexico and export cars to the U.S. from there. This would hurt the export-oriented German economy. Despite these headwinds, we expect the euro zone economy to expand 1.7% this year, the same rate as in 2016, before slowing to 1.6% in 2018. But uncertainty about the U.K. exit negotiations and a more protectionist trade stance by the U.S. government will dominate in the second half of 2017.

Despite accelerating inflation and stronger growth momentum, the ECB maintained its ultra-loose policy stance in March. The bank kept all three policy rates and monthly asset purchases unchanged. Despite rising headline inflation, the subdued demand-driven inflation pressure due to weak wage growth in southern European countries, soft credit growth relative to the stage of the business cycle and political risks restrained the bank from tightening the policy. Nevertheless, after secondary-round inflation effects from higher energy prices materialize and political uncertainty ease, the ECB will

change its rhetoric in the third quarter of 2017 and cut its pace of monthly purchases in October, while extending them beyond 2017.

U.K.

U.K. economic growth is expected to ease to 1.5% this year and 0.9% next year from 1.8% growth in 2016. The British economy has so far withstood the referendum blow remarkably well and put to rest most economists' doomsday scenarios. Investment will remain subdued given the risks associated with exit negotiations and weak construction. The country carried on with business as usual; even if confidence tumbled in the aftermath of the vote, it soon rallied despite no one having a clue about the U.K.'s future ties with the EU. Although the economic data are certainly encouraging, we do not think that the country will sail through the exit unscathed. We expect the weakness in sterling to be a key theme over the next few months.

On Wednesday, U.K. Prime Minister Theresa May formally notified the EU of Britain's intent to leave by triggering Article 50 of the EU Treaty. Thus begins two years of thorny negotiations which will end with the U.K. and the EU definitively parting ways. This assuaged markets, which now expect a softer negotiating stance from the U.K. Although markets expect a softer negotiating stance from the U.K., a leaked document suggested that the EU would take a harder line towards the U.K.: The union would say no not only to simultaneous talks but also to special treatment for the City of London, while also refusing to let Britain start trade negotiations with third countries while still an EU member. We think markets are underestimating the chances of a softer U.K. exit, especially given the country's change of tone. A comprehensive trade deal seems feasible, and as soon as the British economy starts to bear the brunt of the soar in prices and of the renewed uncertainty for business, it will be ready to compromise on more than it is now.

Higher inflation due to weaker pound will equal or slightly exceed the rise in nominal wages, leading real income growth to stall or even go into reverse in 2017. The labor market is expected to falter as a result of the heightened uncertainty over the U.K.'s future, and this could hamper employees' bargaining power and further limit wage growth. Besides weaker households spending, investment will remain subdued given the risks associated with exit negotiations and weak construction, while net exports will benefit little from the weaker currency. Given the weaker than expected expansion in exports and the low level of import substitution, we expect net trade will do little for growth in 2017.

The Bank of England kept its policy rate and asset purchase program unchanged at its March monetary policy committee meeting, in line with our forecast. But a surprise came from dissent on the decision, with a sole committee member voting for a rate hike. This was unexpected, especially considering that inflation and wage growth undershot the bank's forecast in January. Despite the dissent, the minutes of the meeting were little changed from February, showing that the three judgments underpinning the bank's recent projections remained broadly on track. This means that the bank still does not see the need for a rate hike this year, and we agree with this view.

Meanwhile, the bank reiterated that monetary policy could still move in either direction, and that it is seeking to return inflation to target over a somewhat longer period than usual. The bank also repeated that there were limits to the extent that above-target inflation could be tolerated, but it did not suggest that those limits were getting any closer. As in February, we think the bank is overestimating growth and underestimating inflation. Evidence shows that import prices are feeding into selling prices much faster than the bank originally estimated, and that inflation should peak at more than 3% already by midyear. We expect inflation to average 2.9% for the year as a whole, above the BoE's view that inflation will peak at 2.75% in early 2018.

