Morningstar Corporate Credit Research Highlights
New issuance from banking sector floods corporate bond market.

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<table>
<thead>
<tr>
<th>Issuer/Ticker</th>
<th>Current Issuer Credit Rating</th>
<th>Previous Issuer Credit Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>KeyCorp KEY</td>
<td>BBB+</td>
<td>BBB+</td>
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<td>Masco MAS</td>
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<td>BBB</td>
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<td>BBB+</td>
<td>BBB+</td>
</tr>
<tr>
<td>Eli Lilly LLY</td>
<td>AA</td>
<td>AA</td>
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<tr>
<td>Novartis NVS</td>
<td>AA</td>
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<td>Pioneer Natural Resources PXD</td>
<td>BBB-</td>
<td>BBB-</td>
</tr>
<tr>
<td>Johnson &amp; Johnson JNJ</td>
<td>AAA</td>
<td>AAA</td>
</tr>
<tr>
<td>HP HPQ</td>
<td>BBB</td>
<td>BBB</td>
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</table>

Recent Notes Published by Credit Analysts
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► JPMorgan Offering 11-Year and 31-Year Callable Notes
► Hologic Issues $1 Billion of Unsecured Notes in Private Offering to Refinance Existing Notes
► Eye-Popping Tax Effects Overshadow Some Positive Aspects of Citigroup’s 4Q Results
► Following 4Q Earnings, Citigroup Offering 5-Year and 21-Year Callable Notes
► Strong Annual Performance for Schwab in Wake of Bank and Asset-Management Expansion
► Goldman Sachs’ 4Q Results Mixed Bag for Bondholders
► Following 4Q Earnings, Goldman Sachs Offering 5-Year and 11-Year Callable Notes
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► Despite Tax Effects, Morgan Stanley’s 4Q Earnings Illustrate Progress on Many Strategic Priorities
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► Broadening Demand for Oilfield Services Supports Schlumberger’s 4Q Results and 2018 Outlook
Credit Market Insights

New Issuance From Banking Sector Floods Corporate Bond Market
Fixed-income markets were largely unaffected by the looming government shutdown, as investors have become inured to the prospect of as well as the actual shutdowns over the years. While it was a holiday-shortened week, the new issue market was open for business, and following recent earnings reports, the banking sector flooded the market with new issues. Many of the large global banks reported earnings at the end of the prior week or early this past week and wasted no time issuing bonds after their quiet periods ended. While many financial companies reported lower-than-expected earnings or in some cases losses, underlying performance was generally within expectations, with their bottom lines constrained by one-time tax expense charges in conjunction with the recently enacted Tax Cuts and Jobs Act. The charges were attributed to a combination of writing down the value of deferred tax assets accumulated during the financial crisis of 2008-09 as well as repatriating accumulated earnings of non-U.S. subsidiaries. The who's who in the banking sector that took advantage of the opening to the new issue market included: Bank of America (BBB+, stable), Citigroup (A-, stable), Goldman Sachs (BBB+, stable), JPMorgan Chase (A, stable), Morgan Stanley (BBB+, stable), PNC Financial Services (A- stable), U.S. Bancorp (AA-, stable), and Wells Fargo (A, stable).

Credit spreads in the investment-grade market remained relatively steady as strong demand for corporate bonds was able to mostly absorb the deluge of new issuance. The average spread of the Morningstar Corporate Bond Index (our proxy for the investment-grade bond market) widened just 1 basis point and ended the week at +93, near its lowest levels since before the global financial credit crisis. As for the underlying components of the index, the average spread of the financial sector widened 1 basis point, whereas the average spread of the industrial sector was unchanged and the utility sector widened 1 basis point. Year to date, the average credit spread of the overall index has tightened 3 basis points, driven by a 4-basis-point tightening in the industrial sector and 7-basis-point tightening in the utility sector. Financial sector credit spreads have been flat.

In the high-yield market, the BofA Merrill Lynch High Yield Master Index tightened 2 basis points to end the week at +335, which is 28 basis points tighter than at the end of 2017. This is the tightest level the high-yield index has registered since mid-2014 and only 2 basis points away from its tightest level since before the global financial credit crisis. Among other risk assets, the S&P 500 rose almost 1% last week and is already up 5.1% over the past 13 trading days thus far this year. After rallying almost as much as $9 this year, oil prices pulled back slightly and ended the week $1 lower at $63.50 per barrel.
The Treasury market got whacked again last week as prices fell across the entire yield curve, sending interest rates to their highest levels in years. The yields on the 2-, 5-, 10-, and 30-year Treasury bonds rose 6, 10, 11, and 8 basis points, respectively, to 2.06%, 2.45%, 2.66%, and 2.93%. The yield on the 2-year Treasury bond is highest since the midst of the global financial credit crisis, and the yield on the 5-year Treasury bond is its highest since 2010. The yield on the 10-year Treasury bond is its highest since the fall of 2014.

Third-Highest Weekly High-Yield Fund Outflow of Past Year Follows Highest Weekly Inflow
Fund flows in the high-yield market quickly reversed last week, as the $3.5 billion of outflows is the third-highest weekly outflow registered over the past year. Fund flows consisted of $1.1 billion of withdrawals among the open-end funds and $2.4 billion of unit redemptions across the high-yield exchange-traded funds for the week ended Jan. 17. The prior week, the amount of inflows was the highest amount of weekly inflows over the past year and the fourth-highest amount over the past two years.
Estimated Weekly High-Yield Bond Fund Flows and High Yield Credit Spreads

Source: Morningstar, Inc. and BofA Merrill Lynch Global Indexes.
## Exhibit 1 Morningstar Credit New Issue Monitor

Week ended Jan. 19, 2018

(000,000s $ unless otherwise noted)

<table>
<thead>
<tr>
<th>Issuer</th>
<th>Ticker</th>
<th>Morningstar Corporate Rating(^1)</th>
<th>Size</th>
<th>Coupon</th>
<th>Description</th>
<th>Maturity</th>
<th>Approx Spread to US Treasuries</th>
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<td>BBB+</td>
<td>$1,500</td>
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<td>Senior Unsecured</td>
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<td>NA</td>
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<tr>
<td>Bank of America</td>
<td>BAC</td>
<td>BBB+</td>
<td>$1,250</td>
<td>L+105</td>
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<td>NA</td>
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<td>Citi Group</td>
<td>C</td>
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<td>$2,000</td>
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<td>NA</td>
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<td>Goldman Sachs</td>
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<td>3.20%</td>
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<td>Hologic</td>
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<td>NA</td>
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<td>Morgan Stanley</td>
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<td>L+55</td>
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<td>2021</td>
<td>NA</td>
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<tr>
<td>Morgan Stanley</td>
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<td>BBB+</td>
<td>$2,500</td>
<td>3.13%</td>
<td>Senior Unsecured</td>
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<td>+77</td>
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<td>PNC Bank</td>
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<td>A-</td>
<td>$400</td>
<td>L+25</td>
<td>Senior Unsecured</td>
<td>2021</td>
<td>NA</td>
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<tr>
<td>PNC Bank</td>
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<td>A-</td>
<td>$900</td>
<td>2.50%</td>
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<td>2021</td>
<td>+43</td>
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<tr>
<td>PNC Bank</td>
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<td>$700</td>
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<td>+73</td>
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<td>USB</td>
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<td>$500</td>
<td>L+12.5</td>
<td>Senior Unsecured</td>
<td>2020</td>
<td>NA</td>
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<td>US Bank NA Ohio</td>
<td>USB</td>
<td>AA-</td>
<td>$550</td>
<td>2.35%</td>
<td>Senior Unsecured</td>
<td>2020</td>
<td>+33</td>
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<td>US Bank NA Ohio</td>
<td>USB</td>
<td>AA-</td>
<td>$750</td>
<td>2.85%</td>
<td>Senior Unsecured</td>
<td>2023</td>
<td>+45</td>
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<td>WFC</td>
<td>A</td>
<td>$1,750</td>
<td>2.40%</td>
<td>Senior Unsecured</td>
<td>2020</td>
<td>+43</td>
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<td>Wells Fargo</td>
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<td>A</td>
<td>$1,000</td>
<td>L+23</td>
<td>Senior Unsecured</td>
<td>2020</td>
<td>NA</td>
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<td>WFC</td>
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<td>$2,500</td>
<td>2.80%</td>
<td>Senior Unsecured</td>
<td>2021</td>
<td>+50</td>
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</tbody>
</table>

Source: Bloomberg, company Securities and Exchange Commission filings.  
\(^1\) Morningstar’s issuer credit rating is assigned at the holding company level.
### Exhibit 2 Morningstar, Inc. Corporate Bond Index Sector Summary

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<thead>
<tr>
<th>Sector</th>
<th>Average Rating</th>
<th>Number of Issues</th>
<th>Modified Duration</th>
<th>Spread (bps)</th>
<th>MTD Spread Chg (bps)</th>
<th>YTD Spread Chg (bps)</th>
<th>MTD Total Return (%)</th>
<th>YTD Total Return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>A-</td>
<td>4,988</td>
<td>7.0</td>
<td>93</td>
<td>(3)</td>
<td>(3)</td>
<td>(1.00)</td>
<td>(1.00)</td>
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<td>FINANCIAL</td>
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<td>1,462</td>
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<td>83</td>
<td>(0)</td>
<td>(0)</td>
<td>(0.98)</td>
<td>(0.98)</td>
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<tr>
<td>Bank</td>
<td>A-</td>
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<td>81</td>
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<td>(0.88)</td>
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<td>Finance</td>
<td>A</td>
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<td>5.7</td>
<td>87</td>
<td>(0)</td>
<td>(0)</td>
<td>(1.18)</td>
<td>(1.18)</td>
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<tr>
<td>Insurance</td>
<td>A</td>
<td>212</td>
<td>7.9</td>
<td>83</td>
<td>(3)</td>
<td>(3)</td>
<td>(1.28)</td>
<td>(1.28)</td>
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<td>REITs</td>
<td>BBB+</td>
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<td>5.9</td>
<td>100</td>
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<td>(4)</td>
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<td>(0.93)</td>
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<td>INDUSTRIAL</td>
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<td>Basic Industries</td>
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<td>7.9</td>
<td>118</td>
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<td>(11)</td>
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<td>(0.66)</td>
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<td>Consumer Products</td>
<td>A-</td>
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<td>7.6</td>
<td>82</td>
<td>(2)</td>
<td>(2)</td>
<td>(1.21)</td>
<td>(1.21)</td>
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<td>Energy</td>
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<td>115</td>
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<td>(7)</td>
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<td>(0.70)</td>
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<td>85</td>
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<td>(4)</td>
<td>(1.19)</td>
<td>(1.19)</td>
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<td>6.2</td>
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<td>(2)</td>
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<td>(9)</td>
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<td>(0.91)</td>
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<td>(4)</td>
<td>(1.19)</td>
<td>(1.19)</td>
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<td>Technology</td>
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<td>(1)</td>
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<td>Telecom</td>
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<td>(5)</td>
<td>(5)</td>
<td>(1.01)</td>
<td>(1.01)</td>
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<tr>
<td>Transportation</td>
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<td>9.1</td>
<td>91</td>
<td>(7)</td>
<td>(7)</td>
<td>(0.96)</td>
<td>(0.96)</td>
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<td>UTILITY</td>
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<td>113</td>
<td>(7)</td>
<td>(7)</td>
<td>(0.93)</td>
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<tr>
<td>Electric Utilities</td>
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<td>9.4</td>
<td>99</td>
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<td>(4)</td>
<td>(1.25)</td>
<td>(1.25)</td>
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<tr>
<td>Gas Pipelines</td>
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<td>(11)</td>
<td>(11)</td>
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**Rating Bucket**

