

WEEKLY MARKET OUTLOOK

Moody's Capital Markets Research

Weekly Market Outlook Contributors:

John Lonski
1.212.553.7144
john.lonski@moody's.com
Njundu Sanneh
1.212.553.4036
njundu.sanneh@moody's.com
Franklin Kim
1.212.553.4419
franklin.kim@moody's.com
Yuki Choi
1.212.553.0906
yukyung.choi@moody's.com

Moody's Analytics/Europe:

Tomas Holinka
+420 (221) 666-384
Tomas.holinka@moody's.com
Barbara Teixeira Araujo
+420 (224) 106-438
Barbara.TeixeiraAraujo@moody's.com

Moody's Analytics/Asia-Pacific:

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

Editor

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

follow us on


So Much Debt, So Little Growth

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

So Much Debt, So Little Growth.

[» 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, "At the end of September, our median HY bond spread equaled 306 bp, its thinnest month-end gap since May 2007's 283 bp," begin on page 17.

Credit Spreads	Investment Grade: Year-end 2017 spread to exceed its recent 105 bp. High Yield: After recent spread of 356 bp, it may approximate 400 bp by year-end 2017.
Defaults	US HY default rate: Compared to September 2017's 3.3%, Moody's Default and Ratings Analytics team forecasts that the US' trailing 12-month high-yield default rate will average 2.3% during 2018's third quarter.
Issuance	In 2016, US\$-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 5.3% to a new zenith of \$1.487 trillion, while US\$-priced high-yield bond issuance may increase by 27.3% to \$434 billion, or a tad under 2014's \$435 billion record high.

[» FULL STORY PAGE 17](#)

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

Telling Downgrades in Retail.

[» 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: Spain, upside surprise, bulls, less fear, Fed & BoJ, inflation, market triggers, hurricanes, data in sync, Harvey, inflation, yields, Korea, jobless rate, spreads, Saudi Arabia, lending, El Salvador, liquidity, CreditEdge, European credit, rates, sov 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.

Credit Markets Review and Outlook

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

So Much Debt, So Little Growth

Today marks the 30th anniversary of the stock market crash of 1987. October 19, 1987's -17.9% daily plunge by the market value of US common stock included a -20.5% plummet by the S&P 500. To better grasp what transpired, consider that a -20% dive by today's Dow Jones Industrial Average would sink the blue-chip average by roughly -4,600 points to something under 20,000 points. Moreover, a -17.9% collapse would slash the market value of common equity by -\$4.75 trillion, which approximates 25% of Q2-2017's nominal GDP.

It was also on October 19, 1987 that the 10-year Treasury yield was last at or above 10%. Many of us may not live long enough to see the return of a 10-year Treasury yield above 7%, never mind 10%.

In addition to the amplification of selling pressures triggered by portfolio-insurance programs, a fundamentally excessive climb by interest rates was one of the primary drivers behind October 19's stock price plunge. In response to 1986's profits recession, the 10-year Treasury yield's month-long average sank from March 1985's 11.86% to January 1987's 7.08%. Moreover, the federal funds rate target fell from March 1985's 8.50% to the 5.88% of August-December 1986.

However, a recovery by profits and a jump by the average monthly percent increase by payrolls from yearlong 1986's 0.16% (or 234,000 new jobs per month in terms of the number employed today) to 1987's 0.26% (or a similarly-adjusted 378,000 new jobs per month) quickly drove the effective federal funds rate up to 7.30% by October 1987. Meanwhile the 10-year Treasury yield underwent an even more dramatic ascent to September 1987's 9.42% that set the stage for October's tumultuous sell-off.

In view of how a new Fed chairperson is a distinct possibility, it's worth mentioning that Alan Greenspan had been leading the Fed for just over four months at the time of the market crash. More specifically, after Greenspan assumed the helm on June 2, 1987, the fed funds target briefly dipped from May 1987's 6.75% to 6.63% by the end of July 1987. Thereafter, fed funds eventually reached 7.3% until the events of October 19 drove fed funds down to 6.5% by February 1988.

Nevertheless, the greater than 10% 10-year Treasury yield of the three days prior to and the morning of October 19, 1987 had more to do with the stock price crash than did the previous firming of monetary policy. Basically, much more so than the Fed, the Treasury bond market bears responsibility for October 1987's stock price plunge.

The Fed rate hikes of 1987 appeared reasonable given the rapid pace of jobs growth and the rise by the annual rate of core PCE price index inflation from a January 1987 low of 2.8% to September 1987's 3.4%. Coincidentally, the annual rate of core PCE price index inflation would continue its rise until peaking at the 4.7% of February 1989, which has never been approached since and now matches a 34-year high.

Though both business activity and profits thrived prior to and following October 1987's stock price crash, the month-long average for the market value of common stock would still plunge by -27.4% from its August 1987 high to its December 1987 bottom. It would not be until July 1989 that the market value of common equity returned to its high of August 1987. Thus, the growth of profits amid a positive economic outlook does not necessarily guarantee the avoidance of a jarring plunge by share prices.

Record ratio of debt-to-GDP disputes consensus interest rate views

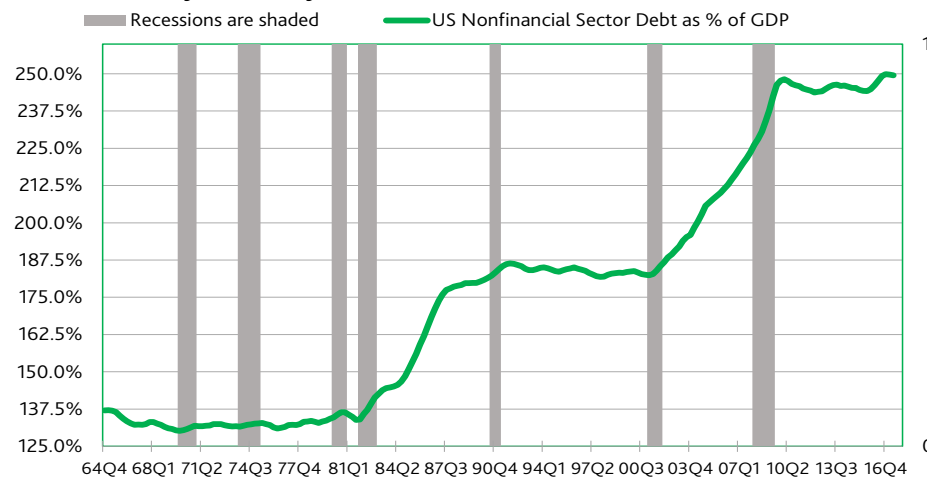
The latest deceleration by the US's total nonfinancial-sector debt complements the recent slowdown by core consumer price inflation. The combination of modest debt growth and well-contained price inflation underpins the case favoring a limited rise by interest rates. Recent consensus projections of a nearly 2% fed funds rate and a 3% 10-year Treasury yield by 2018's final quarter may weigh noticeably on business activity given today's near record high ratio of private and public nonfinancial-sector debt to GDP. (Figure 1.)

The downshifting of US real GDP's 10-year average annual growth rate has coincided with a climb by the ratio of nonfinancial-sector debt to GDP. This brings attention to how slower-than-anticipated spending growth amplifies leverage. Moreover, a deterioration of the fundamentals driving growth may compel

Credit Markets Review and Outlook

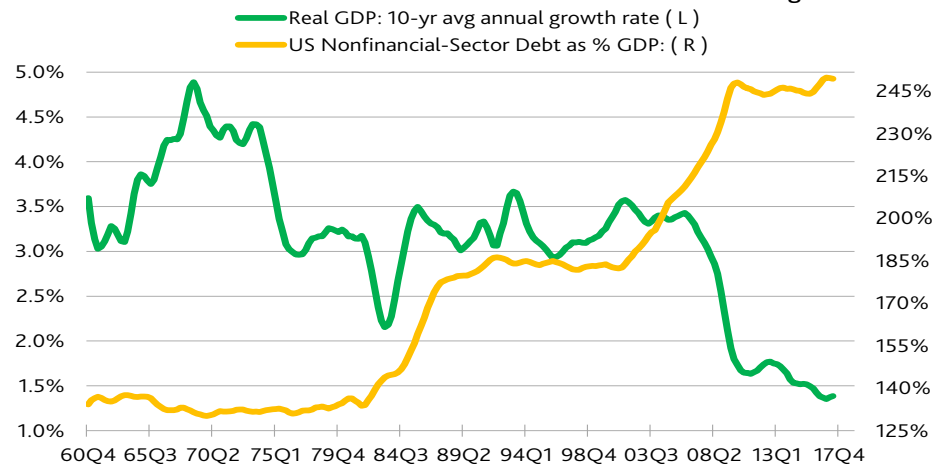
private and public sectors to engage in more debt-financed spending in order to avoid an even more pronounced deceleration by real economic growth.

Figure 1: Record Ratio of US Nonfinancial-Sector Debt to GDP Warns US Economy May Be Incapable of Shouldering Long-Term Projections of 2.8% for Fed Funds and 3.6% for 10-year Treasury Yield



When the average ratio of nonfinancial-sector debt to GDP rose from the 135% of 1960-1984 to the 175% of 1985-2001, the average annualized rate of real GDP growth slowed from 3.6% to 3.3%, respectively. In conjunction with the 229% average ratio of debt to GDP since 2001, real GDP growth has slowed to 1.9% annualized, on average. (Figure 2.)

