

## WEEKLY MARKET OUTLOOK

Moody's Capital Markets Research, Inc.

### Weekly Market Outlook Contributors:

David W. Munves, CFA  
1.212.553.2844  
david.munves@moody's.com

John Lonski  
1.212.553.7144  
john.lonski@moody's.com

Ben Garber  
1.212.553.4732  
benjamin.garber@moody's.com

Njundu Sanneh  
1.212.553.4036  
njundu.sanneh@moody's.com

Yukyung Choi  
1.212.553.0906  
yukyung.choi@moody's.com

Irina Baron  
1.212.553.4307  
irina.baron@moody's.com

Franklin Kim  
1.212.553.4419  
franklin.kim@moody's.com

Xian (Peter) Li  
1.212.553.1404  
xian.li@moody's.com

### Moody's Analytics/Europe:

Tomas Holinka  
+420 (221) 666-384  
Tomas.holinka@moody's.com

### Moody's Analytics/Asia-Pacific:

Katrina Ell  
+61 (2) 9270-8144  
katrina.ell@moody's.com

Emily Dabbs  
+61 (2) 9270-8159  
emily.dabbs@moody's.com

Jack Chambers  
+61 (2) 9270-8118  
jack.chambers@moody's.com

### Editor

Dana Gordon  
1.212.553.0398  
dana.gordon@moody's.com

## Bond Yields Will Fall When the Equity Bubble Bursts

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

Bond Yields Will Fall When the Equity Bubble Bursts.

» FULL STORY PAGE 2

### [The Week Ahead](#)

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

» FULL STORY PAGE 6

### [The Long View](#)

Check our chart here for forecast summaries of key credit market metrics. Full updated stories, "March's \$58.9 billion of US\$ high-yield bond issuance was second only to the record \$59.7 billion of September 2013," begin on page 18.

Credit Spreads	<u>Investment Grade</u> : Year-end 2017 spread to exceed its recent 123 bp. <u>High Yield</u> : After recent spread of 401 bp, it may approximate 480 bp by year-end 2017.
Defaults	<u>US HY default rate</u> : after February 2017's 5.4%, Moody's Credit Policy Group forecasts it near 3.1% during the three-months-ended February 2018.
Issuance	<u>In 2016</u> , 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. <u>For 2017</u> , 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 16.9% to \$398 billion but still lag 2014's \$435 billion zenith.

» FULL STORY PAGE 18

### [Ratings Round-Up](#) by Njundu Sanneh

The Year's Upgrade Rally Continues.

» FULL STORY PAGE 22

### [Market Data](#)

Credit spreads, CDS movers, issuance.

» FULL STORY PAGE 24

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

Links to commentaries on: Venezuela, equity, eurozone, hike, global, profits, Korea, Caa, yes, hike, VIX, rates, France, demography, boom, Japan, reform, India, Turkey, risk.

» FULL STORY PAGE 28

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.

follow us on  


## Credit Markets Review and Outlook

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

### Bond Yields Will Fall When the Equity Bubble Bursts

Stocks are not cheap. Thus, equities are vulnerable to a deep slide in the event profits contract or interest rates undergo a disruptive climb. The latter would probably include an increase by the 10-year Treasury yield to at least 2.75%.

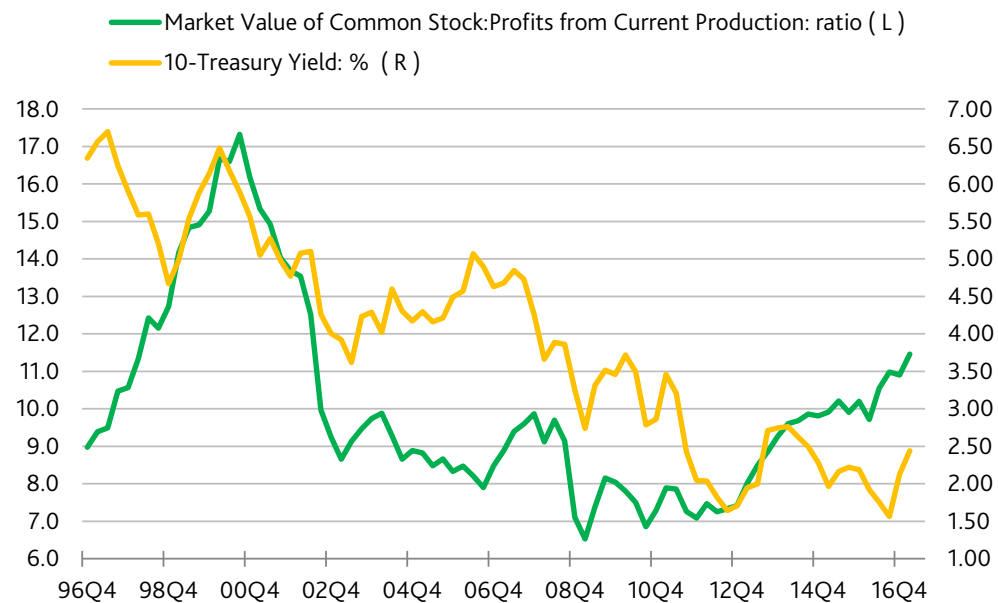
However, for now, benchmark bond yields have moved in a direction opposite to that taken by the federal funds rate. In spite of the December 2016 and March 2017 rate hikes, the 10-year Treasury yield eased from mid-December's 2.6% to less than 2.4%.

The drop by the 10-year Treasury yield following two Fed rate hikes was in response to reduced expectations for GDP growth that partly stemmed from the diminished likelihood of meaningful fiscal stimulus. The Blue Chip consensus now looks for nominal GDP growth of 4.3% in 2017, which is only a bit above early November 2016's pre-election forecast of 4.2%. In view of how the 10-year Treasury yield averaged 1.82% during the 10 trading days ending with Election Day, the 10-year Treasury might conceivably dip under 2.25% barring an upwardly revised outlook for nominal GDP.

#### Next correction of overvaluation will trigger a "flight to quality"

US equities remain untenably overvalued. The market value of US common equity now resides at a multiple of pretax profits from current production that was unheard of prior to 1998. More specifically, the ratio of the market value of US common stock to yearlong pretax operating profits rose to 11.5:1 in Q4-2016, which was the highest such ratio since Q2-2002's 12.5:1. After averaging 14.8:1 in 1999, common equity's market value crested at a record 17.3-times profits in Q3-2000. (Figure 1.)

**Figure 1: The Inevitable Correction of an Overvalued Equity Market Will Drive Treasury Bond Yields Lower**

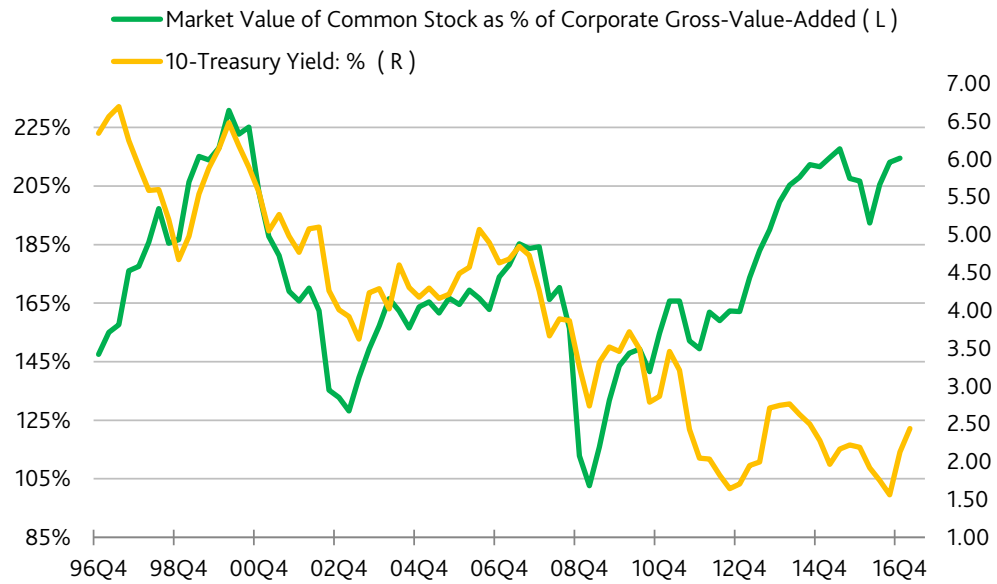


In addition, stocks are richly priced relative to corporate revenues. As of Q2-2015, the market value of US common stock rose to a cycle high of 218% of corporate gross-value-added, where the latter is a proxy for total corporate revenues. Second-quarter 2015's ratio for the market value of common equity to corporate gross-value-added (GVA) was the highest since the 225% of Q3-2000. Earlier, the market value of equity peaked at a record high 231% of corporate GVA in Q1-2000. During 2002-2007's business cycle upturn the ratio failed to reach 200% and the market value of common stock crested at 185% of corporate GVA in Q2-2007.

## Credit Markets Review and Outlook

After falling to Q1-2016's 192%, the market value of common stock has since risen to 214% of corporate GVA in Q4-2016. The latter surpasses all ratios prior to Q2-1999's 215%. (Figure 2.)

