Bradley Rogoff, CFA +1 212 412 7921 bradley.rogoff@barclays.com BCI, US

Rizwan Hussain +1 212 412 7997 riz.hussain@barclays.com BCI, US

Arvind Kumar + 1 646 333 1184 arvind.kumar4@barclays.com BCI, US

How Much More Room to Run?

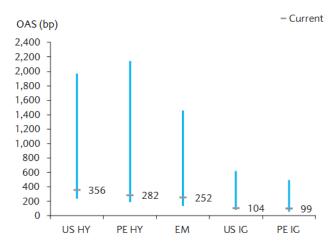
In last week's US Credit Alpha, our investment grade credit strategy colleagues examined the broader IG market valuation level with some historical context (see Tighter and Tighter) as the Investment Grade Credit Index finally broke through 100bp. The natural follow-up for us is how the US high yield market fares under a similar historical lens, incorporating both favorable and adverse adjustments to historical trading levels. But we come to some notably different conclusions for high yield that still back a modestly constructive stance.

Using History as Guide, What Could Support Tighter Spreads

To start, in Figure 1, we set the valuation stage by mapping the current range of valuations across the major US credit asset classes since the beginning of 2007. It is no surprise to see spreads across all assets quickly closing in on their 10-year tights. We are well aware that trading liquidity, market size, investor composition, price convexity, and duration differences complicate true comparisons across assets over time. But the chart simply reminds us of the dearth of "spready" alternatives available to fixed income asset managers today. Specific to US high yield, as we noted last week (see No Accounting for Taste in Quality), while the BB index as a percentage of the overall High Yield Index is through its 10-year average, Bs and CCCs still look to have room to compress along this metric.

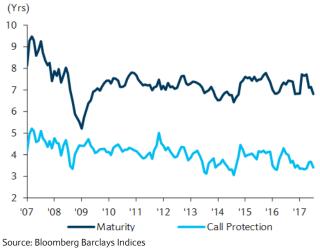
More important, in stark contrast to the changes in the investment grade market, the high yield market today is actually of higher quality (using purely ratings cohort as a proxy) and shorter duration relative to the opportunity set that existed at the historical tights. Those changes have recently been driven by fallen angel and default activity (a net positive for quality), a market structural trend toward shorter call protection in new issues (Figure 2), and a less robust M&A environment that has limited net new issuance since announced M&A peaked in 2015 (allowing the high yield market to roll down the curve). Adjusting the current index spread of 356bp for these differences results in an adjusted High Yield Index level of 390bp, almost 160bp wider than the 2007 tights and almost 70bp wider than the 2014 local tights (Figure 3).

FIGURE 1 Few Spready Alternatives to US High Yield in a Global Fixed Income Context



Source: Bloomberg Barclays Indices. Range indicated from January 2007 to

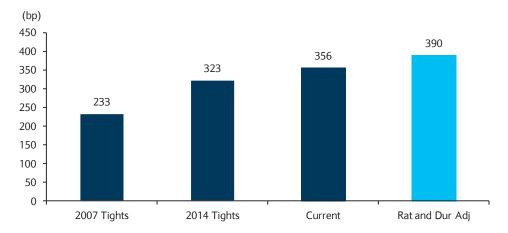
FIGURE 2 Duration of High Yield Issuance Has Shortened Significantly, and Call Protection Is Near the Lows



Completed: 27-Jul-17, 23:52 GMT Released: 28-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
Today's High Yield Market Is Shorter in Duration and Higher in Quality, Resulting in an Even Wider Adjusted Spread



Source: Bloomberg Barclays Indices

Next, while we all debate how far along we are in the economic and credit cycles, we think it is important to acknowledge that the commodity sectors broadly (approximately 14% of the par-weighted risk in the US High Yield Index) have already undergone a reasonable amount of credit repair after the 2015-16 stresses. That recovery would have typically occurred in the early stages of a broader credit cycle. Energy companies and miners, in particular, have spent a good portion of the past 18 months selling assets, "equitizing" balance sheets, repaying debt, and enjoying a fall in leverage courtesy of a recovery in underlying commodity prices. We believe it is difficult to argue that the high yield credit market is uniformly "late cycle" across sectors. As a result, we find reasonable scope and rationale for high yield credit spreads to move tighter from here, despite the fact that all-in-yields are closer to historic lows than spreads are to their tights.

What's the Pushback?

Nonetheless, there is reasonable pushback to the above supportive points that we share with some investors. First, fallen angel activity has a mixed effect on our assessment. While many of the fallen angels have landed as BBs, improving the optical quality of the high yield market, as noted above, those same fallen angels lack the typical protections for creditors traditionally found in a standard high yield covenant package. It is difficult to quantify how much a less uniform set of covenants in high yield resulting from fallen angel activity should be worth in spread terms. But investors are right to highlight the divide that should be reflected as some incremental compensation at the index level.