Figure 2: As Real GDP's 10-year Average Annual Growth Rate Slows, Ratio of US' Private & Public Nonfinancial-Sector Debt to GDP Climbs Higher



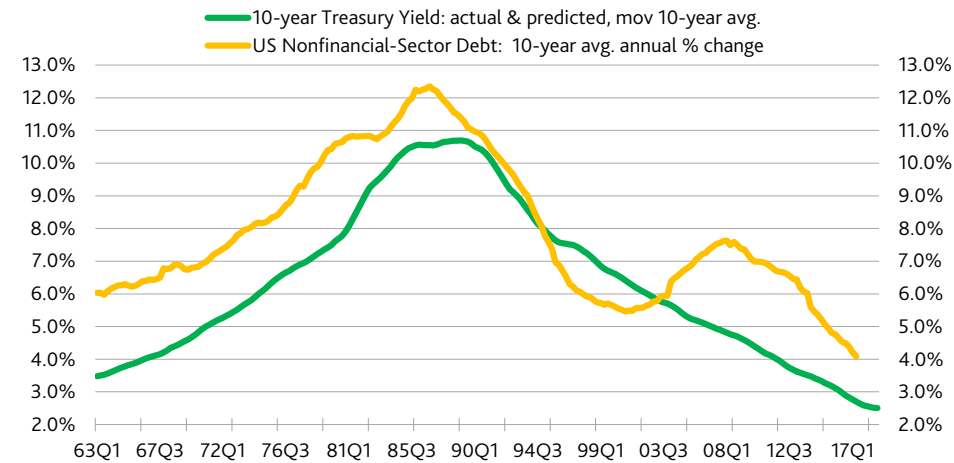
Benchmark Treasury yields follow path taken by debt growth

The 10-year average annual growth rate of total nonfinancial-sector debt ebbed to a record low 4.1% for the span-ended Q2-2017. At the end of the three previous business cycle upturns, the 10-year average annualized growth rates for total nonfinancial-sector debt were 7.6% as of Q4-2007, 5.5% as of Q4-2000, and 10.9% as of Q2-1990.

The long-term trend shows benchmark Treasury bond yields moving in the direction taken by the underlying rate of growth for the US's total nonfinancial-sector debt. When measured over a ten-year span, the average annualized growth rate of nonfinancial-sector debt peaked at the scintillating 12.4% of the span-ended Q4-1986. Not too long thereafter, the 10-year Treasury yield's moving 10-year averaged crested at the 10.69% of the span-ended Q1-1989. The subsequent slowing by nonfinancial-sector debt's 10-year average annual growth rate to Q2-2017's 4.1% has been joined by an easing of the benchmark Treasury yield's moving 10-year average to the 2.64% of the span ended September 2017. Unless nonfinancial-sector debt accelerates markedly, the 10-year Treasury yield's moving 10-year average should be no greater than 2.50% by the end of 2018. (Figure 3.)

Credit Markets Review and Outlook

Figure 3: Secular Deceleration by US' Public and Private Nonfinancial-Sector Debt Steers 10-year Treasury Yield Lower
moving 10-year observations



Despite a very accommodative Fed policy, the annual increase of the US's non-federal, non-financial sector slowed from year-end 2016's 4.0% to Q2-2017's 3.8%. Over the past 10 years, non-federal debt rose by merely 2.2% annualized, on average, which was slower than nominal GDP's comparably measured rise of 3.0%.

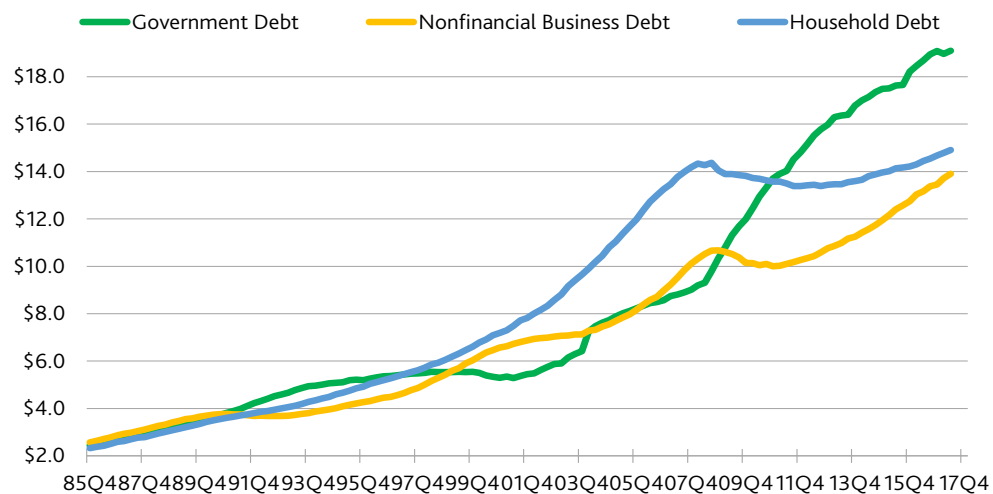
Unprecedented borrowing restraint outside the federal government helps to explain why the 10-year Treasury yield's moving 10-year average fell from the 4.93% of the span-ended June 2007 to the 2.70% of the span-ended June 2017. A continuation of well below-trend debt growth outside of the US government would probably extend the slide by the 10-year Treasury yield's moving 10-year average.

US government debt tops all other categories throughout current upturn

The broadest estimate of the US's private- and public-sector nonfinancial debt rose by merely 3.5% yearly in Q2-2017 to a record \$47.92 trillion. The latest yearly increase by total nonfinancial sector debt was down from the 4.8% of Q2-2016 and Q3-2016's high for the current upturn of 5.6%.

Across the US's nonfinancial sectors, second-quarter 2017's year-to-year percent changes by debt included gains of 2.8% for federal government debt (to \$16.05 trillion), 3.2% for household-sector debt (to \$14.91 trillion), and 5.6% for nonfinancial business debt (to \$13.91 trillion). By contrast, state & local government debt dipped by -0.8% (to \$3.05 trillion). (Figure 4.)

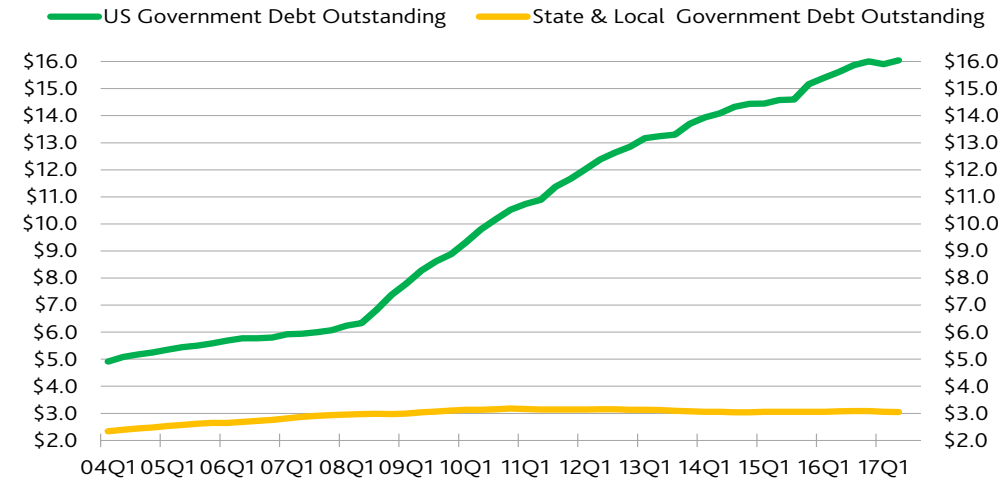
Figure 4: Average Annual Growth Rates of Past Ten Years Are 8.0% for Government Debt, 3.9% for Nonfinancial-Business Debt and 0.8% for Household Debt
amounts outstanding in \$ trillions, source: Federal Reserve, Moody's Analytics



Credit Markets Review and Outlook

Over the last 10 years, the US government's share of total nonfinancial-sector debt soared from Q2-2007's 18.5% to Q2-2017's record 33.5%, while state & local government's share fell from 8.9% to 6.4%, respectively. In a sense, federal debt has supplanted state & local government debt. (Figure 5.)

Figure 5: State & Local Government Debt Sinks from Q2-2007's 48% to Q2-2017's 19% of US Government Debt
\$ trillions from Federal Reserve's Financial Accounts of the United States



The Week Ahead – US, Europe, Asia-Pacific

THE US

From Moody's Analytics - Economy.com and the Moody's Capital Markets Research Group
(Updates are made on Mondays.)

Summary, October 23 The U.S. economic outlook depends in good measure on what happens, or does not happen, in Washington DC. Lawmakers have finally taken up tax reform in earnest. The debate and deliberations will rage over the next few months, and we should know by early next year if and how the tax code will change.

Handicapping where the tax debate lands is difficult. The consensus on the prospects for reform, as represented by financial markets, has been all over the place. For the moment, investors appear to believe that the Trump administration and Congress will fail to get much done, if anything. However, there are powerful political incentives, including the fast-approaching 2018 midterm elections, to pass something.

The Trump administration appears likely to name its nominee for Fed chair in the next few weeks. This will remove some uncertainty, but the implications for monetary policy depend on who the next chair is. We will re-evaluate our forecast for the Fed's balance sheet and the path of the fed funds rate after a new chair has been nominated and confirmed. Our preliminary assessment is that changes under a Jerome Powell-run Fed would be minimal. There would likely be significant policy consistency between current Fed Chair Janet Yellen and Powell. Kevin Warsh would likely represent a regime shift, possibly not on interest rates (immediately) but on the balance sheet. Warsh may favor a more aggressive reduction in the balance sheet, representing further monetary policy tightening.

John Taylor leans hawkish, but it will be easy for financial markets to overreact based on what Taylor's eponymous rate-modeling rule says the fed funds rate should be currently. Though Taylor would likely be less hawkish than some label him, there are still concerns. Even slightly more aggressive tightening could prevent inflation from overshooting the central bank's 2% target and anchor long-run inflation expectations at a suboptimal level. Therefore, the Fed could be going into the next recession with below-target inflation, which would be problematic. Also, Taylor may be swayed by Congress to back legislation for the Fed to follow a more rule-based approach to setting monetary policy. This would be a mistake because discretion is important.

For the upcoming week, we look for new-home sales to decline because of the hurricanes. Durable goods likely eked out a small gain while third quarter GDP is forecast to have risen 3.4% at an annualized rate.

THURSDAY, OCTOBER 19

Jobless claims (week ended October 14; 8:30 a.m. EDT)

Forecast: 240,000

Initial claims for unemployment insurance benefits fell from 258,000 to 243,000 in the week ended October 7 as the impact of the hurricanes has been fading. New filings in Texas continue to fall but remain slightly higher than before Hurricane Harvey. Claims in Florida are still higher than before Hurricane Irma. Excluding those areas affected by recent hurricanes, initial claims have been little changed. We look for initial claims to have slipped from 243,000 to 240,000 in the week ended October 14, which includes the payroll reference week. This would put initial claims down 20,000 between the September and October payroll reference weeks and suggests job growth bounced back.