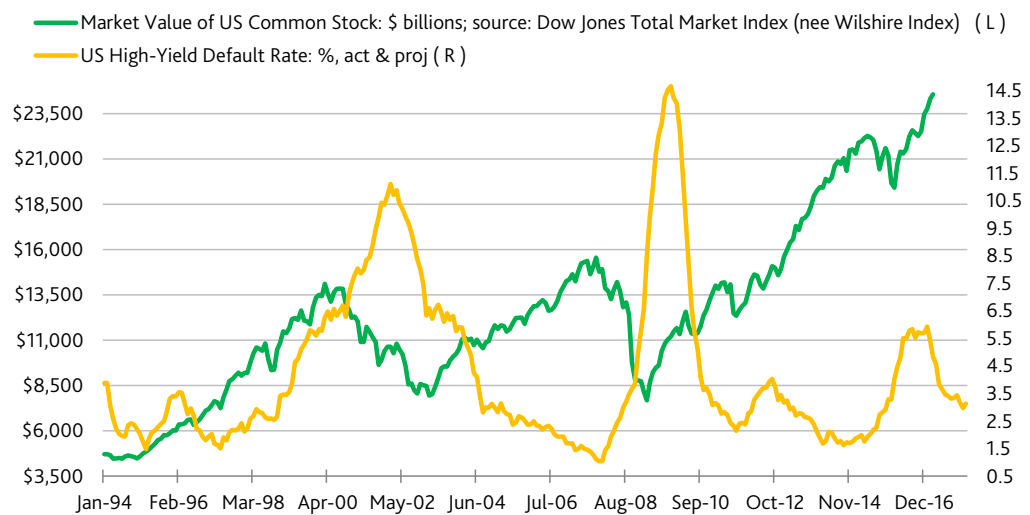
**Figure 2: Drop by Market Value of Common Stock as Percent of Corporate Gross-Value-Added Will Put Downward Pressure on Treasury Bond Yields**



Today's very high valuation of equities vis-a-vis both profits and revenues does not preclude even richer share prices, but it does warn of substantially lower valuations in the event of an adverse shock. Moreover, a deep drop by equity prices will quickly prompt a ballooning of high-yield bond spreads, which currently undercompensate for long-term default risk.

An eventual bursting of the equity bubble will diminish systemic liquidity. In turn, much costlier financial capital will prompt an increase in defaults. No longer will a relaxation of loan covenants, injections of common equity capital, and the liquidation of business assets provide badly needed relief to distressed borrowers. (Figure 3.)

**Figure 3: Since 1993, Higher Default Rate Followed Each Deeper than -10% Drop from Prior High by Market Value of Common Stock**



Thus, when the equity bubble bursts, both the federal funds rate and Treasury bond yields will fall. Though unsustainably high benchmark interest rates may precipitate the bursting of an equity bubble, the ensuing deflation of the bubble will drive benchmark rates sharply lower. The bursting of the equity bubbles of 1987 and 1999-2000, the high-yield and commercial real estate bubbles of 1989-1990, and the housing bubble of 2004-2006 were followed by substantially lower benchmark interest rates.

## Credit Markets Review and Outlook

### Consensus outlook on rates contradicts fundamentals

Currently, the consensus expects interest rates to rise steadily at least through year-end 2018. The three-month Treasury bill rate is projected to climb from a recent 0.80% to 2.0% by Q4-2018, while the 10-year Treasury is expected to ascend from just under 2.4% to 3.3%. These forecasts implicitly assume that the equity bubble will not burst into 2018's final quarter. In other words, the consensus senses that the considerable downside risk of an overvalued equity market will not be realized, notwithstanding the projected return of a quarter-long average of more than 3% for the 10-year Treasury yield for the first time since Q2-2011's 3.21%. The latter proved unsustainable partly because real GDP growth failed to conform to early June 2011's consensus expectations of 2.6% for 2011 and 3.1% for 2012. Instead, real GDP rose by merely 1.6% in 2011 and 2.2% in 2012.

Not only did the consensus exaggerate business activity's forthcoming pace, the consensus also extrapolated too much about future inflation from mid-2011's speeding up of consumer price inflation. Second quarter 2011's 4.1% annualized surge by PCE price index inflation was the fastest since 2008 and included a 2.5% advance by the core PCE price index. However, by 2011's final quarter the sequential annualized rate of inflation had eased to 1.4% for the PCE price index and 1.6% for the core PCE price index.

Having badly overstated near-term economic growth and inflation risk, the consensus would grossly overstate the 10-year Treasury yield's trajectory. As of early June 2011, the consensus had projected a 3.7% average for Q4-2011's 10-year Treasury yield, which was well above the actual 2.05%. The miss for Q4-2012's 10-year Treasury yield was even greater, as the actual yield of 1.71% came in well under the predicted 4.4%.

### Core consumer goods price deflation will continue

Today's consensus has yet to fully appreciate the low-inflation implications of a continued stay by consumer goods price deflation excluding energy products. As millions of late model vehicles come off lease during the next several years, a glut of used cars can be expected to put downward pressure on the prices of new vehicles. Moreover, the loss of demand as inferred from Q1-2017's -1.4% yearly decline by unit sales of light motor vehicles will reinforce the auto industry's loss of pricing power.

Worse yet, the inability of very attractive sales incentives to boost car purchases materially does not bode well for auto prices. March's seasonally-adjusted unit sales fell by -5.4% from February despite sales incentives that averaged 10.4% of the sticker price, which was the highest such percentage since 2009 according to JD Power and Dow Jones.

Elsewhere, reports have surfaced telling of a US retailing giant's intention to pressure an e-commerce behemoth with more aggressive price discounting. And, for the first time in a long while, a leading producer of non-durable consumer goods will cut prices in order to better compete with recent start-ups.

The progression of communication and manufacturing technologies will continue to contain price inflation. Consider how advancements in oil & gas drilling technology have diluted OPEC's once unrivalled pricing power.

### Consensus forecast of interest rates seems too high

Only if US real GDP growth approaches 3% on a recurring basis might the current consensus 10-year Treasury yield forecast of a 2.8% average for 2017's second half and 3.1% for yearlong 2018 prove correct. Given the problematic outlook for proposed fiscal stimulus, so rapid a rate of economic growth is unlikely. In the event the 10-year Treasury yield somehow approaches 3% absent a sufficient upward revision of the outlook for operating profits, then a likely deflation of the equity bubble would quickly drive the benchmark Treasury yield well under 3%.

Is revenue-neutral fiscal stimulus an oxymoron? Too much may have been made of the stimulatory powers of revenue-neutral fiscal stimulus. In response to the Great Recession of 2008-2009, fiscal stimulus was enacted that was far from revenue-neutral. For example the moving yearlong US federal budget deficit widened from year-end 2007's -\$371 billion (or -2.9% of GDP) to -\$1.417 trillion (or -9.7% of GDP).

Nevertheless, real GDP's reaction to the massive injection of fiscal stimulus was quite muted. Instead of growing by at least 3% to 4% annually, real GDP rose by a mild 2.5% in 2010. Moreover, 2011 saw real GDP growth sag to 1.6%.

## Credit Markets Review and Outlook

What was striking was the inability of economic activity to capitalize more on 2010's very low rates of resource utilization. For example, 2010's yearlong averages were 9.6% for the unemployment rate, 16.7% for the U6 underemployment rate, and 73.6% for the rate of industrial capacity utilization. By contrast, February 2017's rates of 4.7% for unemployment, 9.2% for U6 underemployment, and 75.4% fo

Whatever fiscal stimulus emerges in late 2017 or 2018 probably will not be enough to assure a 3% annual increase by yearlong real GDP. In turn, the likelihood for higher short- and long-term interest rates is less than the consensus now believes.

## *The Week Ahead – US, Europe, Asia-Pacific*

### THE US

From Moody's Analytics - Economy.com and the Moody's Capital Markets Research Group

April 7: The improvement in the unemployment rate and other measures of labor market underutilization in March will likely create some angst among Fed officials. They are increasingly concerned that the economy will overshoot full employment, leading to stronger than anticipated inflation down the road. The absence of an increase in the labor force participation rate may lead some Fed officials to argue that there isn't much more room for improvement on the supply-side of the labor market and that they could signal a more aggressive tightening in monetary policy.

For now, we still look for the next rate hike to occur in June and the reduction in the balance sheet to begin in December. The debate within the Fed will turn to whether to go slower on rate hikes as the balance sheet declines, something markets are betting on. However, the central bank isn't sold on that idea yet. According to the Federal Reserve Board staff's estimate, the fading effects of quantitative easing, under the assumption that full reinvestment continues for the timing being, could increase the 10-year Treasury yield by 15 basis points. This is historically consistent with a 50-basis point increase in the target fed funds rate, highlighting the case for the Fed to take it easier with raising the fed funds rate during the normalization of the balance sheet.

