

## High Grade Food & Beverage

# Getting Paid for the Leverage Hangover; Raise to Market Weight

We raise the food & beverage sector to Market Weight from Underweight and think that investors should start selectively to add exposure where downside risk is priced in and spreads offer upside versus our fair value target. In this vein, we rate Campbell, Kraft Heinz, and Tyson Overweight.

### Rating Changes

- **We initiate coverage of Campbell with an Overweight rating.** On a relative basis, levels are wide of our fair value target, and as one of the widest-trading names in the sector, it offers a way to add exposure to food & beverage with attractive carry. While we recognize the fundamental and secular challenges facing the company, we think that there are concrete things that it can do to shore up its rating, and as such, we see limited likelihood that the credit will fall to high yield (more limited than current spreads arguably suggest). Furthermore, we expect the next catalyst for the company – its earnings results and strategic review announcement on August 30 – to be positive.
- **Raise Tyson to Overweight.** We think that the relative differential with Sysco can be cut in half, putting the company at levels more aligned with what we view as a high-BBB credit story. This is supported by the company's strong balance sheet, lower leverage target, and strong track record in executing on acquisitions.
- **Lower Mondelez to Underweight.** We think that investors should take profits at current levels, as we believe the credit should trade flat to Kellogg, suggesting widening potential of 15bp. Furthermore, looking at performance relative to BBB industrials and the rest of the BBB food & beverage sector, Mondelez is the only credit to have tightened year-to-date, suggesting an opportune time to consider other names.
- **Raise General Mills to Market Weight,** as the credit's current valuation is approaching our fair value target on an absolute basis, although we would be selective about adding exposure. In our view, current levels are starting to more appropriately reflect the company's strong track record of acquisition integration while balancing ongoing challenges in the sector.
- **Raise Constellation to Market Weight.** In our view, the company's valuation premium is justified given its steady financial policy and limited event risk, and we view spreads as fair versus our +15-20bp target relative to Anheuser-Busch InBev.

This document is intended for institutional investors and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors under U.S. FINRA Rule 2242. Barclays trades the securities covered in this report for its own account and on a discretionary basis on behalf of certain clients. Such trading interests may be contrary to the recommendations offered in this report.

**PLEASE SEE ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES STARTING AFTER PAGE 11**

---

#### U.S. HG Food and Beverage

**Market Weight**

from Underweight

#### CAMPBELL SOUP CO

**Overweight**

from n/a

#### CONSTELLATION BRANDS INC

**Market Weight**

from Underweight

#### GENERAL MILLS INC

**Market Weight**

from Underweight

#### KELLOGG CO

**Market Weight**

Unchanged

#### KRAFT HEINZ FOODS CO

**Overweight**

Unchanged

#### MONDELEZ INTERNATIONAL INC

**Underweight**

from Market Weight

#### TYSON FOODS INC

**Overweight**

from Market Weight

---

Priya Ohri-Gupta, CFA

+1 212 412 3759

priya.ohrigupta@barclays.com

BCI, US

[www.barclays.com](http://www.barclays.com)

## Summary of Ratings

Bloomberg Barclays U.S. Credit Index		
	Old	New
U.S. HG Food and Beverage	Underweight	<b>Market Weight</b>
CAMPBELL SOUP CO	n/a	<b>Overweight</b>
CONSTELLATION BRANDS INC	Underweight	<b>Market Weight</b>
GENERAL MILLS INC	Underweight	<b>Market Weight</b>
KELLOGG CO	Market Weight	Market Weight
KRAFT HEINZ FOODS CO	Overweight	Overweight
MONDELEZ INTERNATIONAL INC	Market Weight	<b>Underweight</b>
TYSON FOODS INC	Market Weight	<b>Overweight</b>

Source: Barclays Research

## Time to Step in

We raise our rating on the food & beverage sector to **Market Weight** from **Underweight**, as it is currently trading 2bp wide of US credit, its widest level in more than a decade. While the historic wide was an 11bp discount (in late April 2006), we think that present levels reflect some of the secular challenges faced by the sector – ie, changing consumer preferences, retailer pressure, competitive dynamics, and higher leverage. While outperformance is likely to require more consistent positive trends, coupled with successful deleveraging, we think that levels have reached the point where investors should consider adding exposure selectively. Furthermore, we would argue that while the percentage of BBB names in the food & beverage sector has increased (from 38.5% at year-end to 44.6% currently), it is still lower than the Credit Index (at 48.0%), suggesting that the sector remains somewhat safer from a ratings perspective than the market (Figure 2). We recommend buying Tyson, Kraft Heinz and Campbell, with the latter offering the most carry given its currently wide levels.

The past few months have shown increasing evidence of "M&A gone wrong," which is notable at a time when companies are increasing leverage for inorganic growth. We are coming off a heavy issuance period in the food & beverage sector, in particular, with companies having issued \$45.65bn (or 18% of total industrial gross issuance year-to-date). Leverage for many of our companies is now at 4-6x, and more recently, results have been weakened by the steep rise in freight and transport costs (compounded by retailer pressure for on-time and full deliveries). First-quarter earnings have started to show evidence of stabilization in certain areas (eg, Kellogg in cereal), with both Mondelez and Kraft posting better-than-expected sales performance. We think that this is evidence that the sector should settle at current levels. The most recent leg of widening has been driven by a combination of weaker earnings at Campbell (and subsequently Smucker), **but levels have reached the point where we think investors are being paid to move into the sector.**

To be fair, we think that **deleveraging will remain a focus in the sector.** Outside of food & beverage, we contend that Newell Brands is a relevant example, with the company having to engage in a series of asset sales, driven in part by the inability to deliver the pace of EBITDA growth originally assumed in its deleveraging plan. Furthermore, we think that Moody's placement of Campbell's rating on review for downgrade following F3Q18 results shows that recent leveraging transactions have limited cushion if things do not go exactly as planned. In light of this, asset sales could be an important route to support ratings – General Mills is already planning to divest 5% of its portfolio, and we expect Campbell to consider asset sales as well.

