

Priya Ohri-Gupta, CFA +1 212 412 3759 priya.ohrigupta@barclays.com BCI, US
Scott Schachter +1 212 526 9716 scott.schachter@barclays.com BCI, US

Quarterly Consumer/Retail Debt Maturity Calendar and New Issue Performance

We provide a preview of upcoming debt maturities in food, beverage, consumer products, tobacco, retail, grocers, and restaurants and review how new issues performed over the past year. We suggest examining upcoming maturities in conjunction with other possible uses of cash, such as share repurchases and acquisitions, to assess the potential for new issuance.

Retail Debt Maturities by Month (Jan 2017 - March 2018)

		Next 15 Mos: Debt Maturities (\$mn)	2017												2018		
	Ticker		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
RETAIL																	
Advance Auto Parts	AAP	0															
AutoNation Inc.	AN	0															
AutoZone Inc	AZO	400	400														
Bed Bath & Beyond Inc	BBBY	0															
Best Buy Co Inc	BBY	0															
Costco	COST	2,200			1,100									1,100			
Dollar General Corp	DG	500							500								
Home Depot Inc	HD	500									500						
Kohl's Corp	KSS	0															
Lowe's Cos	LOW	750				500					250						
Macy's Inc	M	300							300								
Nike Inc	NKE	0															
Nordstrom Inc	JWN	650													650		
O'Reilly Automotive Inc	ORLY	0															
Ralph Lauren	RL	0															
Ross Stores Inc	ROST	0															
Staples Inc	SPLS	500													500		
Target Corp	TGT	1,682						598							1,084		
Tiffany & Co	TIF	0															
Wal-Mart Stores, Inc	WMT	3,250				1,500		500								1,250	
GROCEER AND DRUGSTORE																	
CVS Health Corp	CVS	0															
Kroger	KR	600								600							
Walgreens Boots Alliance Inc	WBA	750											750				
RESTAURANTS																	
Darden	DRI	0															
McDonald's	MCD	2,576			400							650	526				1,000
Starbucks	SBUX	0															

Note: Total debt maturity amounts are converted to USD, although some companies issue non-dollar denominated bonds. FX rates as of 12/30/16: AUDUSD = .7208, USDCAD = 1.3441, USDCHF = 1.019, USDCNY = 6.945, EURUSD = 1.0517, GBPUSD = 1.234, USDJPY = 116.96, Data as of 12/30/2016.

Source: Company reports, Bloomberg

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 5

Consumer Debt Maturities by Month (Jan 2017 - March 2018)

	Ticker	Next 15 Mos: Debt Maturities (\$mn)	2017												2018		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
FOOD																	
Archer-Daniels-Midland	ADM	820				261											559
Bunge Limited	BG	850				250		600									
Campbell Soup Co	CPB	400							400								
Cargill Inc	CARGIL	3,672			1,300		546						1,826				
Conagra Brands, Inc.	CAG	414						225							120		70
Constellation Brands	STZ	700					700										
Danone	BNFP	983						94			100		789				
General Mills Inc	GIS	1,600		1,000								500				100	
Hershey Co	HSY	0															
Kellogg Co	K	623					623										
Kraft Heinz Foods Co	KHC	2,018			18			2,000									
Mondelez International	MDLZ	2,172	789		172					488					245	478	
Sysco Corporation	SY	500														500	
Tyson Foods	TSN	53							53								
BEVERAGE																	
Anheuser-Busch InBev	ABIBB	7,018	300		1,089			789	2,000						1,946		894
Brown-Forman Corp	BFB	250													250		
Coca-Cola Co	KO	4,230			2,103					206		946	225				750
Coca-Cola Enterprises	CCE	0															
Diageo Capital	DGELN	2,250					1,000					1,250					
Dr. Pepper Snapple PLC	DPS	0															
Molson Coors	TAP	672					300					372					
PepsiCo	PEP	4,400		750			250		1,250	1,000		1,150					
Suntory Holdings Ltd	SUNTOR	1,514					300		214		1,000						
TOBACCO																	
Altria	MO	0															
Philip Morris International	PM	2,300			550					1,250			500				
Reynolds American Inc	RAI	504								504							
CONSUMER PRODUCTS																	
Clorox	CLX	400										400					
Colgate-Palmolive	CL	650	400					250									
Estee Lauder Cos Inc	EL	300						300									
Hasbro Inc	HAS	350									350						
Kimberly-Clark	KMB	950								950							
Mattel Inc	MAT	250															250
Newell Brands Inc	NWL	350												350			
Procter & Gamble	PG	991										991					
Unilever NV	UNANA	1,237		43				494		550		150					

Note: Total debt maturity amounts are converted to USD, although some companies issue non-dollar denominated bonds FX rates as of 12/30/16: AUDUSD = .7208, USDCAD = 1.3441, USDCHF = 1.019, USDCNY = 6.945, EURUSD = 1.0517, GBPUSD = 1.234, USDJPY = 116.96, Data as of 12/30/2016.