ASIA PACIFIC

By Katrina Ell and the Asia-Pacific Staff of Moody's Analytics
March 30, 2017

New Zealand's economy has entered its eighth year of uninterrupted growth. Drivers this year will be strong population advances driven by record-high net migration, which will lift domestic demand; the sustained low and accommodative interest rate environment; and the improved export picture especially amid higher dairy prices and buoyant tourism. We estimate the economy will grow 3.1% in 2017 from 3.2% in 2016. This is around potential, which the Reserve Bank of New Zealand estimates to be 3%.

Household consumption is tracking around 4.7% y/y, above its decade average of 2.7%. Forward-looking consumer confidence, which has a correlation coefficient with retail trade of 0.5, suggests spending will continue around current levels, important given consumption represents 75% of GDP.

Primary export growth has improved after poor weather hindered production in late 2016. Cool and wet conditions especially in the North Island limited dairy production. Combined with tight global milk supply elsewhere and renewed Chinese interest, global prices have increased. The importance of New Zealand's dairy industry should not be understated. Dairy is the country's largest merchandise export and accounts for 7% of GDP.

Australia remains New Zealand's largest export destination, but China is hot on its heels. China is growing in importance as higher income growth lifts demand for New Zealand's primary produce, especially dairy as mainlanders incorporate more protein into their diet. Mainlanders are also an important source of tourists, valued globally for their relatively high spending per person.

Solid growth in service exports led by tourist spending will help net exports make a greater contribution to growth in 2017. While the rate of growth in visitor arrivals has eased recently, prospects remain strong. Tourism is New Zealand's largest export industry and directly employs 7.5% of the workforce. Annual visitor arrivals in the year to February 2017 were up by 10.7% y/y, after growing by 10.1% y/y in the year to February 2016. An added boost to tourism will come from airlines announcing new flights to New Zealand, making it an easier destination to visit.

A more recent lift to New Zealand's tourism is its reputation as a relatively safe, peaceful country with a strong rule of law and governance. It is also far from geopolitical tensions and hot spots. As a result, New Zealand has become popular for offshore high-wealth individuals to set up elaborate, alternate housing, an added lift to the construction industry. These high-profile moves provide additional marketing for New Zealand as an attractive tourist destination.

Inflation pressures are rising. Because of base effects from higher oil prices, December quarter inflation returned to the target band for the first time in more than two years. We expect inflation to creep higher in 2017, averaging 1.6%, before rising to 2.1% in 2018, the midpoint of the central bank's 1% to 3% target range.

Yet rising price growth will not be enough to force the RBNZ into a tightening bias in 2017; it wants to keep downward pressure on the currency, which is considered too high to support balanced growth. Also, longer-term inflation expectations remain well-anchored around 2%. The RBNZ will keep the official cash rate at 1.75% through mid-2018.

We expect the New Zealand dollar will depreciate around 4% in coming months to US$0.68 because of tighter U.S. monetary policy. This will be a welcome development, helping improve export competitiveness in an environment where soft commodity prices are higher and volumes (especially for dairy) are lagging.

The worrisome housing market

The heated-in-patches housing market has been a thorn in the central bank's side for years. Activity has come off the boil recently with turnover falling and forward indicators such as auction clearance rates suggesting price growth will moderate.

Outside Auckland, the median price rose 7.3% y/y in February, while in Auckland—where prices have reached dizzying heights in recent years—it was up 6.7%. Evidence of cooling comes with nationwide sales volumes falling by 14% y/y in February; in Auckland they were down 8.9%. Also, fewer properties are being sold at auction, particularly in Auckland. When a high proportion of properties are being sold at auction, demand is typically near or at a peak

