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More Stars Rise; Bigger Angels Fall

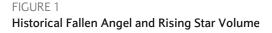
As the cycle advances further into its late stages, we believe that upward ratings momentum can continue in light of improving fundamentals, encouraging operational trends, and proactive credit repair. The normalized ratio of forward guidance has entered positive territory for the first time in five years, which we interpret as a signal that the deleveraging trend could continue. Our bottom-up forecast, in keeping with these trends, suggests that rising star volumes could reach a new high of \$60bn in 2018. While elevated rising star volumes have come at a time when fallen angel volumes are near historical lows, increased upgrade activity does not always coincide with decreased downgrade activity. Our expectation is that fallen angel volumes will also reach \$60bn by the end of 2018 as large capital structures such as Teva, Macy's, and Seagate show preliminary signs of credit deterioration.

Rising Star Outlook

Entering the year, our benign outlook on rising stars was largely predicated on the potential for ratings agencies to relax their more conservative outlook on energy. After spending a good portion of the past year repairing their balance sheets through asset sales and debt repayment, energy companies have been the prime beneficiaries of positive rating actions in 2017. Year-to-date energy rising star volumes amount to \$24bn and make up around 60% of total (Figure 3). The large upgrade volume has been dominated by large capital structures (Sabine Pass, Tesoro, Enovus, Concho, and, most recently, Andeavor Logistics this week), the most notable of which was Sabine Pass, which alone accounted for more than \$11.5bn in debt crossing over to investment grade (See *Too Big to Ignore*).

Upgrade activity has been more moderate outside of energy, even among other commodity-related sectors. The metals & mining sector, for instance, has produced only one rising star this year, Anglo American, despite staging a turnaround from the troughs of its own credit cycle. Outside of the commodity-related sectors, the remaining rising stars make up less than 30% of the total volume. Most have small capital structures and were driven by idiosyncratic factors rather than cyclical ones.

FIGURE 2





Source: Bloomberg, Barclays Research



Note: Considers a normalized ratio of the number of companies issuing upward forward guidance to downward forward guidance. Source: Bloomberg

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Forecasting Rising Star Volumes Near the Highs

Our 2018 rising star forecast was built by surveying both thematic and idiosyncratic factors that could contribute to upward rating momentum. On the thematic front, we believe that the metals & mining sector will be a likely source of rising stars, in contrast to the lack of upgrades within the sector this year. Our metals & mining analysts specifically believe that the large capital structures of Freeport-McMoRan, Teck, and ArcelorMittal, among others, can earn investment grade status over the next 12-24 months (see *I Get Knocked Down, but I Get Up Again*). Away from metals & mining, our rising star opportunity set also features other deleveraging stories that are broadly characterized by improving rating agency outlooks, stable operational trends, and steady free cash flow generation.

Keeping these trends in mind, our forecast suggests that rising star volumes can reach a new peak of \$60bn in 2018, surpassing 2017 volumes by approximately \$10bn. The most significant input to our forecast is a bottom-up review of all credits covered by our fundamental analysts weighted by their likelihood of receiving an upgrade. The set of credits can be divided into three buckets.

- The first bucket, which accounts for \$22bn of our 2018 forecast, considers covered
 credits to which our analysts assign a greater than 50% chance of being upgraded in
 2018. Figure 7 presents a list of select upgrade candidates in this bucket with
 commentary from our fundamental analysts.
- The second bucket considers potential long-term upgrade candidates that have a less than 50% chance of being upgraded in 2018, in our view – in aggregate, it represents \$20bn of our total forecast. Figure 8 lists select credits that fit in this category with analyst commentary.
- The remainder of our forecast (\$18bn) considers uncovered credits that screen as rising star candidates, to which we then apply a conservative adjustment¹ based on historical migration rates from the High Yield Index to the Investment Grade Index.

Caveat on Upside from Ratings Uplift

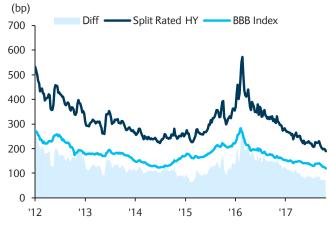
While the magnitude of rising star volumes may be able to eclipse those of prior years, the scope for further outperformance is constrained somewhat by tight trading. As we





Source: Bloomberg Barclays Indices

FIGURE 4
Split-Rated High Yield versus BBB Index Spread Differential



Source: Bloomberg, Bloomberg Barclays Indices

¹ We apply the adjustment only to names that are 1) rated BB+ or higher by two of the three rating agencies or 2) carry a BB rating at two of the three rating agencies with a positive outlook/under review. We calculate the migration rates for credits that are upgraded from the High Yield Index.

highlighted in *Fallen Angels Rise Again*, rising stars behave in predictable ways in the leadup to an upgrade, with most of the outperformance registering a year in advance.

