US Credit Research and Strategy

Fed Provides Strong Support for BBBs and Fallen Angels, Disappoints for Rest of High Yield and Loans

FOCUS
#bbbubble
#virus

We evaluate the many effects that the Fed's additional measures will have across credit markets, including investment grade, high yield, municipal and asset-backed securities.

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

Brian Monteleone
+1 212 412 5184
brian.monteleone@barclays.com
BCI, US

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

Mikhail Foux
+1 212 526 7849
mikhail.foux@barclays.com
BCI, US

Today the Federal Reserve announced details of several of the programs that have been proposed since the onset of COVID-19. The announcements and term sheets can be found here: Federal Reserve takes additional actions to provide up to $2.3 trillion in loans to support the economy.

When we examine the combined effect of the various facilities, we believe the Fed is providing significant support for companies that were rated investment grade as of March 22. This should drive a rally in short-dated investment grade debt generally as well as the lower rated segments of BBBs . For high yield companies, the Main Street Loan facilities are a disappointment, as terms are less favorable than we were led to believe by the CARES Act. The potential bright spot for high yield investors was that the Fed can purchase high yield ETFs, although they indicated this would not be their first choice. We understand that the Fed opening up the possibility of buying high yield has caused that market to rally today, but we expect there to be HY/IG decompression before the Fed actually buys high yield in any meaningful fashion. High yield investors can also feel better about fallen angels not overwhelming their market, but today's rally still feels somewhat extreme. The leveraged loan market could have benefitted from the inclusion of new AAA CLO tranches in TALF, but only static deals backed by newly issued collateral are eligible for the program, so it is unlikely to help clean up existing warehouses. The expansion of TALF to existing CMBS deals should help cap CMBS AAA spreads and consolidate the recent rally. Finally, the municipal market looks set to benefit from strong Fed support in the primary market, but the overall package is slightly below our expectations.

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 beginning on page 7 .

Completed: 09-Apr-20, 21:59 GMT Released: 09-Apr-20, 22:05 GMT Restricted - External

Primary Market Corporate Credit Facility (PMCCF)

Quick Facts: PMCCF is expressly designed to serve as a funding backstop for US businesses or those with significant operations in and a majority of employees in the US, with an initial program size of $500bn of the $750bn split with the SMCCF. Leverage is 10 to 1, or 7 to 1 when acquiring a fallen angel. The issuer had to be investment grade-rated by a major nationally recognized statistical rating organization (NRSRO) as of March 22, 2020 (or by at least two agencies if rated by more than one) and at least BB-/Ba3 as of the date of purchase. Insured depository institutions are excluded. Maturities purchased will be four years or less and the facility can be the sole investor or purchase up to 25% of a bond issuance or loan syndication. There is some ambiguity about who can access the facility: the term sheet specifically mentions approaching the facility to refinance debt three months ahead of maturity, but says additionally issuers may approach at any time for new issuance as long as the rating criteria is met. An issuer may borrow up to 130% of its maximum outstanding bonds and loans from the past year as of March 22, 2020. The maximum size per issuer is 1.5% of the combined SMCCF and PMCCF. Pricing will be issuer-specific, informed by market conditions plus a 100bp facility fee. The facility will purchase assets through September 30, 2020, unless it is extended.

Views: We believe the PMCCF would significantly lower the refinancing risk for many lower-rated and recently downgraded IG companies. Unlike the SMCCF, which will buy bonds at fair market value (see below), PMCCF will purchase at an "issuer-specific, informed by market conditions" price plus a 100bps facility fee. For a 4y bond, the fee corresponds to about 25bp in spread. While that would suggest that an issuer that still has regular-way access to markets is unlikely to tap this primary facility, it does provide a relatively inexpensive backstop for funding access to companies.