Ratings Round-Up

By Njundu Sanneh

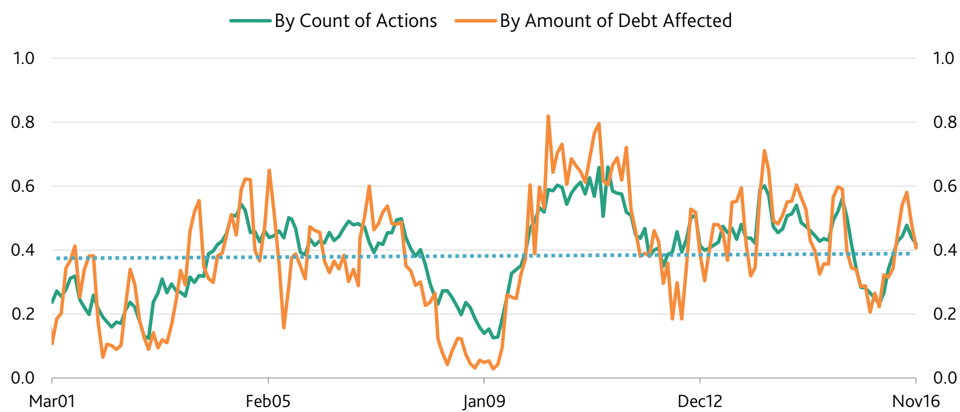
Positives Reassert

Rating changes were sparse over the past week with only 12, spread evenly between the US and Europe. There was however, a return to the recent trend of more positive rating changes after falling to 33% for both the US and Europe last week. Positive rating changes rebounded strongly to 67% in the US and 83% in Europe. The driving sectors for this jump included IT services companies such as Black Knight InfoServ, LLC, and Presidio Holdings, Inc., defense outfit Kratos Defense & Security Solutions, Inc., and forest products company Louisiana-Pacific Corporation. The downgrade of Chinos Intermediate Holdings A, Inc., a retail company better known through its J Crew subsidiary, reflects the challenges of the retail sector even as consumer spending shows solid gains.

In Europe rating change activity is distributed among several countries, with two in the Netherlands. The only downgrade is of Frigoglass SAIC, a Greece finished goods manufacturing company.

FIGURE 1

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

Ratings Round-Up

FIGURE 3 Rating Changes: Corporate & Financial Institutions – US

Date	Company	Sector	Rating	Amount ($ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/SG
3/22/17	EXGEN TEXAS POWER, LLC	Industrial	SrSec/BCF		D	B2	B3	SG
3/22/17	PRESIDIO HOLDINGS INC.	Industrial	LTCFR/PDR		U	B2	B1	SG
3/23/17	FIDELITY NATIONAL FINANCIAL, INC - Black Knight InfoServ, LLC	Industrial	LTCFR/PDR/		U	Ba3	Ba2	SG
3/24/17	CHINOS INTERMEDIATE HOLDINGS A, INC.	Industrial	PDR		D	Caa2	Caa3	SG
3/24/17	LOUISIANA-PACIFIC CORPORATION	Industrial	SrUnsec/LTCFR/PDR	350	U	Ba3	Ba2	SG
3/28/17	KRATOS DEFENSE & SECURITY SOLUTIONS, INC.	Industrial	SrSec/LTCFR/PDR	449	U	Caa2	Caa1	SG