The Week Ahead

FRIDAY, OCTOBER 20

Existing-home sales (September; 10:00 a.m. EDT)

Forecast: 5.28 million annualized units

We look for existing-home sales to have fallen from 5.35 million annualized units in August to 5.28 million in September. A good chunk of existing-home sales and a large portion of home closings each month normally occur at the end of the month. Therefore, we expect Hurricane Irma to have weighed on sales in the South. A majority of these sales are delayed and will be recouped over the next few months.

MONDAY, OCTOBER 23

Business confidence (week ended October 20; 10:00 a.m. EDT)

Forecast: N/A

Abstracting from the weekly wobbles in the survey results, global business sentiment is strong, stable and consistent with a global economy that is expanding just above its potential. A consistent more than 40% of respondents say present business conditions are improving, while close to 10% say they are weakening. Expectations regarding the economy's prospects into next year are even stronger, with about half saying that conditions should improve further.

The strongest business confidence is in the U.S., where sentiment is in line with an economy that is growing above its potential. The weakest confidence is in South America, where sentiment is in line with an economy that is barely growing.

The four-week moving average of our global business confidence index fell from 32.1 to 30.7 in the week ended October 13.

TUESDAY, OCTOBER 24

No major economic releases scheduled.

WEDNESDAY, OCTOBER 25

Durable goods (September; 8:30 a.m. EDT)

Forecast: 0.7%

We look for durable goods orders to have risen 0.7% in September following a 1.7% increase in August. Transportation should be a net negative for orders in September. We look for nondefense aircraft orders to have fallen in September while defense aircraft posted a small gain. Motor vehicles and parts will limit the drag on total durable goods orders from transportation. Excluding transportation, we look for new orders to have risen 0.9% in September.

New-home sales (September; 10:00 a.m. EDT)

Forecast: 543,000 annualized units

We look for new-home sales to have fallen from 560,000 annualized units in August to 543,000 in September. Hurricane Irma will likely weigh on new-home sales in September, but this drag will be temporary. For projects in the Survey of Construction for which the Census Bureau didn't receive sales information in August, it assumed there was no change and counted the units previously listed as for sale as still for sale. Newly issued single-family permits are counted as for sale if the sales status cannot be determined. Though the recent hurricanes are weighing on sales, the pre-storm trend had begun to soften.

THURSDAY, OCTOBER 26

Jobless claims (week ended October 21; 8:30 a.m. EDT)

Forecast: 235,000

The Week Ahead

Initial claims fell 22,000 to 222,000 in the week ended October 14, the fewest since 1973. Some of the decline was likely attributed to further declines in new filings in those states affected by the recent hurricanes. Also, claims can be noisy around holidays and we believe seasonal adjustment issues surrounding Columbus Day may have pushed new filings down in the week ended October 14. This support won't stick and we look for initial claims to have risen 13,000 to 235,000 in the week ended October 12.

The data on continuing claims and the insured unemployment rate will be for October 14, which includes the household reference week and could provide some guidance on possible changes in the unemployment rate.

FRIDAY, OCTOBER 27

GDP (2017Q3-advance; 8:30 a.m. EDT)

Forecast: 3.4% at an annualized rate

We look for real GDP to have risen 3.4% at an annualized rate in the third quarter, a modest acceleration from the 3.1% in the second quarter. The composition of growth will be less impressive than in the prior three months. A larger inventory build in the third quarter will provide a noticeable boost to growth this quarter, adding 0.7 of a percentage point.

Real consumer spending likely rose 2% at an annualized rate in the second quarter. Within consumption, durable goods likely provided the biggest support while services spending is forecast to have risen only 1.6% at an annualized rate while nondurables likely edged lower. The forecast assumes a modest gain in real residential investment while nonresidential investment likely rose 6%. Equipment spending is forecast to rise 7% at an annualized rate in the third quarter. We look for net exports to be a small positive for second quarter GDP growth.

However, forecasting GDP is more difficult when a severe hurricane can cause big swings. To assess this, we look at the costliest hurricanes since 2004, including Ivan, Katrina/Rita, Wilma, Ike, Irene, Sandy and Matthew. The average forecast miss between the consensus estimate and the Bureau of Economic Analysis' advance estimate of real GDP growth is -0.5 percentage point in those quarters that a severe hurricane hit the U.S. (since 2004). The average error for all quarters since 2004 is -0.1 percentage point. However, there isn't a clear directional bias in the forecast errors. For example, GDP was only below consensus expectations in three of the seven instances since 2004. However, there were sizable forecast errors for Sandy and Wilma.

The next question is whether the advance estimate of GDP is less reliable. In other words, GDP growth is subject to larger than normal revisions. This is a fair question because when the BEA calculates the advance estimate, it doesn't have complete source data, with the largest gaps in data for the third month of the quarter. In particular, the advance estimate lacks complete source data on inventories, trade, and consumer spending on services, which could all be affected by a hurricane. Therefore, the BEA must make assumptions for these missing pieces based in part on past trends. As new and more complete data become available, it incorporates that information into the second and third GDP estimates along with the annual and benchmark revisions.

We turned back to the most recent costliest storms and looked at the revision between the BEA's advance and current estimate of real GDP growth. GDP was revised lower in six of the seven instances, with an average revision of -0.3 percentage point. This isn't enormous. For example, the average revision between the advance and current estimates between 2004 and now is -0.2 percentage point. For those quarters affected by hurricanes, the largest downward revisions were to those quarters when Hurricane Ike and Irene hit. It's important to note that Ike occurred during a recession and GDP is often revised lower during recessions.

We will finalize our forecast for third quarter GDP following new-home sales, durable goods, and the advance economic reports.

EUROPE

By the Dismal (Europe) staff in London and Prague
(Updates are made on Mondays.)

Summary, October 23: The week ahead will be busy, bringing the preliminary estimate of third quarter GDP figures for the U.K. We continue to be downbeat about Britain's economic momentum, and we expect growth there to only have matched the second quarter's meagre 0.3% quarter-on-quarter pace, with risks tilted further to the downside. Given the Office for National Statistics' recent revisions, yearly growth should print as low as 1.4%, slowing from an already-weak 1.5% expansion in the second quarter. This compares with much better results for most G-7 economies and the euro zone itself; Germany is expected to have expanded by 2.1% in the third quarter, France by 2%, Japan by 1.7%, and Italy by 1.6%, while the U.S. and Canada are forecast to expand by 2.1% and 3.3%, respectively. Growth in the whole euro area should remain steady at 2.3%, its joint-highest since the first quarter of 2011.

At this point, it is hard to still claim that last year's Brexit vote made no dent on the British economy. True, the damage took a little longer than expected to materialize, but now companies and households are clearly feeling the pinch. Most striking is that, while the pound's slump failed to boost the U.K.'s external trade position, it did take a toll on consumer spending, which had been for several years the engine of the country's growth. We don't expect much will change in the third quarter. Regarding GDP's production breakdown, we expect that services spending again disappointed and increased by only 0.3% q/q, following a 0.4% rise in the second stanza. While total retail sales still rose by 0.6% q/q in the third quarter despite September's slump, retail trade accounts for only around 7% of total services output, which means that the industry should have contributed a paltry 0.03 to 0.04 percentage point to GDP growth. And we are pessimistic about output outside the distribution sector. Our view is that consumers have likely clamped down on most of their services spending to finance sales in the High Street. True, we do not have much leading data on the bulk of services activity, but already the index of services fell unexpectedly by 0.2% m/m in July, while the PMIs are consistent with services growth of 0.3% q/q. In all, we look for total services to contribute around 0.25 percentage point to the country's expansion.

The outlook is a little better for U.K. production, but not much. Hard data available show that industrial production rose by 0.3% month on month in July and 0.2% in August, underpinned by a 0.4% increase in manufacturing output in each month. Considering that we expect factory growth to remain relatively steady in September, as a jump in mining and quarrying will probably be offset by mean-reversions in pharmaceuticals and a drop in energy production, we are penciling in a 0.7% q/q gain in production in the third quarter, improving on a 0.3% decline in the previous stanza and contributing around 0.1 percentage point to GDP growth.

U.K. construction, meanwhile, should have disappointed sharply. While construction output rose by 0.6% m/m in August, this followed a 0.9% slump in July and we are penciling in a further 0.4% drop in September. All leading data for the sector have been abysmal, suggesting that the industry is undergoing a sharp correction as Brexit woes are weighing heavily on companies' and households' will to undertake major financial commitments. We forecast that output should have contracted by around 0.7% q/q over the quarter as a whole, subtracting around 0.05 percentage point from GDP growth.

THURSDAY, OCTOBER 19

U.K.: Retail Sales (September; 9:30 a.m. BST)

U.K. retail sales likely remained steady in monthly terms in September, but this is still extremely good news following July and August's jumps. The yearly rate is expected to edge down only slightly

The Week Ahead

to 2.3%, from 2.4% previously. Leading indicators released in recent weeks have all been extremely bright: Data from BDO showed that sales on the High Street rose by 2.9% y/y in September, from 2% previously, while BRC's like-for-like sales jumped by 1.9%, from 1.3% in August. Similarly, the CBI reported that the sales balance jumped to an impressive 42, from -10 in August, though we caution that the CBI balance is often a poor guide to sales; it is extremely erratic given the small number of retailers included in the survey.

We expect that both food and nonfood sales rose. Fuel sales, meanwhile, should have fallen given that pump prices rose further over the month. Despite September's upbeat forecasts, we still expect that retail sales will remain poor throughout the rest of 2017, as accelerating inflation combined with limited wage growth will continue to erode real wages and consumers' purchasing power throughout the year, while banks are reducing their credit supply and the savings rate remains at record lows.

FRIDAY, OCTOBER 20

Spain: Foreign Trade (August; 9:30 a.m. BST)

We expect that the trade deficit narrowed to €1.6 billion in August from €2 billion in July, as imports eased. But the export sector still failed to take off, with the weakness of manufacturing goods likely lingering. On a year-ago basis, car exports remained a drag on the back of the competitiveness losses due to the stronger euro.

MONDAY, OCTOBER 23

No major releases are scheduled for this day.