FIGURE 1  
Food & Beverage Sector Is at Almost an 11-year Wide

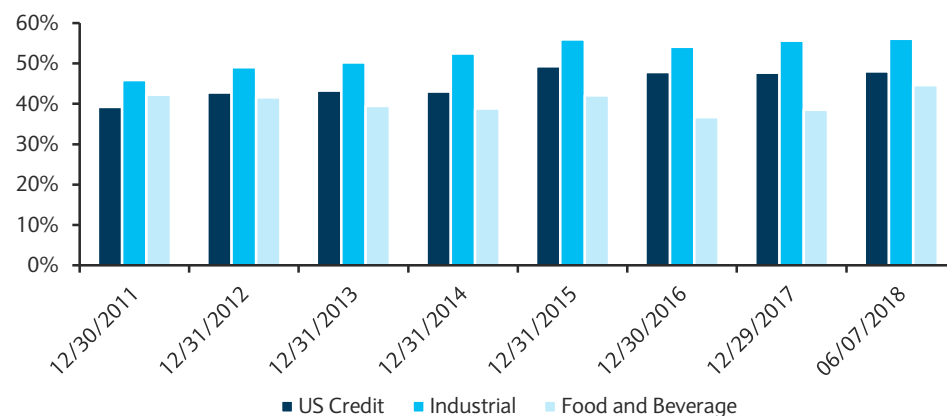


IG Food and Beverage vs US Credit (OAS, bp)

Source: Barclays Live - Chart

Source: Barclays Live-Chart

FIGURE 2  
BBBs as a Percent of Outstanding

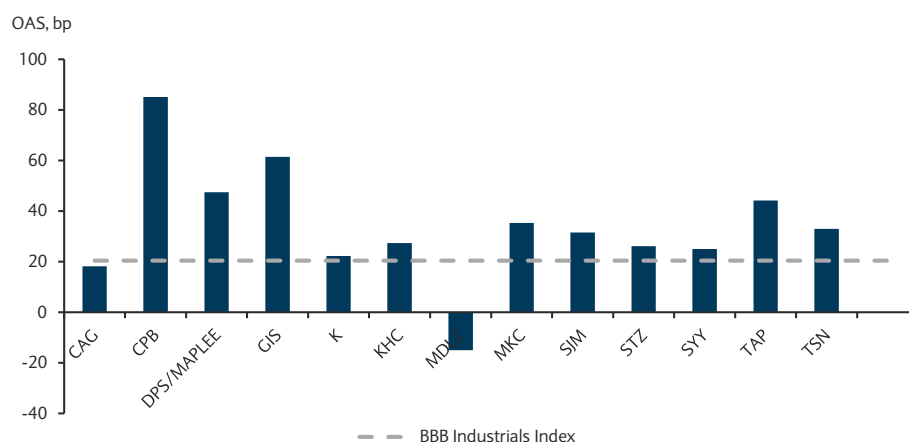


Source: Bloomberg Barclays Indices

## Where to Add Exposure

In *For BBBs, This Sell-off Looks Like a Rally*, Barclays' strategy team looked at the performance of BBBs versus As and noted that "the BBB/A ratio has dropped from 1.67x at the beginning of the year to 1.51x currently, implying beta-adjusted BBB outperformance." It also noted that while there is concern that an increased amount of BBB notional debt could affect performance, especially for highly leveraged credits, in the event of a weaker economic backdrop, this is not yet evident in performance. We would argue that one exception is BBB food companies, particularly the three that have incurred leverage for M&A (Campbell, Keurig Dr Pepper, and General Mills), which have underperformed, as highlighted below. Campbell has been the most significant underperformer in this regard, supporting what we view to be an entry point to the credit, particularly as we compare our relative value expectations with where credits are presently trading (Figure 4).

FIGURE 3

**BBB Food & Beverage Performance versus BBB Industrials (Year-to-Date Change in OAS)**

Source: Bloomberg Barclays Indices

## Fair Value Framework for Food

FIGURE 4

**Relative Value Framework**

Food			
Company	Ticker	10y spread target (bp)	Increment (bp)
Hershey	HSY	100	
Sysco	SYU	120	20
Tyson	TSN	130	10
Danone	BNFP	135	5
Mondelez	MDLZ	145	10
Kellogg	K	145	0
McCormick	MKC	145	0
Kraft Heinz	KHC	155	10
Smucker	SJM	160	5
General Mills	GIS	165	5
Campbell	CPB	190	25

Source: Barclays Research

We provide the fair value framework above as a way to assess relative value in the sector. We discuss the drivers for specific relationships below, but generally think that higher leverage related to M&A requires more of a discount than credits where leverage might be lower. For example, we view Mondelez and Kellogg as having similarly low event risk, with the near-term focus likely to be on portfolio shifts that involve bolt-on activity, as evidenced recently. We think that Kraft Heinz should trade at a 10bp discount to both, reflecting its current leverage and modestly weaker ratings. We find it difficult to add more discount than this for the unknown element of “M&A supply,” which remains a concern in the marketplace. Relative to Kraft, we think that General Mills should trade at a 10bp discount (putting it 15-20bp back of Mondelez and Kellogg), given higher leverage and the

acquisition of an asset that represents entry to a new category (with its own competitive and channel pressures). Finally, we think that Campbell should trade 25bp behind General Mills, reflecting the potential for weaker ratings and recent underperformance.

## Campbell – Initiate at Overweight

We initiate coverage of Campbell with an Overweight rating, as current crossover-like levels (5-10bp inside Bacardi) are pricing in more downside risk than we envision and we expect the next catalyst to be positive (as discussed below). We see limited risk that the credit will be downgraded to high yield in the near term and expect ratings to settle at low-BBB (versus current ratings of Baa2 (Review for Downgrade)/BBB (Negative)). We also note that spreads, while modestly wide of our fair value target in absolute terms, are well wide of our **relative target of a 25bp discount to General Mills**. Admittedly, the story is not without its challenges, with leverage just inside of 5x and the recent closure of the Snyder's-Lance transaction, which has already faced some short-term issues. However, the late-August outcome of the company's strategic review will be important in setting the tone for how investors should view the credit's short-term potential and, specifically, the trajectory of its ratings. In order to retain current ratings, we believe that the company will need to articulate ways to address its current debt load and support deleveraging despite more challenged profit performance expectations for FY19.

There are risks to our rating. The company may not discuss the initiatives outlined below, core performance could worsen further, and there is still a degree of open-ended uncertainty about how weak margin performance could be in FY19. However, at current levels, we think that the bias should be toward starting to add exposure.

### Levers to Support Investment Grade Rating

We believe there are levers the company can pull to protect its investment grade rating and expect these to be discussed at the end of August when it announces earnings results and details of the ongoing strategic review. While the announcement of the next CEO will be important in determining the future direction of the company, we are encouraged by the consistent discussion of debt paydown as a priority. To this end, the company could announce several things that would be credit supportive: **1) potential asset divestitures, with proceeds going toward debt paydown; 2) working capital initiatives that unlock sufficient cash flow over the short term to enable debt paydown and deleveraging; and 3) additional sources of liquidity such as a factoring or accounts receivables securitization program to diversify funding** (similar to those at Kraft Heinz and Newell Brands). Symbolically, while we view it as less likely, we think an announcement that the company could reduce or even hold its dividend constant while focusing on debt paydown would be well received by both the rating agencies and investors.

- We think that the company could consider divesting areas of the business that have been a drag on results.
- We estimate that the company could put roughly a \$500mn receivables securitization and factoring program in place to aid liquidity.
- If Campbell were to start extending its days payable outstanding to a level more in line with the industry, as one example of improving working capital, we estimate that it could unlock at least \$500mn in cash flow. Year-to-date, the company has extended its DPOs by close to nine days and unlocked \$160mn in cash flow y/y. There is room to improve this metric, which currently stands at 59 days, compared with other industry peers that are well over 100 days.