The attention shifts from the labor market to inflation this week. We look for the consumer price index to have declined 0.1% in March while the core index, which excludes food and energy, rose 0.2%. We also look for a decline in import prices while producer prices were likely unchanged. Though reflation remains gradual, unless there is a noticeable step back, it won't deter the Fed from raising rates fairly soon.

Retail sales were likely weak in March, falling 0.3%. Sales are expected to be held down by autos and gasoline. Real consumer spending is tracking 0.7% at an annual rate in the first quarter and March retail sales are unlikely to help. We look for the University of Michigan survey to have slipped in April while business inventories will provide further guidance on the inventory build last quarter, which has been coming in light

#### MONDAY, APRIL 10

##### **Business confidence (week ending April 7; 10:00 a.m. EDT)**

Forecast: N/A

Global business sentiment remains strong, as it has all year. This is consistent with buoyant financial markets and a global economy that is growing at a pace that is above its potential rate. Business confidence is strongest in the United States and weakest in South America, while Asian and European businesses are cautious. If there is a blemish in the survey results it is a softening in respondents' assessments of present business conditions during the past several weeks. But expectations regarding the economy through this summer remain firm. The four-week moving average in our global confidence index fell from 34.1 to 33.5 in the week ended March 31.

#### TUESDAY, APRIL 11

##### **NFIB small business optimism survey (March; 6:00 a.m. EDT)**

Forecast: 102.8

We look for the NFIB small business index to have dropped 2.5 points to 102.8 in March. This is still relatively strong, leaving it above its average in the final three months of 2016 of 99.7. Already-released data showed that around a third of small employers reported job openings that they could not fill in March. A net 28% of owners reported raising workers' compensation, the second highest reading since mid-2007. Though the employment details of the NFIB survey will be upbeat, others could weaken. Republican efforts to replace the Affordable Care Act failed in March and it cast questions on the

## The Week Ahead

prospect for comprehensive corporate tax reform. That could dampen sentiment for the month. There is also tendency for the NFIB survey to fall in March. It has done so in 11 of the past 12 years. Through February, the NFIB survey would be consistent with GDP growth of 4.8%. However, what businesses have said and done in the first quarter differed. One reason we put more stock in what businesses do rather than say is that some surveys, including the NFIB, can lean politically in one direction. In fact, respondents to NFIB's survey tend to favor Republicans, which isn't surprising, since Republicans, more than Democrats, have a tendency to be more pro-business. We used a simple regression of the NFIB small business index on annualized real GDP growth. We compared the average difference between the predicted value and actual GDP growth under Republican and Democrat presidents since 1974. The average forecast error was 0.65 percentage point under Republican presidents and -0.87 percentage point for Democrat presidents. In other words, the NFIB survey overestimates growth under Republicans and underestimates it for Democrats.

## WEDNESDAY, APRIL 12

**Import prices (March; 8:30 a.m. EDT)**

Forecast: -0.2% (total)

Forecast: 0% (nonfuel)

Import prices are forecast to have slipped 0.2% in March following a 0.2% gain in February. This would be the first decline since November. Global oil prices will be a drag on import prices for March. The key is nonfuel import prices, and they are expected to have been unchanged after rising 0.3% in February. The trend in nonfuel import prices has improved but remains soft. Rising Chinese producer prices should put some additional upward pressure on nonfuel import prices. Assuming no revisions to prior months, March's gain will leave nonfuel import prices up 0.9% on a year-ago basis, compared with 0.5% in February.

## THURSDAY, APRIL 13

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

Forecast: 255,000 Initial claims are expected to have risen from 234,000 to 255,000 in the week ending April 8, reversing most of the prior week's gain and leaving them above the four-week moving average. We anticipate an increase in initial claims but they are volatile around holidays and the incoming data is for the week before Good Friday. The trend in initial claims should be between 250,000 and 260,000. We believe the trend earlier this year was temporarily depressed by weather.

**University of Michigan survey (March-prelim; 10:00 a.m. EDT)**

Forecast: 95.4

We look for the University of Michigan's consumer confidence index to have come in at 95.4 in April, according to the preliminary survey. This would be down modestly from the implied second half of March of 95.9. Other survey-based data has softened and we don't believe consumer sentiment is immune. Equity markets are less supportive for sentiment than in the past few months. Also, gasoline prices are a small drag. The labor market is likely neutral in the preliminary survey, since initial claims are low and the unemployment rate fell in March. High-frequency measures of consumer sentiment have slipped some, supporting our forecast for a small decline in the Michigan survey relative to the implied second half of March.

## FRIDAY, APRIL 14

**Consumer price index (March; 8:30 a.m. EDT)**

Forecast: -0.1% (headline)

Forecast: 0.2% (core)

The consumer price index is forecast to have fallen 0.1% in March following a 0.1% gain in February and 0.6% increase in January. This would be the first decline in the CPI since February 2016. We expect energy prices to have been a net drag on the CPI in March. The CPI for food and beverages rose 0.2% in

## The Week Ahead

February, the strongest since September 2013. We don't believe this pace is sustainable and expect growth to have moderated in March. Excluding food and energy, we look for the CPI to have risen 0.2% (0.15% unrounded) in March. Within core, the forecast anticipates a trend-like gain in rents, which are normally sticky. Growth in apparel prices should continue to moderate. New-car prices likely edged higher but used-car prices are forecast to have dropped, consistent with the message in the Manheim index.

The core CPI is expected to have been up 2.3% on a year-ago basis. Year-over-year growth in the core CPI has been running about 0.5 percentage point above the core PCE deflator over the past few months. The core PCE deflator is the Fed's preferred measure.

**Retail sales (March; 8:30 a.m. EDT)**

Forecast: -0.3% (total)

Forecast: 0.2% (ex auto)

We look for nominal retail sales to have dropped 0.3% in March following a 0.1% gain in February and 0.6% increase in January. We believe weather was likely a small negative for sales. Our past work has shown that snowstorms that hit a large population base have a tendency to depress retail sales initially but many of these lost sales, save for restaurants, are made up in subsequent months. There is some potential boost to non-store sales from the storm. Non-store sales have been contributing more to growth in control retail sales recently.

Already released data showed that unit vehicle sales dropped 5.5% in March and though we anticipate a smaller drop in retail, autos will still shave 0.4 percentage point off total retail sales growth. Excluding autos we look for a 0.1% gain in retail sales. Gasoline will also be a drag on retail sales.

A late Easter adds uncertainty to the forecast. Easter is late this year after being early in 2016. The forecast assumes that the Census Bureau correctly adjusts for the shift in the timing of the Easter holiday. This year the majority of Easter sales should occur in April.

---

**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, April 7: The spectacular jump in Germany's industrial production figures in February should not be reflected in next week's euro zone factory growth headline. That's because the single-currency area's report on industrial performance, unlike those published by most of the major country's national statistics offices, excludes the construction industry, and it was construction output that drove February's production growth. Growth in the sector soared by 13.6% m/m in Germany, and by a similarly stellar 8.1% in France. This was due to the month's unseasonably warm temperatures, which across the Continent were at least one degree Celsius higher than their long-run average. Without the contribution from construction, Germany's factory growth would have risen by a much more subdued 0.8% m/m. We expect production in the euro zone to come in relatively stable in February, pushed down by the lackluster results in France and disappointments in Spain and Italy. The main drag should have come from the energy sector, which is the flip side of the warmer-than-average temperatures, since the milder weather depressed demand for heating. But production in the other industrial sectors



## The Week Ahead

should have also remained rather subdued, as weakness in most major countries likely offset the somewhat stronger results in Germany.

Next week will also bring inflation and producer price figures for the U.K. After consumer price growth jumped to 2.3% in February from 1.8% in January, marking the first time that inflation breached the Bank of England's 2.3% target in three-and-a-half years, we are expecting inflation to cool to 2% to 2.1% in March. But our expectations of a loss of momentum have nothing to do with the easing of price pressures; they are primarily due to base effects related to this year's later timing of Easter holidays. Easter this year will fall in April, while last year it fell in March. Normally, prices for airfares, package holidays and accommodation soar during this period, so this means that in yearly terms prices for those components will be depressed in March, while they should jump and mean-revert in April. Some drag should also come from fresh-produce inflation, which should ease somewhat following the harsh winter months, during which supply of fruits and vegetables were hit. Similarly, transport inflation could lose some momentum, given that oil prices fell slightly in March, though we think that risks are tilted to the upside.

But again, we do not expect March's easing to announce the beginning of a change in trend. Inflation should continue to gather pace in the U.K. in 2017, averaging around 3% over the year as a whole. Core inflation should similarly continue to pick up quickly, driven mainly by soaring prices of core goods, as retailers keep passing on higher import prices through to consumers. Output producer prices should also continue to gain momentum following the impressive jump in input producer prices in previous months; output prices normally lag input prices by a few quarters. Unfortunately, the broad rise in prices should not be reflected in domestically-generated inflation, since we are expecting wage growth to have slowed further in February following disappointing results for January, when wage growth eased to a low of 1.9% m/m. Although we expect the labour market to remain tight, there is still enough slack for wages to remain subdued even if employment rises. Plus, as the labour market is relatively rigid, we expect wages rather than jobs to bear the brunt of any Brexit-related slowdown in 2017.