TUESDAY, OCTOBER 24

France: Job Seekers (September; 5:00 p.m. BST)

France's job market is improving compared with 2016 figures, but growth has slowed considerably in recent months. We expect the number of job seekers fell to 3.52 million in September after rising to 3.54 million in August. Annual numbers should maintain their downward trend as several reforms in 2015 and 2016 begin to bear fruit, including a tax credit and several measures to reduce labour costs. Despite disappointing headlines over the past two months, we are confident that France's labour market will make headway this year and next thanks to overall improvement in the economy. Additionally, President Emmanuel Macron is attempting to advance his labour market reforms to help combat the nation's stubbornly high unemployment. However, the president's lost support over the past several months is beginning to dent consumer confidence and could weigh on the labour market in the coming quarters, posing some downside risk.

WEDNESDAY, OCTOBER 25

U.K.: GDP Production Breakdown (Q3; 9:30 a.m. BST)

We expect U.K. GDP to have grown only 0.3% q/q in the third quarter, matching the second quarter's meagre results. In yearly terms, GDP growth should have gained 1.4%, slowing from 1.5% previously. The services sector likely powered the expansion again, but even so it likely contributed only around 0.25 percentage point to total output. Retail sales did increase over the quarter, but the performance of nondistribution services should have remained subdued.

Industrial production likely also contributed, reversing most of the previous quarter's fall. We expect factory growth ticked up 0.7% q/q in the three months to September, powered mostly by manufacturing, and adding 0.1 percentage point to the gain in GDP. Construction, by contrast, should also have again disappointed. Although construction output rose by 0.6% m/m in August, this followed a 0.9% slump in July and we are bracing for a further 0.4% decline in September.

The Week Ahead

Leading data for the sector have been dismal, suggesting that the industry is undergoing a sharp correction as Brexit woes are depressing companies' and households' will to take on major financial commitments. We forecast that output should have contracted by around 0.7% q/q over the quarter as a whole, shaving around 0.05 percentage point off GDP growth.

THURSDAY, OCTOBER 26

Spain: Unemployment (Q3; 8:30 a.m. BST)

Unemployment fell by a further 0.8 percentage point to 16.5% in the third quarter. But that pace is less spectacular than in the previous stanza, when the pool of unemployed shed 1.6 percentage point. We estimate that job creation slowed to 2.6% y/y in the three months to September, down from the stellar 2.8% in the second quarter, when tourism-related services propped up labour demand. Further, labour absorption capacity will reach its limit as the services sector won't be able to employ the long-term unemployed. Without active labour market policies, Spain's high structural unemployment will likely linger, leaving unemployment at around 16% to 17%.

Euro Zone: Monetary Policy (October; 12:45 a.m. BST)

The European Central Bank will likely announce how much and for how long it will buy the government bonds and other assets at its October monetary policy meeting. Under the current plan, the ECB buys €60 billion a month until December. We expect the bank will likely cut monthly purchases to €40 billion starting in January but continue its bond-buying program until at least September 2018. This September's meeting minutes gave the impression that central bankers prefer to gradually dismantle the monetary stimulus because of still-weak inflation. The euro zone's annual harmonized inflation remained unchanged at 1.5% in September from a month earlier. Meanwhile, core inflation did not budge from 1.3% in August, a sign that demand-led inflation is not yet building. Tepid inflation and the still-strong euro are restraining a hike in interest rates, and we expect the ECB to raise the refinancing rate in the second quarter of 2019.

FRIDAY, OCTOBER 27

Spain: Retail Sales (September; 8:05 a.m. BST)

We expect that Spanish retail sales failed to impress again in September. Sales likely added 0.1% over the month, the same rate of increase as in August. The consumer confidence gauge shows that sentiment soured considerably from the second quarter, with the balance of opinions sinking into negative territory, to -1.1, down from 1.5 in the second quarter. The slowdown is driven by the softer increase in employment and sluggish rise in wages, which is keeping shopping lists shorter. For now, we see little risk of the Catalanian political crisis depressing consumers' mood. Instead, the broad-based moderation is largely because of a reversion to potential consumption.

Russia: Monetary Policy (October; 11:30 a.m. BST)

With year-over-year CPI inflation dropping to 3% in September, minimal inflation to date in October, and weakening supply-side indicators, the table is set for the Russian central bank to cut rates again this month. By its latest measure, inflation is a full point below target, creating another opening for policy normalization. Softening business sentiment and weaker growth in industrial production last month also signal the need for easier access to capital.

ASIA-PACIFIC

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

Japan's core CPI likely held at 0.7% y/y amid higher fuel costs

Japan's core CPI was likely unchanged in September after August's 0.7% y/y gain. Rising fuel prices continue to be one of the largest contributors to inflation as global commodity prices rebound. Yet, wage growth in Japan remains weak. There's potential for upside; if the recent rise in inflation leads to higher wages, the wage-inflation nexus could again come alive. But given Japan's declining population and falling costs of capital goods, this remains unlikely. Instead, inflation will likely be capped at around 1% over the coming year, well below the Bank of Japan's 2% inflation target.

South Korean GDP likely expanded 0.6% q/q in the three months through September, the same as in the prior quarter. Despite the synchronized upturn in global demand, South Korea's manufacturing sector has remained relatively soft, with production up just 1.9% y/y in the year to date to August. Meanwhile, household consumption is still subdued, as weak labour market conditions and high debt hamper spending.

Australia's headline CPI growth likely jumped to 0.9% q/q in the September quarter, following a 0.2% gain in the June quarter. The main driver is higher energy prices; we estimate utility prices rose 15% over the quarter, adding around 0.4 percentage point to 0.5 percentage point to quarterly CPI. Annual headline CPI likely rose to 2.1% y/y from 1.9% previously. Core CPI is expected to remain relatively stable at 1.9% y/y, up from the June quarter's 1.8% and just shy of the central bank's 2% to 3% target range. Energy prices are stripped out of the underlying inflation calculation.

It has been a strong year for Taiwan's tech manufacturing sector. Exports of electronic components have been especially strong, particularly to China for assembly into new products to be sold globally. Strong demand for semiconductors should continue to support manufacturing output. Downside risks include a slowing mainland China economy, increased tensions with the mainland, and subdued domestic demand.

THURSDAY, OCTOBER 19**Japan – Foreign Trade – September**

Time: 10:50 a.m. AEDT (Wednesday, 11:50 p.m. GMT)

Forecast: ¥450 billion

Japan's trade surplus likely widened in September to ¥450 billion from August's ¥367.32 billion. Export growth continues to buttress the economy; demand for Japan's large manufacturing goods has firmed in 2017 partially because of the yen's depreciation. Sustained buoyant global tech demand is also helping. Despite a few false alarms in recent months, electronics demand has stayed remarkably strong and should remain that way until the December quarter. Auto exports have also firmed throughout 2017 as Japanese carmakers continue to release new models. Overall, we expect export demand to remain firm over the coming months, and Japan's trade surplus will continue.

Australia – Employment Situation – September

Time: 11:30 a.m. AEDT (12:30 a.m. GMT)

Forecast: 5.6% unemployed

Australia's seasonally adjusted unemployment rate likely held at 5.6% in September. We expect a modest pullback in monthly employment of 10,000 following the outside 54,200 added in August. A lower participation rate should absorb the fall in employment and keep the unemployment rate steady. The bulk of August job growth was in full-time positions, continuing the trend seen through 2017 and reversing what was observed in 2015 and much of 2016 when part-time positions made up the bulk of

The Week Ahead

employment growth, driving underemployment to record highs. A variety of indicators such as ANZ job advertisements confirm the labour market is continuing to tighten, which should deliver improved wage growth from its current record low by the end of the 2017 and early 2018.

China – Fixed Asset Investment – September

Time: 1:00 p.m. AEDT (2:00 a.m. GMT)

Forecast: 7.3%

Investment in fixed assets in China is decelerating on account of falling mining-related investment. Investment in manufacturing assets continues to grow at a stable pace thanks to continued global tech demand, while investment in agriculture sectors is strong, albeit down from the peak earlier in the year. The recent drop in commodity prices will likely put further downward pressure on mining investment. Total fixed asset investment likely grew 7.3% in the year to September.

China – GDP – 2017Q3

Time: 1:00 p.m. AEDT (2:00 a.m. GMT)

Forecast: 6.9%

China's economy has been growing close to trend since an acceleration in the first quarter. The government has tacitly allowed a mild pickup in credit growth to perk up activity ahead of the all-important Congress in late October. The housing market is cooling at an orderly pace, but activity remains buoyant. Manufacturing output is bolstered by strong global demand and is receiving a fillip from new products launched for sale during the holiday season. The economy likely grew 6.9% in the third quarter, the same as in the second.

China – Industrial Production – September

Time: 1:00 p.m. AEDT (2:00 a.m. GMT)

Forecast: 6.2%

Industrial production growth decelerated in August on softer output of coal, cement, and other heavy industry products. The cooling Tier 1 and Tier 2 housing markets may be causing firms to reduce output. Outside of heavy industry, firms are doing better. Manufacturing firms in particular are seeing buoyant growth partly as tech shipments heat up as the holiday season nears. Sentiment surveys show increased optimism on orders and production. Industrial production likely grew 6.2% in September, up from 6% in August.

China – Retail Sales – September

Time: 1:00 p.m. AEDT (2:00 a.m. GMT)

Forecast: 10%

Retail spending has softened in line with the cooling housing markets in Tier 1 and Tier 2 cities, which may be dampening demand for related purchases. Purchases of construction materials, household electronics and furniture are decelerating, for instance. However, sales of autos and phones remain strong, showing that continued income growth in urban areas continues to bolster consumer confidence. Retail sales likely rose 10% in September after 10.1% in August.

South Korea – Monetary Policy – October

Time: Unknown

Forecast: 1.25%

The Bank of Korea is expected to keep its policy interest rate on hold at 1.25% at its October policy meeting. Although inflation has hovered around the central bank's 2% inflation target this year, soft domestic demand is likely to keep monetary policy accommodative in the near term. However, the government's stimulus measures such as the proposed 7.1% y/y spending increase in the 2018 budget and concerns about record high household debt could prompt a faster than expected rate hike cycle next year.