## Ratings Downside Limited to One Notch

While we believe that Campbell will try to retain investment grade ratings, there is risk that it could fall to low-BBB if the strategic review does not provide a clear path to deleveraging consistent with what was indicated at the time of the Snyder's-Lance acquisition. Based on the company's original time frame, it had anticipated achieving 3x net leverage by 2022 (we estimate that cash is usually a 0.1-0.2x cushion), which implied close to a half a turn of deleveraging per year. We estimate that pro forma leverage was 4.9x on a gross basis (4.8x net) at the end of F3Q18, and based on our expectations, leverage could tick up 0.1x in FY19 before dropping about 0.5x in FY19 to end at 4.5x on a gross basis. This is predicated on debt paydown of \$880mn through the end of FY19 and would represent a one-year delay to the original plan and agency expectations. This does not assume any working capital improvement, nor does it include potential asset sales, either or both of which could be used to help improve the trajectory. **In order to stay close to the original deleveraging plan, we estimate that the company would have to pay down an additional \$1bn of debt by the end of FY19.** If this were to occur, we think there is a chance that the company could even retain a mid-BBB rating with negative outlooks.

## Divestitures Are Key

The short-term issues related to the Snyder's-Lance deal that have been highlighted by Campbell, as well as lingering issues from past acquisitions (Bolthouse Farms and Garden Fresh), underscore the challenges the company has faced in seeking inorganic growth opportunities. We think that the current strategic review, in which "everything is on the table," could provide a fresh view of the portfolio and allow Campbell to reconsider areas that have been a drag on results. The C-Fresh business has been the subject of recent impairments (related to both Bolthouse Farms and Garden Fresh), and as discussed below, within C-Fresh, goodwill has been written down entirely for Garden Fresh Gourmet and the refrigerated soups business, Bolthouse Farms refrigerated beverages and salad dressings, and Bolthouse Farms carrot and carrot ingredients. These assets also use a different supply chain than the rest of the US business. On the Snyder's-Lance side, the Pop Secret brand, along with Kettle Chips outside the US, were both impaired in 2017, suggesting a downward trend in their growth outlooks.

FIGURE 5  
Valuing Past Acquisitions

Acquisition	Acquisition Price	Impairments	% Impaired
Bolthouse	1,550	877	56.6%
Garden Fresh	255	170	66.7%
Total	1,805	1,047	58.0%

Source: Company reports, Barclays Research

## Relative to Newell

Outside of the food sector, we think that Newell provides an appropriate comp to Campbell given some of the challenges facing both credits. Both companies have had multiple guidance revisions driven by the challenge of forecasting headwinds accurately (in the case of Newell, sales issues at two key businesses were exacerbated by operational deleveraging, while at Campbell, there was an underappreciation of the severity of the cost environment, worsening the challenges for C-Fresh). That said, some key differences include the CEO departure at Campbell, which could be an important step in bringing in a fresh perspective (particularly if the previous CEO was heavily involved in prior acquisitions), versus departures at Newell in the CFO, chief development officer, and president roles. In terms of the board, there appears to be greater stability at Campbell; while Newell's board was reconstituted more recently, the CEO's posture and commentary related to Starboard's

white paper during the last earnings call appear to suggest that some dissonance remains. We also note the presence of two activist investors at Newell (Starboard and Icahn), while the Dorrance family owns more than 40% of Campbell's equity, which we view as more credit supportive (we see a low likelihood of a leveraged buyout, but note that all bonds issued in 2015 to fund the Snyder's transaction have change of control provisions that do not carve out the family). In both cases, deleveraging is likely to be tied to asset sales; while Newell is arguably further down this path, the company's use of proceeds is expected to be biased toward shareholder returns, whereas we expect that Campbell would use proceeds fully for debt reduction. Finally, the lack of coupon steps for Campbell could support investor preference for Newell in the event that ratings risk for Campbell increases.

## Recent Results

Fiscal third-quarter earnings were meaningfully below expectations. Notably, adjusted gross margin was down 4pts y/y (to 32.0%). The company described a "challenging" quarter beset by higher-than-expected inflation, transportation and logistics costs, and underperformance in key segment areas (C-Fresh). Leadership is also in a state of transition after Denise Morrison, who had served as president and CEO for the previous seven years, announced her retirement effective immediately. Interim CEO Keith McLoughlin addressed the company's poor performance and announced that a strategic/operational review of all portfolio units will commence, leaving all options on the table. This contrasts with previous guidance in February that was confident in the performance of the entire diversified portfolio. That said, the company reiterated its commitment to deleverage its balance sheet. Total debt stood at \$9.6bn, reflecting the acquisition of Snyder's-Lance and Pacific Foods. Management remains pleased with the recent acquisitions, but admits that the unexpected headwinds mentioned above have weakened the near-term outlook.

Higher inflation costs were related to dairy, meat, steel, and aluminum, while supply chain costs affected the C-Fresh segment (\$19mn operating loss in the quarter). In addition, manufacturing inefficiencies, reduced carrot crop yields, and increased costs associated with transportation and logistics all contributed to a decline in adjusted gross margin.

## *Impairments*

In conjunction with earnings, Campbell announced that it was impairing its Garden Fresh Gourmet business and portions of its Bolthouse Farms business by \$619mn. We estimate that at this point, the company has impaired approximately 60% of the value it paid for Bolthouse and Garden Fresh, indicating that its outlook for the purchases had been too optimistic. The impairments taken in F3Q were in a different area than those in F2Q. Impairments in F3Q were split between the deli reporting unit (composed of Garden Fresh Gourmet and the US refrigerated soup business) and Bolthouse Farms refrigerated beverages and salad dressings. Within the deli unit, the \$105mn impairment (\$11mn on tangible assets and \$94mn on intangible assets) was driven by the loss of a majority of the company's private-label refrigerated soup customers (they plan to in-source production starting in 2019), as well as recent performance in Garden Fresh Gourmet. As a result of the impairment (\$81mn of which was related to goodwill), the company has written down the remaining goodwill on the reporting unit. The remaining \$514mn impairment charge is related to a reduction in sales growth expectations and a lower gross profit outlook (driven by inflation and manufacturing efficiency pressures) for the Bolthouse Farms refrigerated beverages and salad dressings unit. The charge included a \$384mn write-down for goodwill, which represented the balance of what was attributed to the reporting unit. In F2Q18, the company impaired the carrot and carrot ingredients business of Bolthouse Farms (also in the C-Fresh segment) and wrote down the remaining goodwill of that business.



### *Short-term Pressures*

On its earnings call, management noted that it had uncovered some “short-term” issues with Snyder’s-Lance in the eight weeks that it had owned the business, including 1) higher-than-expected trade rates implemented by the prior management team; 2) transportation and logistics costs that are not moderating as expected; and 3) issues in relocating Emerald nut production to Charlotte from California owing to greater challenges than expected (by both the current and former management teams) in restarting equipment. **While these issues are not a positive start to the integration process, we believe that current levels more than discount these challenges, and we expect to see some degree of improvement over the next couple of quarters.** With regard to the first issue, the company plans to implement the more disciplined trade process of the Pepperidge Farm business, which should start to provide benefits in F2Q/3Q19.