Source: Company reports, Bloomberg

Investment Grade Retail, Grocer, and Restaurant New Issue Activity: Jan 2016 - Dec 2016

Issuer	Issue Date	Coupon	Maturity	Amount Issued	Spread at Issue (bp)	Spread at Issue per Years to Maturity (bp)	Current Bid Spread (bp)	Current Bid Spread per Years to Maturity (bp)	Change in Spread (bp)	Change in Spread as % of New Issue Spread	5s-10s Curves at Issue (bp)	10s-30s Curves at Issue (bp)	5s-10s Curves at Present (bp)	10s-30s Curves at Present (bp)	OAS	% Change in Spread at Issue vs Current OAS
HOME DEPOT INC/THE	2/3/16	2.00	4/1/21	1350	80	19	29	7	(51)	(64)					41	(49)
STARBUCKS CORP	2/1/16	2.10	2/4/21	750	75	18	29	7	(46)	(61)					45	(39)
HOME DEPOT INC/THE	2/3/16	3.00	4/1/26	1300	120	13	61	7	(59)	(49)	40		32		61	(49)
O'REILLY AUTOMOTIVE INC	3/1/16	3.55	3/15/26	500	175	19	120	13	(55)	(31)					120	(32)
WALGREENS BOOTS ALLIANCE INC	5/26/16	2.60	6/1/21	1500	125	28	86	19	(39)	(31)					94	(25)
KROGER CO/THE	1/8/16	3.50	2/1/26	500	140	15	99	11	(41)	(29)	35		21		99	(29)
CVS HEALTH CORP	5/16/16	2.13	6/1/21	1750	92	21	66	15	(26)	(28)					75	(19)
WALGREENS BOOTS ALLIANCE INC	5/26/16	4.65	6/1/46	600	205	7	149	5	(56)	(27)		40		24	153	(26)
KROGER CO/THE	1/8/16	2.60	2/1/21	300	105	26	78	19	(27)	(26)					94	(11)
WALGREENS BOOTS ALLIANCE INC	5/26/16	3.45	6/1/26	1900	165	18	125	13	(40)	(24)	40		39		124	(25)
HOME DEPOT INC/THE	9/6/16	3.50	9/15/56	1000	135	3	104	3	(31)	(23)					97	(28)
LOWE'S COS INC	4/11/16	3.70	4/15/46	1350	117	4	98	3	(19)	(16)		35		27	99	(15)
KROGER CO/THE	9/26/16	3.88	10/15/46	500	155	5	131	4	(24)	(15)		45		23	132	(15)
KROGER CO/THE	1/8/16	2.00	1/15/19	300	85	42	72	35	(13)	(15)					71	(16)
CVS HEALTH CORP	5/16/16	2.88	6/1/26	1750	122	13	104	11	(18)	(15)	30		38		102	(16)
STARBUCKS CORP	5/11/16	2.45	6/15/26	500	75	8	64	7	(11)	(15)					62	(17)
HOME DEPOT INC/THE	9/6/16	2.13	9/15/26	1000	70	7	60	6	(10)	(14)					56	(20)
AUTOZONE INC	4/18/16	3.13	4/21/26	400	135	15	116	12	(19)	(14)					115	(15)
LOWE'S COS INC	4/11/16	2.50	4/15/26	1350	82	9	71	8	(11)	(13)					70	(15)
WALGREENS BOOTS ALLIANCE INC	5/26/16	3.10	6/1/23	750	150	23	132	21	(18)	(12)					103	(31)
TARGET CORP	4/4/16	3.63	4/15/46	1000	105	4	95	3	(10)	(10)		33		29	96	(8)
TARGET CORP	4/4/16	2.50	4/15/26	1000	72	8	66	7	(6)	(8)					66	(8)
NIKE INC	10/18/16	2.38	11/1/26	1000	65	7	61	6	(4)	(6)					57	(12)
KROGER CO/THE	9/26/16	1.50	9/30/19	500	65	24	61	22	(4)	(6)					67	4
NIKE INC	10/18/16	3.38	11/1/46	500	93	3	88	3	(5)	(5)		28		27	87	(6)
UNDER ARMOUR INC	6/8/16	3.25	6/15/26	600	160	17	152	16	(8)	(5)					150	(6)
WALGREENS BOOTS ALLIANCE INC	5/26/16	1.75	5/30/18	1250	90	64	87	62	(3)	(3)					65	(28)
TIJX COS INC/THE	9/7/16	2.25	9/15/26	1000	80	8	78	8	(2)	(3)					74	(8)
KROGER CO/THE	9/26/16	2.65	10/15/26	750	110	11	108	11	(2)	(2)					104	(5)
AUTOZONE INC	4/18/16	1.63	4/21/19	250	75	33	87	38	12	16					79	5
LOWE'S COS INC	4/11/16	1.15	4/15/19	350	35	15	51	22	16	46					44	26