Indonesia – Monetary Policy – October

Time: Unknown

Forecast: 4.25%

The Week Ahead

Bank Indonesia should be taking a breather in October after cutting the policy rate by a total of 50 basis points at its August and September monetary policy meetings to bring the repo rate to 4.25%. We worry about the external risks that these consecutive rate cuts bring. Bank Indonesia should be careful loosening monetary policy when major central banks offshore are more hawkish. BI's objective appears to be to deliver on the government's full-year GDP growth target of 5.2%, after June quarter growth disappointed at 5%. Indonesia's external position is healthier than it was in 2013 when it was amongst the worst affected in Asia by destabilizing capital outflows from the taper tantrum following a Federal Reserve signal that U.S. bond purchasing would begin winding down. But it's still vulnerable to destabilizing capital outflows, and we feel that the policy easing in August and September is baiting market sentiment to turn against Indonesia.

MONDAY, OCTOBER 23

Taiwan – Domestic Trade – September

Time: 7:00 p.m. AEDT (8:00 a.m. GMT)

Forecast: 3.9%

Consumers were in a cautious mood in the first half of 2017, despite a recovering economy led by export manufacturing. However, retail sales perked up in August, growing by a seven-month high of 4.3% y/y. The pickup in retail sales was in line with improving consumer sentiment, which rose to a 22-month high in September. More upbeat consumers and gradually improving job prospects are expected to encourage a 3.9%/y lift in retail sales in September.

Taiwan – Industrial Production – September

Time: 7:00 p.m. AEDT (8:00 a.m. GMT)

Forecast: 4%

We expect industrial production to tick up 4% y/y in September, up from 3.2% in August. It has been a strong year for Taiwan's tech manufacturing sector. Exports of electronic components have been especially strong, particularly to China for assembly into new products to be sold globally. Strong demand for semiconductors should continue to support manufacturing output. Downside risks include a slowing mainland China economy, increased tensions with the mainland, and subdued domestic demand.

TUESDAY, OCTOBER 24

No major economic indicators are scheduled for release.

WEDNESDAY, OCTOBER 25

South Korea – Consumer Sentiment Index – October

Time: 8:00 a.m. AEDT (Tuesday, 9:00 p.m. GMT)

Forecast: 107.3

South Korean consumer sentiment likely slipped to 107.3 in October from 107.7 in September. Consumer confidence has softened in recent months, as tensions with North Korea have escalated. Still, consumer confidence remains above earlier lows, thanks to improving economic conditions and President Moon Jae-In's stimulus measures. Expectations for household income and spending have remained resilient, suggesting spending intentions are still relatively positive.

Australia – Consumer Price Index – 2017Q3

Time: 11:30 a.m. AEDT (12:30 a.m. GMT)

Forecast: 0.9%

Australia's headline CPI growth likely jumped to 0.9% q/q in the September quarter following a 0.2% gain in the June quarter. The main driver is higher energy prices. We estimate utility prices rose 15% over the quarter, adding around 0.4 percentage point to 0.5 percentage point to quarterly CPI. Annual headline CPI likely rose to 2.1% y/y from the 1.9% gain previously. The annual rise is modest given utility prices tend to rise in the September quarter and are relatively steady at other times. To

The Week Ahead

households, higher energy prices operate like a tax, as energy usage can be typically only marginally reduced. Core CPI is expected to remain relatively stable at 1.9% y/y, up from the June quarter's 1.8% and just shy of the central bank's 2% to 3% target range. Energy prices are stripped out of the underlying inflation calculation.

THURSDAY, OCTOBER 26

New Zealand – Foreign Trade – September

Time: 8:45 a.m. AEDT (Wednesday, 9:45 p.m. GMT)

Forecast: -NZ\$420 million

New Zealand's monthly trade deficit likely narrowed to NZ\$420 million in September following the NZ\$1.235 billion shortfall in August. A jump in crude oil imports in August drove the monthly trade deficit to balloon in August. Since New Zealand is a relatively small economy, a large trade deficit typically results when crude oil and other petroleum products arrive onshore. This is also the case with large transport equipment such as aircraft. Exports are doing well, especially on the back of globally high dairy prices lifting export receipts. However, from August we began to see a pullback in volumes amid surging values, and we expect that to continue in the December quarter.

South Korea – GDP – 2017Q3

Time: 10:00 a.m. AEDT (Wednesday, 11:00 p.m. GMT)

Forecast: 0.6%

South Korean GDP likely expanded 0.6% q/q in the September quarter, the same as in the prior quarter. Despite the synchronized upturn in global demand, South Korea's manufacturing sector has remained relatively soft, with production up just 1.9% year to date through August. Meanwhile, household consumption is still subdued, as weak labour market conditions and high debt hamper spending. The government's recent stimulus package, which focuses on creating jobs, should provide a mild lift to consumer spending in the September quarter.

Singapore – Industrial Production – September

Time: 4:00 p.m. AEDT (5:00 a.m. GMT)

Forecast: 10%

Industrial production growth likely slowed to 10% y/y in September from 19.1% in August. Singapore's exports surprised on the downside in September, as a high base from a year earlier and cooler demand for electronics saw overall exports fall 1.1% y/y. Although a high base and cooler exports are likely to cap industrial production growth, manufacturing should continue to be supported by a firm tech cycle, which bodes well for the Singapore economy. GDP growth accelerated to 4.6% y/y in the September quarter thanks to strong manufacturing output.

Hong Kong – Foreign Trade – September

Time: 7:30 p.m. AEDT (8:30 a.m. GMT)

Forecast: -HK\$40 billion

Trade activity through Hong Kong's port remains healthy. Exports are growing on the back of increasing consumer tech product shipments, especially of mobile phones ahead of the holiday season. Robust wage growth in mainland China, coupled with the rebound in commodity values, is also boosting Hong Kong's port throughput. Hong Kong's trade deficit likely widened to HK\$40 billion in September from HK\$35.5 billion in August, in line with seasonal trends.

FRIDAY, OCTOBER 27

Japan – Consumer Price Index – September

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

Forecast: 0.7%

Japan's core CPI was likely unchanged in September after August's 0.7% y/y gain. Rising fuel prices continue to be one of the largest contributors to inflation as global commodity prices rebound. Medical costs are also rising because of greater demand from an ageing population. That said, wage growth in

The Week Ahead

Japan remains weak. There's potential for upside; if the recent rise in inflation leads to higher wages, the wage-inflation nexus could again come alive. But given Japan's declining population and falling costs of capital goods, this remains unlikely. Instead, inflation will likely be capped at around 1% over the coming year, well below the Bank of Japan's 2% inflation target.

Singapore – Employment – 2017Q3

Time: 1:30 p.m. AEDT (3:30 a.m. GMT)

Forecast: 2%

Singapore's labour market has remained weak in recent quarters. Although employment in services has improved, manufacturing and construction continue to shed jobs, keeping the unemployment rate just above 2% since the June quarter of 2016. However, with economic growth in a cyclical upturn and improving noticeably in the September quarter (GDP growth accelerated to 4.6% y/y), we expect the unemployment rate to edge down to 2% in the third quarter.

The Long View

The US: At the end of September, our median HY bond spread equaled 306 bp, its thinnest month-end gap since May 2007's 283 bp

By John Lonski, Chief Economist, Moody's Capital Markets Research Group,
October 19, 2017

CREDIT SPREADS

As measured by Moody's long-term average corporate bond yield, the recent investment grade corporate bond yield spread of 105 bp is far under its 122-point mean of the two previous economic recoveries. This spread is more likely to be wider, as opposed to narrower, a year from now.

The recent high-yield bond spread of 356 bp is less than what is inferred from the spread's macroeconomic drivers and the high-yield EDF metric. The adverse implications for liquidity of possibly significantly higher interest rates merit consideration.

DEFAULTS

After setting its current cycle high at January 2017's 5.8%, the US high-yield default rate has since eased to the 3.3% of September. Moody's Default and Ratings Analytics team expects the default rate will average 2.3% in Q3-2018. A deeper slide to its 1.85% average of the 18-months-ended June 2015 is unlikely for now.

US CORPORATE BOND ISSUANCE

Yearlong 2016's 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.

First-quarter 2017's worldwide offerings of corporate bonds showed annual percent increases of +7.7% for IG and +110.6% for high-yield, wherein US\$-denominated offerings advanced by +17.1% for IG and by +98.3% for high yield.

Second-quarter 2017's worldwide offerings of corporate bonds showed an annual percent decline of -6.3% for IG and an increase of +8.3% for high-yield, wherein US\$-denominated offerings fell by -6.4% for IG and grew by +5.8% for high yield.

Third-quarter 2017's worldwide offerings of corporate bonds showed an annual percent decline of -2.8% for IG and an increase of +6.0% for high-yield, wherein US\$-denominated offerings dipped by -1.4% for IG and grew by +3.8% for high yield.

The Long View

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 rise by 4.4% annually for IG and may advance by 30.7% for high yield.

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 and Barbara Teixeira Araujo of Moody's Analytics

Eurozone (October 19, 2017)

The euro zone economy has performed better than anticipated since the start of the year, powered by strong export growth. A broad-based economic recovery finally appears to be becoming entrenched. Improvements in the labor market combined with strengthening wage growth in a number of member countries should spur household spending. Furthermore, there are increasing signs that ultra-loose monetary policy and mildly stimulative fiscal policy are starting to support a long-awaited rebound in investment and bank lending as the region's beleaguered banking sector slowly heals. Upbeat sentiment should support the growth momentum in the near term and prompted us to revise our GDP forecast upwards for many European countries. We expect euro zone GDP to expand by 2.2% in 2017, 0.2 ppt more than in the previous forecast, and Italy's GDP to grow by 1.4%, up sharply from the predicted 1.1%. Spain will top the growth chart at 3%, while Germany will advance by 2% and France by 1.7% this year, all of them accelerating from 2016.

But we see clouds on the horizon—strong euro and Brexit. The euro has appreciated around 14% this year and tightened financial conditions are the last thing the ECB wants. Although the stronger euro versus the dollar barely registers on core inflation, it could undermine the euro zone's exports and the broader recovery. Our analysis shows that the euro's appreciation will likely weigh on exports later this year and early in 2018. A negative correlation between the annual foreign exchange rate change and the annual change of euro area exports means that an appreciating euro softens exports, while a depreciating euro boosts them. So while the booming euro zone economy together with moderating growth in the U.S. may be largely behind the euro's gains, several risks could yet derail the region's expansion. Although we are optimistic about the recent turnaround in the euro zone economy, which may now be self-sustaining, there is a need for caution. Therefore, we expect that the European Central Bank doesn't need to rush to adjust its policy stance.