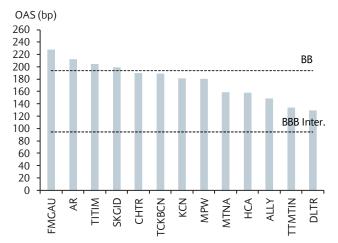
Figure 4, however, shows that the differential in spreads between split-rated high yield credits² that compose our rising star opportunity set and the BBB index has compressed meaningfully, with levels now testing 2015 lows. While the compression leaves less room for ratings-driven upside, it is commensurate with the broader tightening in BBs relative to BBBs and our view that the risk/reward in BBs in less compelling at this time. Figure 5, however, identifies select rising star candidates that trade reasonably wide relative to the intermediate BBB index where ratings momentum can continue to be a catalyst for further spread compression.

Implications of Corporate Tax-Reform for Rising Star Volumes

Another factor that could contribute to higher rising star volumes in coming years is corporate tax reform. As discussed in *What is priced in for different assets*, leverage could decline by up to 25% over a 10-year period if corporate tax rates are cut from 35% to 20%. This is based on the premise that lower corporate taxes would reduce the incentive for companies to issue debt and, thus, to maintain high yield ratings. And while leverage is not the ultimate arbiter of a company's rating, it can be used to help frame the amount of additional BB debt that would achieve investment grade-like leverage under a 20% corporate tax regime.

Figure 6 compares the current distribution of BB leverage with the same distribution assuming the 25% haircut to leverage mentioned above. While our data are limited to public filers, we believe that the sample is fairly representative of the broader market. A 25% decline in leverage would mean that an additional 38% of the BB universe could achieve the current BBB leverage of 3.6x. Assuming that an equivalent percentage of the market will eventually be upgraded over the 10-year time frame, corporate tax reform could provide a \$20bn/year boost to the annual rising star pace. We note that the change in leverage should be implemented gradually over a 10-year time frame, and would not expect any near-term deleveraging as a result of a potential change in tax policy. Depending on the final outcome of any legislation, tax policy changes could materially affect corporate financial policy beyond 2018, with some modest effects in 2H18. That said, the effect on valuations could be felt well in advance of actual upgrades.

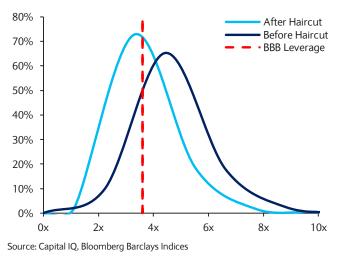
FIGURE 5 2018 Rising Star Candidates



Note: To adjust for differences in duration, the second dashed line considers spreads of the BBB Intermediate Index. Source: Bloomberg Barclays Indices

FIGURE 6

Distribution of BB Leverage Assuming That Corporate Tax-Reform Leads to a 25% Leverage Haircut



² We define split-rated credits as those that either carry at least one investment grade rating and are included in the High Yield Index or those that carry at least one high yield rating and are included in the Investment Grade Index.

FIGURE 7
Rising Star Candidates That Are Likely to Be Upgraded to Investment Grade in 2018