Source: Moody's

FIGURE 4 Rating Changes: Corporate & Financial Institutions – EUROPE

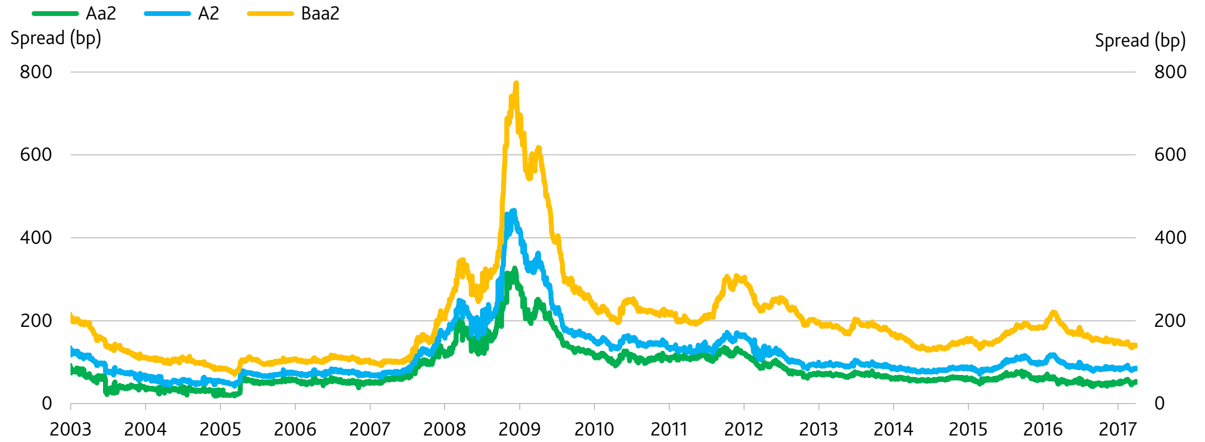
Date	Company	Sector	Rating	Amount ($ Million)	Up/ Down	Old LTD Rating	New LTD Rating	Old STD Rating	New STD Rating	IG/ SG	Country
3/23/17	RAIFFEISEN ZENTRALBANK OESTERREICH AG	Financial	LTIR/SLTD		U	Baa2	Baa1	NP	P-3	IG	AUSTRIA
3/22/17	FRIGOGLASS SAIC	Industrial	SrUnsec/PDR	270	D	Caa3	Ca			SG	NETHERLANDS
3/23/17	METINVEST B.V.	Industrial	LTCFR		U	Caa3	Caa2			SG	NETHERLANDS
3/22/17	PFLEIDERER GROUP S.A.	Industrial	LTCFR/PDR		U	B1	Ba3			SG	POLAND
3/22/17	CAMPOFRIO FOOD GROUP, S.A.	Industrial	SrUnsec/LTCFR/PDR	1,081	U	Ba3	Ba2			SG	SPAIN
3/27/17	LIBERTY GLOBAL PLC	Industrial	SrSec/LTCFR/PDR/BCF		U	B1	Ba3			SG	UNITED KINGDOM