## 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.

## The Week Ahead

**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 unseasonably 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.

## MONDAY, APRIL 10

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

Italy's industrial production likely rose in February, reversing a 2.3% m/m drop from the previous months. High-frequency indicators suggest the recovery in manufacturing continues. The manufacturing Purchasing Managers' Index rose to 55.7 in March, the highest reading in six years, from 55 in February, while manufacturing confidence increased to 107.1, the highest since December

## The Week Ahead

2007, from 106.4. The weaker euro, which increases the competitiveness of Italy's exporters, together with strengthening external demand is benefiting the Italian economy and keeping businesses optimistic. Yet Britain's departure from the EU and a more protectionist trade stance by the U.S. administration pose real risks, since both countries are among the top four trading partners for Italy.

TUESDAY, APRIL 11

**U.K.: Consumer Price Index (March; 9:30 a.m. BST)**

The U.K.'s annual headline CPI inflation should have decelerated slightly to 2% y/y in March, from 2.3% in February, as the later timing of Easter this year compared to last year likely pushed down prices of airfares in yearly terms. We do not think that this seasonal slowdown announces a change in trend, though, and we expect higher import prices will continue to make their way through to consumer prices throughout the year. Accordingly, electricity prices are expected to rise sharply from April as five of the 'Big Six' U.K. energy suppliers announced fare hikes as an offset to the pound's slump and the recovery in oil prices, while food inflation—which normally lags food producer output prices by four months—should continue to creep higher in coming quarters following several months of weak figures. But not only should prices for noncore items accelerate, but core inflation will also continue to be pushed up by retailers passing on higher import prices to final consumers, while services inflation will follow suit. Even if the pound rallied at the beginning of the year, it still read around 15% lower against the dollar and 10% lower against the euro at the end of March compared with prior to the referendum.

Survey data corroborate our view: The latest Markit PMI again showed a substantial increase in average purchase prices in both manufacturing and services in the final month of the first quarter. Output prices also rose quickly, with the pace of increase remaining close to its record high reached in January in manufacturing and climbing to an eight-and-a-half year high in the service sector; sellers seem to be passing the higher input prices on to clients much faster than policymakers had anticipated.

**Euro Zone: Industrial Production (February; 10:00 a.m. BST)**

Euro zone industrial production likely contracted by a modest 0.1% m/m in February following a 0.9% increase in January, dragged down by poor performances in most of the major countries' energy sectors. Energy output was likely depressed by February's unseasonably warm temperatures, which curbed demand for heating across the area. This development was strongest in France, where energy production fell by a sharp 9.3% m/m, but a little less in Germany, where temperatures did not climb as high and where energy output remained relatively flat. Elsewhere, production in the other industrial sectors should have also remained rather subdued, as weakness in manufacturing in most major countries offset the somewhat stronger results in Germany.

Across countries, Germany should have driven the area's industrial production growth in February, as output excluding construction is expected to have increased by 0.8% m/m. Italy should have followed suit, mean-reverting from a steep 2.3% decline in the previous month, though no preliminary results for the country are available yet. Spain's performance should have been again rather unimpressive, as production in the country likely fell by a modest 0.2%, dragged down mainly by the energy sector. Production in France, meanwhile, is expected to have plunged, offsetting most of the gains in Italy and Germany.

**Russia: Foreign Trade (February; 2:00 p.m. BST)**

We expect the Russian foreign trade balance dipped to \$11.0 billion in February, largely due to falling oil exports. Oil appreciation has stalled since December, which will limit further growth in the value of oil exports. Oil export volume likely suffered in February as well. As part of the joint oil producers' agreement to cut supply, Russia cut 120,000 barrels per day of oil production in February compared with October. Since oil accounts for roughly 30% of Russian exports, declining volumes will weigh heavily on exports. Apart from oil, the ruble has appreciated and is at its strongest against

## The Week Ahead

the dollar since July 2015. This will make Russian goods more expensive on foreign markets, reducing international demand for all exports. Despite the drag from exports, a sharp increase in imports is not on the horizon. The Russian consumer remains weak, limiting domestic demand for foreign goods. As a result, the decline in the trade balance will be slight.

## WEDNESDAY, APRIL 12

**U.K.: Unemployment (February; 9:30 a.m. BST)**

The U.K. headline unemployment rate likely remained unchanged at 4.7% in the three months to February, its lowest since August 1975. After January's figures beat market expectations, with both the number of employed increasing and the number of unemployed falling further, some mean-reversion is expected in February, though not enough to offset previous gains. The number of vacancies remained elevated in February, and survey data all point to some stable momentum in the labor market. They signal further growth in permanent and temporary job placements, although the rate of growth is softening from the previous months.

But wages should have again declined, as firms are choosing to freeze salaries instead of laying off staff. We expect the outlook for wages to remain subdued, while the outlook for jobs should soften somewhat. The labor market responds with a lag to shocks in the economy, and anecdotal evidence show that firms are scaling back on hiring plans. With uncertainty surrounding Britain's exit from the EU, fewer businesses will likely see fit to launch new projects and step up hiring. We thus expect employment and self-employment to lose ground in 2017.

## THURSDAY, APRIL 13

**Germany: Consumer Price Index (March; 7:10 a.m. BST)**

Preliminary estimates show Germany's consumer prices rose by 1.6% y/y in March, not seasonally adjusted, slowing somewhat from the 2.2% increase in February, which was the fastest pace of increase since August 2012. Inflation of energy and food prices eased slightly. Energy prices rose 5.1% y/y, after jumping 7.2% in February. Growth of food prices slowed to 2.3% y/y from 4.4% previously. Meanwhile, the growth of prices of services almost halved to 0.7% from 1.3% in February.

The price pressures come mainly from higher commodity prices, not from any significant rebound in demand. The relatively weak euro has also been supporting inflation pressures. Higher prices for oil and metals, in particular, pushed input prices higher for German producers, with the rate of increase reaching almost a six-year high, according to Markit manufacturing PMI. We expect that the seasonally adjusted inflation was little changed at 2.1% in March.

**France: Consumer Price Index (March; 8:15 a.m. BST)**

France's annual EU-harmonized consumer prices likely rose 1.1% in March, down a touch from February, but added 0.5% on a month-ago basis. The annual number decelerated due to lower prices of manufactured products, while prices of services remained strong. Meanwhile, annual prices of tobacco added close to 3% in March and prices of energy likely rose nearly 10%. Core inflation also remains firmly in positive territory. We should see inflation strengthen in the months ahead, supported by stronger demand-pull and cost-push inflation pressures, and slowly but surely approach the ECB's inflation target within about half a year.

## FRIDAY, APRIL 14

No indicators are scheduled for this date.

**ASIA-PACIFIC**

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

**Rising global commodity prices boost inflation across Asia**

Chinese trade likely rebounded in March. Exports are benefiting from stronger global demand, especially in the U.S. Imports are picking up on the back of steady domestic demand and increased manufacturing. China's booming housing market continues to boost money supply. House price growth in Tier 1 cities is slowing as government measures to rein in credit growth start to take hold. But outside this, the housing market remains strong and continued to drive credit growth in March. The housing market is also supporting consumer price gains, which likely strengthened in March. Producer prices are also expected to accelerate as rising global commodity prices push up raw material costs.

Indian inflation is edging higher, with March headline CPI expected to strengthen. Higher global commodity prices are pushing up the cost of energy, while lower food prices provide some offset. Wholesale prices are also expected to accelerate, driven mostly by higher fuel prices due to a low base. Indian manufacturers likely slowed in February because of a slowdown in investment. Adding a further dampener to production is the disruption from the government's demonetization policy.

Elsewhere, industrial production continues to expand steadily in the Philippines as domestic demand and improved global conditions support manufacturing. Malaysian production is also expected to have rebounded in February after the Lunar New Year disruptions.

In Japan, machinery orders are expected to have rebounded in February after the Lunar New Year dragged on growth in January. Export-facing firms are benefiting from a weaker yen, but the recent appreciation poses a downside risk to the outlook. Singapore's economy likely started 2017 on steady footing. Upbeat manufacturing and services were likely offset by weakness in construction due to the fall in residential property prices.

Australia's housing market is growing strongly, and this will support mortgage growth. The regulatory body is working with major lenders to tighten lending standards, and this will likely dampen mortgage growth in the coming months. Australia's unemployment rate likely held steady in March because of subdued employment growth. This suggests wages will remain weak through the first half of 2017.

Meanwhile, Korea's unemployment rate likely dipped in March as job growth picked up on the back of stronger export conditions. However, restructuring by indebted businesses, especially in the shipping industry, will limit the gains. The Bank of Korea will likely maintain its current monetary policy stance. The economy is on the mend, but domestic conditions remain difficult and high private debt will keep the bank from easing further.

**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

## The Week Ahead

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.

## MONDAY, APRIL 10

**China – Monetary Aggregates – March**

Time: Unknown

Forecast: 11.5%

China's booming housing market continues to drive credit growth. Growth in the money supply likely accelerated to 11.5% in March from 11.1% previously. The bulk of credit growth is geared towards the housing market, which is in a cyclical upswing. Government measures to rein in lending to Tier 1 cities will likely dampen credit growth in coming months.