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<thead>
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<th>Rating Bucket</th>
<th>Number of Issues</th>
<th>Modified Duration</th>
<th>Spread (bps)</th>
<th>MTD Spread Chg (bps)</th>
<th>YTD Spread Chg (bps)</th>
<th>MTD Total Return (%)</th>
<th>YTD Total Return (%)</th>
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<td>AAA Bucket</td>
<td>114</td>
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<td>(0)</td>
<td>(1.48)</td>
<td>(1.48)</td>
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<tr>
<td>AA Bucket</td>
<td>468</td>
<td>5.7</td>
<td>54</td>
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<td>(4)</td>
<td>(0.90)</td>
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**Term Bucket**

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<th>YTD Spread Chg (bps)</th>
<th>MTD Total Return (%)</th>
<th>YTD Total Return (%)</th>
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<tbody>
<tr>
<td>1-4</td>
<td>A-</td>
<td>1,580</td>
<td>2.3</td>
<td>56</td>
<td>(1)</td>
<td>(1)</td>
<td>(0.24)</td>
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<td>4-7</td>
<td>A-</td>
<td>1,178</td>
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<td>77</td>
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<td>(3)</td>
<td>(0.77)</td>
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<tr>
<td>7-10</td>
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<td>930</td>
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<td>(3)</td>
<td>(1.27)</td>
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<tr>
<td>10PLUS</td>
<td>A-</td>
<td>1,300</td>
<td>13.9</td>
<td>139</td>
<td>(6)</td>
<td>(6)</td>
<td>(1.80)</td>
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</tbody>
</table>

*Data as of 01/19/2018

*Source: Morningstar, Inc.*
Exhibit 3 Morningstar, Inc. Corporate Bond Index Spread by Sector

Source: Morningstar, Inc.

Exhibit 4 Morningstar, Inc. Corporate Bond Index YTD Spread Change

Source: Morningstar, Inc.
Exhibit 5: Morningstar, Inc. Corporate Bond Index YTD Return

Source: Morningstar, Inc.
Credit Rating Actions

KeyCorp's Rating Affirmed at BBB+; Outlook Remains Stable
Following the adoption of our revised bank methodology, Morningstar Credit Ratings, LLC is affirming KeyCorp's BBB+ credit rating and maintaining a stable outlook. We believe that potential scale and cost benefits from the full integration of First Niagara's operations into KeyCorp during 2018 could ultimately be offset by the company's above-average exposure to commercial real estate and commercial and industrial loans.

KeyCorp's good Business Risk score benefits from the company's reasonably diverse operations and good funding mix. The combination of First Niagara has expanded the company's footprint into New York, Pennsylvania, and New England from its legacy markets in the Upper Midwest. Revenue sources are reasonably diverse and split between net interest income, which represents about 61% of revenue in 12-months ending September and fee-based sources, which contributed the remaining 39% of revenue. During the first three quarters of the year, KeyCorp generated about 61% of its revenue in its community banking segment that provides deposit, lending, and asset management services to individuals and small businesses. Most of the remaining revenue was generated in the company's corporate bank, which includes a full-service investment bank providing capital markets services and commercial mortgage loans to its primarily middle market clients. KeyCorp's loan portfolio maintains an above-average exposure to commercial loans that represented about 73% of loans compared with 50%-60% for most large regional banks, which could contribute to earnings volatility if the commercial credit conditions were to deteriorate. In our view, KeyCorp also benefits from a good funding mix with over 100% of funding (relative to noncash assets) coming from sources that we would consider stable, including equity, long-term debt, and deposits. Notwithstanding these strengths, Morningstar's Equity Research Group does not view KeyCorp as benefiting from an economic moat due to higher operating costs and lack of funding cost advantages relative to peers.

Although integration and restructuring costs have overshadowed earnings performance in the year-to-date period, KeyCorp's Solvency Score has improved compared with our prior review a year ago. Under our revised methodology, the bank generates higher scores on our profitability, capital, reserves, and deposit components than previously. As a result, we now consider its score on the pillar roughly average from below average, previously. Higher future profits resulting from business synergies stemming from the First Niagara combination could contribute to a higher Solvency Score.
Similar to regional banking peers, KeyCorp generates a good score on our Stress Test pillar. Although the company's loan portfolio maintains an above-average exposure to commercial and industrial and commercial real estate loans, results on the Stress Test reflect KeyCorp's decent initial capital position and adequate levels of loan-loss reserves and our expectation that pre-provision profits continue to improve over our forecast horizon. Taken together, we expect capital levels to be maintained at decent levels under our stress-case assumptions.

KeyCorp's rating also considers its modestly below-average Distance to Default score. This market-based pillar compares the company's equity market value, including the volatility of its equity value, with the book value of its assets. The pillar score benefits from an above-average equity value about 1.4 times its book. However, an above-average measure of equity volatility during our measurement period detracts from the pillar score.

Factors individually or collectively that could lead to a higher credit rating include higher levels of pretax profits or higher capital levels that could contribute to higher Solvency Score and Stress Test metrics. Business synergies and scale benefits realized from the First Niagara acquisition could also contribute to a stronger Business Risk score and a higher credit rating. Conversely, in the absence of higher capital levels, a lack of business synergies and cost efficiencies from the First Niagara acquisition and realized profits below our expectations could lead to a lower credit rating. Our rating may also be negatively affected by lower reserves relative to nonperforming and delinquent assets to the extent that they lead to a lower Solvency Score. Higher levels of short-term wholesale funding could contribute to a lower Business Risk score. A riskier loan portfolio or lower underwriting standards could contribute to a lower Stress Test score and a lower credit rating.

**Masco's Rating Affirmed at BBB With Stable Outlook on Solid Underlying Fundamentals**

Morningstar Credit Ratings, LLC is affirming Masco's BBB corporate credit rating and maintaining a stable outlook. The rating continues to reflect Masco's improving financial picture, driven by favorable end-market fundamentals that are offset to some degree by a shift to a more shareholder-friendly capital-allocation policy, which will limit further debt reduction.

Our rating reflects Masco's solid portfolio of four product lines and improving financial metrics. After a portfolio review and spin-off of its highly cyclical installation business (primarily exposed to the new-home construction market) in 2015, Masco has maintained a portfolio of market-leading brands focused primarily on the less cyclical repair and remodel market. These range from Delta faucets to Behr paint to Milgard windows to KraftMaid cabinets. The strength of the plumbing and paint segments in particular drives the company's narrow economic moat rating, as assigned by Morningstar's Equity Research Group, a positive for our Business Risk assessment. Still, this score is tempered by a modest degree of cyclicality and management's desire to continue making bolt-on acquisitions. Further, Masco has significant customer concentration, with 34% of 2016 sales to Home Depot.

Masco has delivered strong deleveraging over the past several years since gross leverage peaked at over 8 times in 2011. Total debt has since been reduced to about $3 billion from $4 billion, while gross
leverage has declined to under 2.5 times. Meanwhile, the company maintains healthy liquidity, with cash exceeding $1 billion and an undrawn $750 million revolver available. Our Cash Flow Cushion reflects the solid cash balances and accelerating free cash flow, manageable debt maturities over the next several years, but also growing dividends. The company's capital-allocation policy now also includes a target of about $1.1 billion in share repurchases and acquisitions over 2018-19; along with dividends, this should consume all free cash flow. We expect bolt-on acquisitions to be of modest size, similar to recently announced deals for Kichler Lighting and Mercury Plastics funded with cash. Overall, we forecast mid-single-digit top-line growth over the next five years, with steady margin expansion leading to EBITDA growth in the high single digits. Masco's growth profile is largely in line with underlying residential repair and remodel growth, which is driven by an expected increase in existing-home sales and overall housing values.

Masco's credit rating could improve should it generate growth above our expectations due to strong end-market demand along with modest acquisitions, as this could improve our Business Risk score. Growth that drives operating margins higher and further balance sheet improvement could improve our Solvency Score and warrant an upgrade. Should the company make a large debt-funded acquisition or sell existing assets with proceeds returned to shareholders, the rating could be lowered.

EOG Resources’ BBB+ Rating Affirmed; Outlook Remains Stable
Morningstar Credit Ratings, LLC is affirming the BBB+ corporate credit rating on EOG Resources and maintaining a stable rating outlook. MCR's rating incorporates our current oil and gas price forecasts and our estimate for gradually improving company results over the next several quarters. The stable outlook reflects EOG's ongoing progress in lowering its overall cost structure and its growth strategy, which centers on a large inventory of repeatable, low-risk, oil-weighted drilling opportunities in the Delaware segment of the Permian Basin of Texas and New Mexico and the Eagle Ford Shale of Texas.

The rating reflects our expectation for companywide organic oil equivalent production growth of 12%-14% per year from 2017 through 2021, largely driven by increasing oil production from the Delaware Basin and the Eagle Ford Shale. Our rating also reflects the inherent cyclical for exploration and production (upstream) activity. Further, our rating reflects the view from Morningstar's Equity Research Group that EOG does not have an economic moat, given the lack of sustainable competitive advantages and the historical volatility of the company's return on invested capital. However, the steady reduction in the company's cost structure should help temper this volatility going ahead. The rating outlook incorporates our expectation that operating margins will gradually expand in light of cyclically rebounding oil and natural gas price realizations over the next several quarters.