Source: Moody's

Market Data

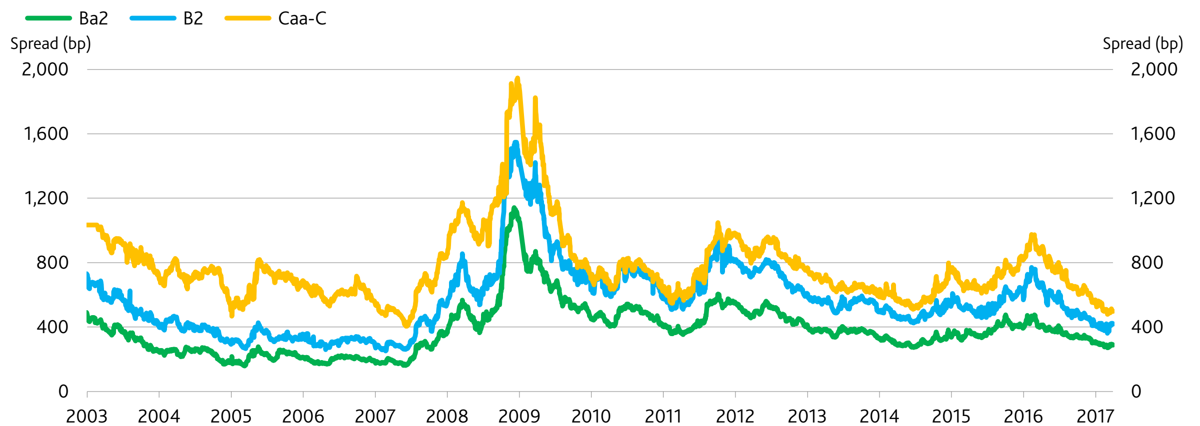
Spreads

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

CDS Movers

Figure 3. CDS Movers - US (March 22, 2017 – March 29, 2017)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Mar. 29	Mar. 22	Senior Ratings
United States of America, Government of	Aa2	Aa3	Aaa
Chevron Corporation	A3	Baa1	Aa2
HCA, Inc.	Ba1	Ba2	B1
Anthem, Inc.	A2	A3	Baa2
Frontier Communications Corporation	Caa2	Caa3	B1
Calpine Corporation	B2	B3	B2
Kinder Morgan Inc.	Baa3	Ba1	Baa3
International Paper Company	A3	Baa1	Baa2
Monsanto Company	A3	Baa1	A3
Apache Corporation	Baa3	Ba1	Baa3

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Mar. 29	Mar. 22	Senior Ratings
PPG Industries, Inc.	Baa1	A2	A3
Capital One Bank (USA), N.A.	A2	A1	Baa1
Capital One Financial Corporation	Baa2	Baa1	Baa1
Becton, Dickinson and Company	A3	A2	Baa2
Consolidated Edison Company of New York, Inc.	A2	A1	A2
Praxair, Inc.	A2	A1	A2
CenturyLink, Inc.	B3	B2	Ba3
Waste Management, Inc.	A3	A2	Baa2
Hertz Corporation (The)	Caa2	Caa1	B2
Noble Energy, Inc.	Ba2	Ba1	Baa3

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Mar. 29	Mar. 22	Spread Diff
Sears Roebuck Acceptance Corp.	Caa3	3,698	3,314	384
Sears Holdings Corp.	Caa3	3,700	3,531	169
Hertz Corporation (The)	B2	662	609	53
HealthSouth Corporation	B1	331	300	31
Avis Budget Car Rental, LLC	B1	420	394	26
CenturyLink, Inc.	Ba3	302	281	21
United States Steel Corporation	Caa1	462	440	21
Genworth Holdings, Inc.	Ba3	681	662	19
GenOn Energy, Inc.	Caa3	2,008	1,989	19
Pride International, Inc.	B1	506	489	17

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 29	Mar. 22	Spread Diff
Nine West Holdings, Inc.	Ca	4,863	5,481	-618
Univision Communications, Inc.	Caa1	327	426	-100
Weatherford International, LLC (Delaware)	Caa1	280	372	-91
Neiman Marcus Group LTD LLC	Caa3	1,345	1,424	-79
Chesapeake Energy Corporation	Caa3	632	704	-72
Tenet Healthcare Corporation	Caa1	521	585	-64
YRC Worldwide Inc.	Caa1	778	831	-53
Frontier Communications Corporation	B1	766	810	-45
Penney (J.C.) Corporation, Inc.	B3	677	719	-42
SUPERVALU Inc.	B3	589	630	-41

Source: Moody's, CMA

Figure 4. CDS Movers - Europe (March 22, 2017 – March 29, 2017)

CDS Implied Rating Rises	CDS Implied Ratings		
Issuer	Mar. 29	Mar. 22	Senior Ratings
France, Government of	A2	A3	Aa2
Rabobank	A3	Baa1	Aa2
Austria, Government of	Aa2	Aa3	Aa1
Nordea Bank AB	A1	A2	Aa3
ING Bank N.V.	A3	Baa1	A1
Bayerische Landesbank	A3	Baa1	A2
ING Groep N.V.	A3	Baa1	Baa1
Swedbank AB	A1	A2	Aa3
Bank of Scotland plc	A3	Baa1	A1
DNB Bank ASA	A2	A3	Aa2

CDS Implied Rating Declines	CDS Implied Ratings		
Issuer	Mar. 29	Mar. 22	Senior Ratings
Old Mutual Plc	Baa1	A2	Baa3
Lloyds Bank Plc	Baa1	A3	A1
Portugal, Government of	B2	B1	Ba1
Deutsche Bahn AG	Aa1	Aaa	Aa1
Sanofi	A2	A1	A1
Tesco Plc	Ba3	Ba2	Ba1
HSBC Bank plc	Baa1	A3	Aa2
Swedish Export Credit Corporation	Aa2	Aa1	Aa1
Unione di Banche Italiane S.p.A.	B1	Ba3	Baa3
BAWAG P.S.K.	Ba2	Ba1	A3