**Australia – Housing Finance – February**

Time: 11:30 a.m. AEST (1:30 a.m. GMT)

Forecast: 1.8%

Australia's housing market continues to steam ahead. The number of owner-occupied finance commitments likely gained 1.8% in February, up from a 0.5% increase in January. Low interest rates and solid population growth are driving up demand, especially in Sydney and Melbourne. Meanwhile, the mining-driven downturn in Western Australia continues to weigh on demand for housing there. The Reserve Bank of Australia is keeping a close eye on the market. In the April monetary statement, the bank noted that additional macro-prudential measures enacted by the regulatory body should rein in risky lending. This will likely dampen demand for finance in coming months.

**Taiwan – Foreign Trade – March**

Time: 6:00 p.m. AEST (8:00 a.m. GMT)

Forecast: US\$3.7 billion

Trade activity continues to strengthen in Taiwan, with the March trade surplus likely to expand to US\$3.7 billion from US\$3.4 billion previously. Exports and imports are expected to expand at a double-digit pace, with electronic-related items leading the way. The upswing in the global tech cycle is supporting demand for Taiwanese manufactured goods. Demand is receiving a further boost from the release of new smartphones by Samsung and Apple. The weak performance in 2016 is also boosting the year-on-year growth figures.

## TUESDAY, APRIL 11

**Philippines – Industrial Production – February**

Time: Unknown

Forecast: 8.7%

Philippine industrial production growth is expected to have remained strong in February, at 8.7% y/y, despite slowing slightly from January's 9.3% increase. The domestic economy continues to drive the rapid increases in manufacturing output as infrastructure projects and rising incomes support demand. Global conditions have also become more supportive of manufacturing, as evidenced by the improvements in merchandise exports from the Philippines that began 2017.

**Malaysia – Industrial Production – February**

Time: 2:00 p.m. AEST (4:00 a.m. GMT)

Forecast: 4.9%

## The Week Ahead

Malaysia's industrial production likely rebounded in February after the Lunar New Year-induced slowdown in January. Malaysia observes the weeklong holiday so it is faced with temporary suspensions of production and shipments. We expect production rose 4.9% y/y after January's disappointing 3.5%. Electronics production is upbeat and leading the manufacturing gains, coinciding with a sustained uptick in the global tech cycle ahead of product launches later in the year and improved U.S. demand.

## WEDNESDAY, APRIL 12

**South Korea – Employment – March**

Time: 9:00 a.m. AEST (Tuesday 11:00 p.m. GMT)

Forecast: 3.8% unemployed

Korean manufacturers likely increased hiring in March, supported by strong global demand for electronics. The headline unemployment rate likely dipped from 4% in February to 3.8% in March. This is partially because of the dip in participation after the surge in February when graduates entered the labor market. Manufacturing is benefiting from an upswing in global tech demand, but high debt burdens in many companies will limit job growth. The shipping industry is undergoing significant restructuring due to prolonged weak demand.

**Japan – Machinery Orders – February**

Time: 9:50 a.m. AEST (Tuesday 11:50 p.m. GMT)

Forecast: 4.6%

Japan's core machinery orders likely rebounded in February after falling by 3.2% m/m in January. Looking through the monthly volatility, machinery orders are doing well, especially by recent trends. The lower yen along with an uptick in the global tech cycle has lifted manufacturing, especially for external-facing firms. Yet the outlook has dimmed with the yen appreciating since the start of 2017, and manufacturers expect cooler conditions ahead.

**China – Consumer Price Index – March**

Time: 11:30 a.m. AEST (1:30 a.m. GMT)

Forecast: 1.8%

Consumer inflation is expected to have rebounded in March after the Lunar New Year dented food prices in February. Headline CPI likely increased 1.8% y/y, accelerating from a 0.8% gain previously. A buoyant housing market continues to drive underlying price pressures. The central bank has started to tighten lending policy and this will limit house price gains in the coming months.

**China – Producer Price Index – March**

Time: 11:30 a.m. AEST (1:30 a.m. GMT)

Forecast: 8.2%

Producer price inflation likely accelerated further in March as rising commodity prices pushed up raw material costs. Headline PPI is expected to have increased 8.2% y/y, up from a 7.8% y/y gain in February. The gains in oil, iron ore and coal prices are the main driver of raw input costs. This is somewhat the result of the buoyant housing market combined with a reduction in overcapacity in heavy industry. Inflation pressures are likely to keep building in the first half of the year, before low base effects fade and growth slows.

**India – Consumer Price Index – March**

Time: 10:00 p.m. AEST (12:00 p.m. GMT)

Forecast: 3.9%

India's consumer price inflation is slowly creeping up amid higher global commodity prices, especially as increased energy prices filter through from firms to consumers. Yet inflation remains below the central bank's 5% target because of low food prices, especially for vegetables, which fell 8.3% in February after a good monsoon season in 2016. Normal monsoons are expected this year, suggesting food price spikes are not forecast for coming months. CPI likely hit 3.9% y/y in March, up from February's 3.7%.

## The Week Ahead

**India – Industrial Production – February**

Time: 10:00 p.m. AEST (12:00 p.m. GMT)

Forecast: 2.2%

Indian industrial production likely cooled slightly in February after January's 2.7% y/y expansion. Production across India is weak, as firms are reluctant to increase investment. An added drag is coming from demonetization, the government's removal of 86% of the currency in circulation. We expect the disruption to business due to demonetization, given that India relies heavily on cash, will be most felt in the March quarter.

## THURSDAY, APRIL 13

**China – Foreign Trade – March**

Time: Unknown

Forecast: US\$24.4 billion

Chinese trade activity remained solid in March. The monthly trade balance likely returned to surplus after dipping into deficit in February. Export growth continues to strengthen on the back of increasing U.S. demand, while the import bill ticks up on higher global commodity prices. We expect trade activity will continue to grow steadily in the coming months, although the anti-trade rhetoric from the new U.S. administration poses a downside risk to the outlook.

**South Korea – Monetary Policy – April**

Time: 11:00 a.m. AEST (1:00 a.m. GMT)

Forecast: 1.25%

The Bank of Korea is expected to stand pat again in April, keeping the official cash rate on hold at 1.25% for the ninth consecutive month. Stronger global demand for Korean electronics is supporting the export-oriented economy, and rising global commodity prices are putting upward pressure on headline inflation. However, there are downside risks to the outlook. Rising tension with China and increased competitiveness in global manufacturing could derail the export rebound. High household debt loads will likely weigh on domestic demand and keep a lid on underlying inflation. The central bank is unlikely to ease monetary policy further in support of economic activity given the risk to financial stability. Furthermore, rising global interest rates could result in capital outflows. We expect the BoK will maintain its current stance until the final quarter of 2017.

**Australia – Employment Situation – March**

Time: 11:30 a.m. AEST (1:30 a.m. GMT)

Forecast: 5.9% unemployed

Australia's unemployment rate is likely to remain at 5.9% in March for the second consecutive month. This is the highest the rate has been since January 2016, as employment growth falls behind an increasing labor market. The volatility of the job data makes it difficult to get a good handle on the labor market. But the record high underemployment rate in February combined with disappointing full-time employment numbers suggests plenty of slack remains in the job market. This is hurting wage growth and crimping spending.

## FRIDAY, APRIL 14

**Singapore – GDP - Advanced – 2017Q1**

Time: Unknown

Forecast: 1.8%

The advanced estimate of Singapore's first quarter GDP is expected to show that economic growth slowed to 1.8% y/y compared with the 2.9% rise in the final three months of 2016. However, this difference is misleading and because of differing base effects. Abstracting from this, the data will show that the city-state's economy continued to perform well in the first three months of 2017. In particular, manufacturing output will grow strongly as a result of improved global demand. The service sector will likely also improve. The laggard will be construction output, as falling residential property prices continue to weigh on building activity.



## The Week Ahead

**India – Wholesale Price Index – March**

Time: 4:45 p.m. AEST (6:45 a.m. GMT)

Forecast: 6.8%

India's wholesale price inflation likely continued rising in March after February's 6.6% y/y expansion. Higher global fuel prices are the culprit. Low base effects from low oil prices in 2016 are also bloating the headline. As India is one of the largest net importers of oil, an uptick in global fuel prices tends to reverberate through the economy. As core inflation remains low by historical standards, there's still room for monetary easing, and at least one 25-basis point interest rate cut is expected in the second half of 2017.

## The Long View

### The US: March's \$58.9 billion of US\$ high-yield bond issuance was second only to the record \$59.7 billion of September 2013

By John Lonski, Chief Economist, and Ben Garber, Economist, Moody's Capital Markets Research Group, April 6, 2017

#### CREDIT SPREADS

As measured by Moody's long-term average corporate bond yield, the recent investment grade corporate bond yield spread of 123 bp resembles 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 401 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, 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 2.8% annually for IG and may advance by 17.3% 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 1.375%. 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

April 6, 2017

### Eurozone

The euro zone's short-term outlook seems promising, despite moderate threats. High-frequency indicators point to accelerating growth at the beginning of 2017 thanks to strengthening domestic demand, a pickup in exports even to the U.K., and a falling unemployment rate in many countries. Yet joblessness hasn't dropped enough to generate stronger wage growth in southern European countries, which together with mounting inflation pressures may undermine fragile household spending. Structural rigidities, mainly in southern Europe, are also restraining faster adjustments in the labor market, while 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.