Ticker	Sector	Par (\$mn)	Index Rating	OAS (bp)	Commentary
НСА	Consumer Non- Cyclical	15,300	BA2/BA3	205	In July 17, Moody's stated that there was a "reduced likelihood that the senior secured debt would be upgraded to investment grade, due to changes in the capital structure (includes more secured debt) and attributes of Moody's Loss Given Default Methodology." Despite Moody's comments in July, we believe the company's scale and strong cash flow will increase the likelihood of an upgrade of the secured notes to IG in 2018. We note that this view may be tempered if the company continues its buyback program. (Rishi Parekh)
TCKBCN	Basic Industry	4,809	BA1/BA2	195	We see current credit metrics (0.7x net leverage estimated at YE17) as worthy of an IG upgrade, particularly given the \$2+bn of debt repayment since 2Q16 (now below its \$5bn corporate debt target), but expect the agencies to be slower to give management the benefit of the doubt after its decision not to sell any assets or issue equity in 2015-16 to combat the commodity cycle. TCKBCN has a publicly stated intention to return to mid-BBB ratings, but we will be focused on how the company intends to fund its growth projects, notably the ~\$4.7bn Quebrada Blanca Phase 2 project (QB2). Maintaining higher cash balances, thus limiting the need to use the balance sheet, should help shift the perspective on management and its willingness to manage to IG ratings, despite its aspirations to expand the asset portfolio. The company announced a 20mn share buyback authorization on October 5, which shows a shifting preference for shareholder returns, but this program (~C\$575mn at the current share price) can be funded with excess free cash flow generated in 2017-18 while keeping net leverage <1.0x. (Brian Lalli)
DLTR	Consumer Cyclical	3,242	BA2	157	We view DLTR as potential upgrade candidate in the next 3-9 months. The company noted that it would achieve 3.5x rent-adjusted leverage by 1H18, the threshold for a rating agency upgrade to IG. Given steady operational trends and robust free cash flow, we view an upgrade to IG as a likely outcome. DLTR is currently rated Ba1/BB+ by Moody's/S&P. (Hale Holden)
TTMTIN	Consumer Cyclical	2,700	BA1	139	In our view, JLR (Ba1 Pos/BB+ Stbl/ BB+ Stbl at Moody's/S&P/Fitch) is a potential rising star. We expect it to reach investment grade in the next 12 months. We believe that the end game for JLR is to control its financial services operations. A first step in that direction would be to reach IG status. With a net cash position according to its latest published results and its upcoming product launches, which are expected to drive profitability, we think that the company is on the right track. We acknowledge that JLR's EBITDA margin has taken a hit recently (12.1% in FY17 vs 14.1% in FY16) because of various factors (timing of product launches, FX, new model launch costs), but owing to new product launches, we forecast that it will bounce back in FY 18E and reach 14.7%. (Christophe Boulanger)
KCN Source: Blo	Basic Industry omberg Barclays Indic	1,750	BA1	189	With a positive outlook at S&P and existing investment grade ratings at Fitch, we think that KCN is well positioned for an upgrade back to BBB- at the former following a downgrade in 2016 as a result of lower commodity price assumptions. Since then, gold prices have been above expectations and KCN has taken the opportunity to increase its reserve base and repay debt. As an upgrade trigger, S&P requires leverage well below 2.0x on a sustained basis, which we estimate KCN can achieve even at a gold price below the agency's price deck of \$1,250/oz. (Harry Mateer)

Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 8
Rising Star Watch List for Credits Where Upgrade to Investment Grade Is Possible

Ticker	Sector	Par (\$mn)	Index Rating	OAS (bp)	Commentary
CHTR	Communications	18,898	BA2	209	CHTR has the scale and cash flow-generating ability of an IG company, with net leverage at 4.1x in 2Q17, toward the low end of its longer-term net leverage target of 4.0-4.5x. That said, management has not indicated any signs that it plans to deleverage, as evidenced by more than \$6bn of HY issuance in 2017 that has largely gone toward funding share buybacks. In our view, further deleveraging will be limited in the near term, although the company could achieve IG ratings relatively seamlessly to the extent that it does not continue its recent pattern of issuing debt to fund buybacks. (Vincent Foley)
ALLY	Banking	9,867	BA1/BA2	152	S&P recently affirmed its BB+ rating on Ally with a stable outlook, suggesting that an IG rating at S&P will take more than a year to materialize. In September, Fitch unexpectedly placed Ally's ratings on positive outlook, making it possible that it could upgrade the company to IG in 2018. However, even if that were to occur, Ally would need either S&P or Moody's to upgrade its senior bonds to transition to the IG index. Moody's rates Ally the lowest of the three agencies (Ba3/Stable), and we think that IG ratings there are still multiple years away. As a result, we still view Ally as a rising star, but the cross-over point to IG should be in 2019 at the earliest. (Peter Troisi)
TITIM	Communications	6,258	BA1	213	Based on our estimates and factoring in Moody's adjustments, we believe that Telecom Italia's (TI) 2018 financial performance will put the company in line for an IG rating at the agency. However, we think that an upgrade to IG at S&P could take slightly longer, given that the company will not achieve all of the stated triggers by the end of 2018, in our opinion. The largest risk to our estimates remains the domestic mobile market, given the entry of Iliad. (Daniel Rekrut)
CLR	Energy	5,199	BA3	215	We remain Underweight rated on CLR, even though it remains a best-in- class drillbit story, albeit unhedged on its oil production. Through asset sales of non-core acreage, CLR remains focused on reducing debt to ~\$5bn within the next few years from the current \$6.5bn. Our estimated 2018 net leverage drops to 2.3x from its current (LTM) 3.7x. The company has the scale and the operational footprint plus liquidity to be upgraded. (Paul Chambers)
MTNA	Basic Industry	5,052	BA1	168	MTNA acted decisively in response to the downturn: since 1Q16, it has sold assets, raised equity, and reduced debt. 2017's improved EBITDA generation will contribute to an improvement in leverage this year. However, with capex set to increase in 2018 (the company recently announced an investment program in Mexico and has Ilva-related expenditures) and given our cautious view on the trajectory of steel prices, we believe that leverage will move sideways next year. While management has communicated a desire to return to investment grade, MTNA is comfortably positioned within the BB+ category. We therefore see the targeted return to IG as more likely in the longer term. (Maggie O'Neal)
AR	Energy	3,450	BA3	196	We remain Market Weight rated on Antero, as the bonds seem to reflect elevated hedges and the NGL pricing uplift. Data have been trending positive for the company, especially with its enhanced completions in the Marcellus. In addition, at the Barclays Energy Conference, the company reiterated its long-term goal of free cash flow generation. It is looking to 2019 as a potential investment grade candidate. Stable cash flows from hedges, ample liquidity, and acreage footprint are reasons it could be upgraded. (Paul Chambers)