While the company kept its outlook for the long-term prospects of the business intact, along with synergy expectations, these issues are expected to keep FY19 gross and operating margins under pressure. In addition, we estimate that steel costs (associated with higher tariff-driven pricing) could be a 40bp drag on an annualized basis, with higher costs starting to hit in the latter half of FY19.

## Ratings Discussion

---

### **Constellation Brands – Raise to Market Weight**

Relative to leverage and operational trends in the food sector, we think that Constellation is mis-rated at low-BBB and expect to see ratings trend up in coming months. In our view, the market has increased scrutiny of current balance sheet uses compared with what they will be one to two years forward and is reticent to give credit for the latter. As such, we view Constellation’s current market premium as justified and supportive of a Market Weight rating (up from Underweight), particularly given limited M&A risk. We also view current valuations as in line with our fair value target of +15-20bp back of Anheuser-Busch InBev.

### **General Mills – Raise to Market Weight**

With current levels approaching our fair value target and Figure 3 showing that the credit is the second most significant underperformer among BBB food year-to-date, we raise our rating on General Mills to Market Weight from Underweight. In the context of our fair value target of 10bp behind Kraft Heinz and 15-20bp back of Kellogg, we see room for a modest amount of additional widening in the 10y and 30y parts of the curve, but would look for selective opportunities along the curve to begin adding exposure. The freight backdrop remains a headwind for the sector, and we think that the ongoing severity could affect General Mills in the current quarter. While the company’s prior guidance adjusted for this, spot market utilization was around 20%, and pricing has only recently started to moderate. We await evidence that some of the initiatives outlined to address this (transportation carrier changes, tighter expense controls, and targeted revenue management actions) have taken hold.

With regard to M&A, General Mills has a solid track record, as exemplified by acquisitions such as Annie’s and Lara Bar. While Blue Buffalo puts the company in an entirely new category, the plan to increase market penetration is akin to that for Annie’s. The existing management team for Blue Buffalo has also been kept in place. That said, while the company has touted its ability to “keep current channels,” ie, support growth in existing channels while expanding into food/drug/mass in the cases of Annie’s and Lara Bar, we note that a key difference in the case of Blue Buffalo is that pet specialty, which accounted for 59% of sales in 2017 (versus 48% for the US pet food category), continues to struggle (with recent comps declining in the low to mid-single digits). Furthermore, there is ongoing pressure from comparable private-label entrants (such as Amazon’s Wag) that are priced



cheaper than Blue Buffalo; while we recognize higher brand loyalty among pet parents and a greater willingness to trade up, this is an area that bears monitoring. Smucker's acquisition of Ainsworth (with growth similarly predicated on distribution gains over the near term) exemplifies that the market is also being crowded by branded competitors.

### **Kellogg – Maintain Market Weight**

We view Kellogg as fairly valued at current spreads, but see room to swap into the credit from Mondelez, as we expect the two to compress. We believe that Kellogg's lower leverage (mid-3x) relative to the sector, coupled with signs of stabilization in key areas such as cereal, demonstrates that it should be viewed as one of the "safer" credits in BBB food, supporting a premium to both General Mills and Kraft Heinz. In terms of M&A risk, the company has recently engaged in small bolt-on activity that is indicative of the strategy management plans to employ over the near term. In addition, we think that portfolio refinement/pruning will persist, as management indicated at CAGNY.

### **Kraft Heinz – Reiterate Overweight**

We reiterate our Overweight rating on Kraft Heinz. While we recognize market concerns about potential M&A supply, we think the current 15bp discount relative to MAPLEE bonds in the intermediate part of the curve prices in a fair amount of that risk. Furthermore, we think that S&P's deleveraging parameters, which call for the company to reduce net leverage to 4x within 24 months of a transformational acquisition, set an outside bound in terms of where leverage could go – we see this as in line with where Keurig Dr Pepper is taking pro forma leverage. That said, absent M&A, we view the company as being squarely focused on improving its credit ratings to work toward gaining tier 2 commercial paper access (ie, A2/P2 ratings), supported by its decision to wind down its receivables securitization and factoring program. In terms of fair value, we think that Kraft Heinz should trade about 10bp behind Kellogg and 20bp inside General Mills, reflecting its leverage (~4x) and a stronger-than-expected start to 2018.

As a reminder, 2018's sales and EBITDA results are expected to be more 2H-weighted than usual. While 2Q is expected to see headwinds similar to 1Q and is lapping the most difficult EBITDA margin comparables, the pace of growth is expected to pick up into the latter half of the year. Specific drivers include 1) transitory headwinds in nuts, cold cuts, and frozen (Ore-Ida) that are turning positive; 2) the benefit of go-to-market capabilities; 3) international growth from innovation and white space opportunities; and 4) the leveraging of greater savings. Notably, cash flow was \$500mn higher y/y in the first quarter because of lower cash needs for capex, taxes, and working capital, as management has discussed an improvement in cash generation this year.

### **Mondelez – Lower to Underweight**

We lower our rating on Mondelez to Underweight, as we think that investors should take profit at current tight levels. In our view, Mondelez should trade flat to Kellogg and about 15bp back of Tyson, and as such, **we see room for spreads to widen about 20bp**. Similar to Kellogg, Mondelez is embarking on a portfolio renovation strategy, and while neither is likely to engage in large M&A, we think that investors should be compensated for the higher leverage (we estimate around 4x, reflecting recent debt issuance/tender activity and the Tate's acquisition). The company's focus is shifting from being a margin-centric business toward one focused on execution and top-line opportunities. While power brands will continue to receive the bulk of the company's focus and support, there are some brands that can help drive improved mix through selective support. The company's start to 2018 demonstrated better-than-expected organic sales growth despite North America weakness, and there is potential for upside to the 1-2% top-line growth forecast if trends in North America stabilize.

That said, similar to other food & beverage companies under coverage, Mondelez expects sequential improvement in 2H, particularly with regard to margins. And while the company plans to discuss its new strategic framework in September, we do not expect results to drive any further tightening from current levels, as we anticipate that financial policy will remain largely intact.

We think it is worth highlighting some of the challenges from the first quarter, including unfavorable mix owing to continued weakness in the higher-margin gum category, which the company expects to persist. Strategically, the category provides scale in certain markets, and as such, stranded costs would be a consideration in any evaluation of the business. Over the near term, the company remains pleased with the innovation that is expected to roll out and is focused on improving the cost structure while shifting resources to mints and candy. Higher commodity costs were also an issue, namely in dairy, cocoa, and packaging costs. The company has been passing through dairy-related price increases, which should be completed by midyear. With regard to cocoa, higher hedges from last year and inventory entering the year were a drag (and resulted in an effect that did not mirror the spot market). While this is expected to persist into 2Q, owing to when the hedges were put on, the trend should improve in the latter half of the year because the company has clarity given that it is fully locked in on costs. Finally, higher supply chain costs were an issue in North America, where higher freight and logistics costs were a 210bp drag. In addition, lingering service issues from last year carried into 1Q, although the company expects to see improvement as the year progresses.