Meanwhile, the economic impact of Brexit on the EU will depend largely on the political fallout. The threat that the British exit will empower Eurosceptic political parties has diminished somewhat since the defeat of such parties in the Austrian, Dutch and French elections. Furthermore, Italy's populist Five Star Movement suffered heavy losses in municipal elections in June, casting doubt on whether it can win parliamentary elections next year. However, a right-wing antiestablishment backlash still remains a threat to the region, as is evident in the surprising result in the German elections, where the far-right Alternative für Deutschland won 13% of the vote. Although Angela Merkel managed to win a fourth

The Week Ahead

term as chancellor, but with a reduced majority, the AfD could fan support for protectionist policies in Germany. Unrest in Catalonia following the referendum vote, which was in defiance of the Spanish government, further clouds the political stability of the region.

UK (October 19, 2017)

The euro zone and U.K. economies are on different paths as the impact of the British public's decision to leave the European Union drags on the U.K. economy. After a weak growth in the second quarter the U.K. economy won't bounce back sharply in the current quarter. Business investment should remain subdued, notably in the services sector, given the soft outlook for consumer demand. Manufacturers should start to invest in export capacity, but it will still take a long time before the economy rebalances, notably if firms continue to get little clarity on what the U.K.-EU future ties will look like. By contrast, we are more optimistic with regards to the country's export performance. We expect that exports will gather momentum in the third quarter in line with the recent surge in export orders at manufacturing firms. But imports will also remain robust—the U.K. depends heavily on imported inputs—meaning that net trade's contribution to growth won't improve much. Meanwhile, wage growth remains extremely weak: including bonuses, pay increased by as little as 1.4% y/y in July, down from 2.8% in June. Even if we exclude bonuses, which are notably volatile, wage growth was only 2% y/y, which is still below 2016's 2.4% average and the MPC's 3% target. That's all to say that the growth numbers provide little evidence that the economy is strengthening, or that the output gap is closing.

All is not gloom, though, as the labour market remains pretty tight and there is evidence that starting salaries are rising. According to REC/Markit Report on Jobs, permanent starting salary growth accelerated for the fourth month running in August, to a 25-month high. We caution, though, that this is not representative of wage pressures in the broad labour force, notably now that confidence is extremely depressed and few people are changing jobs. Job-to-job moves need to improve considerably in order for them to drive up total wage growth.

Meanwhile, the Bank of England has undoubtedly turned hawkish, stating that a rate hike may not be far off. While the statement still leaves a move clearly contingent on future developments on the inflation and growth fronts, it marks a huge change from the bank's previous stance. And, even if neither inflation nor growth lives up to expectations and the bank ends up standing pat, in our view what's most important about September's announcement is that the MPC's aggressive, heightened rhetoric indicates that little upside surprise is now needed to push the bank to action. Still, we think that the bank would be making a mistake by raising rates as soon as November.

U.K. economic growth is projected to remain subdued in the coming quarters amid exit negotiations as uncertainty regarding the future U.K.-EU relationship impacts businesses' hiring and investment decisions. Theresa's May speech on September 22 was aimed at bringing some clarity over future negotiations, but the British prime minister delivered little substance. Though she claimed that the U.K. would ultimately honor all of its financial commitments with the EU, that's far from agreeing on a specific figure, and we expect negotiations on a final bill to take a while. Similarly, little progress has been made in negotiations over citizens' rights and the Irish border. On the upside, May confirmed rumors that the U.K. will seek a two-year transition period following the exit, during which the status quo will remain. While this brings some relief to business, we think a two-year transition is short enough for economic risks surrounding Brexit to continue to influence investment decisions, notably in the services sector. What's more, during her speech May confirmed that the U.K. is pushing for a hard Brexit, which will see the U.K. leave the Customs Union and the Single Market.

The Long View

ASIA PACIFIC

By Katrina Ell and the Asia-Pacific Staff of Moody's Analytics
October 19, 2017

Australia

Australia is poised to grow 2.3% in 2017, just shy of potential, which we estimate to be from 2.5% to 3%. GDP growth is expected to strengthen in 2018 mainly on the back of improved domestic conditions. The main positive for the economy at the midpoint of 2017 has been a marked improvement in employment growth. We expect the tighter labour market to lead income gains to meaningfully pick up from mid-2018.

Nonmining investment is likely to keep improving and continue picking up the slack from flat mining investment. The large public-private infrastructure investment pipeline is providing an added lift that will start to make headway from late 2018. This should address bottlenecks including transport in large cities and eventually lift productivity.

Household consumption will be unable to maintain the June quarter's brisk pace heading into 2018. The household savings ratio reached a record low 4.6% in the three months to June as households dipped into savings to fund spending in the absence of solid income growth. Households have proved unwilling to maintain the burly consumption pace by continuing to reach for their savings and have pulled back on spending. This caused retail trade to contract at its fastest pace since March 2013 with a 0.6% m/m seasonally adjusted drop in August. Annual growth slowed to 2.1% from 3.5% previously. From a sustainability perspective, this is a positive development given the high household leverage Australians are carrying. Household debt is running at almost 120% of GDP.

In October, consumer confidence index hit 101.35, the first time it has been in optimistic territory and above the neutral 100 mark since November. Households are feeling optimistic about the economy a year ahead, and current conditions are also perceived as more favourable.

Many assume that a happier consumer is one that has a higher marginal propensity to spend, but that's not necessarily the case in Australia. Indeed, a three-year rolling correlation between monthly retail trade and the consumer confidence index shows a negative relationship from 2015 through 2017 so far. A Granger causality test confirmed no causal relationship.

A more important determinant of Australia's household consumption is income growth, which has hovered around a record low 1.8% y/y amid high labour underutilisation. Indeed, the correlation between the underutilisation rate and income growth is -0.88 from 2001 to mid-2017.

High underutilisation has started to edge lower as full-time employment growth has outpaced part-time positions through 2017, reversing the trend seen through most of 2015 and 2016, when part-time positions were favoured.

Forward-looking indicators suggest labour market tightening will persist into 2018, setting the stage for stronger income growth. We created a leading indicator of the labour market tracker using four different measures: ANZ job advertisements (the average number of print and internet advertisements), the Department of Employment's leading indicator of employment, the department's cyclical employment indicator, and the internet job vacancies report. In statistical jargon, the tracker is defined as the "first principal component" of four forward-looking employment measures.

The tracker shows that across the various indicators, the employment outlook has turned higher over 2017, suggesting further labour market tightening. This will bring down underutilisation and take income growth higher into 2018, providing a lift to consumption by mid-2018.

Australian brick-and-mortar retailers have struggled to keep up with online retailing, and the arrival of Amazon will be an even bigger challenge. The online retail giant is setting up warehouses and expected to begin local shipping in 2018. To some extent, restrictive shipping costs have shielded local retailers from online overseas retailers. That will change when Amazon sets up a local warehouse. In the U.S. and U.K., consumers over time buy a greater variety of products from Amazon as they become more familiar with the site. A similar trend is expected in Australia.

The Week Ahead

If Amazon is successful, it will result in retail job losses, as fewer staff are required in stores. This has occurred in the U.S. and is blamed for brick-and-mortar stores continually closing. It will also put downward pressure on clothing and other consumer durable prices. This impact has already occurred with the advent of fast fashion retailers such as H&M and Uniqlo setting up a local presence, but is expected to intensify with Amazon.

The Reserve Bank of Australia noted in its October monetary policy statement that a higher exchange rate is weighing on the outlook for continued improvement in output and employment. The Australian dollar has appreciated 8.8% year to date against the greenback, from around US\$0.72 to US\$0.78. A weaker U.S. dollar is partly the catalyst, with the trade-weighted dollar up 3.3% over the same period. We modeled the impact of the Australian dollar appreciating by 11% over 2017, bringing the currency to US\$0.80 by the December quarter of 2017. This involves the aussie rising a further 2.8 percentage points. Forecast GDP slowed by 0.03 percentage point to 2.27% in 2017 under the appreciation scenario. The impact was more pronounced in 2018 with GDP growth slowing from the baseline forecast of 2.52% to 2.3%.

Slower GDP growth has far-reaching consequences. Our expectation that the labour market will continue to tighten seems unlikely. The unemployment rate was little affected in the scenario, with no observable change in 2017 and less than 0.1 percentage point higher to 5.65% in 2018. But the relatively steady unemployment rate masks underlying weakness. We would expect underemployment to start edging back to its record high 8.9% as part-time positions are more favourable in the slower growth environment than full-time. Since the labour market wouldn't keep tightening in the appreciation scenario, the expected pickup in income growth later in 2017 and early 2018 is unlikely to materialize.

Forecast CPI for 2017 went from 2.05% y/y to 1.92% under the appreciation scenario. By 2018, the impact was more pronounced, from a forecast of 2.01% to 1.65%, falling below the RBA's 2% to 3% target range.

If the currency continues to strengthen, the RBA will maintain a neutral stance for longer. Assuming the currency does not keep strengthening, we have penciled in interest rate hikes to begin in mid-2018. The RBA could always revert to its old strategy of jawboning the currency lower, that has had some success in the past. A threat of the cash rate remaining at 1.5% for at least another year or further interest rate reductions could be deemed credible.

After an unparalleled rise in recent years, house prices are cooling, especially in the most heated markets of Sydney and Melbourne thanks to aggressive regulatory action that has involved limiting credit availability, especially to the riskier segments including interest-only loans to investors with limited deposits.

We expect a subdued housing market through to 2019 as strained affordability alongside restrictive regulation make household investment a less attractive option. This enables the RBA to keep interest rates on hold for longer than forecast, if need be.