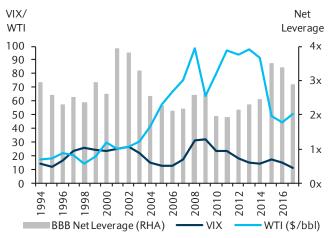
Source: Bloomberg Barclays Indices

Fallen Angel Outlook

The stabilization of commodity prices, persistently low market volatility, and steadily improving fundamentals for investment grade issuers in 2017 (Figure 9) have led to historically low fallen angel volumes this year, dropping from more than \$80bn in 2016 to less than \$10bn this year. Indeed, fallen angel volumes as a percent of the High Yield Index amount outstanding have never been so low, dipping below 1% of all high yield par outstanding (Figure 10). The lack of drawdown has further spurred returns for the

FIGURE 9

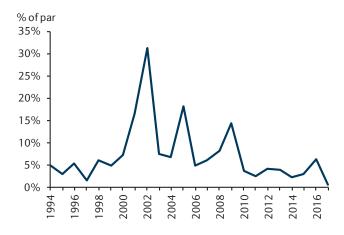
Annual Averages for VIX, WTI, and BBB Net Leverage



Note: Net leverage as of 2Q for 2016 and 2017. Source: Bloomberg, Factset, Bloomberg Barclays Indices

FIGURE 10

Fallen Angel Volumes as a Percent of High Yield Par Outstanding

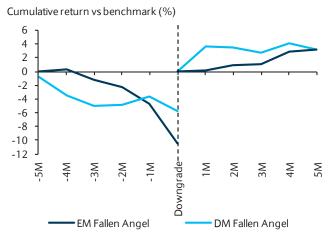


Source: Bloomberg Barclays Indices, Barclays Research

investment grade market, and as discussed in last week's investment grade section (*A Rising Tide Could Lift These Boats*), even with spreads at such tight levels, market stability remains our base case for the near term.

Fallen angel volumes tend to be binary year by year, oscillating between high volumes when macroeconomic or sector-specific volatility hits the market and low volumes during "steady-state" years. However, our sanguine near-term market outlook does not mean that the investment grade market is immune to downgrades going into 2018. Although commodity-leveraged issuers have either already been downgraded or stabilized their businesses, consumer-leveraged issuers remain vulnerable. While these sectors represent a relatively small slice of the investment grade market, the issuers – namely. Macy's, Nordstrom, and Mattel (which was downgraded to high yield by S&P last week) – represent an outsized portion of the \$60bn of fallen angel volume that we forecast for the next 12 months.