Note: We provide this measure to give investors an indication of curve-adjusted spread differential. Data as of December 30, 2016.

Source: Bloomberg, Barclays Research

Investment Grade Food, Beverage, Consumer Products, and Tobacco New Issue Activity: Jan 2016 - Dec 2016

Issuer	Issue Date	Coupon	Maturity	Amount Issued	Spread at Issue (bp)	Spread at Issue per Years to Maturity (bp)	Current Bid Spread (bp)	Current Bid Spread per Years to Maturity (bp)	Change in Spread (bp)	Change in Spread as % of New Issue	5s-10s Curves at Issue (bp)	10s-30s Curves at Issue (bp)	5s-10s Curves at Present (bp)	10s-30s Curves at Present (bp)	OAS	% Change in Spread at Issue vs Current OAS
PROCTER & GAMBLE CO/THE	1/28/16	1.85	2/2/21	600	45	11	16	4	(29)	(64)					33	(26)
NEWELL BRANDS INC	3/18/16	3.15	4/1/21	1000	185	44	75	18	(110)	(59)					88	(52)
PROCTER & GAMBLE CO/THE	10/31/16	1.70	11/3/21	875	43	9	18	4	(25)	(58)					17	(60)
NEWELL BRANDS INC	3/18/16	4.20	4/1/26	2000	235	25	120	13	(115)	(49)	50		45		121	(48)
PEPSICO INC	10/3/16	1.35	10/4/19	750	45	16	23	8	(22)	(49)					29	(35)
NEWELL BRANDS INC	3/18/16	5.50	4/1/46	1750	285	10	146	5	(139)	(49)		50		26	152	(47)
ANHEUSER-BUSCH INBEV FINANCE I	1/13/16	2.65	2/1/21	7500	120	29	63	15	(57)	(48)					79	(34)
NEWELL BRANDS INC	3/18/16	2.60	3/29/19	1000	160	71	90	40	(70)	(44)					84	(48)
PEPSICO INC	2/19/16	2.85	2/24/26	750	110	12	62	7	(48)	(44)					62	(44)
NEWELL BRANDS INC	3/18/16	3.85	4/1/23	1750	220	35	130	21	(90)	(41)					105	(52)
ANHEUSER-BUSCH INBEV FINANCE I	1/13/16	3.65	2/1/26	11000	160	18	103	11	(57)	(36)	40		40		104	(35)
PHILIP MORRIS INTERNATIONAL IN	2/18/16	1.88	2/25/21	750	85	20	55	13	(30)	(35)					69	(19)
ANHEUSER-BUSCH INBEV FINANCE I	1/13/16	4.90	2/1/46	11000	205	7	135	5	(70)	(34)		45		32	140	(32)
KIMBERLY-CLARK CORP	2/17/16	2.75	2/15/26	400	95	10	64	7	(31)	(33)					66	(31)
PROCTER & GAMBLE CO/THE	1/28/16	2.70	2/2/26	600	75	8	51	6	(24)	(32)	30		35		53	(29)
INGREDION INC	9/15/16	3.20	10/1/26	500	150	15	106	11	(44)	(29)					103	(32)
KELLOGG CO	2/25/16	3.25	4/1/26	750	157	17	111	12	(46)	(29)					112	(29)
SYSCO CORP	3/22/16	2.50	7/15/21	500	110	24	78	17	(32)	(29)					84	(24)
ANHEUSER-BUSCH INBEV FINANCE I	1/13/16	3.30	2/1/23	6000	150	25	107	18	(43)	(29)					83	(44)
NEWELL BRANDS INC	3/18/16	5.38	4/1/36	500	270	14	193	10	(77)	(29)					155	(43)
COCA-COLA CO/THE	8/29/16	1.55	9/1/21	1000	40	9	29	6	(11)	(28)					32	(20)
ANHEUSER-BUSCH INBEV FINANCE I	1/13/16	1.90	2/1/19	4000	85	41	62	30	(23)	(27)					60	(30)
MOLSON COORS BREWING CO	6/28/16	2.10	7/15/21	1000	110	24	81	18	(29)	(26)					87	(21)
SYSCO CORP	3/22/16	4.50	4/1/46	500	180	6	133	5	(47)	(26)		40		23	136	(25)
BUNGE LTD FINANCE CORP	8/10/16	3.25	8/15/26	700	175	18	132	14	(43)	(25)					129	(26)
PHILIP MORRIS INTERNATIONAL IN	2/18/16	2.75	2/25/26	750	110	12	83	9	(27)	(25)	47		16		83	(25)
ARCHER-DANIELS-MIDLAND CO	8/8/16	2.50	8/11/26	1000	95	10	72	7	(23)	(24)					69	(28)
PEPSICO INC	10/3/16	1.70	10/6/21	750	55	12	42	9	(13)	(24)					42	(23)
PEPSICO INC	2/19/16	1.50	2/22/19	600	60	28	46	21	(14)	(23)					43	(29)
MATTEL INC	8/2/16	2.35	8/15/21	350	130	28	100	22	(30)	(23)					103	(21)
SYSCO CORP	3/22/16	3.30	7/15/26	1000	140	15	110	12	(30)	(21)	30		32		108	(23)
PEPSICO INC	10/3/16	3.45	10/6/46	1500	115	4	91	3	(24)	(21)		40		29	90	(21)
MOLSON COORS BREWING CO	6/28/16	4.20	7/15/46	1800	195	7	155	5	(40)	(21)		40		28	157	(19)