### **Tyson – Raise to Overweight**

We raise our rating on Tyson to Overweight, as we view it as a credit that has been pulled along with the rest of the sector, driven in part by concerns about tariffs, as well as higher input/freight costs. In our view, Tyson should trade about 15bp tighter than current levels, cutting the differential relative to Sysco by half in the intermediate part of the curve. Tyson has the lowest leverage among the mid-BBB rated food names and one of the strongest track records of M&A integration and deleveraging, which gives us comfort in its ability to utilize its balance sheet if the opportunity arises. While the company has recently made acquisitions to the tune of \$1bn (including rendering assets and an organic chicken producer), it also continues to prune its portfolio (selling the Sara Lee frozen bakery and Van's frozen waffle and cereal businesses) and remains committed to a 2x leverage target before returning to a more balanced financial policy. Finally, we are encouraged by the pricing confidence that Tyson has displayed in terms of offsetting some of its commodity headwinds, which is notable in the packaged foods sector.

### **Trade Ideas**

- Sell GIS 4s of 2025 (quoted 133/125, g-spread of 133bp, \$99) and buy CPB 3.95s of 2025 (quoted 172/167, g-spread of 168bp, \$96) to pick 35bp, versus our fair value target of 25bp, while taking out 3pts.
- Sell GIS 4.2s of 2028 (quoted 158/153, g-spread of 158bp, \$98) and buy CPB 4.15s of 2028 (quoted 194/189, g-spread of 189bp, \$95) to pick 30bp, versus our target of 25bp, while taking out 3pts.
- Buy KHC 2029s (quoted 180/177, g-spread of 177bp, \$99), as we view levels as attractive, 10bp back of Maple Escrow (MAPLEE) and roughly 20bp behind General Mills. In our view, KHC should trade 10bp inside GIS and about 20bp through MAPLEE.
- Sell MDLZ 2028s (quoted 132/127, g-spread of 132bp, \$99) and buy K 2028s (quoted 149/145, g-spread of 145bp, \$99) to pick up 13bp. We expect this relationship to compress to flat.

- Sell TSN 2019s (quoted 43/33, g-spread of 59bp, \$100) and buy TSN 2021s (quoted 92/82, g-spread of 80bp, \$96) to pick up 20bp while taking out 4pts.
- Buy CPB 3.95s of 2025 (quoted 172/167, g-spread of 168bp, \$96), as we view the 10bp pickup relative to a 4pt dollar differential versus the 3.3s of 2025 to be attractive on the curve.
- Buy GIS 3.15s of 2021 (quoted 88/78, g-spread of 72bp, \$99) or GIS 2.6s of 2022 (quoted 95/85, g-spread of 88bp, \$96) – both appear relatively attractive on the curve given the spread pickup versus other bonds in the front end.

### Analyst Certification

I, Priya Ohri-Gupta, CFA, hereby certify (1) that the views expressed in this research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

### Important Disclosures:

Barclays Research is produced by the Investment Bank of Barclays Bank PLC and its affiliates (collectively and each individually, "Barclays").

All authors contributing to this research report are Research Analysts unless otherwise indicated. The publication date at the top of the report reflects the local time where the report was produced and may differ from the release date provided in GMT.

### Availability of Disclosures:

For current important disclosures regarding any issuers which are the subject of this research report please refer to <https://publicresearch.barclays.com> or alternatively send a written request to: Barclays Research Compliance, 745 Seventh Avenue, 13th Floor, New York, NY 10019 or call +1-212-526-1072.

Barclays Capital Inc. and/or one of its affiliates does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that Barclays may have a conflict of interest that could affect the objectivity of this report. Barclays Capital Inc. and/or one of its affiliates regularly trades, generally deals as principal and generally provides liquidity (as market maker or otherwise) in the debt securities that are the subject of this research report (and related derivatives thereof). Barclays trading desks may have either a long and / or short position in such securities, other financial instruments and / or derivatives, which may pose a conflict with the interests of investing customers. Where permitted and subject to appropriate information barrier restrictions, Barclays fixed income research analysts regularly interact with its trading desk personnel regarding current market conditions and prices. Barclays fixed income research analysts receive compensation based on various factors including, but not limited to, the quality of their work, the overall performance of the firm (including the profitability of the Investment Banking Department), the profitability and revenues of the Markets business and the potential interest of the firm's investing clients in research with respect to the asset class covered by the analyst. To the extent that any historical pricing information was obtained from Barclays trading desks, the firm makes no representation that it is accurate or complete. All levels, prices and spreads are historical and do not necessarily represent current market levels, prices or spreads, some or all of which may have changed since the publication of this document. Barclays Research Department produces various types of research including, but not limited to, fundamental analysis, equity-linked analysis, quantitative analysis, and trade ideas. Recommendations and trade ideas contained in one type of Barclays Research may differ from those contained in other types of Barclays Research, whether as a result of differing time horizons, methodologies, or otherwise. The Barclays Research Department operates independently from the Absa Research Department. Absa Research is produced by Absa Bank Limited acting through its Corporate and Investment Bank division, which is a part of Barclays Africa Group Limited and affiliated with the Investment Bank of Barclays Bank PLC. Eligible clients may receive research reports from both research departments, which may reach different conclusions and may contain different and conflicting forecasts, recommendations, or trade ideas. In order to access Barclays Statement regarding Research Dissemination Policies and Procedures, please refer to <https://publicresearch.barcap.com/S/RD.htm>. In order to access Barclays Research Conflict Management Policy Statement, please refer to: <https://publicresearch.barcap.com/S/CM.htm>.

