

Tight and Tighter

Shobhit Gupta +1 212 412 2056 shobhit.gupta@barclays.com BCI, US

Ryan Preclaw, CFA +1 212 412 2249 ryan.preclaw@barclays.com BCI, US

James K Martin + 1 212 412 2345 james.k.martin@barclays.com BCI, US

Jigar Patel +1 212 412 1161 jigar.n.patel@barclays.com BCI, US

The Bloomberg Barclays Credit Index dropped below 100bp for the first time in nearly three years. Aside from a brief period in the summer of 2014, the index has not maintained a spread below its current level since the pre-crisis years of 2005-06. Over that period, the index composition has changed dramatically, with notable increases in the market value of lower-rated and longer-dated debt. The index market value weight of AAA/AA credit decreased over 10%, and debt with more than eight years to maturity increased over 6% (Figure 1). After we adjust for these differences at an index level, we find that spreads are less than 5bp off their average level for 2005-06, although they remain roughly 15bp off the tights (Figure 2).

Dissecting the index into financials and non-financials, the majority of rating deterioration has occurred in the former. While the term structure for financials remains consistent with pre-crisis levels, lower-rated debt nearly doubled its market value weight over the past decade (Figure 3). In particular, BBB rated debt comprised only 11% of financials' market value in 2005-06, while today BBBs are close to 40%, even though subordinated bank debt's share of financial market value has declined by 50% over the period. This rating migration partly explains the cheapness of financials currently relative to pre-crisis levels: from 2005 to 2006, the corporate index traded roughly 20bp wide of financial credit; that difference is about 4bp now.

However, even after adjusting for subordination and compositional differences, financials trade meaningfully wide of pre-crisis levels (Figure 4 compares senior financial spreads across different rating/maturity buckets between 2005-06 and now). This is driven partly by concerns about TLAC supply and the increase in USD-denominated European bank debt, which generally trades wider than US bank paper (see Banking on Yankees Going into Summer). That said, we see room for further compression in US bank spreads, especially as the TLAC technical abates (see US Banks: 2Q17 Supply Update: Favorable Conditions Keep the Spigot Open).

FIGURE 1 The Index Has Shifted to Lower-Quality, Longer-Dated Credit, Making Pre-crisis Comparisons Challenging

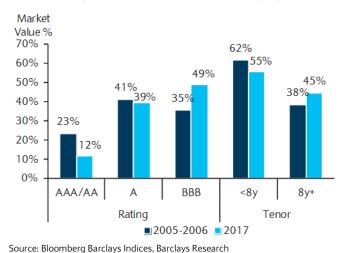
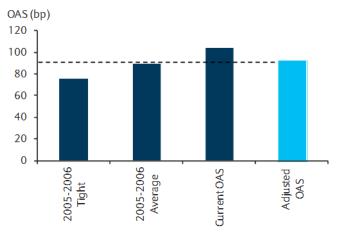


FIGURE 2 After Adjusting for These Changes, Spreads Appear in Line with Their Pre-crisis Average

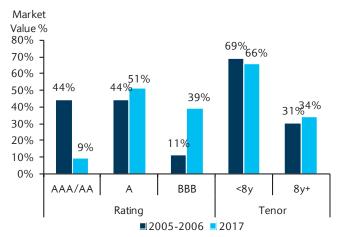


Source: Bloomberg Barclays Indices, Barclays Research

Completed: 21-Jul-17, 00:09 GMT Released: 21-Jul-17, 10:30 GMT

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 4

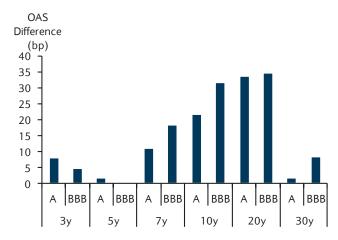
FIGURE 3
Financials Remain Heavily Weighted in the Front End, but Ratings Have Been Downgraded Significantly



Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 4

Senior Financial Spreads across Ratings and Tenor Are Wide of Pre-crisis Levels

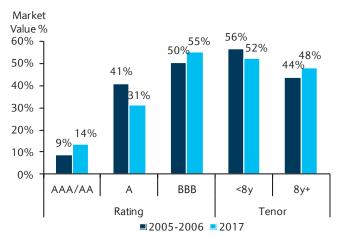


Source: Bloomberg Barclays Indices, Barclays Research

Industrials have largely seen a more balanced change in composition (Figure 5). While there has been an increase in BBB rated and 20-30y debt (the sector's market value share increased roughly 4% for each from 2005 to 2006), we also see added market value share in AA rated credit and bonds in the 1-3y maturity bucket (each increased more than 3% in the same period). Comparing valuations across the ratings/maturity buckets, A rated paper consistently trades through pre-crisis averages, while BBBs appear more in line or slightly wide, particularly for longer-dated paper. One part of the market that still offers substantial pickup versus 2005-06 spreads is BBB rated 20y debt (Figure 6).