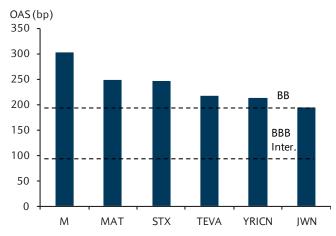
FIGURE 11
Emerging versus Developed Market Fallen Angel
Performance around Downgrade



Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 12

Average OAS for Fallen Angel Candidates



Source: Bloomberg Barclays Indices, Barclays Research

Figure 13 lists notable fallen angel candidates covered by our fundamental analysts, along with their comments on the company's outlook. For issuers not covered by our analysts, we estimate an additional \$20-30bn of fallen angel volume based on an historical annual fallen angel rate of 5.8% for BBBs and a 14% fallen angel rate for split-rated investment grade issuers – those that already have one high yield rating (see *Investment Grade and High Yield: Splitting from the Crowd*).

FIGURE 13 Fallen Angel Candidates for 2018

			Par	OAS	Ratings/Outlook	
Issuer	Ticker	Sector	(\$bn)	(bp)	(Moody's; S&P Fitch)	Research Commentary
Teva Pharmaceutical	TEVA	Pharmaceu ticals	17.0	218	BAA3/Neg; BBB-; BBB-	Teva's 3Q release solidified our view that the credit is unlikely to retain investment grade status over the next three months if it remains on its current trajectory. Our view that the timeline for a downgrade has been accelerated is driven predominantly by management's indication of little interest in pursuing an equity raise at this time even though the agencies have indicated that such a decision as among the few remaining levers that the company can pull in an effort to stave off a downgrade. In addition, generic Copaxone aside, the rest of the business continues to underperform, as evidenced by a third reduction in full-year guidance. (Brittany Chen)
Macy's Retails Holdings	М	Retailers	5.0	305	BAA3/Stable; BBB-; BBB/Neg	We see continued ratings pressure on the credit owing to secular headwinds. At its investor day in June, Macy's reiterated its goal to return to targeted leverage of 2.5-2.8x from the current 3.2x, stopping short of a commitment to IG ratings. Commentary about the company's strategy demonstrates that there is still a lot to do to improve competitiveness in the current retail environment, and we see the current challenges facing retail as magnified for Macy's. (Priya Ohri-Gupta)
Seagate	STX	Technology	4.4	246	BAA3/Neg; BB+; BBB-/Neg	With S&P cutting Seagate's issuer and unsecured rating from BBB- to BB+ on July 27, Moody's and S&P rate Seagate Baa3 and BBB- both with a negative outlook. Depending on HDD industry/Seagate revenue performance, Moody's and/or Fitch could downgrade the ratings in 2018. (Jeff Harlib)
Nordstrom Inc	JWN	Retailers	2.6	196	BAA1/Stable; BBB+/Neg; BBB+	The company not only faces a continued challenging retail landscape but the potential for a MBO, which could cause it to be downgraded to HY based on the details of the most recently discussed structure. The company recently paused its plan for an MBO ("Nordstrom Family Suspends Effort to Take Retailer Private," <i>Wall Street Journal</i> , October 16, 2017) but noted that the evaluation process will continue after the important holiday season. As previously outlined, we believe that JWN would be unable to maintain its IG ratings based on the construct of the potential deal (<i>Nordstrom Inc (JWN) - Considering Going Private</i> , June 8, 2017). Even if no deal is reached, the company still faces significant secular headwinds within the retail sector. (Priya Ohri-Gupta)
Mattel Inc	MAT	Consumer Products	1.2	249	BAA3/Neg; BB/Neg; BBB-/Neg	We see potential for Mattel to be downgraded to HY, as credit metrics have deteriorated, driven by secular headwinds and the recent Toys 'R' Us bankruptcy. Mattel recently posted earnings significantly below estimates and suspended its dividend. Over the past two quarters, leverage has increased from 3.2x to 5.4x, and the company was forced to renegotiate its revolver covenants this summer because it breached its leverage restriction. The current covenant calls for leverage below 4.5x at the end of 2017, and MAT is currently almost a full turn above that. We note that Moody's and S&P have set 3.5x as a potential threshold for downgrade, and management has already discussed "evaluating alternative forms of financing" in the event of a "potential rating agency downgrade." (Priya Ohri-Gupta)