### Primary Issuers/Bonds

**CAMPBELL SOUP CO**, Overweight, A/CD/CE/D/J/K/L/M

Representative Bond: CPB 4.15 03/15/28 (USD 94.43, 07-Jun-2018)

Representative Bond: CPB 4.8 03/15/48 (USD 88.17, 07-Jun-2018)

**CONSTELLATION BRANDS INC**, Market Weight, CD/CE/D/J/K/L/M/N

Representative Bond: STZ 3.6 02/15/28 (USD 95.16, 07-Jun-2018)

Representative Bond: STZ 4.1 02/15/48 (USD 89.82, 07-Jun-2018)

**GENERAL MILLS INC**, Market Weight, A/CD/CE/D/J/K/L/M/N

Representative Bond: GIS 4.2 04/17/28 (USD 97.68, 07-Jun-2018)

Representative Bond: GIS 4.7 04/17/48 (USD 95.33, 07-Jun-2018)

**KELLOGG CO**, Market Weight, A/CD/CE/D/J/K/L/M/N

Representative Bond: K 4.3 05/15/28 (USD 99.09, 07-Jun-2018)

**KRAFT HEINZ FOODS CO**, Overweight, A/CD/D/E/J/K/L/M

Representative Bond: KHC 4 5/8 01/30/29 (USD 99.34, 07-Jun-2018)

**MONDELEZ INTERNATIONAL INC**, Underweight, A/CD/CE/D/GE/J/K/L/M

Representative Bond: MDLZ 4 1/8 05/07/28 (USD 99.13, 07-Jun-2018)

Representative Bond: MDLZ 4 5/8 05/07/48 (USD 96.12, 07-Jun-2018)

**TYSON FOODS INC**, Overweight, A/CD/CE/D/J/K/L/M

Representative Bond: TSN 3.55 06/02/27 (USD 94.23, 07-Jun-2018)

Representative Bond: TSN 4.55 06/02/47 (USD 95.02, 07-Jun-2018)

### Materially Mentioned Issuers/Bonds

CAMPBELL SOUP CO, Overweight, A/CD/CE/D/J/K/L/M  
CPB 3.95 03/15/25 (USD 96.07, 07-Jun-2018)

GENERAL MILLS INC, Market Weight, A/CD/CE/D/J/K/L/M/N  
GIS 2.6 10/12/22 (USD 95.56, 07-Jun-2018)  
GIS 3.15 12/15/2021 (USD 98.85, 07-Jun-2018)  
GIS 4 04/17/25 (USD 98.97, 07-Jun-2018)

TYSON FOODS INC, Overweight, A/CD/CE/D/J/K/L/M  
TSN 2 1/4 08/23/21 (USD 96.10, 07-Jun-2018)  
TSN 2.65 08/15/19 (USD 99.69, 07-Jun-2018)

All pricing information is indicative only. Prices are sourced from Thomson Reuters as of the last available closing price at the time of production of the research report, unless another time and source is indicated.

#### Disclosure Legend:

A: Barclays Bank PLC and/or an affiliate has been lead manager or co-lead manager of a publicly disclosed offer of securities of the issuer in the previous 12 months.

B: An employee or non-executive director of Barclays Bank PLC and/or an affiliate is a director of this issuer.

CD: Barclays Bank PLC and/or an affiliate is a market-maker in debt securities issued by this issuer.

CE: Barclays Bank PLC and/or an affiliate is a market-maker in equity securities issued by this issuer.

D: Barclays Bank PLC and/or an affiliate has received compensation for investment banking services from this issuer in the past 12 months.

E: Barclays Bank PLC and/or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer within the next 3 months.

FA: Barclays Bank PLC and/or an affiliate beneficially owns 1% or more of a class of equity securities of this issuer, as calculated in accordance with US regulations.

FB: Barclays Bank PLC and/or an affiliate beneficially owns a long position of more than 0.5% of a class of equity securities of this issuer, as calculated in accordance with EU regulations.

FC: Barclays Bank PLC and/or an affiliate beneficially owns a short position of more than 0.5% of a class of equity securities of this issuer, as calculated in accordance with EU regulations.

GD: One of the analysts on the fundamental credit coverage team (or a member of his or her household) has a financial interest in the debt or equity securities of this issuer.

GE: One of the analysts on the fundamental equity coverage team (or a member of his or her household) has a financial interest in the debt or equity securities of this issuer.

H: This issuer beneficially owns more than 5% of any class of common equity securities of Barclays PLC.

I: Barclays Bank PLC and/or an affiliate is party to an agreement with this issuer for the provision of financial services to Barclays Bank PLC and/or an affiliate.

J: Barclays Bank PLC and/or an affiliate is a liquidity provider and/or trades regularly in the securities of this issuer and/or in any related derivatives.

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.

L: This issuer is, or during the past 12 months has been, an investment banking client of Barclays Bank PLC and/or an affiliate.

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.

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

O: Not in use.

P: A partner, director or officer of Barclays Capital Canada Inc. has, during the preceding 12 months, provided services to the subject company for remuneration, other than normal course investment advisory or trade execution services.

Q: Barclays Bank PLC and/or an affiliate is a Corporate Broker to this issuer.

R: Barclays Capital Canada Inc. and/or an affiliate has received compensation for investment banking services from this issuer in the past 12 months.

S: This issuer is a Corporate Broker to Barclays PLC.

T: Barclays Bank PLC and/or an affiliate is providing equity advisory services to this issuer.

U: The equity securities of this Canadian issuer include subordinate voting restricted shares.

V: The equity securities of this Canadian issuer include non-voting restricted shares.

#### 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.

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

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/research/EMSectorReturns> 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.

**Not Covered (NC):** Barclays' fundamental credit research team does not provide formal, continuous coverage of this issuer and has not assigned a rating to the issuer or its debt securities. Any analysis, opinion or trade recommendation provided on a Not Covered issuer or its debt securities is valid only as of the publication date of this report and there should be no expectation that additional reports relating to the Not Covered issuer or its debt securities will be 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.

**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.

**Not Covered (NC):** Barclays' fundamental credit research team does not provide formal, continuous coverage of this issuer and has not assigned a rating to the issuer or its debt securities. Any analysis, opinion or trade recommendation provided on a Not Covered issuer or its debt securities is valid only as of the publication date of this report and there should be no expectation that additional reports relating to the Not Covered issuer or its debt securities will be published thereafter.

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:**

25% have been assigned an Overweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Buy rating; 67% 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.

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; 83% of the issuers with this rating have received financial services from the Firm.

24% have been assigned an Underweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Sell rating; 68% 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.

#### **Distribution of ratings assigned by Barclays Corporate Credit Research at the bond level:**

25% have been assigned an Overweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Buy rating; 57% of bonds with this rating category are investment banking clients of the Firm; 66% 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; 55% of bonds 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.

24% have been assigned an Underweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Sell rating; 48% of bonds with this rating category are investment banking clients of the Firm; 76% 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):**

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.

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

32% have been assigned an Overweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Buy rating; 17% of issuers with this rating category are investment banking clients of the Firm; 67% of the issuers with this rating have received financial services from the Firm.

37% have been assigned Market Weight rating which, for purposes of mandatory regulatory disclosures, is classified as a Hold rating; 21% of issuers with this rating category are investment banking clients of the Firm; 71% of the issuers with this rating have received financial services from the Firm.

32% have been assigned an Underweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Sell rating; 58% of issuers with this rating category are investment banking clients of the Firm; 100% of the issuers with this rating have received financial services from the Firm.

#### **Explanation of other types of investment recommendations produced by Barclays FICC Research:**

Trade ideas contained herein that have been produced by the Credit teams within Barclays Research are valid at current market conditions and may not be otherwise relied upon.

Trade ideas contained herein that have been produced by other research teams within Barclays FICC Research shall remain open until they are



subsequently amended or closed in a future research report.