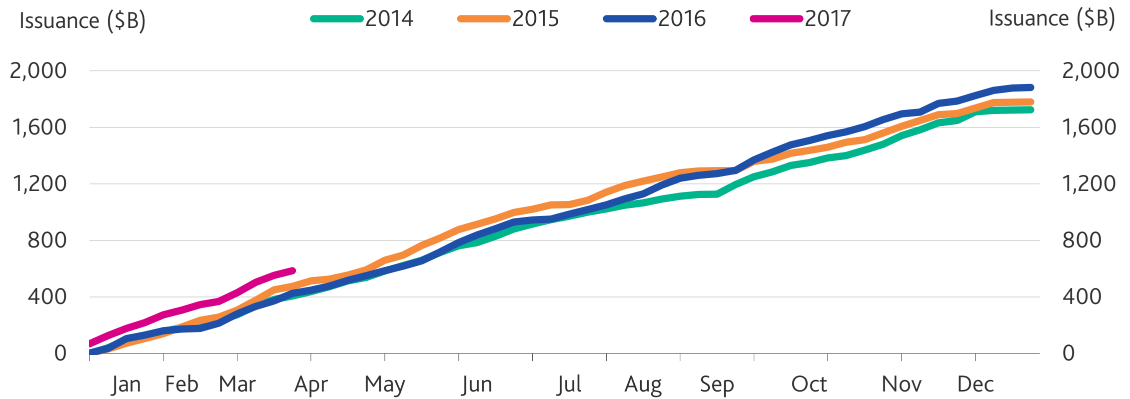
CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Mar. 29	Mar. 22	Spread Diff
Norske Skogindustrier ASA	Caa3	4,501	4,427	74
Ensco plc	B2	518	500	18
Old Mutual Plc	Baa3	59	45	14
Fiat Chrysler Automobiles N.V.	B1	270	260	10
Stena AB	B3	641	634	7
Astaldi S.p.A.	B2	696	689	7
Telefonaktiebolaget LM Ericsson	Baa3	105	99	6
Schneider Electric SE	A3	42	37	5
NN Group N.V.	Baa2	70	64	5
Jaguar Land Rover Automotive Plc	Ba1	201	196	5

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Mar. 29	Mar. 22	Spread Diff
Greece, Government of	Caa3	791	845	-54
Banco Comercial Portugues, S.A.	B1	467	511	-44
CMA CGM S.A.	B3	499	541	-42
Premier Foods Finance plc	Caa1	366	394	-29
Galapagos Holding S.A.	Caa2	772	800	-28
Unipol Gruppo Finanziario S.p.A.	Ba2	176	204	-27
Boparan Finance plc	B2	448	467	-19
Italy, Government of	Baa2	160	178	-18
Trionista HoldCo GmbH	B2	122	134	-12
Banca Monte dei Paschi di Siena S.p.A.	B3	395	406	-11