Increasing external demand will also add to the expanding euro zone economy. A weaker euro combined with stronger foreign demand will help to drive up euro zone exports in coming months. Nevertheless, Britain's departure from the EU poses a real risk, and any fallout will likely be felt once the U.K. formally withdraws and starts renegotiating trade agreements. How individual countries will fare depends on the trade deals they strike. Although EU countries should coordinate and approve common rules, some countries that trade heavily with the U.K. will probably negotiate better conditions and sign deals sooner. But any agreements will take time to hammer out, which will heighten uncertainty and weigh on trade in the meantime.

Yet accommodative monetary policy, which will keep the euro relatively cheap, and reorienting exports to new markets could offset expected weaker shipments to the U.K. Subdued demand-driven inflation pressure and soft credit growth relative to the stage of the business cycle should keep the monetary stance accommodative until late 2017. Nevertheless, after secondary-round inflation effects from higher energy prices materialize, the ECB will change its rhetoric and cut its pace of monthly purchases in October, arguably by €10 billion a month, while extending them beyond 2017. With the ECB expected to shift to a more hawkish monetary policy stance, the sovereign bond yields of fiscally troubled countries could spike. This would prompt governments to implement less expansionary fiscal policy in 2018.

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. So far, the euro area seems healthy enough to overcome these threats.

## The Long View

### U.K.

The U.K. ended 2016 as the world's fastest growing advanced economy. But the impact of the British public's decision to leave the European Union is becoming visible in the economy. Job growth has slowed and the sharp depreciation in the British pound has increased consumer prices and dampened consumer spending. Economic activity in the U.K. is expected to slow in the coming quarters as the resulting uncertainty impacts businesses' hiring and investment decisions. The combination of higher oil prices and soaring import prices is threatening households' living standards. Furthermore, nominal wages growth is expected to stutter this year in the face of exit-related uncertainties. While the pound's depreciation should be good news for the country's exporters, firms are choosing to raise prices, erasing most competitiveness gains from the lower currency and failing to offset the negative effects on domestic demand from imported inflation.

The slowdown in inward foreign direct investment will be one of the largest drags on the U.K. economy. Britain is one of the world's most attractive destinations for foreign investment—accounting for about 5% of the global total in recent years—and is currently the number two host country in the world for inward FDI stock, after the U.S. By leaving, the U.K. is set to lose its competitive advantage as the gateway to the EU market for non-EU countries. This means that Britain will not attract as much investment as it did before, and this will curb demand for sterling. The trade-weighted pound is expected to remain under pressure until the final trade agreement between the U.K. and the EU is approved, lingering around \$1.20 and €1.16 in the coming quarters.

Despite the slump in sterling and associated rise in inflation, the weakening British economy is expected to keep the Bank of England on the sidelines. Moody's Analytics expects the Monetary Policy Committee to delay tightening policy until well after the EU exit, gradually raising the main policy rate from mid-2019. Fiscal policy will support the BoE's accommodative monetary policy. The government has abandoned its plan to close the budget deficit by 2020 and has confirmed plans to lower the corporate tax rate from the current rate of 20% to 17% by April 2020 and increase government spending to prop up waning economic activity.

U.K. economic growth is projected to slow sharply in the coming quarters amid exit negotiations, as the resulting uncertainty impacts businesses' hiring and investment decisions. Real GDP growth is expected to decelerate from 1.8% in 2016 to around 1.5% in 2017 and 0.9% in 2018 before gradually strengthening to settle around 1.8%, its new post-exit potential growth rate, around 0.2 percentage point lower than it would have been were the U.K. to stay in the EU.

### ASIA PACIFIC

By Katrina Ell, Emily Dabbs, Jack Chambers, and the Asia-Pacific Staff of Moody's Analytics  
April 6, 2017

Japan's economy is on shaky ground. Headline inflation ticked up in February, mostly due to rising energy prices and a weak yen as domestic demand lags. Spending is being constrained by weak wage growth and difficult employment conditions. Manufacturing is the bright spot, and the depreciation of the yen supports export competitiveness. However, the currency is exposed to external pressures and a rebound could derail the economy's main driver of growth.

Our high-frequency GDP model estimates Japan's economy is growing around 1% annualized in the March quarter, compared with the December quarter's 1.2% annualized gain. The February data lowered the estimate by 2.3 percentage points. We expect the estimate to weaken even more as more information for the quarter comes.

## The Week Ahead

Japanese consumers are staying frugal in 2017. Retail spending was relatively flat in February, rising just 0.1% y/y and falling short of market expectations for a 0.5% gain. Consumers cut back spending on food and durable goods to deal with the higher energy prices. Higher crude oil prices alongside a lower yen have pushed up Japan's gasoline prices. February's household expenditure survey was soft, rising just 0.1% y/y, after a 1.7% y/y decline in February. The two measures of household consumption often differ because retail spending is a measure of actual store sales, while household expenditure is a survey of consumers. But in February they were in agreement: consumption is weak.

Flat wage growth and uncertain employment prospects keep consumers cautious. Employers have been favoring temporary workers over full-time, permanent staff. From a consumption perspective this is undesirable because workers' income and benefits are less stable. Workers in part-time, temporary or contract jobs are a rising share of the economy, comprising 38% of the workforce in 2016, compared with 33% a decade ago, according to the Labor Ministry.

There has been some relief, though. In recent months, temporary staff have enjoyed stronger wage growth. Part-time hourly wages were up 2.6% y/y in January, compared with a 0.4% gain for full-time base wages. Firms tend to more easily increase part-time wages, as they can more easily reverse course in a downturn. In contrast, wages of full-time employees where lifetime employment is prevalent especially in large companies are more difficult to cut.

Japanese manufacturing was a stand out in the February data, with production increasing at the strongest pace in months. New car releases are bolstering auto production, while strong global demand for electronics is boosting ICT output. After steady gains over the past few months, electronic parts and components softened in February, but new smartphone releases in the first half of the year should help production in March.

A major tailwind for Japanese production is the depreciation of the yen, which is supporting the export competitiveness of Japanese manufacturers. The yen depreciated around 12% from November to the end of December in expectation of higher fiscal spending in the U.S., supporting steady gains in the annual growth of production and shipments.

But the momentum has stalled in 2017, with the yen appreciating 4.3% so far in 2017. Developments in the U.S. are the major source of uncertainty surrounding the yen's path in the coming months; continued currency appreciation would pose a downside risk to the ongoing strength of export-facing production. That would be a blow to Japan's economy, which is currently relying on export-facing businesses to drive growth.

Japanese inflation is rising, but it still remains well below the central bank's 2% target. Core CPI expanded 0.2% y/y in February, which is the first time since 2015 that the measure has expanded for two consecutive months. The recent depreciation of the yen is helping boost values of imported goods and rising global energy prices are also boosting headline inflation. Despite Japan's developed nuclear power infrastructure, its overall use remains relatively low compared with before the 2011 earthquake. Nuclear reactors are expected to come on line slowly and will likely generate less power than previously. This means Japan's appetite for imported energy will remain buoyant, and prices of energy should push up inflation over the coming year.

That said, the 2% inflation target is still unattainable. The Bank of Japan remains committed to stretch its quantitative easing program and is willing to overshoot the 2% inflation target. However, since prices are unlikely to ever reach 2%, we expect the BoJ will begin to scale back its pace of asset purchases next year.

## Ratings Round-Up

By Njundu Sanneh

### The Year's Upgrade Rally Continues

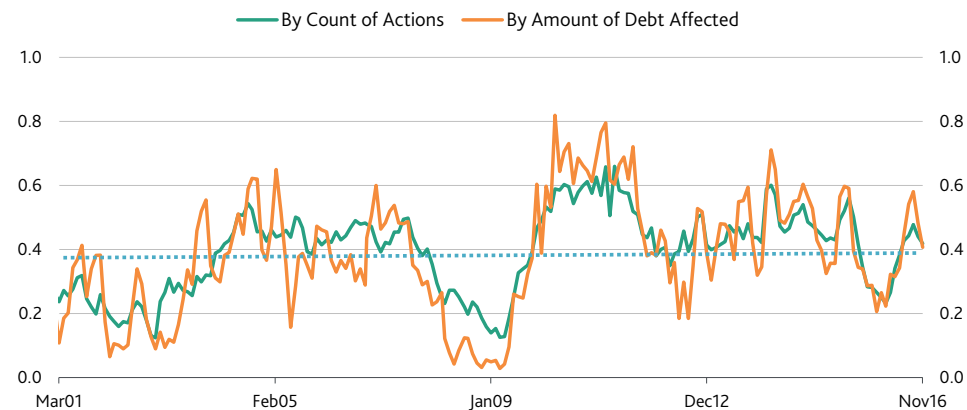
It was another stellar week for positive rating changes, which comprised eight of 14 US changes and six of the eight for Europe. The rate of positive rating changes has been well above the long-term average of 40% and upgrades have bested downgrades for all but a few weeks this year. This bodes well for corporate credit quality, which is buoyed by low credit spreads even for the speculative grade credit bucket, and even as the Federal Reserve has signaled a tightening monetary policy and prepares to start offloading some of its mortgage securities.