Issuer	Ticker	Sector	Par (\$bn)	OAS (bp)	Ratings/Outlook (Moody's; S&P Fitch)	Research Commentary
Yamana Gold Inc	YRICN	Metals & Mining	0.5	215	BAA3/Neg; BB+/Stable; BBB-/Stable	A downgrade would be the result of leverage being maintained above the Moody's threshold of 3.0x beyond yearend 2017, with the metric standing at 3.2x as of June 30, 2017. Although we estimate that leverage can improve to below the trigger over the next 12 months, this is largely contingent on gold prices and would not be the case under Moody's current price deck of \$1,150/oz. (Harry Mateer)

Source: Bloomberg Barclays Indices, Barclays Research

It is worth noting that Teva, the only \$10bn+ issuer listed that could be downgraded to high yield before the end of 2018, would not enter the Bloomberg Barclays High Yield Index. As our fundamental and emerging market analysts have already highlighted (see *Teva Pharmaceutical Industries Ltd (TEVA): Assessing the market technicals behind a potential downgrade to high yield* and, more generally, *Trading EM 'Falling Angels': History Does Not Repeat Itself, but It Rhymes*), past emerging market fallen angels included in the Bloomberg Barclays US Aggregate Index have underperformed the index by more than 10% in the five months leading up to downgrade, while developed market issuers that enter the High Yield Index underperformed by only about 6% (Figure 10). While high yield managers' appetite for off-index bonds could mediate the downside for Teva, our analysts forecast \$2.5bn of forced selling from investment grade index-based managers and insurers.

Analyst Certification

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Materially Mentioned Issuers/Bonds

ALLY FINANCIAL INC, A/CD/CE/D/E/J/K/L/M/N

ANTERO RESOURCES CORP, A/CD/CE/D/E/GD/J/K/L/M

ARCELORMITTAL, CD/CE/D/I/K/L/M/N

CHARTER COMMUNICATIONS OPERATING LLC / CHARTER COMMUNICATIONS OPERATING CAPITAL, CD/J/K/M

CONTINENTAL RESOURCES INC/OK, CD/CE/J

DOLLAR TREE INC, CD/CE/J/K/M

HCA INC, A/CD/D/J/K/L/M/N

KINROSS GOLD CORP, Overweight, CD/CE/J

Representative Bond: KCN 5 1/8 09/01/21 (USD 107.00, 02-Nov-2017)

MACY'S INC, Underweight, CD/CE/J

Representative Bond: M 2 7/8 02/15/23 (USD 91.76, 02-Nov-2017) Representative Bond: M 3.875 01/15/2022 (USD 98.82, 02-Nov-2017)

MATTEL INC, CD/CE/J

NORDSTROM INC, Underweight, CD/CE/J

Representative Bond: JWN 4.0 10/15/2021 (USD 103.15, 02-Nov-2017)

SEAGATE HDD CAYMAN, Market Weight, CD/J

Representative Bond: STX 3 3/4 11/15/18 (USD 101.75, 02-Nov-2017) Representative Bond: STX 4 1/4 03/01/22 (USD 101.50, 02-Nov-2017) Representative Bond: STX 4 3/4 01/01/25 (USD 99.00, 02-Nov-2017) Representative Bond: STX 4 3/4 06/01/23 (USD 102.50, 02-Nov-2017) Representative Bond: STX 4 7/8 03/01/24 (USD 101.00, 02-Nov-2017) Representative Bond: STX 4 7/8 06/01/27 (USD 97.50, 02-Nov-2017) Representative Bond: STX 5 3/4 12/01/34 (USD 96.25, 02-Nov-2017)

TATA MOTORS LTD, CD/CE/D/J/K/L/N

TECK RESOURCES LTD, CD/CE/D/E/FB/J/K/L/M/R/U

TELECOM ITALIA SPA/MILANO, CD/CE/D/J/K/L/M/N

TEVA PHARMACEUTICAL FINANCE CO BV, Underweight, CD/D/J/L Representative Bond: TEVA 2.95 12/18/22 (USD 91.63, 02-Nov-2017) Representative Bond: TEVA 3.65 11/10/2021 (USD 96.54, 02-Nov-2017)

YAMANA GOLD INC, Underweight, CD/CE/D/J/K/L/M

Representative Bond: YRICN 4.95 07/15/24 (USD 103.00, 02-Nov-2017)

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K: Barclays Bank PLC and/or an affiliate has received non-investment banking related compensation (including compensation for brokerage services, if applicable) from this issuer within the past 12 months.

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M: This issuer is, or during the past 12 months has been, a non-investment banking client (securities related services) of Barclays Bank PLC and/or an affiliate.