Note: We provide this measure to give investors an indication of curve-adjusted spread differential. Data as of December 30, 2016.

Source: Bloomberg, Barclays Research

Investment Grade Food, Beverage, Consumer Products, and Tobacco New Issue Activity: Jan 2016 - Dec 2016 (cont.)

Issuer	Issue Date	Coupon	Maturity	Amount Issued	Spread at Issue (bp)	Spread at Issue per Years to Maturity (bp)	Current Bid Spread (bp)	Current Bid Spread per Years to Maturity (bp)	Change in Spread (bp)	Change in Spread as % of New Issue	5s-10s Curves at Issue (bp)	10s-30s Curves at Issue (bp)	5s-10s Curves at Present (bp)	10s-30s Curves at Present (bp)	OAS	% Change in Spread at Issue vs Current OAS	
KELLOGG CO	2/25/16	4.50	4/1/46	650	200	7	159	5	(41)	(21)		43			48	163	(18)
MOLSON COORS BREWING CO	6/28/16	1.45	7/15/19	500	75	30	60	24	(15)	(20)						72	(4)
COCA-COLA CO/THE	8/29/16	2.25	9/1/26	1000	70	7	57	6	(13)	(19)	30		28			55	(22)
MOLSON COORS BREWING CO	6/28/16	3.00	7/15/26	2000	155	16	127	13	(28)	(18)	45		46			124	(20)
PROCTER & GAMBLE CO/THE	10/31/16	2.45	11/3/26	875	63	6	52	5	(11)	(17)	20		34			49	(22)
PEPSICO INC	10/3/16	2.38	10/6/26	1000	75	8	62	6	(13)	(17)	20		20			58	(22)
ALTRIA GROUP INC	9/13/16	3.88	9/16/46	1500	150	5	124	4	(26)	(17)		55			42	125	(17)
WHIRLPOOL CORP	5/18/16	4.50	6/1/46	500	190	6	158	5	(32)	(17)						161	(15)
ESTEE LAUDER COS INC/THE	5/5/16	1.70	5/10/21	450	50	11	42	10	(8)	(16)						52	4
FLOWERS FOODS INC	9/23/16	3.50	10/1/26	400	195	20	168	17	(27)	(14)						165	(16)
ALTRIA GROUP INC	9/13/16	2.63	9/16/26	500	95	10	82	8	(13)	(14)						79	(17)
HERSHEY CO/THE	8/2/16	3.38	8/15/46	300	110	4	96	3	(14)	(13)		30			25	95	(13)
DR PEPPER SNAPPLE GROUP INC	12/5/16	4.42	12/15/46	400	135	5	118	4	(17)	(13)		30			18	120	(11)
HERSHEY CO/THE	8/2/16	2.30	8/15/26	500	80	8	71	7	(9)	(11)						68	(15)
KRAFT HEINZ FOODS CO	7/19/16	4.375	6/1/46	2985	180	6	164	6	(16)	(9)		50			28	167	(8)
COCA-COLA CO/THE	5/25/16	2.55	6/1/26	500	68	7	62	7	(6)	(9)						62	(9)
KIMBERLY-CLARK CORP	7/26/16	3.20	7/30/46	500	93	3	86	3	(7)	(8)						85	(9)
UNILEVER CAPITAL CORP	7/25/16	1.38	7/28/21	550	40	9	38	8	(2)	(5)						43	8
DR PEPPER SNAPPLE GROUP INC	12/5/16	3.43	6/15/27	400	105	10	100	10	(5)	(5)						94	(11)
ANHEUSER-BUSCH INBEV FINANCE I	1/13/16	4.70	2/1/36	6000	190	10	181	9	(9)	(5)						142	(25)
DR PEPPER SNAPPLE GROUP INC	9/7/16	2.55	9/15/26	400	105	11	101	10	(4)	(4)						98	(7)
DR PEPPER SNAPPLE GROUP INC	12/5/16	2.53	11/15/21	250	70	14	69	14	(1)	(1)						67	(5)
UNILEVER CAPITAL CORP	7/25/16	2.00	7/28/26	700	60	6	60	6	0	0	20		22			58	(3)
SYSCO CORP	3/22/16	1.90	4/1/19	500	85	38	86	38	1	1						80	(6)
KRAFT HEINZ FOODS CO	7/19/16	3.000	6/1/26	1999	130	14	136	14	6	5						134	3
CONSTELLATION BRANDS INC	11/29/16	3.70	12/6/26	600	140	14	147	15	7	5						143	2
PHILIP MORRIS INTERNATIONAL IN	2/18/16	1.38	2/25/19	500	63	29	67	31	4	6						63	(1)
KIMBERLY-CLARK CORP	2/17/16	1.40	2/15/19	400	45	21	49	23	4	9						46	2
KELLOGG CO	11/7/16	2.65	12/1/23	600	107	15	118	17	11	10						85	(21)
DR PEPPER SNAPPLE GROUP INC	12/5/16	3.13	12/15/23	500	95	14	120	17	25	26						86	(9)
COCA-COLA CO/THE	5/25/16	1.38	5/30/19	1000	32	13	45	19	13	41						35	9
PHILIP MORRIS INTERNATIONAL IN	4/28/16	2.13	5/10/23	500	68	11	103	16	35	51						75	11