We regard EOG's liquidity as very good. At the end of the September quarter, the company had $846 million in cash and equivalents and full availability on its $2.0 billion senior unsecured credit facility (maturing in July 2020). Upcoming maturities of long-term borrowings are $350 million in 2018, $900 million in 2019, $1.0 billion in 2020, and $750 million in 2021. Considering cash and equivalents and our forecast for increasing free cash flow, we estimate EOG has adequate liquidity relative to near-term maturities. EOG plans to spend near the high end of its capital expenditure guidance range of $3.7
billion-$4.1 billion in 2017, about 60% more than the previous year, and we estimate it will spend $4.5 billion in 2018. After capital expenditures, dividends, and dispositions, we estimate EOG will generate net cash flow of $650 million in 2017, cycling higher to more than $4 billion in 2021. Combined with its large cash position, this results in a Cash Flow Cushion score that is average. However, a gradually increasing return on invested capital drives an improving Solvency Score through our forecast period.

Our base forecast incorporates revenue cyclically rebounding to about $22 billion in 2021 from $10.8 billion in 2017, which equates to an approximate 20% compound annual growth rate from 2017. We estimate the company's adjusted EBITDAX margin gradually rising to about 58% by 2021 from 42% in 2017. Commensurate with this, we estimate the ratio of total debt/trailing EBITDAX gradually declining to less than 1 times by 2021 from 1.4 times in 2017. Our base operating forecast incorporates an average 2018 price assumption of $3.00 per million British thermal units for U.S. natural gas and $3.00 per year thereafter. For oil (West Texas Intermediate basis), our yearly forecast is $57.50/barrel average for 2018, $60 for 2019, and $65 for 2020 and 2021. Our yearly natural gas price forecast ranges from 4% to 6% above the futures price curve through 2021. As of Jan. 17, the gas price futures curve is in slight backwardation. For oil, our annual forecast ranges from 5% below to 20% above the futures price curve through 2021, at the top end of this range for the last two years of our forecast. Also as of Jan. 17, the oil price futures curve is in backwardation.

Our rating outlook is stable and assumes that the company is able to incrementally reduce leverage from higher price realizations that should arise from the gradual improvement in oil and gas supply and demand fundamentals. If fundamentals and the pricing outlook improve more quickly than we currently expect, we would consider raising the credit rating, as we would expect improvement in our Cash Flow Cushion and Solvency Score. If spot pricing were to languish, squeezing margins and pressuring the Solvency Score, we may consider a downgrade of the credit rating.

**Eli Lilly's AA Rating Affirmed; Outlook Stable**

Morningstar Credit Ratings, LLC is affirming Eli Lilly and Co.’s AA rating and stable outlook, reflecting our expectation that the company may overcome significant drug patent expirations through its industry-leading commitment to research innovation.

Eli Lilly's research and development investment topping 20% of sales has produced a refreshed medicine chest since 2014, including promising treatments Trulicity, Jardiance, and Basaglar in diabetes; Cyramza, Lartruvo, and Verzenio in cancer; and Taltz and Olumiant in immunology. Eli Lilly is in the midst of a patent cliff that began in 2017 with the losses of market exclusivity for anticoagulant Effient and ADHD medicine Strattera. It still faces potential generic competition in the next few years to osteoporosis drug Forteo, cancer medicine Alimta, and erectile dysfunction drug Cialis, which together account for around 27% of total revenue. While patent expiration risk is high for the industry, strong demand for nine drugs introduced since 2014 supports our expectation of mid-single-digit sales growth compounded annually over the next five years. Operating leverage arising from successful cost control, including head count reduction (3,500 positions) announced in September 2017 that may save $500 million annually (with half dedicated to reinvestment in operations), drives our expectation for low-
double-digit EBITDA growth compounded annually through 2021. Cost-cutting benefits may push down operating expenses (a combination of marketing and research costs) below 49% of sales in 2018, trending toward the company’s operating margin target at least 30% by 2020. Lilly will lose diversification if it spins off animal health business Elanco (nearly 14% of total revenue), but our very good Business Risk pillar would stay intact.

Eli Lilly’s leverage remains elevated after the acquisition of Novartis’ animal health business in March 2015 and a series of asset purchases during 2017, most notably CoLucid in March. As of Sept. 30, 2017, the company owed $13.5 billion in total debt, including $2.3 billion of long-term unsecured debt issued in May, compared with $8.1 billion at the end of 2014. As a result, total debt leverage rose to 2.2 times for the 12 months ended September 2017 from 1.6 times in 2014. Considering Eli Lilly’s cash and investments of $13.1 billion on Sept. 30, 2017, net leverage was 0.1 times for the trailing 12-month period, paralleling the company’s historical standard. We suspect the May debt issuance (pursuant to a covenant-light indenture dated February 1991) may be used to repay the only significant debt maturities through 2021—around $1 billion maturing in 2018 and $600 million due in 2019. This debt reduction along with solid operational performance driven by strong demand for new medicines may decrease gross leverage to mid-1 times by 2020, in our estimation, which supports our Cash Flow Cushion and Solvency Score pillars.

Eli Lilly’s substantial financial flexibility stems mainly from strengthening free cash flow that we expect to average $4.5 billion annually through 2021, though back end-loaded. The company also has three credit facilities: a $1.5 billion one-year revolver due December 2017, a $2.3 billion one-year facility due March 2018, and a $1.2 billion five-year revolving agreement due August 2021. Eli Lilly’s first use for capital is reinvestment in its operations as it internally develops and launches novel pharmaceuticals. But the company may accelerate supplementing its highly productive research program with external projects while increasing returns to shareholders as cash flow improves. Lilly already increased dividends 8% for 2018 after holding payments flat while it refreshed its medicine bag, and it may step up share repurchasing in the absence of tuck-in acquisitions. On Sept. 30, 2017, Eli Lilly had around $2.2 billion of authorization left on a $5 billion program (established in October 2013).

The stable outlook on Eli Lilly’s rating indicates we see no immediate fundamental or financial catalyst to change the current rating over the next few years. However, if demand shrinks for the company’s new drug portfolio while EBITDA generation significantly compresses, such that our Cash Flow Cushion deteriorates, then a downgrade may be warranted. In addition, large leveraging transactions, like a transformational acquisition or aggressive share repurchasing, that severely impair our leverage-based pillars could cause a downgrade. A return of gross debt leverage to a historical level around 1 times, most likely requiring successful navigation of its patent wave and a long-term commitment to operating with a lower debt burden, could prompt an upgrade to the rating.

Novartis’ Rating Affirmed at AA; Outlook Stable
Morningstar Credit Ratings, LLC is affirming Novartis AG’s AA rating and stable outlook to reflect its diversified portfolio spanning the pharmaceutical industry with leading positions in the generic drug
sector, ophthalmic treatments, and novel prescription medicines. However, the rating is weighed down by stubbornly elevated gross leverage since the company's global corporate transformation in 2015 in addition to heightened share repurchases since 2014.

Novartis' very good Business Risk pillar remains intact supported by a wide moat and low uncertainty assigned by Morningstar's Equity Research Group and despite earnings now concentrated on human medicines after the company refined its corporate portfolio over the past few years. Upon annualizing generic competition to Novartis' once best-seller Gleevec (oncology), we expect overall revenue to reach a floor in 2017. Longer term, we see Novartis overcoming the U.S. patent expirations of top-selling drugs—Gilenya in 2019 and Afinitor in 2020—with its diversified portfolio and new drug introductions, notably the potential blockbusters Cosentyx (autoimmune conditions) and Entresto (heart failure). The company successfully returned its ailing Alcon unit to growth in 2017, but is still contemplating strategic options for the business that may range from a capital market transaction to keeping the segment with action unlikely before the first half of 2019. Including this segment, we foresee revenue growing in the low single digits compounded annually over the next five years, despite potential U.S. generic competition to Gilenya and Afinitor in the next few years. This decent sales growth may leverage a leaner operating cost base to drive EBITDA expansion in the low double digits over the same time frame as the company succeeds with its cost-containment efforts.

Novartis' gross leverage has been stubbornly elevated following its global corporate transformation in 2015 that included the purchase of Glaxo's oncology assets for $16 billion in addition to heightened share repurchases since 2014. As a result, the company owed $30.2 billion in debt as of Sept. 30, 2017 compared with $18.0 billion in 2013 or gross debt leverage of 2.1 times for the trailing 12 months versus 1.4 times, respectively. Also contributing to higher leverage is damped EBITDA generation as Novartis acclimated to its new corporate structure, contended with generic competition to its most-important medicine Gleevec, and repaired its struggling eye care unit Alcon. During this time, net debt more than doubled to $20.7 billion (total debt less cash and short-term investments of $9.4 billion) from $8.8 billion in 2013. Net leverage stood at 1.4 times for the trailing 12 months ended in September 2017, which rose from 0.7 times in 2013. The higher debt load and increased debt leverage pressures our Cash Flow Cushion and Solvency Score pillars. When we consider Novartis' investment in associates of $14 billion, specifically its 6% interest in Roche and 36.5% ownership of the consumer joint venture with GlaxoSmithKline, net leverage falls by a full turn to 0.4 times, which we view as more reflective of the AA rating. Even so, we expect leverage to improve over the next five years, primarily from EBITDA growth, likely achieved by operational leverage stemming from cost-containment efforts. Free cash flow averaging $12 billion annually through 2021, in our estimation, can easily manage $7.5 billion of long-term debt maturities over the next five years. However, we think Novartis may continue to return the vast majority of free cash flow to shareholders through an increasing dividend supplemented by share repurchasing. Aggressive shareholder returns may compromise efforts to work down seasonally elevated leverage (following the annual dividend distribution in the company's first quarter) via debt reduction.

The stable outlook on Novartis' AA rating implies no immediate catalyst over the next few years that could affect the current rating. But, if the company successfully counters its drug patent cliff while
effectively controlling its operating cost base so that leverage significantly decreases, such that our Cash Flow Cushion and Solvency Score pillars meaningfully strengthen, then an upgrade may be considered. Conversely, we could see a lower rating if the company fails to achieve our modest growth assumptions, likely due to dampened demand for key pharmaceuticals, Cosentyx and Entresto, or poor uptake of new oncology medicines, causing our Cash Flow Cushion to significantly compress. In addition, leveraging transactions, including a transformational acquisition or aggressive share repurchasing, that pressure our Solvency Score pillar may prompt a downgrade to the rating.