Ratings Round-Up

Ratings Round-Up

By Njundu Sanneh

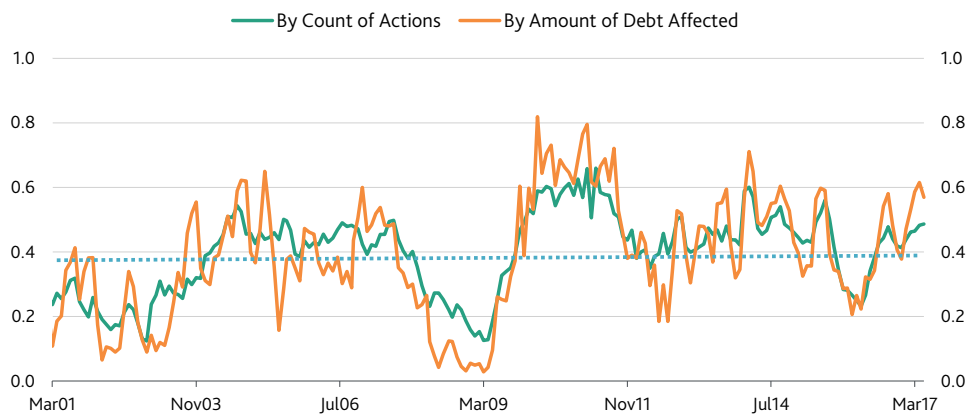
Telling Downgrades in Retail

In the US the downgrade of two retail companies reflects the challenges faced by the sector. The retail sector accounted for five (38%) of the 13 defaults in the third quarter, a substantial jump from the 17% in the second quarter. Increased competition in the sector especially with the entry of Amazon in the retail space is likely to continue pressuring prices and margins. Both Evergreen ArqCo 1 LP and The Fresh Market, Inc. are burdened with high leverage and poor operating performance. The impending debt maturities for Evergreen increase the likelihood of a distressed exchange. The retail sector apart, wholesale distributors and chemical companies did not also fare well in the past week with two downgrades in each of the sectors. Building materials manufacturers provided the positive note as the two concerns from this sector experienced positive rating changes. The improving conditions in the frac-sand industry is supportive for both Hi-Crush Partners LP and US Silica Company.

In Europe there were only three rating changes for the past week, with two upgrades and one downgrade.

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

The Week Ahead

FIGURE 3 Rating Changes: Corporate & Financial Institutions – US

Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/ SG
9/27/17	HS GROUP HOLDINGS, INC.	Industrial	SrSec/BCF/LTCFR/PDR		U	B2	B1	SG
9/28/17	AMN HEALTHCARE, INC.	Industrial	SrUnsec/LTCFR/PDR	650	D	Ba3	Ba1	SG
9/28/17	FIELDWOOD ENERGY LLC	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	B3	SG
9/28/17	FULLBEAUTY BRANDS HOLDINGS CORP.	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	B3	SG
9/28/17	GUIAR CENTER HOLDINGS, INC - Guitar Center Inc.	Industrial	SrUnsec/SrSec/LTCFR/PDR	940	D	Caa1	Caa2	SG
9/28/17	REYNOLDS GROUP HOLDINGS LIMITED	Industrial	SrUnsec/SrSec/LTCFR/PDR	7,874		Caa2	Caa1	SG
10/11/17	EVERGREEN ACQCO 1 LP	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	B3	SG
10/11/17	MITSUBISHI UFJ FINANCIAL GROUP, INC.	Financial	SrUnsec/LTIR/Sub/PS	2,600	U	A3	A2	IG
10/11/17	UNIVAR N.V. - Univar Inc.	Industrial	SrUnsec/SrSec/BCF/LTCFR/PDR	400	U	Caa1	B3	SG
10/12/17	ALLIANCE ONE INTERNATIONAL, INC.	Industrial	SrSec	275	D	B1	B2	SG
10/12/17	CHEMOURS COMPANY, (THE)	Industrial	SrUnsec/SrSec/BCF/LTCFR/PDR	2,834	U	B1	Ba3	SG
10/12/17	FRESH MARKET, INC. (THE)	Industrial	SrSec/LTCFR/PDR/BCF	800	D	B3	Caa1	SG
10/12/17	PFS HOLDING CORPORATION	Industrial	SrSec/BCF/LTCFR/PDR		D	B3	Caa1	SG
10/12/17	WIRECO WORLDGROUP INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	B3	Caa1	SG
10/13/17	KSS HOLDINGS, INC - Key Safety Systems, Inc.	Industrial	SrSec/BCF/LTCFR/PDR		D	Ba2	B1	SG
10/13/17	LANDRY'S HOLDINGS, INC. - Landry's, Inc.	Industrial	SrUnsec	600	U	Caa1	B3	SG
10/16/17	HI-CRUSH PARTNERS LP	Industrial	SrSec/BCF/LTCFR/PDR		U	Caa1	B3	SG
10/17/17	4L HOLDINGS CORPORATION - 4L Technologies Inc.	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	B3	SG
10/17/17	CONTEXTMEDIA HEALTH, LLC	Industrial	SrSec/BCF/LTCFR/PDR		D	B2	Caa1	SG
10/17/17	PR WIRELESS, INC.	Industrial	SrSec/BCF/LTCFR/PDR		D	Caa1	Caa2	SG
10/17/17	US SILICA HOLDINGS INC - US Silica Company, Inc.	Industrial	SrSec/BCF/LTCFR/PDR		U	B2	B1	SG

Source: Moody's

FIGURE 4 Rating Changes: Corporate & Financial Institutions – EUROPE

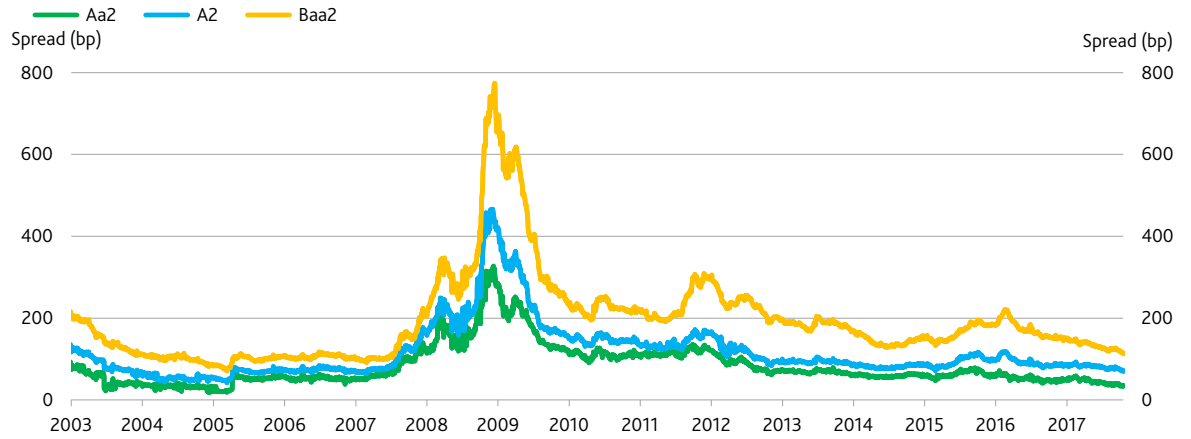
Date	Company	Sector	Rating	Amount (\$ Million)	Up/ Down	Old LTD Rating	New LTD Rating	IG/ SG	Country
10/17/17	OESTERREICHISCHER VOLKSBANKEN-VERBUND - OEVAG Finance (Jersey) Limited	Financial	PS		U	C	Caa1	SG	JERSEY
10/11/17	EASTCOMTRANS LLP	Industrial	SrSec/LTCFR/PDR	59	U	Caa1	B3	SG	KAZAKHSTAN
10/13/17	RICHMOND UK HOLDCO LIMITED	Industrial	SrSec/BCF/LTCFR/PDR		D	B1	B2	SG	UNITED KINGDOM

Source: Moody's

Market Data

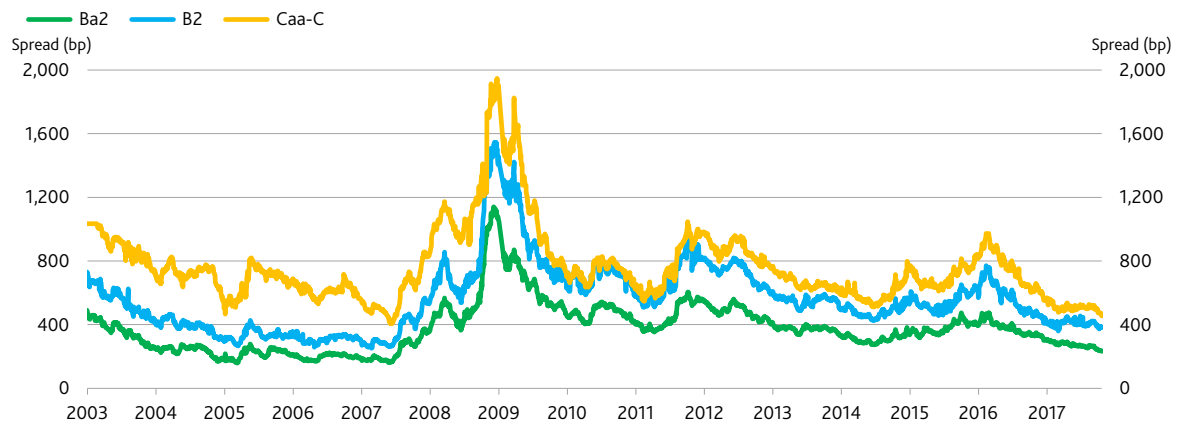
Spreads

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 (October 11, 2017 – October 18, 2017)

CDS Implied Rating Rises

Issuer	CDS Implied Ratings		Senior Ratings
	Oct. 18	Oct. 11	
Chevron Corporation	Aa3	A2	Aa2
Rite Aid Corporation	Caa2	Ca	B3
Microsoft Corporation	Aa1	Aa2	Aaa
Oracle Corporation	A1	A2	A1
International Business Machines Corporation	A1	A2	A1
Dow Chemical Company (The)	A3	Baa1	Baa2
Freeport-McMoRan Inc.	B1	B2	B2
HP Inc.	A3	Baa1	Baa2
Colgate-Palmolive Company	A1	A2	Aa3
Corning Incorporated	Baa3	Ba1	Baa1

CDS Implied Rating Declines

Issuer	CDS Implied Ratings		Senior Ratings
	Oct. 18	Oct. 11	
MBIA Inc.	C	Caa2	Ba1
Citigroup Inc.	Baa1	A3	Baa1
Morgan Stanley	Baa2	Baa1	A3
McDonald's Corporation	Aa2	Aa1	Baa1
General Electric Company	A3	A2	A1
Walt Disney Company (The)	A2	A1	A2
HCA, Inc.	B1	Ba3	B1
Johnson & Johnson	Aa1	Aaa	Aaa
Time Warner Inc.	Baa1	A3	Baa2
U.S. Bancorp	Aa2	Aa1	A1