Next, one could argue that there should be a floor on how tight spreads can go just as a function of the prevailing interest rate environment. While US high yield spreads today are wider than historical tights, all-in yields clearly are not. Historically low fixed income yields may not matter as much for the investment grade market, where excess returns are the prevailing performance. Meanwhile, high yield is clearly considered more of a total return asset class, with higher direct retail investor participation (and equities serving as a competing asset allocation). Today's low all-in yields leave total returns vulnerable to shrinking breakeven moves higher in UST yields. Furthermore, coupons in a high yield portfolio have traditionally generated income to buffer principal losses through defaults that will undoubtedly occur in every high yield portfolio. But historically, low coupons and yields have served as a hurdle to

28 July 2017 2

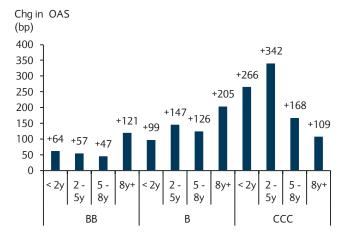
how tight spreads can go, in light of the need for income to offset principal losses in the next default cycle.

Breaking Down the Historical Comparison across Quality and Duration

In Figure 4, we show the difference of index spreads in various maturity buckets across rating cohorts versus the all-time spread tights, set in 2007. With the exception of longer-dated CCCs (itself a relatively small sample set), it confirms that credit quality curves have steepened over time, despite an accommodative primary market that has allowed stressed issuers to come to market over the past several years. It also confirms our thoughts from last week, that Bs and CCCs look to be more attractive new money allocation buckets than high dollar price, call-constrained BBs.

Figure 5 provides some detail on our earlier observation that the High Yield Index duration has shortened over time. Market value representation in the High Yield Index of two-year and shorter risk has increased across all ratings cohorts, while 8+ year risk has decreased across all cohorts. These two observations lead us to conclude that short-dated Bs and CCCs are an interesting opportunity space today for investors looking to add risk.

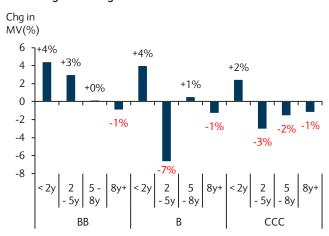
FIGURE 4
A Steeper Credit Curve and Wider Spreads across All
Maturity Cohorts Compared with the 2007 All-Time Tights



Source: Bloomberg Barclays Indices

FIGURE 5

Risk Has Migrated to Short Maturities, Consistent with the Shortening of the High Yield Index Duration



Source: Bloomberg Barclays Indices

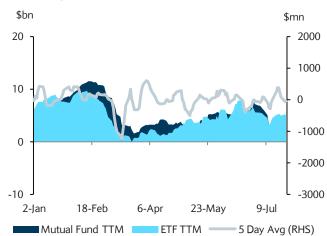
28 July 2017 3

High Yield Average Institutional Trade Volume (\$bn)



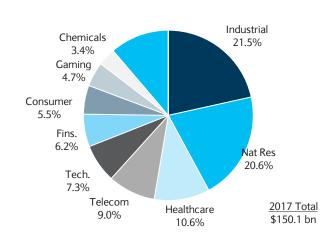
Note: Includes both registered and 144A volumes. Source: FINRA TRACE

Flows to High Yield Mutual Funds and ETFs



Note: Daily reporters only. Source: EPFR

High Yield Supply by Sector



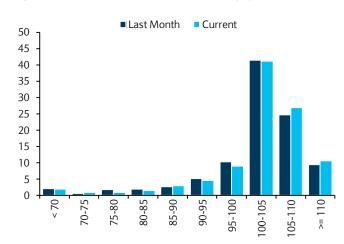
Source: Barclays Research

On-the-Run HYCDX versus US High Yield Index (bp)



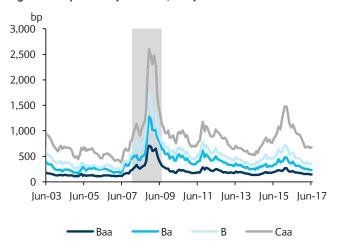
Source: Barclays Research

High Yield Index Price Distribution by Par (%)



Source: Barclays Research

High Yield Spreads by Credit Quality



Source: Bloomberg Barclays Indices

28 July 2017 4

Analyst Certification

We, Rizwan Hussain, Arvind Kumar and Bradley Rogoff, 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