Pioneer Natural's BBB- Rating Affirmed; Maintain Positive Outlook on Rising Energy Prices

Morningstar Credit Ratings, LLC is affirming the BBB- credit rating of Pioneer Natural Resources and maintaining a positive rating outlook. MCR's rating incorporates our current oil and gas price forecasts and our estimate for gradually improving company results over the next several quarters. The positive outlook reflects Pioneer's excellent, ongoing progress in lowering its overall cost structure, and its growth strategy, which centers on a large inventory of repeatable, low-risk, oil-weighted drilling opportunities in the Permian Basin of Texas and New Mexico.

The rating reflects our expectation for companywide organic oil equivalent production growth of about 14% per year from 2017 through 2021, largely driven by increasing oil production from the Spraberry/Wolfcamp Shale in the Midland segment of the Permian Basin. Our rating also reflects the inherent cyclicality for exploration and production (upstream) activity. Further, our rating reflects the view that Pioneer does not benefit from a sustainable competitive advantage, given the historical volatility of the company's return on invested capital. However, the steady reduction in the company's cost structure should help temper this volatility going ahead. The rating outlook incorporates our expectation that operating margins will gradually expand in light of cyclically rebounding oil and natural gas price realizations over the next several quarters.

We regard Pioneer's liquidity as very good. The company ended the September quarter with $636 million in cash and equivalents plus $1.4 billion in short-term investments. Additionally, the company has full availability on a $1.5 billion unsecured revolving credit facility, which matures in August 2020. The next significant debt maturities include $450 million in 2018, $450 million in 2020, and $500 million in 2021. Therefore, Pioneer's debt maturity schedule does not pose a concern, with more than adequate liquidity relative to near-term maturities. Pioneer has guided for capital expenditures of $2.75 billion in 2017, about 30% higher than the prior year, and we estimate capital expenditures to be $2.75 billion in 2018. We estimate cash flow less total capital expenditures and dividends plus net proceeds from dispositions will be negative $375 million in 2017, rebounding to $245 million in 2018 and steadily increasing to about $2.4 billion in 2021. Combined with the company's current large cash, cash equivalent, and short-term investments position, this drives an average Cash Flow Cushion score. However, we expect a gradually increasing return on invested capital to drive an improving Solvency Score throughout our forecast period.

In our base forecast, we estimate the company's adjusted EBITDAX margin to gradually rise to 60% by 2021 from about 40% in 2017. Commensurate with this, we estimate the ratio of total debt/trailing
adjusted EBITDAX gradually declining back to less than 1 times at 2021 from 1.4 times in 2017. Our base operating forecast incorporates an average 2018 price assumption of $3.00 per million British thermal units for U.S. natural gas and $3.00 per year thereafter. For oil (West Texas Intermediate basis), our yearly forecast is $57.50 a barrel average for 2018, $60 for 2019, and $65 for 2020 and 2021. Our yearly natural gas price forecast ranges from 4% to 6% above the futures price curve through 2021. As of Jan. 17, the gas price futures curve is in slight backwardation. For oil, our annual forecast ranges from 5% below to 20% above the futures price curve through 2021, at the top end of the range for the last two years of our forecast. Also at Jan. 17, the oil price futures curve is in backwardation.

Our positive outlook indicates a possible upgrade in Pioneer's credit rating, given the company's excellent ongoing cost-reduction progress and potential benefit from a faster-than-expected improvement in oil and gas supply and demand fundamentals and, therefore, higher price realizations. This would allow company operating margins and cash flow to expand faster than our current forecast, positively affecting our Cash Flow Cushion and Solvency Score. Given our positive outlook, we do not anticipate downgrading our rating over the next year or two.

Johnson & Johnson's Rating Affirmed at AAA; Outlook Stable
Morningstar Credit Ratings, LLC is affirming Johnson & Johnson's AAA rating reflecting its well-diversified corporate portfolio spanning the global healthcare spectrum that generates exceptional financial flexibility. The company's financial discipline, exemplified by its prudent use of tax-advantaged foreign cash to consummate the $30 billion purchase of Actelion in June 2017, has maintained our leverage-based pillars and helped inform a revision of the rating outlook to stable from negative.

J&J's diverse product portfolio, with offerings in pharmaceuticals, medical devices, and over-the-counter medicines (representing roughly 47%, 35%, and 18% of total sales, respectively), buffers the company from weakness in a particular segment at any given time, and supports our top-tier Business Risk pillar. We see this diversity helping to mitigate J&J's key drug patent expirations, including present biosimilar competition to best-seller autoimmune treatment Remicade and generic entrants for Velcade, Invega Sustenna, Zytiga, and Prezista (representing around 10% of total revenue) over the next few years. We see sustained overall revenue growth overall approaching the midsingle digits through 2021 compounded annually, supported by the launch of promising medicines over the past few years, most notably oncology medicine Darzalex and next-generation psoriasis treatment Tremfya. Aided by cost initiatives in its medical devices business, we expect EBITDA growth pacing slightly ahead of revenue compounded annually through 2021. This continuity of earnings and cash flows maintains a historically good Cash Flow Cushion.

J&J's use of tax-advantaged foreign cash to consummate the $30 billion purchase of Actelion in June held gross leverage relatively steady and helped maintain its very good Solvency Score and Distance to Default pillars. However, the company lost its net cash position after the acquisition, as cash fell to $16.2 billion at the end of the third quarter from $41.9 billion at the end of 2016. The company's balance sheet still remains strong, as gross leverage stayed relatively steady at 1.4 times for the trailing 12 months, compared with 1.1 times in 2016, despite an increase in its debt load to $35 billion at the end of the third
quarter from $27 billion at the end of 2016. Throughout 2017, J&J issued a total of $9 billion of new debt ($4.5 billion in March and $4.5 billion in November) with maturity dates ranging from 2020 to 2048, in order to fund share repurchases and to reduce outstanding commercial paper ($6.7 billion at the end of the third quarter). We see free cash flow averaging around $20 billion annually over the next five years, easily managing well-laddered debt maturities totaling $9.3 billion in 2018-22. However, we expect gross leverage to ease to more historical levels of 1 times or less within the next two years through a combination of modest debt reduction and steady operational performance, as the company uses external sources to refinance most of these maturities, by our estimates.

The acquisition of Actelion, together with heavy share repurchasing in 2016 and the first half of 2017 have temporarily moderated J&J’s industry-leading financial flexibility. Annual dividends of $8.9 billion and share repurchases of $7.6 billion consumed most free cash flow of around $18.5 billion for the 12 months ended Oct. 2, 2017. We anticipate that capital deployment may return to its traditional balance between asset purchasing and returning value to shareholders through dividends and share repurchases, allowing J&J to build its cash holdings and approach a net cash position in the next few years.

Given the stable outlook, we see no catalysts to alter the current rating over the next year or so. While we see reduced financial flexibility over the next few years as the company rebuilds its cash balance, we would need to see larger debt-funded repurchases or acquisitions, such that our Solvency Score and Cash Flow Cushion pillars become impaired, to downgrade J&J’s very strong credit rating.

Affirming HP’s Rating at BBB; Outlook Stable
Morningstar Credit Ratings, LLC is affirming its BBB corporate credit rating on HP Inc. and maintaining a stable outlook. Our rating reflects HP’s moderately high Business Risk, driven by high product concentration, our expectation of continued operating cyclicality, and the mature nature of its core market segments. HP generates solid returns on invested capital, which support a good Solvency Score. The Cash Flow Cushion remains at the midrange of the scale as HP’s low debt level is offset by a skew toward shorter average maturities.

Morningstar’s Equity Research Group does not view HP as benefiting from an economic moat due to a lack of significant customer switching costs and its expectation of high competitive intensity and ongoing secular market declines. In recent quarters, the company has gained market share in printing despite pricing pressure from competitors. The personal computing market has also provided a tailwind to results over the past year. However, our rating assumes that revenue growth is likely to be constrained over the long term as mobile technology continues to displace traditional PC computing and reduce the demand for hard-copy printing.

At the end of fiscal 2017, HP reported $7.8 billion of total debt, supported by $7.0 billion of cash and short-term investments. The company issued $1.0 billion of debt in September 2017 to fund a $1.05 billion acquisition of Samsung’s printing business, which closed in November and is expected to
enhance HP's reach in the Asia-Pacific region. Pro forma for the Samsung acquisition, we expect net
debt to increase slightly to 0.4 times EBITDA, compared with 0.2 times at the end of fiscal 2017.

Over the most recent 12 months, we calculate that HP earned free cash flow of just under $3.3 billion.
The company used $894 million of cash to fund dividend payments and $1.4 billion to fund net share
repurchases, which represents a payout ratio of 69% of free cash flow, putting it at the higher end of
management's target of 50%-75%. In the near term, we believe the company will remain highly focused
on returning cash to shareholders despite a debt maturity schedule that remains skewed to the short
end. Over the next five years, the company faces maturities of $6.6 billion, or 85% of its total debt,
including $2.9 billion due in fiscal 2021.

Our outlook reflects our forecast for 6% revenue growth in 2018 reflecting the acquisition of Samsung's
printing business, followed by a 1%-2% annual decline in revenue over the succeeding four years. We
also expect a gradual contraction of operating margins on pricing pressure and higher component costs,
offset partially by management's cost reduction efforts. We may consider an upgrade of the rating if the
company can continue to generate high returns on invested capital despite competitive pressure and
sustainably maintain a strong Cash Flow Cushion supported by low net debt levels and strong cash flow.
However, we may consider a downgrade of the rating if intensifying competition leads to renewed
pressure on revenue growth or if management allows leverage to rise materially.
Recent Notes Published by Credit Analysts

One-Time Items Muddy Wells Fargo’s 4Q Results

MCR Credit Risk Assessment

On Jan. 12, Wells Fargo (A, stable) reported net income available to common shareholders of $5.7 billion, which was affected by the largely offsetting effects of $3.25 billion in litigation accrual and $3.35 billion in tax benefit from the Tax Cuts and Jobs Act. The litigation expense included a variety of matters involving mortgage-related investigations and other consumer sales practices. However, unlike most global banks, which hold deferred tax assets, Wells Fargo holds deferred tax liabilities, which were written down based upon lower tax rates in the Tax Act, causing the one-time gain during the quarter.