CDS Spread Increases

Issuer	Senior Ratings	CDS Spreads		
		Oct. 18	Oct. 11	Spread Diff
Nine West Holdings, Inc.	Ca	8,156	7,961	195
Sears Roebuck Acceptance Corp.	Caa3	3,930	3,775	155
Sears Holdings Corp.	Caa3	3,495	3,358	137
MBIA Inc.	Ba1	871	751	120
MBIA Insurance Corporation	Caa2	890	802	89
R.R. Donnelley & Sons Company	B2	596	512	83
K. Hovnanian Enterprises, Inc.	Caa3	1,088	1,011	77
Windstream Services, LLC	B2	1,643	1,567	76
SUPERVALU Inc.	B3	711	652	60
Dish DBS Corporation	Ba3	312	256	56

CDS Spread Decreases

Issuer	Senior Ratings	CDS Spreads		
		Oct. 18	Oct. 11	Spread Diff
Parker Drilling Company	Caa1	1,002	1,070	-68
Genworth Holdings, Inc.	B2	673	733	-61
Neiman Marcus Group LTD LLC	Caa3	1,611	1,661	-49
SLM Corporation	Ba2	293	341	-48
Rite Aid Corporation	B3	785	821	-37
Nordstrom, Inc.	Baa1	235	264	-29
AK Steel Corporation	B3	361	387	-26
United States Steel Corporation	Caa1	317	341	-24
Talen Energy Supply, LLC	B1	818	840	-22
Navistar International Corp.	Caa1	326	348	-22

Source: Moody's, CMA

Figure 4. CDS Movers - Europe (October 11, 2017 – October 18, 2017)

CDS Implied Rating Rises	CDS Implied Ratings			
	Issuer	Oct. 18	Oct. 11	Senior Ratings
	Caixa Geral de Depositos, S.A.	Ba3	B2	B1
	Anheuser-Busch InBev SA/NV	A2	A3	A3
	Daimler AG	A2	A3	A2
	Danone	A1	A2	Baa1
	Tesco Plc	Ba1	Ba2	Ba1
	Fiat Chrysler Automobiles N.V.	B1	B2	B1
	Veolia Environnement S.A.	A1	A2	Baa1
	National Grid Electricity Transmission plc	A3	Baa1	A3
	EDP - Energias de Portugal, S.A.	Baa1	Baa2	Baa3
	EnBW Energie Baden-Wuerttemberg AG	Aa3	A1	Baa2

CDS Implied Rating Declines	CDS Implied Ratings			
	Issuer	Oct. 18	Oct. 11	Senior Ratings
	Italy, Government of	Ba3	Ba2	Baa2
	Spain, Government of	Baa3	Baa2	Baa2
	Rabobank	Aa2	Aa1	Aa2
	Austria, Government of	Aa1	Aaa	Aa1
	Barclays Bank PLC	Baa1	A3	A1
	Lloyds Bank Plc	A2	A1	Aa3
	BNP Paribas	A1	Aa3	Aa3
	Deutsche Bank AG	Ba1	Baa3	Baa2
	Portugal, Government of	Ba3	Ba2	Ba1
	Finland, Government of	Baa1	A3	Aa1

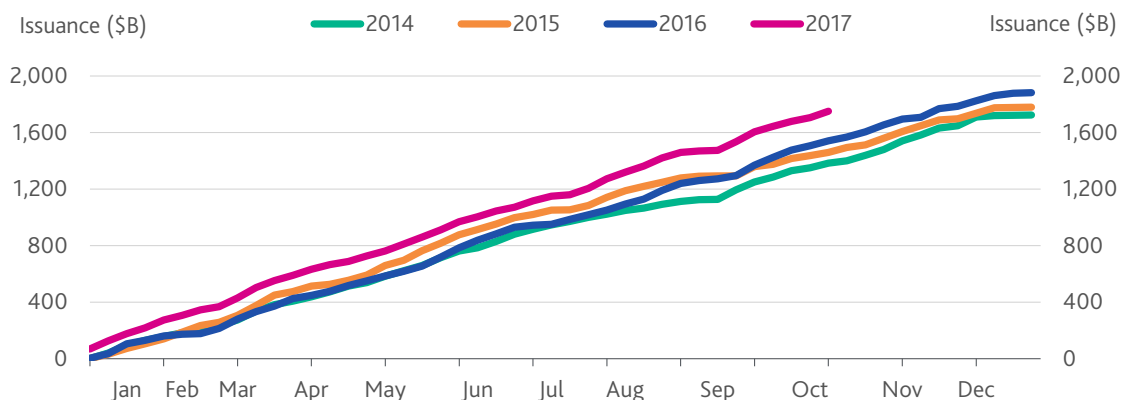
CDS Spread Increases	CDS Spreads				
	Issuer	Senior Ratings	Oct. 18	Oct. 11	Spread Diff
	Boparan Finance plc	B2	645	593	52
	DONG Energy A/S	Baa1	79	68	12
	MAN SE	A3	85	76	9
	Finland, Government of	Aa1	54	47	8
	GKN Holdings plc	Baa3	90	84	6
	Nokia Oyj	Ba1	85	80	5
	Spain, Government of	Baa2	69	64	4
	SEB	Aa3	27	23	4
	The Royal Bank of Scotland plc	A3	55	51	3
	Portugal, Government of	Ba1	132	129	3

CDS Spread Decreases	CDS Spreads				
	Issuer	Senior Ratings	Oct. 18	Oct. 11	Spread Diff
	PizzaExpress Financing 1 plc	Caa1	841	908	-67
	Caixa Geral de Depositos, S.A.	B1	141	206	-65
	Astaldi S.p.A.	B3	731	761	-30
	CMA CGM S.A.	B3	322	350	-29
	Stena AB	B3	525	551	-27
	Matalan Finance plc	Caa2	404	423	-19
	ArcelorMittal	Ba1	136	151	-16
	Tesco Plc	Ba1	102	117	-15
	Galapagos Holding S.A.	Caa2	881	895	-14
	Fiat Chrysler Automobiles N.V.	B1	172	184	-13

Source: Moody's, CMA

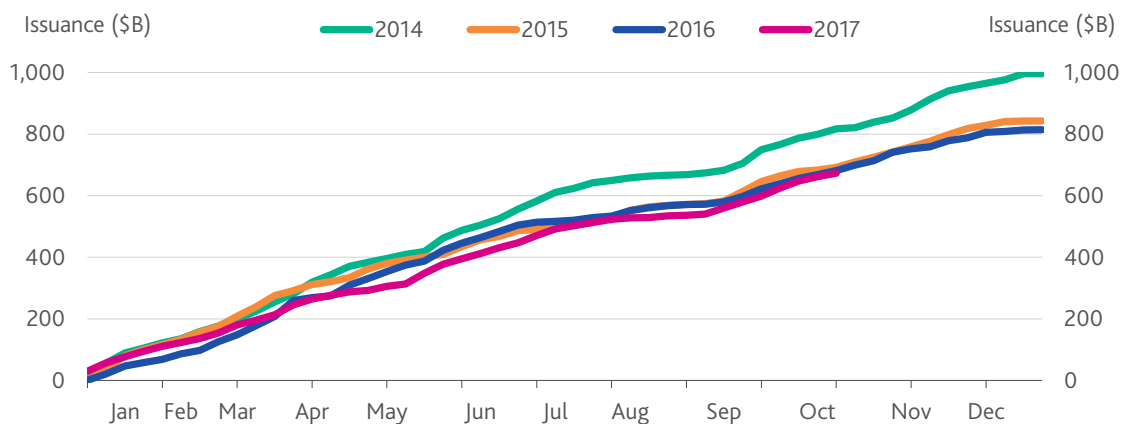
Issuance

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 Amount \$B	High-Yield Amount \$B	Total* Amount \$B
Weekly	32.862	7.880	44.441
Year-to-Date	1,244.168	367.033	1,750.738

	Euro Denominated		
	Investment-Grade Amount \$B	High-Yield Amount \$B	Total* Amount \$B
Weekly	6.790	2.644	10.768
Year-to-Date	552.952	83.884	672.852

* Difference represents issuance with pending ratings.

Source: Moody's / Dealogic

Moody's Capital Markets Research *recent publications*

Spain's Sovereign Credit Risk Receding Post-Referendum
Special Events Supply an Upside Surprise (Capital Markets Research)
Rate Spike Would Tame the Bulls (Capital Markets Research)
Less Fear, More Debt (Capital Markets Research)
Sovereign Risk Report: The Fed and the BoJ (Capital Markets Research)
Low Inflation May Suppress Bond Returns (Capital Markets Research)
What Might Trigger the Next Market Plunge? (Capital Markets Research)
Sovereign Risk Report: Hurricanes, Natural and Manmade, Weigh on Sovereign Risk
Jobs, VIX and Defaults Move Together (Capital Markets Research)
Hurricane Harvey Update: Little Impact on US Energy Sector Default Risk -- Moody's Topics@CreditEdge
Low Inflation Trims Interest-Rate Risk (Capital Markets Research)
Medium-Grade Bond Yields May Lag Consensus Views (Capital Markets Research)
Sovereign Risk Report: Tensions on the Korean Peninsula Keep Market-Based Sovereign Credit Risk Elevated
Jobless Rate's Waning Influence on Inflation and the Fed (Capital Markets Research)
Swelling of Low-Grade Spreads Looms (Capital Markets Research)
Sovereign Risk Report: Non-Oil Sector Growth Curbs Saudi Arabia's Credit Risk
Lending Goes Wanting (Capital Markets Research)
Sovereign Risk Report: Market-Based Sovereign Risk Measures Rising in El Salvador
Liquidity Buoy Corporate Credit (Capital Markets Research)
How Low Can You Go? Using CreditEdge to Search for Yield in the US Corporate Bond Market (CreditEdge Research)
Sovereign Risk Report: Along with Draghi's Dovish Tone, European Credit Market Sentiment Is Little Changed
Low Interest Rates Offset Fiscal Gridlock (Capital Markets Research)
Sovereign Risk Report: Sovereign Risk Declines Broadly
The Least Inaccurate Forecaster (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: 1097172

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.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.