In positive rating action for the retail sector, Raley's was upgraded for outperforming expectations and resilience in its same store sales growth within a challenging business environment. Growth initiatives such as loyalty programs, increased product offerings, and planned growth of specialty wine and craft beer were cited as factors influencing the rating upgrade.

European rating changes were concentrated in Russia with three and Netherlands with two. Speculative grade companies accounted for all but one of the firms on the list with financials accounting for three of the eight.

FIGURE 1

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



\* Trailing 3-month average

Source: Moody's

FIGURE 2

#### Rating Key

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

## Ratings Round-Up

FIGURE 3 Rating Changes: Corporate &amp; Financial Institutions – US

Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/SG
3/29/17	B&G FOODS, INC.	Industrial	SrSec/BCF		U	Ba3	Ba2	SG
3/29/17	HD SUPPLY, INC.	Industrial	SrUnsec/SrSec/BCF/LTCFR/PDR	3,500	U	B3	B2	SG
3/30/17	NMH HOLDINGS, INC. - National MENTOR Holdings, Inc.	Industrial	LTCFR/PDR		U	B2	B1	SG
3/30/17	NMSC HOLDINGS, INC.	Industrial	SrSec/LTCFR/PDR		D	B1	B2	SG
3/30/17	QUORUM HEALTH CORPORATION	Industrial	SrUnsec/SrSec/BCF/LTCFR/PDR	400	D	Caa1	Caa2	SG
3/30/17	SIX FLAGS ENTERTAINMENT CORPORATION	Industrial	SrUnsec	3,000	U	B2	B1	SG
3/30/17	TALEN ENERGY SUPPLY, LLC	Utility	SrUnsec	600	D	Ba3	B1	SG
3/31/17	ALTICE US HOLDING I S.A.R.L. Cequel Communications Holdings I, LLC	Industrial	LTCFR/PDR		U	B3	B2	SG
3/31/17	STG-FAIRWAY ACQUISITIONS, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	Caa1	SG
3/31/17	SUMMIT MATERIALS, LLC	Industrial	SrUnsec/LTCFR/PDR	900	U	Caa1	B3	SG
4/3/17	KEMET CORPORATION	Industrial	LTCFR/PDR		U	Caa1	B3	SG
4/4/17	ENDO INTERNATIONAL PLC - Endo Finance LLC	Industrial	LTCFR/PDR		D	B1	B2	SG
4/4/17	RALEY'S	Industrial	SrSec/BCF/LTCFR/PDR		U	B3	Ba3	SG
4/4/17	SOFTBANK GROUP CORP. - Clearwire Communications LLC	Industrial	SrUnsec	1,258	D	Ba3	B3	SG

Source: Moody's

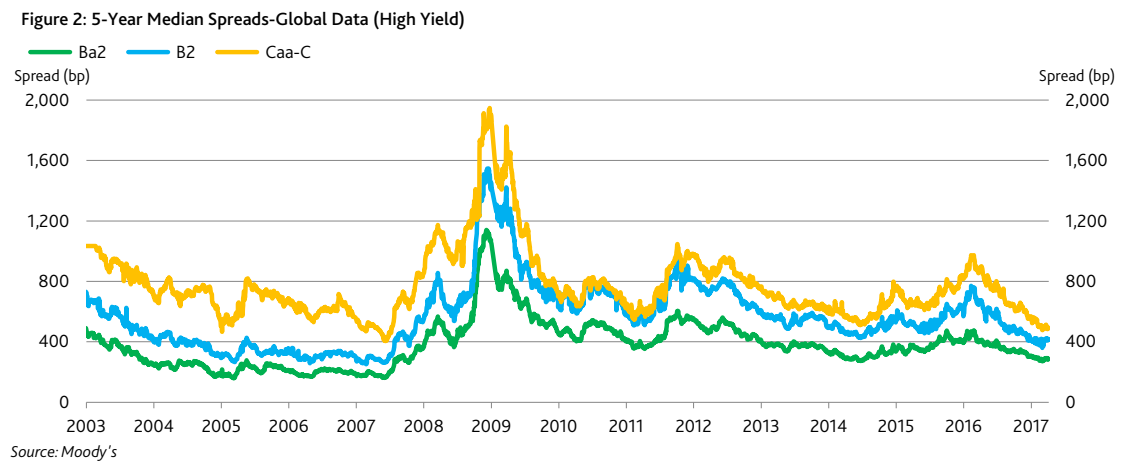
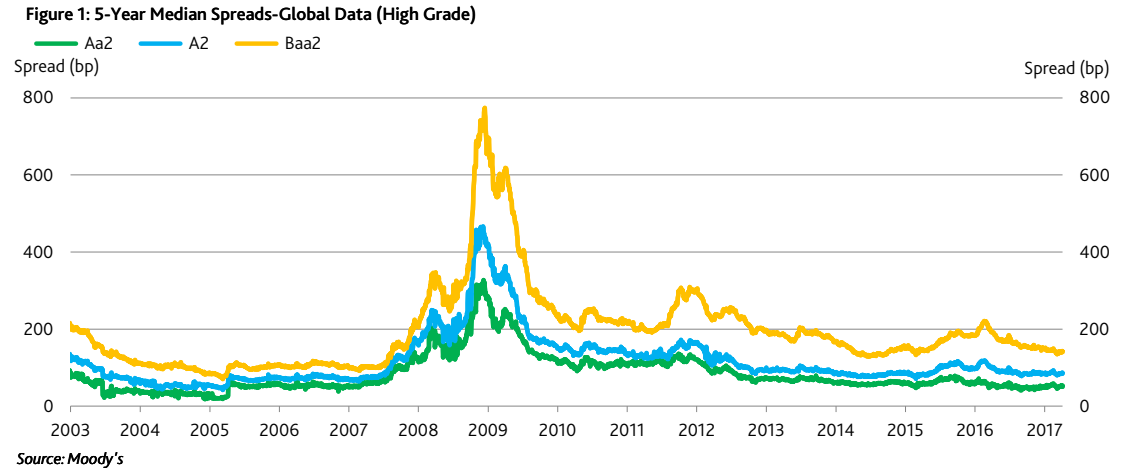
FIGURE 4 Rating Changes: Corporate &amp; Financial Institutions – EUROPE

Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	Old STD Rating	New STD Rating	IG/ SG	Country
3/29/17	BELFIUS BANK SA/NV	Financial	SrUnsec/SLTD/Sub/SrSub/JrSub/MTN/CP	3,969	U	A3	A2	P-2	P-3	IG	BELGIUM
3/29/17	ADRIA GROUP BV - Agrokor D.D.	Industrial	SrUnsec/LTCFR/PDR	968	D	B3	Caa1			SG	CROATIA
4/4/17	MONIER HOLDINGS SCA	Industrial	SrSec/LTCFR/PDR/BCF	465	U	Ba3	Ba2			SG	LUXEMBOURG
3/31/17	JACOBS DOUWE EGBERTS HOLDINGS B.V.	Industrial	SrSec/BCF/LTCFR/PDR		U	Ba3	Ba2			SG	NETHERLANDS
3/31/17	X5 RETAIL GROUP N.V.	Industrial	LTCFR/PDR		U	Ba3	Ba2			SG	NETHERLANDS
4/3/17	CENTER-INVEST BANK	Financial	LTD		U	B1	Ba3			SG	RUSSIA
4/4/17	NBD BANK	Financial	LTD		U	B1	Ba3			SG	RUSSIA
4/4/17	POWER MACHINES PJSC	Industrial	LTCFR/PDR		D	Ba2	B1			SG	RUSSIA

Source: Moody's

## Market Data

### Spreads





## CDS Movers

Figure 3. CDS Movers - US (March 29, 2017 – April 5, 2017)

### CDS Implied Rating Rises

Issuer	CDS Implied Ratings		Senior Ratings
	Apr. 5	Mar. 29	
John Deere Capital Corporation	A3	Baa1	A2
Capital One Bank (USA), N.A.	A1	A2	Baa1
Sprint Communications, Inc.	B2	B3	B1
CIT Group Inc.	Baa3	Ba1	Ba3
Bristol-Myers Squibb Company	Aa3	A1	A2
Occidental Petroleum Corporation	Baa1	Baa2	A3
NRG Energy, Inc.	B2	B3	B1
Chesapeake Energy Corporation	Caa1	Caa2	Caa3
CenturyLink, Inc.	B2	B3	Ba3
ConocoPhillips	Baa1	Baa2	Baa2