Going forward, we expect Wells Fargo to benefit from a lower tax rate of around 19%, down from an average of 31% in the trailing three years. Results also included a one-time pretax gain of $848 million from the sale of Wells Fargo Insurance Services. Reported return on common equity for the quarter was a solid 12.5%, but when adjusting for the special items, this comes in at a more average 10.5% by our calculations. ROE for the year of 11.5% compared favorably with other large banks, including JPMorgan (A, stable), which reported a 9.8% ROE that was dented by the effects of the Tax Act, as well as Bank of America (BBB+, stable) and Citigroup (A-, stable), which reported mediocre ROEs for the first three quarters of 7.6% and 6.9%, respectively.

Operating results included slightly lower net interest income, which decreased 0.7% relative to a year ago, owing to lower loans, lower asset yields, and higher deposit costs. Net interest margin decreased 2 basis points sequentially and 3 basis points year over year. As expected, the company took steps to derisk its balance sheet by reducing commercial real estate loans, auto, and second-lien mortgages, which offset the growth in credit card loans, first-lien consumer mortgages, and commercial and industrial loans. Noninterest income increased 6.1% as the gain from the sale of the insurance business during the quarter compared favorably with a loss reported in the prior-year quarter, which was attributed to ineffective hedging. Detracting from results, the litigation accrual contributed to operating expenses that were 27.1% higher than a year ago and 17.1% higher than the prior quarter. Higher total compensation costs, which jumped 7.6% year over year, also contributed to the increase.

Despite this noise, we were pleased to see credit costs decrease 19.1% from a year earlier and 9.2% sequentially. The net charge-off rate also decreased during the year to 0.30%, 7 basis points lower than a year ago. Other asset quality measures also improved, including a nonperforming loan balance representing 0.84% of loans, which was 23 basis points lower than a year ago. Moreover, loan-loss reserves, representing 137% of nonperforming loans, improved 27% during the year. We consider Wells Fargo’s asset quality and reserves to be roughly average relative to other large banks. We were also pleased to see capital measures improve during the year. Wells’ fully phased common equity Tier 1 ratio ended the year at a respectable 11.9%, 114 basis points above year-ago levels, while its tangible common equity ratio was about 8%, 16 basis points higher year over year. Although improved, we consider both capital measures slightly below average levels for large U.S. banks. We also note that Wells Fargo improved its funding mix by increasing deposits by 2.3% and decreasing long-term debt by 11.8% year over year. Finally, the company appears to meet 2019 total loss-absorbing capacity requirements, which we expect to limit net debt growth this year.
**Market News and Data**

Given its business model, Wells Fargo can be compared with large regional banks like U.S. Bancorp, as well as global banks. Wells Fargo’s 3.584% notes due 2028 are indicated by pricing service Interactive Data at +88 basis points over the nearest Treasury. Spreads on JPMorgan’s 3.782% notes due 2028 (A, stable) are indicated at a similar spread of +89 basis points. By contrast, U.S. Bancorp’s (AA-, stable) 2.375% notes due 2026 are indicated at +66 basis points, while lower-rated Citigroup’s (A-, stable) 3.887% notes due 2028 are indicated at +102 basis points. Meanwhile, the 10-year notes of Bank of America Corp (BBB+, stable) are indicated at +88 basis points.

**JPMorgan Offering 11-Year and 31-Year Callable Notes**

JPMorgan Chase (A, stable) is in the market with an offering of benchmark-size 11-year and 31-year fixed-rate senior unsecured holding company notes, with each tranche callable one year before maturity. We understand this structure to be beneficial to the issuer’s ability to manage its liability structure and comply with various regulatory requirements, including its total loss-absorbing capacity and net stable funding ratio. According to pricing service Advantage Data, bonds with similar maturities issued by JPMorgan and key comparables are indicated over the nearest Treasury as follows:

**11-year area:**
- JPMorgan Chase & Co’s 3.782% notes due 2028 at +96 basis points.
- Wells Fargo & Co’s (A, stable) 3.584% notes due 2028 at +97 basis points.
- Citigroup Inc’s (A-, stable) 3.887% notes due 2028 at +109 basis points.
- Goldman Sachs’ (BBB+, stable) 3.85% notes due 2027 at +109 basis points.
- Bank of America Corporation’s (BBB+, stable) 3.248% notes due 2027 at +96 basis points.
- Morgan Stanley’s (BBB+, stable) 3.625% notes due 2027 at +96 basis points.

**31-year area:**
- JPMorgan Chase & Co’s 3.964% notes due 2048 at +108 basis points.
- Wells Fargo & Co’s 3.90% notes due 2045 at +103 basis points.
- Citigroup Inc’s 4.281% notes due 2048 at +108 basis points.
- Goldman Sachs’ 4.75% notes due 2045 at +123 basis points.
- Bank of America Corporation’s 4.443% notes due 2048 at +102 basis points.
- Morgan Stanley’s 4.375% notes due 2047 at +115 basis points.

**MCR Credit Risk Assessment**

Our rating for JPMorgan benefits from the company’s diverse revenue sources, solid profits, and adequate asset quality and reserve balances. JPMorgan is the largest U.S. bank, with over $2.5 trillion in assets. During 2017, the bank generated over half its revenue from its relatively low-risk businesses, including 45% from retail banking and around 12% from asset management. Commercial and investment banking constitute the balance of revenue. Although higher regulatory requirements and low interest rates have had a negative impact on results in recent years, profits during the year compare favorably with those of most global peers. After adjusting for the negative effects of the recently enacted Tax Act,
JPMorgan produced a solid 10.9% return on common equity. We expect higher interest rates to increase profits during our forecast period. Asset quality is consistent with peers with nonperforming loans, representing around 0.64% of gross loans. Loan-loss coverage is solid, representing around 229% of nonperformers. Although tangible capital is light, representing 7.3% of tangible assets as of December, regulatory capital is stronger and modestly higher than global peers' with a fully phased common equity Tier 1 ratio of 12.2% and a transitional Tier 1 ratio of 13.9%. JPMorgan receives a good stress test score, as it maintains an acceptable amount of capital under our stress-case scenario. JPMorgan also earns a good Solvency Score. Relative to its global peers, JPMorgan ranks above average in most measures of capital, profitability, reserves, and liquidity. We award JPMorgan a good Business Risk score because of its geographic and business line diversification, large size, narrow moat (as assigned by Morningstar's Equity Research Group), prominent role in the financial system, and above-average management grade. A solid Distance to Default score also positively influences our rating.

**Hologic Issues $1 Billion of Unsecured Notes in Private Offering to Refinance Existing Notes**

**Market News and Data**

Hologic Inc. (BB+, stable) is in the market with a proposed private offering of $1 billion, comprising additional 4.38% senior notes due 2025 and new senior notes due 2028. According to the company's press release Jan. 16, net proceeds, along with cash and secured revolver borrowings, will be used to redeem $1 billion of aggregate principal amount of its outstanding 5.25% senior notes due 2022.

Currently, Hologic has only two senior unsecured bonds outstanding, its 5.25% bonds due 2022 (which are being called) and 4.38% senior notes due 2025. Within the healthcare industry, we think the best comparables for Hologic's new issue are from DaVita Inc (BB+, negative) and HCA Healthcare Inc (BB, stable). Bonds from these issuers recently traded over the nearest Treasury as follows according to Interactive Data:

- Hologic's 4.38% notes due in 2025 at 105.87, a yield to maturity of 4.30%, and a spread to maturity of +183 basis points.
- DaVita's 5.00% notes due in 2025 at 100.00, a yield to maturity of 5.00%, and a spread to maturity of +264 basis points.
- HCA's 5.88% notes due in 2026 (trading to a 2025 call date) at 100.75, a yield to worst of 4.20%, and a spread to worst of +188 basis points.

**MCR Credit Risk Assessment**

Hologic's BB+ rating reflects its competitive advantages in women's health and leverage within its target range. After the blood-screening divestiture and Cynosure acquisition in the first half of fiscal 2017, its Business Risk pillar remains at moderate levels, reflecting the narrow moat and medium uncertainty assessments from Morningstar's Equity Research Group. The breast health segment, where Hologic built its name, has sizable barriers to entry in the form of development hurdles and high customer switching costs. With staff already trained on these expensive machines, customers often choose to upgrade a current system rather than buy a competing one. The acquisition of Gen-Probe added its chlamydia/gonorrhea, HPV, and trichomonas products to Hologic's in-house ThinPrep offering, creating a powerful and extensive diagnostic platform catering to women's health. The acquisition of laser
company Cynosure added noninvasive body contouring, hair removal, skin revitalization, and other
women's health offerings to the mix. Although the Cynosure integration has proved challenging so far,
we expect the company to meet its mid-single-digit growth goals on both the top and bottom lines in
fiscal 2018.

In the first half of fiscal 2017, Hologic sold its blood-screening business for $1.1 billion in aftertax
proceeds, which briefly pushed net leverage down to roughly 2 times. However, shortly after that
divestiture, Hologic acquired Cynosure for $1.4 billion net of the target's cash. As a result, Hologic owed
$3.3 billion in debt (around 3 times pro forma EBITDA) and held $541 million in cash at the end of
September. From a leverage perspective, these divestiture and acquisition activities largely offset each
other, and as of September, pro forma net leverage stood in the mid-2s by our estimates, or near the
middle of its long-term target range of 2-3 times. Until we see a sustained commitment to operate with
lower net leverage for the long run, the company's Cash Flow Cushion, Solvency Score, and Distance to
Default pillars may remain at moderate to weak levels. Therefore, Hologic's credit rating remains below
investment-grade.

Since the end of fiscal 2017, the company has refinanced and extended its term loan with a new $1.5
billion secured agreement that matures in fiscal 2023, upsized and extended its secured revolver ($1.5
billion authorized, which expires in fiscal 2023), and issued $350 million new senior unsecured notes due
in fiscal 2025. Beyond the current redemption of its 2022 notes, the company has also announced plans
to redeem its outstanding convertible bonds in the first half of fiscal 2018 as they become callable.
These activities should not substantially change the company's leverage metrics, by our estimates. The
company appears open to considering additional acquisitions and share repurchases ($300 million
remaining on its share-repurchase authorization as of September), which could negatively influence its
financial health somewhat. However, it also looks able to generate roughly $750 million in average
annualized free cash flow during the next five years, which should help it finance those activities.