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Explanation of the Barclays Research Corporate Credit Sector Rating System

Overweight (OW):

For sectors rated against the Bloomberg Barclays U.S. Credit Index, the Bloomberg Barclays Pan-European Credit Index, the Bloomberg Barclays EM Asia USD

High Grade Credit Index or the Bloomberg Barclays EM USD Corporate and Quasi-Sovereign Index, the analyst expects the six-month excess return of the sector to exceed the six-month excess return of the relevant index.

For sectors rated against the Bloomberg Barclays U.S. High Yield 2% Issuer Capped Credit Index, the Bloomberg Barclays Pan-European High Yield 3% Issuer Capped Credit Index excluding Financials, the Bloomberg Barclays Pan-European High Yield Finance Index or the Bloomberg Barclays EM Asia USD High Yield Corporate Credit Index, the analyst expects the six-month total return of the sector to exceed the six-month total return of the relevant index.

Market Weight (MW):

For sectors rated against the Bloomberg Barclays U.S. Credit Index, the Bloomberg Barclays Pan-European Credit Index, the Bloomberg Barclays EM Asia USD High Grade Credit Index or the Bloomberg Barclays EM USD Corporate and Quasi-Sovereign Index, the analyst expects the six-month excess return of the sector to be in line with the six-month excess return of the relevant index.

For sectors rated against the Bloomberg Barclays U.S. High Yield 2% Issuer Capped Credit Index, the Bloomberg Barclays Pan-European High Yield 3% Issuer Capped Credit Index excluding Financials, the Bloomberg Barclays Pan-European High Yield Finance Index or the Bloomberg Barclays EM Asia USD High Yield Corporate Credit Index, the analyst expects the six-month total return of the sector to be in line with the six-month total return of the relevant index.

Underweight (UW):

For sectors rated against the Bloomberg Barclays U.S. Credit Index, the Bloomberg Barclays Pan-European Credit Index, the Bloomberg Barclays EM Asia USD High Grade Credit Index or the Bloomberg Barclays EM USD Corporate and Quasi-Sovereign Index, the analyst expects the six-month excess return of the sector to be less than the six-month excess return of the relevant index.

For sectors rated against the Bloomberg Barclays U.S. High Yield 2% Issuer Capped Credit Index, the Bloomberg Barclays Pan-European High Yield 3% Issuer Capped Credit Index excluding Financials, the Bloomberg Barclays Pan-European High Yield Finance Index or the Bloomberg Barclays EM Asia USD High Yield Corporate Credit Index, the analyst expects the six-month total return of the sector to be less than the six-month total return of the relevant index.

Sector definitions:

Sectors in U.S. High Grade Research are defined using the sector definitions of the Bloomberg Barclays U.S. Credit Index and are rated against the Bloomberg Barclays U.S. Credit Index.

Sectors in U.S. High Yield Research are defined using the sector definitions of the Bloomberg Barclays U.S. High Yield 2% Issuer Capped Credit Index and are rated against the Bloomberg Barclays U.S. High Yield 2% Issuer Capped Credit Index.

Sectors in European High Grade Research are defined using the sector definitions of the Bloomberg Barclays Pan-European Credit Index and are rated against the Bloomberg Barclays Pan-European Credit Index.

Sectors in Industrials and Utilities in European High Yield Research are defined using the sector definitions of the Bloomberg Barclays Pan-European High Yield 3% Issuer Capped Credit Index excluding Financials and are rated against the Bloomberg Barclays Pan-European High Yield 3% Issuer Capped Credit Index excluding Financials.

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Sectors in Asia High Grade Research are defined on Barclays Live and are rated against the Bloomberg Barclays EM Asia USD High Grade Credit Index.

Sectors in Asia High Yield Research are defined on Barclays Live and are rated against the Bloomberg Barclays EM Asia USD High Yield Corporate Credit Index.

Sectors in EEMEA and Latin America Research are defined on Barclays Live and are rated against the Bloomberg Barclays EM USD Corporate and Quasi Sovereign Index. These sectors may contain both High Grade and High Yield issuers.

To view sector definitions and monthly sector returns for Asia, EEMEA and Latin America Research, go to https://live.barcap.com/go/RSL/servlets/dv.search?pubType=4511&contentType=latest on Barclays Live.