Note: We provide this measure to give investors an indication of curve-adjusted spread differential. Data as of December 30, 2016.

Source: Bloomberg, Barclays Research

Analyst Certification

We, Priya Ohri-Gupta, CFA and Scott Schachter, hereby certify (1) that the views expressed in this research report accurately reflect our personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of our 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 a part of 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 represent current market levels, prices or spreads, some or all of which may have changed since the publication of this document. The Investment Bank's Research Department produces various types of research including, but not limited to, fundamental analysis, equity-linked analysis, quantitative analysis, and trade ideas. Recommendations contained in one type of research may differ from recommendations contained in other types of research, whether as a result of differing time horizons, methodologies, or otherwise. In order to access Barclays Statement regarding Research Dissemination Policies and Procedures, please refer to https://publicresearch.barcap.com/static/S_ResearchDissemination.html. In order to access Barclays Research Conflict Management Policy Statement, please refer to: https://publicresearch.barcap.com/static/S_ConflictManagement.html.

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.

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/ResearchInvestmentRecommendations>.

Barclays legal entities involved in publishing 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)
Absa Bank Limited (Absa, South Africa)
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 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 legal entities that are a part of the Investment Bank as provided 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. 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 those of the author(s) and are subject to change, and Barclays has no obligation to update its opinions or the information in this publication. If this publication contains recommendations, those recommendations reflect solely and exclusively those of the authoring analyst(s), and such opinions were prepared independently of any other interests, including those of Barclays and/or its affiliates. This publication does not constitute personal investment advice or take into account the individual financial circumstances or objectives of the clients who receive it. The securities discussed herein may not be suitable for all investors. Barclays recommends that investors independently evaluate each issuer, security or instrument discussed herein and consult any independent advisors they believe necessary. 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), and a Member of the Canadian Investor Protection Fund (CIPF). Subject to the conditions of this publication as set out above, the Corporate & Investment Banking Division of Absa Bank Limited, 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 the Corporate & Investment Banking Division of Absa Bank Limited in South Africa, 15 Alice Lane, Sandton, Johannesburg, Gauteng 2196. Absa Bank Limited is a member of the Barclays group.

All 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 the 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 the 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 the 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 Brazil by Banco Barclays S.A.

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

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 Barclays Bank plc. Barclays Bank plc does not hold an Australian financial services licence and instead relies on an exemption. 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 (2017). 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