### CDS Implied Rating Declines

Issuer	CDS Implied Ratings		Senior Ratings
	Apr. 5	Mar. 29	
Federal Realty Investment Trust	Baa3	Baa1	A3
United States of America, Government of	Aa3	Aa2	Aaa
Ally Financial Inc.	B2	B1	Ba3
Ford Motor Credit Company LLC	Ba2	Ba1	Baa2
McDonald's Corporation	A1	Aa3	Baa1
CVS Health	A3	A2	Baa1
HCA, Inc.	Ba2	Ba1	B1
Bank of New York Mellon Corporation (The)	A3	A2	A1
Ford Motor Company	Ba2	Ba1	Baa2
Procter & Gamble Company (The)	Aa3	Aa2	Aa3

### CDS Spread Increases

Issuer	Senior Ratings	CDS Spreads		
		Apr. 5	Mar. 29	Spread Diff
GenOn Energy, Inc.	Caa3	2,243	2,008	235
K. Hovnanian Enterprises, Inc.	Caa3	1,561	1,416	144
Hertz Corporation (The)	B2	779	662	118
Avis Budget Car Rental, LLC	B1	475	420	55
American Axle & Manufacturing, Inc.	B2	378	332	46
Cablevision Systems Corporation	B3	420	381	39
Federal Realty Investment Trust	A3	100	64	36
Neiman Marcus Group LTD LLC	Caa3	1,379	1,345	34
Staples, Inc.	Baa2	233	203	30
Penney (J.C.) Corporation, Inc.	B3	706	677	29

### CDS Spread Decreases

Issuer	Senior Ratings	CDS Spreads		
		Apr. 5	Mar. 29	Spread Diff
Nine West Holdings, Inc.	Ca	4,415	4,863	-448
Sears Roebuck Acceptance Corp.	Caa3	3,501	3,698	-197
Parker Drilling Company	Caa1	729	815	-86
Sears Holdings Corp.	Caa3	3,617	3,700	-83
Crown Castle International Corp.	Baa3	244	314	-69
Talen Energy Supply, LLC	B1	727	792	-65
Chesapeake Energy Corporation	Caa3	575	632	-58
Frontier Communications Corporation	B1	731	766	-35
SLM Corporation	Ba2	397	427	-30
Lexmark International, Inc.	Ba2	244	275	-30

Source: Moody's, CMA

Figure 4. CDS Movers - Europe (March 29, 2017 – April 5, 2017)

CDS Implied Rating Rises			
Issuer	CDS Implied Ratings		Senior Ratings
	Apr. 5	Mar. 29	
Old Mutual Plc	A2	Baa1	Baa3
Unione di Banche Italiane S.p.A.	Ba3	B1	Baa3
Banco Comercial Portugues, S.A.	B3	Caa1	B1
AstraZeneca PLC	A2	A3	A3
NN Group N.V.	Baa1	Baa2	Baa2
Vedanta Resources plc	B3	Caa1	B3
Evrax Group S.A.	B2	B3	B1
Stena AB	Caa1	Caa2	B3
Novafives S.A.S.	B3	Caa1	B3
PizzaExpress Financing 1 plc	Caa1	Caa2	Caa1

CDS Implied Rating Declines			
Issuer	CDS Implied Ratings		Senior Ratings
	Apr. 5	Mar. 29	
Franz Haniel & Cie. GmbH	Baa2	Aaa	Ba1
France, Government of	A3	A2	Aa2
Rabobank	Baa1	A3	Aa2
Societe Generale	Baa3	Baa2	A2
Nordea Bank AB	A2	A1	Aa3
BNP Paribas	Baa3	Baa2	A1
Abbey National Treasury Services plc	Baa2	Baa1	Aa3
The Royal Bank of Scotland plc	Baa3	Baa2	A3
Finland, Government of	Baa1	A3	Aa1
Credit Agricole Corporate and Investment Bank	Baa3	Baa2	A1

CDS Spread Increases		CDS Spreads		
Issuer	Senior Ratings	Apr. 5	Mar. 29	Spread Diff
Novo Banco, S.A.	Caa2	1,000	850	149
Norske Skogindustrier ASA	Caa3	4,623	4,501	122
Franz Haniel & Cie. GmbH	Ba1	71	10	60
Galapagos Holding S.A.	Caa2	797	772	25
Care UK Health & Social Care PLC	Caa1	643	619	24
CMA CGM S.A.	B3	519	499	19
Portugal, Government of	Ba1	249	234	15
Eksportfinans ASA	Baa3	500	488	13
Banco Popular Espanol, S.A.	Ba3	266	254	12
Fiat Chrysler Automobiles N.V.	B1	282	270	12

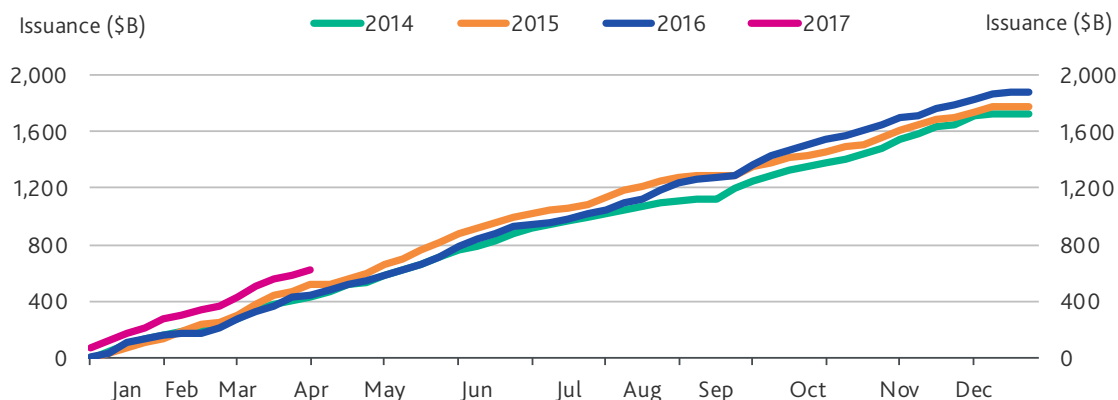
  

CDS Spread Decreases		CDS Spreads		
Issuer	Senior Ratings	Apr. 5	Mar. 29	Spread Diff
Banco Comercial Portugues, S.A.	B1	399	467	-68
Matalan Finance plc	Caa2	1,531	1,595	-64
Novafives S.A.S.	B3	416	457	-41
Banca Monte dei Paschi di Siena S.p.A.	B3	369	395	-26
Greece, Government of	Caa3	770	791	-21
Old Mutual Plc	Baa3	42	59	-17
Stena AB	B3	625	641	-16
Evrax Group S.A.	B1	305	317	-12
NN Group N.V.	Baa2	59	70	-11
Legal & General Group Plc	A3	70	81	-11

Source: Moody's, CMA

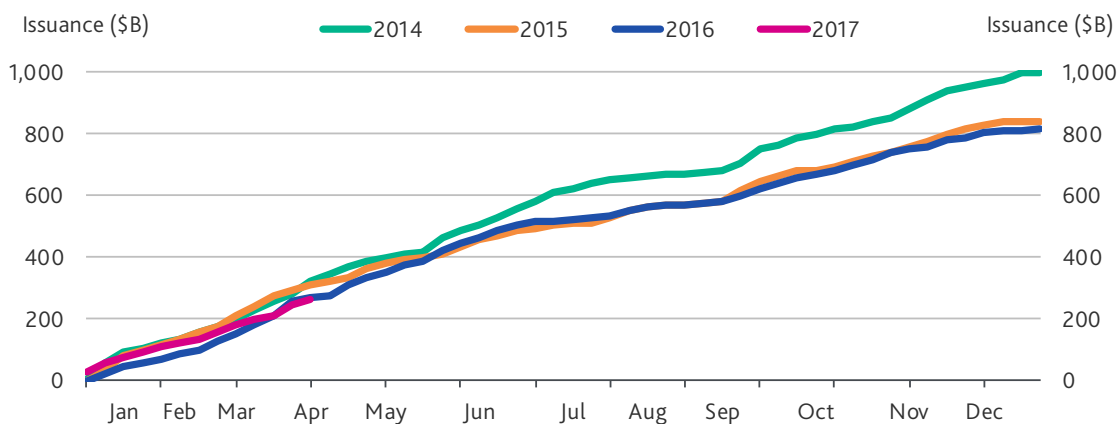
## Issuance

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	27.504	9.697	39.517
Year-to-Date	450.105	127.245	627.671

	Euro Denominated		
	Investment-Grade	High-Yield	Total*
	Amount \$B	Amount \$B	Amount \$B
Weekly	13.873	4.062	18.426
Year-to-Date	223.780	28.983	262.010

\* Difference represents issuance with pending ratings.

Source: Moody's / Dealogic

---

## Moody's Capital Markets Research *recent publications*

Sovereign Risk Report: Latin American Credit Risk Measures Deteriorate Amid Political Crisis in Venezuela  
Near Perfect Equity Market Firms Credit (Capital Markets Research)

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)

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:** 195288

**Contact Us**

Americas :

1.212.553.4399

---

**Editor**

Dana Gordon

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.moody.com](http://www.moody.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 61 003 399 657 AFSL 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.