Eye-Popping Tax Effects Overshadow Some Positive Aspects of Citigroup’s 4Q Results

Although Citigroup’s (A-, stable) fourth-quarter results contained some positive aspects including
improvements in consumer banking and decent investment banking, results were negatively affected by
the extremely large effect of the recently enacted Tax Act. Citigroup reported a one-time noncash charge
of $22 billion during the quarter which was largely due to writing-down the value of the company's
deferred tax assets accumulated during the financial crisis of 2008-09. Repatriating earnings of non-U.S.
subsidiaries contributed a relatively small ($3 billion) of the total charge. This charge largely contributed
to net losses available to common shareholders of $18.6 billion for the quarter and $7.4 billion for the
year. For context, Citigroup reported 2016 net income of $13.85 billion. Adjusting for the significant
items, net income for the quarter and the year was $3.4 billion and $14.2 billion, which was 3.9% and
2.8% higher than a year-ago, respectively. Adjusted return on average common equity remained
mediocre at annualized 6.5% for the quarter and 7.3% for the year which trailed global peer JPMorgan
Chase (A, stable) which reported 10.4% for the quarter and 10.9% for the year after adjusting for much
more modest tax effects. We agree with management's assertion that the company will benefit going
forward from a lower tax rate—assumed at 25% compared with an average of 30% in the two-trailing years—which could increase consumer spending and borrowing, combined with a less burdensome regulatory environment and fundamental improvement in many of Citi’s international markets.

During the quarter, net interest revenue was largely unchanged relative to the year-earlier period as higher borrowing costs offset the positive effects of loan growth and higher asset yields. Net interest margin decreased 9 basis points sequentially and 16 basis points year over year to 2.63%. Higher commission and fee revenue offset lower revenue from principal transactions, contributing to noninterest income that was 3.1% higher than a year ago and total revenue that was 1.4% higher. Citigroup did an admirable job controlling expenses which were largely unchanged year over year and down 1% sequentially which compares favorably to high-single-digit increases reported at JPMorgan and Wells Fargo (A, stable). Positively, Citigroup’s efficiency ratio of 57.7% for the quarter was comparable with JPMorgan’s 58.0% and superior to Wells Fargo’s 76.2%. Credit costs increased 15.7% compared with the year-earlier quarter and 6.7% for the year. The net charge-off rate for the year was largely unchanged representing 1.10% of average loans. At the segment level, global consumer revenue increased 5.6% year over year as every geography reported higher revenue than a year-ago. Revenue in the institutional clients group decreased slightly as modest declines in EMEA and Latin America offset improvements in North America and Asia. By business line, investment banking revenue increased 9.7% year over year while trading revenue decreased 16.5% with declines in both fixed-income trading, down 18.4%, and equity trading, down 22.6%.

From the bondholder perspective, balance sheet metrics diverged during the quarter. Asset quality continued to improve. Nonperforming loans finished the year representing 0.69% of loans, an improvement of 20 basis points from the year-earlier period, which was consistent with JPMorgan and superior to Wells Fargo’s 0.84% at year-end. Loan-loss reserves represented a solid 267% of nonperformers, 50.6% higher than a year ago. But the tax effects wiped out $6 billion of common equity Tier 1 capital during the quarter which contributed 40 basis points of a 70-basis-point total decrease of the ratio during the quarter. The effect was more severe on the company’s tangible common equity ratio, which decreased 120 basis points during the quarter to 8.5%. A key characteristic of Citigroup’s credit profile during recent years has been high capital levels. This strength has been diminished during the quarter, and we now consider Citi’s capital levels only modestly above average.

Market News and Data
We compare Citigroup to large global U.S. banks including JPMorgan, Bank of America, and Wells Fargo. And because of the company’s presence in investment banking and investment management, we also consider Goldman Sachs and Morgan Stanley. Citigroup’s 3.887% senior notes due 2028 are indicated by pricing service Interactive Data at +109 basis points over the nearest Treasury while similar-maturity notes of JPMorgan are indicated at +96 basis points. Wells Fargo’s 3.584% notes due 2028 are indicated at +97 basis points. Among lower-rated companies, Goldman Sachs’ (BBB+, stable) 3.85% notes due 2027 are indicated at +109 basis points while Morgan Stanley’s (BBB+, stable) 3.625% notes due 2027 are indicated at +96 basis points. Bank of America’s (BBB+, stable) 3.248% notes due 2027 are also indicated at +96 basis points.
Following 4Q Earnings, Citigroup Offering 5-Year and 21-Year Callable Notes

Market News and Data

Citigroup (A-, stable) is in the market with an offering of benchmark-size 5-year fixed- and floating-rate senior unsecured holding company notes, as well as 21-year notes. All tranches are callable one year before maturity. We understand the latter structure to be beneficial to the issuer's ability to manage its liability structure and comply with various regulatory requirements including its total loss-absorbing capacity and net stable funding ratio. According to pricing service Interactive Data, bonds with similar maturities for Citigroup and key comparables are indicated over the nearest Treasury as follows:

5-year Area:
- Citigroup Inc 2.70% notes due 2022 at +65 bps.
- Wells Fargo & Co (A, stable) 3.069% notes due 2023 at +71 bps.
- JPMorgan Chase & Co (A, stable) 2.972% notes due 2023 at +70 bps.
- Bank of America Corporation (BBB+, stable) 3.124% notes due 2023 at +60 bps.
- Morgan Stanley (BBB+, stable) 3.75% notes due 2023 at +70 bps.
- Goldman Sachs (BBB+, stable) 2.908% notes due 2023 at +94 bps.

MCR Credit Risk Assessment

Citigroup is the most global of the large U.S. banks. It organizes its operations into a global consumer bank and an institutional client group, the latter of which includes transaction services, a scaled-back investment bank, private banking, and commercial lending. Consumer banking generated around 49% of revenue in 2017 while institutional client services generated approximately 47%. Overall, 37% of earnings came from the faster-growing emerging economies. While these international exposures and Citi’s spotty history creates event risk, we consider Citigroup’s diverse revenue sources a positive factor in our credit assessment. While one-time tax effects reduced Citigroup’s capital buffers at year-end, levels continue to compare favorably to peers. Citigroup’s fully phased common equity Tier 1 ratio and its tangible common equity ratio finished the year representing 12.3% and 8.5%, respectively. The company’s credit profile continues to be characterized by improving asset quality that’s now comparable to peers after trailing peers for years after the financial crisis. Nonperforming loans represented 0.69% of total loans as of December, a level 20 basis points below year-earlier levels, and trailing 12-month charge-offs represented around 1.1% of loans, a rate in-line the year-earlier level. Reserves were solid representing around 267% of nonperforming loans. On the negative side, after adjusting for the outsize effect of the recently enacted Tax Act, Citi’s profitability metrics during 2017 continued to trail global U.S. peers with a return on average assets of 0.72% and a return on average common equity of 7.3%. However, we expect future results to benefit from a lower domestic tax rate, improving international markets, a higher levels of consumer activity domestically, and lower regulatory costs. Finally, we believe that Citigroup’s decent capital levels, generally improving asset quality, and solid loan-loss reserve levels position it comfortably in the A- category.
Strong Annual Performance for Schwab in Wake of Bank and Asset-Management Expansion

MCR Credit Risk Assessment

Charles Schwab Corporation (A+, stable) reported solid fourth-quarter results to round out impressive 2017 annual performance. Despite a one-time $46 million increase in tax expense tied to revaluing deferred tax assets, earnings increased 14% over the prior-year quarter to $597 million, and 2017 earnings increased 25% year over year to roughly $2.4 billion. Schwab's focus on expense containment contributed to a 440-basis-point difference between 2017 net revenue growth and associated expenses, greatly contributing to a 25% increase in EBITDA to $4.3 billion. Consequently, the company's EBITDA operating margin expanded 313 basis points over the prior year to nearly 48%.

We continue to view Schwab’s performance in line with our expectations for a highly rated investment-grade company. The company’s track record of robust growth, strong financial performance, and conservative balance sheet management are key factors that support the rating. Year-end 2017 total client assets were reported at $3.36 trillion, a 21% increase over the $2.78 trillion reported at year-end 2016 and roughly triple the $1.1 trillion reported by competitor TD Ameritrade (A, stable) at the close of third-quarter 2017.

In the course of transferring client money market funds over to Schwab Bank, Schwab purchases investments ahead of time by utilizing a secured credit facility with the San Francisco FHLB. Upon completion of these bulk transfers, proceeds are used to pay down the facility. We believe Schwab repeated this process in 2017 given that short-term borrowings increased substantially in the quarter to $15.0 billion. Ultimately, while this introduces greater credit risk in the short term, we believe the use of this credit facility is largely mechanical in nature. As a result, we believe the more meaningful indicator of Schwab's financial leverage is based off its long-term debt balance, with debt/EBITDA reported at 1.1 times as of year-end 2017. Adjusting for a planned $625 million redemption in February, Schwab's proforma leverage is closer to 1.0 times.

We look to A rated peer TD Ameritrade as a comparable for Charles Schwab. TD Ameritrade is expected to release fourth-quarter earnings next week. In 2017, we affirmed TD Ameritrade’s A rating and stable outlook, citing the potential for a larger operating platform, enhanced scale, and an improved competitive position versus peers such as higher-rated Charles Schwab following the close of the deal. Combined annual expense synergies and additional long-term opportunities could also positively add to the company's earnings profile.

Market Data

The following spreads over the nearest Treasury, as of Jan. 16, are provided by Interactive Data: Charles Schwab Corporation 3.2% notes due in 2027 are indicated at +66 basis points. TD Ameritrade Holding Corporation 3.30% notes due in 2027 are indicated at +69 basis points.
Goldman Sachs’ 4Q Results Mixed Bag for Bondholders

_MCR Credit Risk Assessment_

Goldman Sachs Group (BBB+, stable) reported mixed fourth-quarter results. Directionally similar to global bank peers that have reported results thus far, Goldman reported a $4.4 billion one-time tax expense in conjunction with the recently enacted Tax Cuts and Jobs Act, most of which was due to repatriating accumulated earnings of its non-U.S. subsidiaries. The charge contributed significantly to Goldman’s first quarterly loss in over six years. Capital levels decreased sharply during the quarter. However, after adjusting for the tax effect, net income available to common shareholders of $2.26 billion was largely unchanged compared with a year ago and 10.2% higher than the third quarter. For the year, adjusted net income of $8.21 billion increased 11.1% from 2016. Adjusted return on average common equity for the quarter and year of 11.5% and 11.0%, respectively, compared favorably with JPMorgan’s (A, stable) adjusted ROEs of 10.4% and 10.9% and Citigroup’s (A-, stable) 6.9% and 7.3% levels. While the charge was painful for the company, management was optimistic that the long-term benefits of a lower tax rate would contribute to increased business activity, including higher levels of mergers and acquisitions and higher economic growth, which will benefit the company.