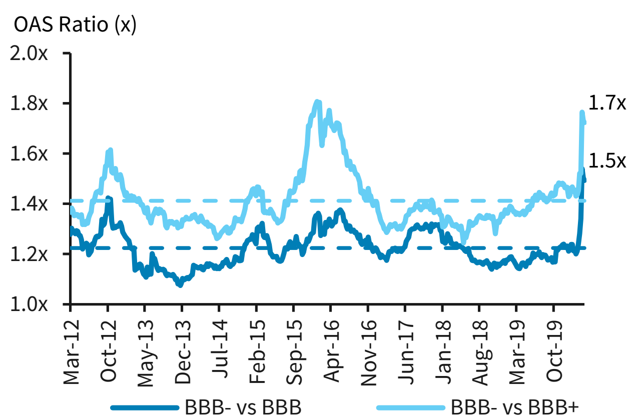
There has been a lot of focus on the risk of fallen angels potentially overwhelming the high yield market, which could severely limit the ability of fallen angels to refinance – we believe the announcement takes that tail risk off the table. By virtue of having access to the PMCCF, any future (or recently downgraded) fallen angels should screen as more attractive versus existing BB corporates. Names that should benefit immediately include Ford, Macy's, QVC and WES (see Figure 1). More broadly, we expect the lower-rated segments of the BBB market to rally meaningfully following this announcement. BBB- debt has underperformed the rest of the BBB space during this crisis period prior to today, trading 1.5x and 1.7x wider than BBB and BBB+ credits, respectively, amid growing concerns about downgrade risk for these credits (Figure 2). We expect these ratios to compress. Credits with meaningful risk of being downgraded to HY (the potential fallen angel candidates highlighted in the Rough Waters Brings a Wave of Angels, 20 March 2020) trade even wider than BBs and 1.5x BBB- (Figure 3) and will likely outperform the most on the back of today's announcement.

FIGURE 1. Recent Fallen Angels Which Would Qualify for the PMCCF and SMCCF

Ticker	Company Name	Sector	Amount Outstanding in US HY ($ mn)	Market Value in US HY Index ($ mn)	% of US HY
CLR	Continental Resources	Independent Energy	5,299	3,924	0.34%
F	Ford	Automotive	34,986	29,256	2.50%
KORS	Michael Kors	Retailers	450	328	0.03%
M	Macy's	Retailers	3,060	2,053	0.18%
PTEN	Patterson-UTI	Oil Field Services	875	369	0.03%
QVCN	QVC	Consumer Cyc Services	3,724	3,122	0.27%
RCL	Royal Caribbean Cruises	Leisure	1,450	1,053	0.09%
WES	Western Midstream	Midstream	7,820	5,972	0.51%
ZFFNGR	ZF NA Capital	Automotive	1,699	1,546	0.13%

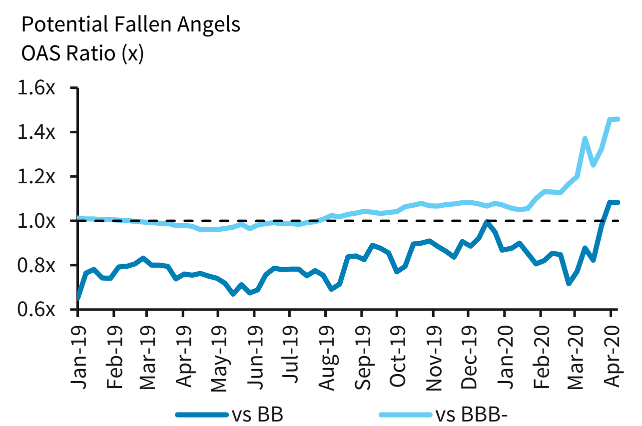
Source: Barclays Research

FIGURE 2. BBB- Spread ratio to BBB & BBB+ Debt



Source: Bloomberg, Barclays Research

FIGURE 3. Potential Fallen Angels Spread Ratio vs HY BB and BBB-



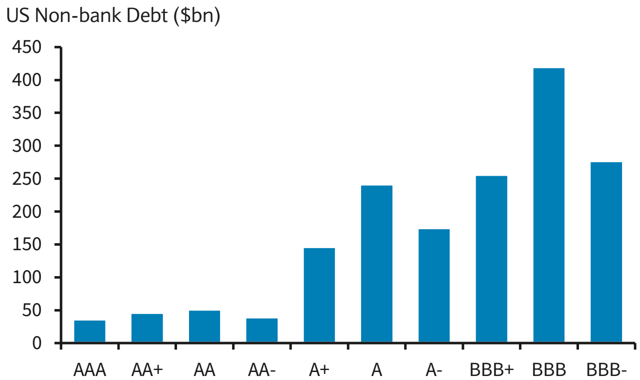
Please see "Rough Waters Brings a Wave of Angels", 20 March 2020 for a description of this cohort.
Source: Bloomberg, Barclays Research