**Disclosure of previous investment recommendations produced by Barclays FICC Research:**

Barclays FICC Research may have published other investment recommendations in respect of the same securities/instruments recommended in this research report during the preceding 12 months. To view previous investment recommendations published by Barclays FICC Research in the preceding 12 months please refer to <https://live.barcap.com/go/research/Recommendations>.

**Legal entities involved in producing Barclays Research:**

Barclays Bank PLC (Barclays, UK)  
Barclays Capital Inc. (BCI, US)  
Barclays Securities Japan Limited (BSJL, Japan)  
Barclays Bank PLC, Hong Kong branch (Barclays Bank, Hong Kong)  
Barclays Capital Canada Inc. (BCCI, Canada)  
Barclays Bank Mexico, S.A. (BBMX, Mexico)  
Barclays Securities (India) Private Limited (BSIPL, India)  
Barclays Bank PLC, India branch (Barclays Bank, India)  
Barclays Bank PLC, Singapore branch (Barclays Bank, Singapore)

**Disclaimer:**

This publication has been produced by Barclays Research Department in the Investment Bank of Barclays Bank PLC and/or one or more of its affiliates (collectively and each individually, "Barclays"). It has been distributed by one or more Barclays affiliated legal entities listed below. It is provided to our clients for information purposes only, and Barclays makes no express or implied warranties, and expressly disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to any data included in this publication. To the extent that this publication states on the front page that it is intended for institutional investors and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors under U.S. FINRA Rule 2242, it is an "institutional debt research report" and distribution to retail investors is strictly prohibited. Barclays also distributes such institutional debt research reports to various issuers, regulatory and academic organisations for informational purposes and not for the purpose of making investment decisions regarding any debt securities. Any such recipients that do not want to continue receiving Barclays institutional debt research reports should contact [debtresearch@barclays.com](mailto:debtresearch@barclays.com). Barclays will not treat unauthorized recipients of this report as its clients and accepts no liability for use by them of the contents which may not be suitable for their personal use. Prices shown are indicative and Barclays is not offering to buy or sell or soliciting offers to buy or sell any financial instrument.

Without limiting any of the foregoing and to the extent permitted by law, in no event shall Barclays, nor any affiliate, nor any of their respective officers, directors, partners, or employees have any liability for (a) any special, punitive, indirect, or consequential damages; or (b) any lost profits, lost revenue, loss of anticipated savings or loss of opportunity or other financial loss, even if notified of the possibility of such damages, arising from any use of this publication or its contents.

Other than disclosures relating to Barclays, the information contained in this publication has been obtained from sources that Barclays Research believes to be reliable, but Barclays does not represent or warrant that it is accurate or complete. Barclays is not responsible for, and makes no warranties whatsoever as to, the information or opinions contained in any written, electronic, audio or video presentations of third parties that are accessible via a direct hyperlink in this publication or via a hyperlink to a third-party web site ("Third-Party Content"). Any such Third-Party Content has not been adopted or endorsed by Barclays, does not represent the views or opinions of Barclays, and is not incorporated by reference into this publication. Third-Party Content is provided for information purposes only and Barclays has not independently verified its accuracy or completeness.

The views in this publication are solely and exclusively those of the authoring analyst(s) and are subject to change, and Barclays Research has no obligation to update its opinions or the information in this publication. Unless otherwise disclosed herein, the analysts who authored this report have not received any compensation from the subject companies in the past 12 months. If this publication contains recommendations, they are general recommendations that were prepared independently of any other interests, including those of Barclays and/or its affiliates, and/or the subject companies. This publication does not contain personal investment recommendations or investment advice or take into account the individual financial circumstances or investment objectives of the clients who receive it. The securities and other investments discussed herein may not be suitable for all investors. Barclays is not a fiduciary to any recipient of this publication. Investors must independently evaluate the merits and risks of the investments discussed herein, consult any independent advisors they believe necessary, and exercise independent judgment with regard to any investment decision. The value of and income from any investment may fluctuate from day to day as a result of changes in relevant economic markets (including changes in market liquidity). The information herein is not intended to predict actual results, which may differ substantially from those reflected. Past performance is not necessarily indicative of future results.

This document is being distributed (1) only by or with the approval of an authorised person (Barclays Bank PLC) or (2) to, and is directed at (a) persons in the United Kingdom having professional experience in matters relating to investments and who fall within the definition of "investment professionals" in Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"); or (b) high net worth companies, unincorporated associations and partnerships and trustees of high value trusts as described in Article 49(2) of the Order; or (c) other persons to whom it may otherwise lawfully be communicated (all such persons being "Relevant Persons"). Any investment or investment activity to which this communication relates is only available to and will only be engaged in with Relevant Persons. Any other persons who receive this communication should not rely on or act upon it. Barclays Bank PLC is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority and is a member of the London Stock Exchange.

The Investment Bank of Barclays Bank PLC undertakes U.S. securities business in the name of its wholly owned subsidiary Barclays Capital Inc., a FINRA and SIPC member. Barclays Capital Inc., a U.S. registered broker/dealer, is distributing this material in the United States and, in connection therewith accepts responsibility for its contents. Any U.S. person wishing to effect a transaction in any security discussed herein should do so only by contacting a representative of Barclays Capital Inc. in the U.S. at 745 Seventh Avenue, New York, New York 10019.

Non-U.S. persons should contact and execute transactions through a Barclays Bank PLC branch or affiliate in their home jurisdiction unless local regulations permit otherwise.

Barclays Bank PLC, Paris Branch (registered in France under Paris RCS number 381 066 281) is regulated by the Autorité des marchés financiers and the Autorité de contrôle prudentiel. Registered office 34/36 Avenue de Friedland 75008 Paris.

This material is distributed in Canada by Barclays Capital Canada Inc., a registered investment dealer, a Dealer Member of IIROC ([www.iiroc.ca](http://www.iiroc.ca)), and a Member of the Canadian Investor Protection Fund (CIPF).

Subject to the conditions of this publication as set out above, Absa Bank Limited, acting through its Corporate and Investment Bank division, which is a part of Barclays Africa Group Limited and affiliated with the Investment Bank of Barclays Bank PLC, an authorised financial services provider (Registration No.: 1986/004794/06. Registered Credit Provider Reg No NCRCP7), is distributing this material in South Africa. Absa Bank Limited is regulated by the South African Reserve Bank. This publication is not, nor is it intended to be, advice as defined and/or contemplated in the (South African) Financial Advisory and Intermediary Services Act, 37 of 2002, or any other financial, investment, trading, tax, legal, accounting, retirement, actuarial or other professional advice or service whatsoever. Any South African person or entity wishing to effect a transaction in any security discussed herein should do so only by contacting a representative of Absa Bank Limited acting through its Corporate and Investment Bank division in South Africa, 7th Floor, Barclays Towers West, 15 Troye Street, Johannesburg. Absa Bank Limited is an affiliate of the Barclays group.