Three of the four major business segments reported higher revenue during the quarter. Investment banking revenue increased an impressive 44.1% year over year, reflecting the company’s position as first in worldwide equity-related offerings for the year. Goldman’s backlog of M&A deals increased at year-end compared with 2016. Underwriting revenue increased 76.2% year over year from primarily leveraged finance debt underwriting. Equity underwriting revenue more than doubled on strong secondary offering volume. Higher revenue from private equity securities contributed to quarterly revenue in the investing and lending segment that was 11.7% higher than the year-earlier period. Positive client flows and market appreciation contributed to investment management revenue that was 3.6% higher than a year ago. However, on the negative side and consistent with global peers, total revenue was negatively affected by weak trading revenue. Both the fixed-income, currencies, and commodities business and the equity business decreased about 50% from year-earlier levels on low volatility and low client activity. Lower revenue in this major segment, which contributed over 47% of 2016 revenue, was the primary contributor to lower revenue during the quarter and year, which decreased 4.15% and 5.9%, respectively.

Lower capital levels at year-end also detracted from our credit view. The negative tax effects contributed 80 basis points of a 110-basis-point total decrease of Goldman’s common equity Tier 1 ratio during the quarter, which finished the year at 10.9%. The effect was less severe on the company’s tangible common equity ratio, which decreased roughly 40 bps during the quarter to 7.3%. We consider both levels below peer averages of 8.5% TCE and 11.5% CET 1. We were encouraged to learn on the call that management does not plan to repurchase the entire approved 2017 Comprehensive Capital Analysis and Review amount of common stock but rather allow capital levels to rebuild during the year.

Given its business model as an investment bank, Goldman Sachs can be compared with close peer Morgan Stanley (BBB+, stable) as well as global banks that include significant investment banks in their overall operations. According to pricing service Interactive Data, Goldman Sachs’ 3.85% notes due 2027
are indicated at +107 basis points over the nearest Treasury. By comparison, Morgan Stanley's 3.625% notes due 2027 are indicated at +94 bps, consistent with levels observed on Bank of America's (BBB+, stable) 10-year notes. Among higher-rated peers, JPMorgan Chase's 3.782% due 2028 are indicated at +95 bps while Citigroup's 3.887% notes due 2028 are indicated at +107 bps.

Following 4Q Earnings, Goldman Sachs Offering 5-Year and 11-Year Callable Notes

Market News and Data

Goldman Sachs Group Inc (BBB+, stable outlook) is in the market with an offering of benchmark-size tranches of 5-year fixed- and floating-rate and 11-year fixed-rate senior unsecured holding company notes. Reportedly, the 11-year tranche is callable one year before maturity. We understand this structure to be beneficial to the issuer's ability to manage their liability structure and comply with various regulatory requirements including their total loss-absorbing capacity, liquidity coverage ratio, and net stable funding ratio. Proceeds of the notes are for general corporate purposes. According to pricing service Interactive Data, bonds with maturities similar to the new issuance for Goldman Sachs and key comparables are indicated over the nearest Treasury as follows:

5-year area:
- Goldman Sachs 3.625% notes due 2023 at +74 basis points.
- Morgan Stanley (BBB+, stable) 3.75% notes due 2023 at +72 bps.
- Bank of America Corporation (BBB, stable) 3.124% notes due 2023 at +67 bps.
- Citigroup Inc (A-, stable) 3.375% notes due 2023 at +75 bps.
- JPMorgan Chase & Co (A, stable) 2.972% notes due 2023 at +58 bps.

10-year area:
- Goldman Sachs 3.85% notes due 2027 at +108 basis points.
- Morgan Stanley (BBB+, stable) 3.625% notes due 2027 at +94 bps.
- Bank of America Corporation 3.248% notes due 2027 at +93 bps.
- Citigroup Inc 3.887% notes due 2028 at +104 bps.
- JPMorgan Chase & Co 3.782% notes due 2028 at +91 bps.

MCR Credit Risk Assessment

Our credit rating for Goldman Sachs reflects our expectations for above-average profits and continued solid capital levels but is hindered by the bank's dependence on wholesale funding and volatile revenue sources that increase business risk. Historically, Goldman had been able to achieve excellent earnings thanks to considerable leverage and risk-taking. By the end of 2007, Goldman's ratio of assets/equity exceeded 25 times. After the 2008 financial crisis, increased regulation and market discipline have contributed to much lower financial leverage and higher capital levels. These factors have played a role in reducing the earnings Goldman is able to achieve, with return on equity falling from 25% in the five years before 2008 to a still-respectable 11.0% for 2017 after adjusting for the detrimental one-time effects of the recently enacted Tax Cuts and Jobs Act. Such results are testament to the company's adaptability and flexibility during often difficult financial markets. The Tax Act also contributed to year-end capital ratios that were sharply lower than in 2016. Goldman's common equity Tier 1 capital ratio

decreased 225 basis points during the year to 10.9% while the tangible common equity/tangible assets ratio decreased 110 bps to 7.3% at year-end. We consider both levels below peer averages of 8.5% TCE and 11.5% CET1. However, we expect the company’s credit profile to improve over the coming year as it rebuilds capital with stronger operating performance and moderates its capital returns to shareholders.

Frontier Proposes Loan Covenant Amendment to Increase Financial Flexibility

MCR Credit Risk Assessment

In an 8-K filed Jan. 17, Frontier Communications Inc. (B, negative) disclosed that it is seeking amendments to the covenant and security packages of its secured credit facilities to increase flexibility in managing its senior unsecured note maturities. The company is proposing revising the leverage covenants on the existing facility to a 1.5 times EBITDA first-lien limit, which appears to relax constraints on Frontier’s ability to issue second-lien or other junior lien debt (including extension of subsidiary guarantees). The proposed first-lien covenant would be scheduled to step down to 1.35 times by the end of June 2020. The amendment also increases the collateral package to include Frontier’s operating assets in Pennsylvania and Connecticut. As proposed, the pro forma collateral package would encompass 79% of EBITDA (measured as of the September quarter) and 66% of total assets.

Our B rating and negative outlook reflect Frontier’s increasing credit uncertainty in the wake of disappointing operating results since 2016’s leveraged acquisition from Verizon. Because of higher uncertainty, higher dependence on capital markets, and the May 2017 lowering of the economic moat to none from narrow by Morningstar’s Equity Research Group, Frontier’s Business Risk score has weakened since the acquisition. Meanwhile, low returns on invested capital, a decline in cash flow, and high debt levels continue to put pressure on the Solvency Score and Cash Flow Cushion. We may downgrade the rating further if customer losses continue to deteriorate over the next few quarters and margin pressure continues beyond next year, putting additional stress on cash flow and credit metrics and increasing the carrier’s dependence on external capital.

Frontier currently has capacity to issue up to $1.7 billion of secured debt in any form. The proposed first-lien covenant revision would explicitly limit first-lien debt to $800 million on an incurrence basis but leaves capacity for other debt undefined. While abandoning the total net leverage covenant may allow Frontier more flexibility to the downside on EBITDA, we still note that the issuance of liens will remain somewhat constrained by the senior note indenture.

Third-quarter results released in October 2017 reflected marginal progress toward stemming customer defections and alleviating cost headwinds, but we expect the company to continue to face significant challenges in the coming quarters that are likely to limit the pace of turnaround. Consequently, we would expect Frontier’s leverage profile to worsen further before it improves, which is reflected in our negative rating outlook. For the 12 months ending Sept. 30, Frontier reported adjusted EBITDA of $4.08 billion, a decline of 4.4% from the prior quarter and down 5.5% year to date. It also reported net debt of $17.7 billion, or 4.3 times adjusted EBITDA. Net secured debt at the parent level was $3.3 billion, or 0.8 times EBITDA. Frontier’s capital structure also includes $850 million of acquired unsecured debt held at various operating subsidiaries.
In 2018, Frontier faces $743 million of debt maturities, including the October maturity of $578 million of the 8.13% unsecured notes, as well as mandatory payments on its term loans. For 2019, scheduled maturities total $828 million, including $428 million of 7.13% notes due March 2019 and the 2014 CoBank revolving credit facility in October, which had $256 million of outstanding borrowings as of Sept. 30. The company continues to expect to repay near-term maturities through internal liquidity sources, though its ability to do so will depend heavily on its ability to reinvigorate free cash flow. For the trailing 12 months, free cash flow totals only $612 million. In both 2018 and 2019, we forecast free cash flow to be $700 million-$800 million, which assumes the company continues to face EBITDA pressure mitigated by the realization of merger cost synergies. Liquidity is also supported by $850 million of capacity available on its primary revolving credit facility due February 2022.

Market Data
According to data from Interactive Data as of Jan. 17, Frontier's 6.88% notes due 2025 were indicated at a 14.94% yield to maturity (+1,241 basis points over the nearest Treasury). Meanwhile, its 11% notes due 2025 were indicated at a yield of 17.16% to maturity (+1,461 basis points). The yields on both series of notes are 44 and 37 basis points tighter since Dec. 29. Among comparably rated issues, Dish Network's (B+, stable) 7.75% notes due 2026 are indicated at a yield to maturity of 6.96% (+439 basis points), 16 basis points tighter from Dec. 29, while B- rated Windstream Holdings (B-, UR-) 7.63% notes due 2023 traded at a yield of 18.34% (+1,589 basis points), 51 basis points wider since Dec. 29. For comparison, the BofA Merrill Lynch B rated High Yield Index, now quoted at +336 basis points, is 25 basis points tighter since Dec. 29.