Secondary Market Corporate Credit Facility (SMCCF)

Quick Facts: SMCFF will purchase bonds with five years or less to maturity of US businesses or those with significant operations in and a majority of employees in the US, initially up to $250bn of the $750bn allocated to this facility and the PMCCF. The issuer had to be investment grade-rated by a major nationally recognized statistical rating organization (NRSRO) as of March 22, 2020 (or by at least two agencies if rated by more than one) and at least BB-/Ba3 as of the date of purchase. Insured depository institutions are excluded. No issuer can be more than 1.5% of the facility and for each issuer the size is capped at 10% of its maximum bonds outstanding in the last year from March 22, 2020. Leverage will be 10 to 1 except for sub-investment grade issuers, where maximum leverage is 7 to 1. For ETFs, the Fed will buy a "preponderance" of ETFs with an objective of mirroring investment grade corporate bonds and the remainder in high yield corporate bond ETFs. The limit per ETF is 20% of the outstanding shares and the Fed will not purchase shares when prices materially exceed the NAV. The purchases will occur through September 30, 2020, unless extended.

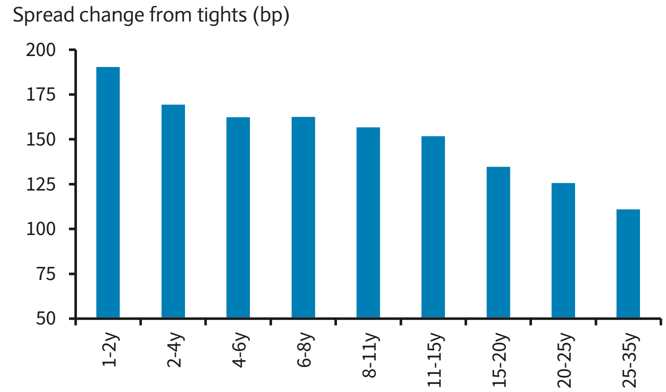
Views: The initial program size is nearly 15% of the $1.7tn of debt maturing in five years or less of US-domiciled investment grade companies excluding banks (Figure 4 shows the distribution of the $1.7tn by rating). We believe that with the SMCCF potentially absorbing a significant portion of the total outstanding front-end debt, the impact on valuations will be very substantial in this part of the market. We expect short-dated debt to rally meaningfully on the news and credit curves to steepen substantially, reversing the underperformance of the front end since the sell-off began (Figure 5). The updated SMCCF definitively excludes all banks and bank holding companies, after the preliminary term sheet was silent on whether they would be included. We do not expect this to lead to sustained underperformance of bank spreads. Reviewing the experience of bank spreads in EUR since the CSPP program was announced in March 2016 and began purchasing corporate bonds in June 2016 (Figure 6), banks initially lagged the move tighter in industrials but ultimately caught up and outperformed.

FIGURE 4. US-domiciled Non-bank Debt Maturing 5y or Less



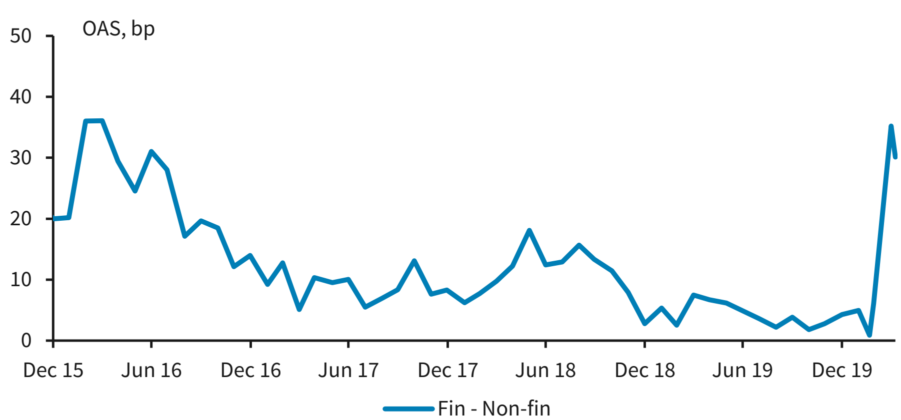
Source: Bloomberg, Barclays Research

FIGURE 5. US Corporate Spread Change from the Tights by Maturity



Note: Industrials excluding energy only. Spread change is calculated from tights for each individual maturity bucket.
Source: Bloomberg, Barclays Research