Explanation of the Barclays Research Corporate Credit Rating System

For all High Grade issuers covered in the US, Europe or Asia, and for all issuers in Latin America and EEMEA (excluding South Africa), the credit rating system is based on the analyst's view of the expected excess return over a six-month period of the issuer's index-eligible corporate debt securities* relative to the expected excess return of the relevant sector, as specified on the report.

Overweight (OW): The analyst expects the six-month excess return of the issuer's index-eligible corporate debt securities to exceed the six-month expected excess return of the relevant sector.

Market Weight (MW): The analyst expects the six-month excess return of the issuer's index-eligible corporate debt securities to be in line with the six-month expected excess return of the relevant sector.

Underweight (UW): The analyst expects the six-month excess return of the issuer's index-eligible corporate debt securities to be less than the six-month expected excess return of the relevant sector.

Rating Suspended (RS): The rating has been suspended temporarily due to market events that make coverage impracticable or to comply with applicable regulations and/or firm policies in certain circumstances including where the Investment Bank of Barclays Bank PLC is acting in an advisory capacity in a merger or strategic transaction involving the company.

Coverage Suspended (CS): Coverage of this issuer has been temporarily suspended.

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published thereafter.

For all High Yield issuers (excluding those covered in EEMEA or Latin America), the credit rating system is based on the analyst's view of the expected total returns over a six-month period of the rated debt security relative to the expected total return of the relevant sector, as specified on the report.

Overweight (OW): The analyst expects the six-month total return of the debt security subject to this rating to exceed the six-month expected total return of the relevant sector.

Market Weight (MW): The analyst expects the six-month total return of the debt security subject to this rating to be in line with the six-month expected total return of the relevant sector.

Underweight (UW): The analyst expects the six-month total return of the rated debt security subject to this rating to be less than the six-month expected total return of the relevant sector.

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Where a recommendation is made at the issuer level, it does not apply to any sanctioned securities, where trading in such securities would be prohibited under applicable law, including sanctions laws and regulations.

*In EEMEA and Latin America (and in certain other limited instances in other regions), analysts may occasionally rate issuers that are not part of the Bloomberg Barclays U.S. Credit Index, the Bloomberg Barclays Pan-European Credit Index, the Bloomberg Barclays EM Asia USD High Grade Credit Index or Bloomberg Barclays EM USD Corporate and Quasi Sovereign Index. In such cases the rating will reflect the analyst's view of the expected excess return over a six-month period of the issuer's corporate debt securities relative to the expected excess return of the relevant sector, as specified on the report.

Distribution of ratings assigned by Barclays Corporate Credit Research at the issuer level:

24% have been assigned an Overweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Buy rating; 69% of issuers with this rating category are investment banking clients of the Firm; 74% of the issuers with this rating have received financial services from the Firm.

51% have been assigned Market Weight rating which, for purposes of mandatory regulatory disclosures, is classified as a Hold rating; 67% of issuers with this rating category are investment banking clients of the Firm; 82% of the issuers with this rating have received financial services from the Firm.

25% have been assigned an Underweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Sell rating; 70% of issuers with this rating category are investment banking clients of the Firm; 78% of the issuers with this rating have received financial services from the Firm.

Explanation of the Barclays EM Sovereign Credit Issuer Rating System

Overweight (OW):

The analyst expects the three-month excess return of the country's index eligible bonds to exceed the three-month excess return of the Bloomberg Barclays EM USD Sovereign Index.

Market Weight (MW):

The analyst expects the three-month excess return of the country's index eligible bonds to be in line with the three-month excess return of the Bloomberg Barclays EM USD Sovereign Index.

Underweight (UW):

The analyst expects the three-month excess return of the country's index eligible bonds to be less than the three-month excess return of the Bloomberg Barclays EM USD Sovereign Index.

Rating Suspended (RS):

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Distribution of ratings assigned by Barclays Emerging Markets Sovereign Research at the issuer level:

33% have been assigned an Overweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Buy rating; 33% of issuers with this rating category are investment banking clients of the Firm; 92% of the issuers with this rating have received financial services from the Firm.

28% have been assigned Market Weight rating which, for purposes of mandatory regulatory disclosures, is classified as a Hold rating; 40% of issuers with this rating category are investment banking clients of the Firm; 80% of the issuers with this rating have received financial services from the Firm.

39% have been assigned an Underweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Sell rating; 57% of issuers with this rating category are investment banking clients of the Firm; 86% of the issuers with this rating have received financial services from the Firm.

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