Despite Tax Effects, Morgan Stanley's 4Q Earnings Illustrate Progress on Many Strategic Priorities

MCR Credit Risk Assessment
Similar to its global banking peers, Morgan Stanley's (BBB+, stable) fourth-quarter results, which included $516 million net income available to common shareholders, were dented by $990 million of discrete tax charges related to the recently enacted Tax Cuts and Jobs Act. Adjusting for these one-time charges, net income of $1.5 billion for the quarter was largely unchanged and 19.0% higher for the year. Resulting adjusted return on average common equity for the year was 9.4%, a level roughly 130 basis points higher than in 2016 but still below key peers Goldman Sachs (BBB+, stable) and JPMorgan Chase (A, stable), which reported adjusted ROEs of 11.0% and 10.9%, respectively, for the year. Total revenue for the quarter increased 5.3% year over year. Within noninterest sources, higher asset management revenue offset lower trading revenue. Illustrating the growth of Morgan Stanley's lending and deposit taking operations, net interest income increased 12.7% year over year. Consistent with their goals established in 2013, Morgan Stanley was successful controlling costs. Total noninterest expense increased just 3.7%, led by compensation costs, which increased 4.8%. The company's efficiency ratio improved about 100 basis points to 74% for the quarter and 73% for the year, attaining another strategic management objective. At the segment level, declines in trading revenue were less severe than many key peers. Supporting the comparison to peers, equity trading revenue for the quarter and year decreased 1.7% and 0.7%, respectively, relative to the year-earlier period. But similar to peers, fixed income, currencies, and commodities decreased 45.0% year over year on weakness in rates products and foreign exchange, which was partially offset by strength in credit products. Relative to the prior
year, investment banking revenue increased 12.8% and 23.7% for the quarter and year on sharply higher equity underwriting revenue, which is reflective of the company's leading position in initial public offerings. Fixed-income underwriting revenue also improved admirably, increasing 18.5% from the year-earlier quarter and 44.3% for the year. Consistent with the company's strategy to emphasize lower-risk businesses, wealth management and the comparatively smaller investment management segment reported revenue during the quarter and year that was 10.5% and 27.4% higher, respectively, than a year earlier on positive client flows and high assets under management.

We were pleased to see Morgan Stanley's regulatory capital levels remain at high levels during the quarter, a distinguishing factor relative to peers that supports our rating. The company's common equity Tier 1 capital ratio finished the year at 16.5%, which was about 35 basis points below both the prior and year-earlier quarters. However, we note that the company's tangible common equity ratio of 7.1% at quarter-end is below a peer average of around 8.5%.

Market Data

Given its business model as an investment bank Morgan Stanley, can be compared with close peer Goldman Sachs as well as global banks which include significant investment banks in their overall operations. On the heels of its fourth-quarter earnings release, Morgan Stanley launched a $3 billion tranche of 11-year notes that are callable one year prior to maturity at +117 basis points over Treasuries. According to pricing service Interactive Data, Goldman Sachs' recently issued 3.814% notes due 2029 are indicated at +119 basis points over the nearest Treasury. By comparison, Bank of America's (BBB+, stable) 3.248% notes due 2028 are indicated at +95. Among higher-rated peers, JPMorgan Chase's 3.509% due 2029 are indicated at +97 basis points, while Citigroup's (A-, stable) 3.887% notes due 2028 are indicated at +107 basis points.

IBM's Revenue Trend Shifts Positive in 4Q, but Tax Payments Likely to Suppress Cash Flow in 2018

MCR Credit Risk Assessment

International Business Machines (A+, negative) reported fourth-quarter and full-year results on Jan. 18. Results included a $5.5 billion one-time charge for the Tax Cuts and Jobs Act of 2017, signed into law last December. For 2018, IBM expects its effective tax rate to increase from 12% in 2017 (excluding the impact of certain one-time credits) to 14%-18%. Management indicated that the headwind is primarily attributable to a reduction in the utilization of foreign tax credits.

Revenue declined 1% on a currency-adjusted basis in 2017 to $79.1 billion, which included a 1% year-over-year growth in the fourth quarter. While currency impact also contributed positively to growth in the fourth quarter, the effect was neutral for the full year. Meanwhile, gross margin declined 200 basis points, partially offset by reductions in selling and general expenses and research and development.

Management is setting its 2018 operating earnings per share guidance at $13.80, in line with 2017 adjusted operating earnings. Guidance reflects management's view of near-term revenue opportunities in blockchain, artificial intelligence, and cloud and its ongoing focus on cost reductions, offset by a
higher effective tax rate. Guidance also includes a $12 billion free cash flow target, which includes the impact of expected cash tax payments of $600 million.

We affirmed our A+ corporate credit rating on IBM on Dec. 11 and maintained our negative outlook. Our credit rating reflects IBM’s moderate Business Risk and Solvency scores and a moderately weak Cash Flow Cushion as the company pivots its portfolio away from legacy hardware-driven solutions to software-defined distributed computing environments. Our rating also assumes that IBM’s revenue growth will gradually improve as its revenue mix continues to shift toward higher-growth contributors. We also project a stabilization in operating margin over time as cost reductions gain momentum.

The contribution of IBM’s strategic imperatives grew 11% to $36.5 billion, or 46% of revenue, while we estimate legacy revenue declined 9.6%. Growth in strategic revenue was once again dominated by cloud, which grew 24% for the full year and now contributes 22% of overall revenue. Meanwhile, analytics remained in line with a mid-single-digit growth trend, increasing 6% during the year.

IBM earned free cash flow (excluding global financing) of $13 billion in 2017, in line with guidance and an increase of 12% from 2016. Acquisition spending declined by $5 billion to $700 million this year. The company also paid $5.5 billion in dividends and completed $4.3 billion of net share repurchases. Total debt increased $4.7 billion, ending the year at $46.8 billion, driven by a $3.5 billion increase in global financing debt (IBM Credit) and a $1.1 billion net issuance of new corporate debt. Meanwhile, cash and short-term investments ended the year at $12.6 billion, up $4.0 billion compared with last year. Excluding financing debt and related cash, we estimate corporate net debt totaled 0.3 times nonfinancing EBITDA, lower from 0.5 times a year ago.

Pension and postretirement benefit obligations also declined 2.1% during the year, ending at $16.7 billion. The company made $2.4 billion in contributions (both cash and noncash) to its pension in 2017 and expects to make a similar level of contributions in 2018.

Market Data
According to Jan. 18 indicative pricing from Interactive Data, IBM’s 3.30% senior notes due in 2027 are indicated at a spread of +59 basis points over the nearest Treasury, 18 basis points tighter from their level on Oct. 17, the date of IBM’s third-quarter earnings release. Among comparable issuers, Applied Materials Inc’s (A+, stable) 3.30% notes due in 2027 are indicated at +67 basis points, 7 basis points tighter from mid-October. Meanwhile, Oracle Corp’s (AA-, stable) 3.25% notes due in 2027 are indicated at +65 basis points, 30 basis points tighter from their issuance on Nov. 7. Over the past three months, the Morningstar Industrial Corporate A+ index tightened 3 basis points and is now quoted at +61 basis points.
Broadening Demand for Oilfield Services Supports Schlumberger’s 4Q Results and 2018 Outlook

MCR Credit Risk Assessment

Leading oil services company Schlumberger (A+, negative) reported fourth-quarter revenue of $8.2 billion, a $1.1 billion (15%) increase relative to $7.1 billion of revenue in the fourth quarter of 2016. Commensurate with the increase on the top line, operating cash flow for fourth-quarter 2017 was $2.3 billion, approximately $238 million (12%) more than the $2.0 billion reported for the year-ago quarter — after adding back impairments and charges, net of tax, of $2.9 billion and $583 million, respectively. For the fourth quarter of 2017, impairments include a $1.1 billion charge taken for WesternGeco seismic restructuring and $938 million for a Venezuela investment write-down.

As anticipated, sequentially and on a year-over-year basis, overall demand for Schlumberger’s oilfield products and services rose in the fourth quarter, led by a continued increase in North American land-based activity and improved pricing. The company also benefited from modest sequential growth in Latin America and Saudi Arabia, while activity in Europe, Commonwealth of Independent States, and Africa seasonally declined. As we begin 2018, and commensurate with a much-improved oil and market outlook, international exploration and production appear poised to broadly rebound, with positive implications for Schlumberger and its oilfield services peers. Despite the improving global backdrop, Schlumberger announced its intention to exit the marine and land acquisition business, citing the inability to derive a premium paid for its offerings and no sign of an upturn for this business segment. The company is currently evaluating options for divestiture.

Outstanding internal cost and efficiency improvements along with international price stabilization allowed Schlumberger to achieve a 14.1% pretax operating margin, better than the 11.4% a year ago, and to generate free cash flow more than covering capital expenditures and Schlumberger Production Management investments. For fourth-quarter 2017, Schlumberger reported $456 million in free cash flow, after $625 million in capital expenditures and a $1.1 billion acquisition for the Palliser Block in Alberta, but prior to $692 million paid in dividends.

On the earnings conference call, management indicated that first-quarter earnings will likely be below fourth-quarter results. The first quarter will be a transitory quarter, with exceptional costs absorbed to reactivate capacity for recent contract wins and to reposition equipment, internationally. Management anticipates that the company will strongly benefit from these actions in the second and third quarters of 2018. With its leaned-out cost and support structure, we think Schlumberger is well poised to benefit from a broader international upturn in demand for oilfield services, assuming the oil price continues to rise. In regard to Schlumberger’s OneStim business, the company purchased the U.S. hydraulic fracturing and pumpdown perforating businesses from Weatherford International (B-, negative) for $430 million (closed Dec. 29). The purchase should help rationalize North American onshore pressure pumping capacity. Lastly, an agreement to purchase a 51% equity stake in Eurasia Drilling (not rated) remains under Russian regulatory review.

As of December, Schlumberger’s liquidity remains excellent, with $5.1 billion in cash and investments and an estimated $4.2 billion available on its $6.6 billion combined credit facility and commercial paper
program. Management guidance for 2018 capital expenditures is approximately $2 billion, similar to $2.1 billion spent in 2017 and 2016. Upcoming maturities of long-term borrowings include $1.3 billion in 2018 and $1.3 billion in 2019.

At the end of December, total debt was $18.2 billion and net debt $13.1 billion. We estimate the ratio of total debt/trailing 12-month EBITDA to be 2.7 times and net leverage 1.9 times, which is lower than 3.1 times, but slightly higher than 1.6 times at year-end 2016, respectively.

Market Data
Schlumberger can be compared with Halliburton (BBB+, stable), a large, diversified oilfield services peer. According to pricing service Interactive Data, the 4.0% notes due Dec. 21, 2025, from Schlumberger Holdings, the principal U.S. subsidiary of Schlumberger, recently traded at +79 basis points over the nearest Treasury. By comparison, Halliburton’s 3.80% notes due in 2025 recently traded at +86 basis points. Elsewhere in the energy industry, the 3.326% notes due Nov. 17, 2025, from Chevron (AA-, stable) recently traded at +44 basis points and Occidental Petroleum’s (A, stable) 3.40% notes due in 2026 have been trading at +57 basis points over the nearest Treasury.
**Credit Contacts**

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