Source: Moody's, CMA

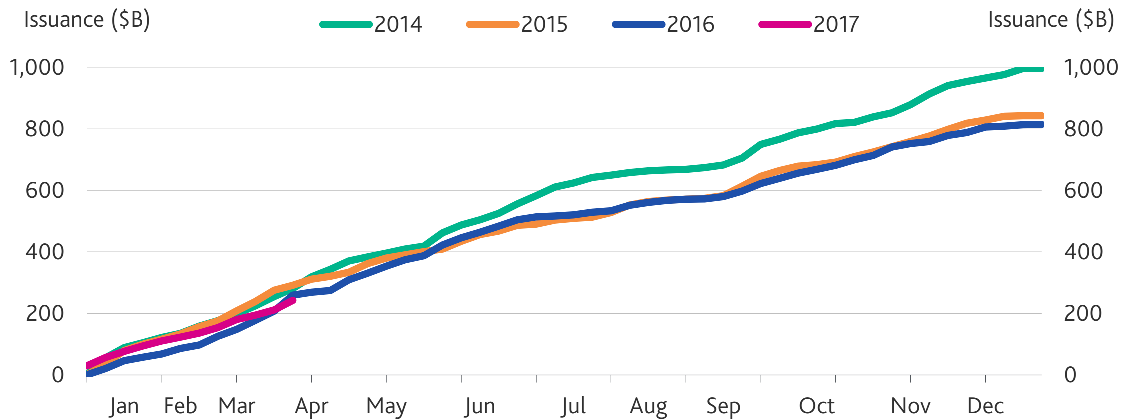
Issuance

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



Source: Moody's / Dealogic

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



Source: Moody's / Dealogic

Figure 7. Issuance: Corporate & Financial Institutions

	USD Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	22.629	6.735	34.123
Year-to-Date	419.738	117.895	585.448
	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount $B	Amount $B	Amount $B
Weekly	27.343	2.917	31.409
Year-to-Date	209.653	24.922	242.621

* Difference represents issuance with pending ratings.

Source: Moody's/ Dealogic

Moody's Capital Markets Research *recent publications*

Sovereign Risk Report: Eurozone Economic Advance Boosts Credit Risk Measures

Rate Hike Won't Hurt Bonds Amid Low Inflation (Capital Markets Research)

Sovereign Risk Report: Global Sovereign Risk Measures Improve Amid Divergent Monetary Policies

Less Borrowing Amid Faster Profits Trims Risk (Capital Markets Research)

Sovereign Risk Report: Political Turmoil Pushes South Korea's Sovereign EDF Higher

Skinny Caa Spread Defies Default Outlook (Capital Markets Research)

Sovereign Risk Report: European Credit Markets Sentiment Improves on Positive Economic Trends

Credit and Equities Say Yes to a Rate Hike (Capital Markets Research)

Sovereign Risk Report: Sovereign Credit Markets Shrug Off Fed Rate Hike Threat

Low VIX and Thin Spreads Could Be on Thin Ice (Capital Markets Research)

US Interest Rate Outlook: The Storm Before the Calm (Capital Markets Research)

Sovereign Risk Report: Politics Influence France's Sharp Rise in Market-Based Sovereign Risk

Demography Is Destiny for Debt (Capital Markets Research)

Operating Lease and Pension Interest Rates - February 2017 (Capital Markets Research)

Market Comment: Bond Issuance Boom Precedes Policy Shifts

Sovereign Risk Report: Japan Challenged by Geopolitical Risks Despite Faster Growth

Leveraging Will Survive Corporate Tax Reform (Capital Markets Research)

Market Comment: Demonetization Improves Indian Bank Credit Risk Signals

Sovereign Risk Report: Turkey Struggles to Keep its Default Risk Measures Low

VIX Is Low, Overvaluation Risk Is Not (Capital Markets Research)

Sovereign Risk Report: Renewed Uncertainty Increases UK Sovereign Credit Risk

Deregulation Seen to Spur Growth, Trim Risk (Capital Markets Research)

Credit Looks for US to Realize Potential (Capital Markets Research)

These and others are also available at: http://www.moodys.com/cmrg

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

Report Number: 195156

Editor
Dana Gordon

Contact Us

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

© 2017 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. ("MIS") AND ITS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("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. 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 FOR RETAIL INVESTORS TO CONSIDER MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS IN MAKING ANY 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.

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 SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

MIS, 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 MIS have, prior to assignment of any rating, agreed to pay to MIS for appraisal and rating services rendered by it fees ranging from $1,500 to approximately $2,500,000. 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 "Shareholder Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

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 clients. It would be dangerous for "retail clients" to make any investment decision based on MOODY'S credit rating. If in doubt you should contact your financial or other professional adviser.

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.