All Barclays research reports are distributed to institutional investors in Japan by Barclays Securities Japan Limited. Barclays Securities Japan Limited is a joint-stock company incorporated in Japan with registered office of 6-10-1 Roppongi, Minato-ku, Tokyo 106-6131, Japan. It is a subsidiary of Barclays Bank PLC and a registered financial instruments firm regulated by the Financial Services Agency of Japan. Registered Number: Kanto Zaimukyokuchō (kinsho) No. 143.

Barclays Bank PLC, Hong Kong Branch is distributing this material in Hong Kong as an authorised institution regulated by the Hong Kong Monetary Authority. Registered Office: 41/F, Cheung Kong Center, 2 Queen's Road Central, Hong Kong.

All Indian securities-related research and other equity research produced by Barclays' Investment Bank are distributed in India by Barclays Securities (India) Private Limited (BSIPL). BSIPL is a company incorporated under the Companies Act, 1956 having CIN U67120MH2006PTC161063. BSIPL is registered and regulated by the Securities and Exchange Board of India (SEBI) as a Research Analyst: INH000001519; Portfolio Manager INP000002585; Stock Broker/Trading and Clearing Member: National Stock Exchange of India Limited (NSE) Capital Market INB231292732, NSE Futures & Options INF231292732, NSE Currency derivatives INE231450334, Bombay Stock Exchange Limited (BSE) Capital Market INB011292738, BSE Futures & Options INF011292738; Depository Participant (DP) with the National Securities & Depositories Limited (NSDL): DP ID: IN-DP-NSDL-299-2008; Investment Adviser: INA000000391. The registered office of BSIPL is at 208, Ceejay House, Shivsagar Estate, Dr. A. Besant Road, Worli, Mumbai – 400 018, India. Telephone No: +91 2267196000. Fax number: +91 22 67196100. Any other reports produced by Barclays' Investment Bank are distributed in India by Barclays Bank PLC, India Branch, an associate of BSIPL in India that is registered with Reserve Bank of India (RBI) as a Banking Company under the provisions of The Banking Regulation Act, 1949 (Regn No BOM43) and registered with SEBI as Merchant Banker (Regn No INM000002129) and also as Banker to the Issue (Regn No INBI00000950). Barclays Investments and Loans (India) Limited, registered with RBI as Non Banking Financial Company (Regn No RBI CoR-07-00258), and Barclays Wealth Trustees (India) Private Limited, registered with Registrar of Companies (CIN U93000MH2008PTC188438), are associates of BSIPL in India that are not authorised to distribute any reports produced by Barclays' Investment Bank.

Barclays Bank PLC Frankfurt Branch distributes this material in Germany under the supervision of Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin).

This material is distributed in Mexico by Barclays Bank Mexico, S.A.

Nothing herein should be considered investment advice as defined in the Israeli Regulation of Investment Advisory, Investment Marketing and Portfolio Management Law, 1995 ("Advisory Law"). This document is being made to eligible clients (as defined under the Advisory Law) only. Barclays Israeli branch previously held an investment marketing license with the Israel Securities Authority but it cancelled such license on 30/11/2014 as it solely provides its services to eligible clients pursuant to available exemptions under the Advisory Law, therefore a license with the Israel Securities Authority is not required. Accordingly, Barclays does not maintain an insurance coverage pursuant to the Advisory Law.

Barclays Bank PLC in the Dubai International Financial Centre (Registered No. 0060) is regulated by the Dubai Financial Services Authority (DFSA). Principal place of business in the Dubai International Financial Centre: The Gate Village, Building 4, Level 4, PO Box 506504, Dubai, United Arab Emirates. Barclays Bank PLC-DIFC Branch, may only undertake the financial services activities that fall within the scope of its existing DFSA licence. Related financial products or services are only available to Professional Clients, as defined by the Dubai Financial Services Authority.

Barclays Bank PLC in the UAE is regulated by the Central Bank of the UAE and is licensed to conduct business activities as a branch of a commercial bank incorporated outside the UAE in Dubai (Licence No.: 13/1844/2008, Registered Office: Building No. 6, Burj Dubai Business Hub, Sheikh Zayed Road, Dubai City) and Abu Dhabi (Licence No.: 13/952/2008, Registered Office: Al Jazira Towers, Hamdan Street, PO Box 2734, Abu Dhabi).

Barclays Bank PLC in the Qatar Financial Centre (Registered No. 00018) is authorised by the Qatar Financial Centre Regulatory Authority (QFCRA). Barclays Bank PLC-QFC Branch may only undertake the regulated activities that fall within the scope of its existing QFCRA licence. Principal place of business in Qatar: Qatar Financial Centre, Office 1002, 10th Floor, QFC Tower, Diplomatic Area, West Bay, PO Box 15891, Doha, Qatar. Related financial products or services are only available to Business Customers as defined by the Qatar Financial Centre Regulatory Authority.

This material is distributed in the UAE (including the Dubai International Financial Centre) and Qatar by Barclays Bank PLC.

This material is not intended for investors who are not Qualified Investors according to the laws of the Russian Federation as it might contain information about or description of the features of financial instruments not admitted for public offering and/or circulation in the Russian Federation and thus not eligible for non-Qualified Investors. If you are not a Qualified Investor according to the laws of the Russian Federation, please dispose of any copy of this material in your possession.

This material is distributed in Singapore by the Singapore branch of Barclays Bank PLC, a bank licensed in Singapore by the Monetary Authority of Singapore. For matters in connection with this report, recipients in Singapore may contact the Singapore branch of Barclays Bank PLC, whose registered address is 10 Marina Boulevard, #23-01 Marina Bay Financial Centre Tower 2, Singapore 018983.

This material is distributed to persons in Australia by either Barclays Bank PLC, Barclays Capital Inc., Barclays Capital Securities Limited or Barclays Capital Asia Limited. None of Barclays Bank PLC, nor any of the other referenced Barclays group entities, hold an Australian financial services licence and instead they each rely on an exemption from the requirement to hold such a licence. This material is intended to only be distributed to "wholesale clients" as defined by the Australian Corporations Act 2001.

IRS Circular 230 Prepared Materials Disclaimer: Barclays does not provide tax advice and nothing contained herein should be construed to be tax advice. Please be advised that any discussion of U.S. tax matters contained herein (including any attachments) (i) is not intended or written to be used, and cannot be used, by you for the purpose of avoiding U.S. tax-related penalties; and (ii) was written to support the promotion or marketing of the transactions or other matters addressed herein. Accordingly, you should seek advice based on your particular circumstances from an independent tax advisor.

© Copyright Barclays Bank PLC (2018). All rights reserved. No part of this publication may be reproduced or redistributed in any manner without the prior written permission of Barclays. Barclays Bank PLC is registered in England No. 1026167. Registered office 1 Churchill Place, London, E14 5HP. Additional information regarding this publication will be furnished upon request.

BRCF2242