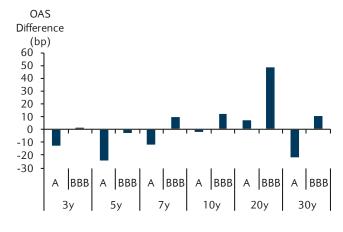
Although we do not see an identifiable near-term catalyst for spread widening, we believe that investors should focus on pockets of the index where relative value looks somewhat attractive. Within the industrials sector, 7-20y BBBs stand out as attractive, trading materially wider than pre-crisis levels, unlike the rest of the industrials sector.

FIGURE 5
Industrial Composition Has Not Changed Materially



Source: Source: Bloomberg Barclays Indices, Barclays Research

FIGURE 6
A Rated Spreads Are Tight of Pre-crisis Levels, while BBBs
Are in Line or Slightly Wide



Source: Source: Bloomberg Barclays Indices, Barclays Research

21 July 2017 2

CDS: Limited Room for Further Compression

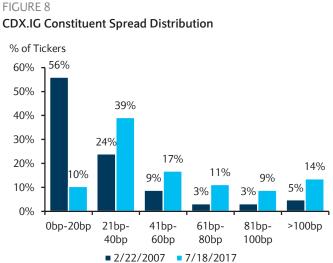
Similar to the performance in the cash market, spreads in the derivatives market have rallied, with CDX.IG now within 2bp of its post-crisis tight of 56bp in July 2014. While spreads now appear tight relative to post-crisis levels, they remain more than 28bp wide of the all-time tight of 28bp in February 2007 (Figure 7). At a high level, this would seem to indicate that there is potential for the index to rally further, particularly if the macro backdrop remains benign. But there are notable differences between the index today (IG28) and the index back then (IG7), which we believe, when taken together, make it unlikely that the index will compress meaningfully from current levels.

In 2007, the biggest factor driving spreads to very tight levels was the presence of synthetic CDOs, which were sizable sellers of protection. During that period, there was significant leverage available, which made it attractive to sell protection even at low absolute spread levels. At the time the index reached its all-time tight, more than half of index constituents were trading inside of 20bp (Figure 8). In contrast, today there is less leverage available for these trades, and structured credit is not a significant part of the market. Currently, only 10% of IG28 constituents trade inside of 20bp, and unless structured products (or similarly prolific sellers of protection) are meaningfully reintroduced to the market, we do not expect a large number of index constituents to trade at very tight levels. Another difference between the index today and the index in 2007 is quality. IG28 is of lower average quality than IG7 was back in 2007: Baa1 versus Baa1/A3.

While we do not believe that the index can tighten significantly from current levels, one factor, in particular, could support a further modest rally: the number of relatively wide-trading constituents in the index. As Figure 8 shows, 23% of IG28 constituents trade wider than 80bp. The majority of these credits are from the retail and energy sectors (16 of the 29 credits). While they are trading wide for a reason, meaningful fundamental improvement in these sectors could support index tightening. To put the potential effect on the index into context, if the retail and energy credits trading wider than 80bp tightened 25%, it would take the intrinsic spread of the index 5bp tighter.



Source: Barclays Research So

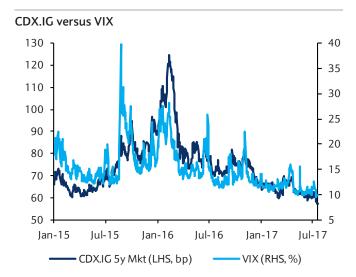


Source: Barclays Research

21 July 2017 3

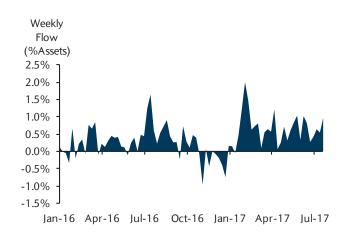
CDX.IG OTR Market versus Intrinsic (bp) 130 120 110 100 90 80 70 60 50 -19 Jan-15 Jul-15 Jan-16 Jul-16 Jan-17 Jul-17 CDX IG OTR Mkt Index minus Intrinsic (RHS)

Source: Barclays Research



Source: Markit, Barclays Research

EPFR Weekly Investment Grade Corporate Fund Flows



Source: EPFR, Barclays Research

CDS-Cash Basis (bp) 0 210 -20 190 -40 -60 170 -80 150 -100 130 -120 110 -140 -160 90 Jan-15 Jul-15 Jan-16 Jul-16 Jan-17 Jul-17 Credit OAS (LHS) Basis (RHS)

Note: Basis defined as CDX.IG spread – Corporate Libor OAS. Source: Bloomberg Barclays Indices, Barclays Research

21 July 2017 4

Analyst Certification

We, Shobhit Gupta, James K Martin, Jigar Patel and Ryan Preclaw, CFA, 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)

Disclaime

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 Zaimukyokucho (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.

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 (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