FIGURE 6. EUR Financials versus Non-financials



BBB+ 5y Core financials minus BBB+ 5y Core Non-financials
Source: Bloomberg, Barclays Research

Similar to the PMCCF, the inclusion of recent fallen angels is helpful for those credits. However, the market is also focused on the program's ability to buy high yield ETFs. We believe that the signaling value that the Fed could buy high yield in some form will be of most support, as we expect actual purchases of high yield ETFs to be minimal (even if the Fed bought 20% of HY ETFs that would still be less than 1% of the high yield market). As stated above, the Fed expects a "preponderance" of ETF purchases to be investment grade corporate bond ETFs and that it is not prepared to buy materially above NAV. Additionally, the term sheet with Blackrock, who will be managing the facility, says "Unless otherwise approved by New York Fed, ETFs shall be only used if their purchase is reasonably expected to achieve the purposes of the Facility more effectively than the purchase of underlying bonds." This signals to us that the Fed will likely purchase ETFs only if there is not enough liquidity in corporate bonds, and perhaps if there were severe dislocations in ETF valuations relative to NAV as was the case especially in the high grade market last month. If there is significant decompression between IG and HY, this could be an effective tool for the Fed to limit that price action.

Main Street New Loan Facility (MSNLF) and Main Street Expanded Loan Facility (MSELF)

Quick Facts: Eligible companies can have up to 10,000 employees or up to $2.5bn in revenue in 2019. The loans can only come from US insured depository institutions, US bank holding companies, and US savings and loan holding companies. The lenders will retain 5% of each loan and the combined size of the MSNLF and Main Street Expanded Loan Facility (MSELF) will be $600bn. Loans have principal amortization and interest deferred for a year and prepayment is allowed without a penalty. The rate will SOFR + 250-400bp. The maximum size for an issuer in the MSNLF is the lesser of $25mm or an amount that when added to the borrowers existing outstanding and committed but undrawn debt does not exceed 4x EBITDA from 2019 and the loan will be unsecured. For the MSELF, the lender would have had to have a term loan with the eligible borrower prior to April 8, 2020 and that loan could be upsized by the lesser of $150mm, 30% of the borrowers committed but undrawn bank debt or an amount when added to the borrowers existing outstanding and committed but undrawn debt does not exceed 6x EBITDA from 2019. The MSELF will have the same collateral as the existing eligible loan.Both programs runs through September 30, 2020, unless extended.

Views: In Congress CARES About Corporates Too, we felt that the mid-sized company lending program could be very positive for leveraged finance companies since ~50% have between 500-10,000 employees and the Act mentioned 2% unsecured loans for these companies. With the release of the final term sheet, our view has changed and is much more negative on the program. While rates are higher, they remain favorable but the limit on the maximum loan size and leverage will severely limit the efficacy of the facility, especially for companies in the high yield universe. Further, we calculate that only 25% of the high yield bond market is below 4x gross leverage and 55% is below 6x and that is without even counting undrawn revolvers. For leveraged loans these numbers are even lower. Therefore, we believe the MSNLF will have minimal uptake among issuers in the leveraged finance market although banks could benefit from having some of the risk of existing revolvers 95% owned by the SPV.

Term Asset-Backed Securities Loan Facility (TALF)

Quick Facts: As was previously announced, TALF has been brought back to support issuance in the ABS market. It will initially make up to $100bn of loans. The change from the original announcement is that it will now include CMBS and CLOs. Additionally, pricing for ABS has changed from 2-3y Libor based swaps + 100bp to OIS + 125bp to account for Libor decommissioning and a lower OIS rate. For CMBS, deals with exposure to property in the US or its territories issued before March 23, 2020 are eligible whereas for CLOs it is only deals issued after that date. For CLOs, only static deals are eligible and pricing will be 150bp over 30-day SOFR with a 20% haircut. To be eligible collateral, all or substantially all of the underlying collateral must be newly issued, except for legacy CMBS. TALF is set to run through September 30, 2020 and there is a 10bp administrative fee.

Views: Static deals are not typical for CLOs, although they can become more common in stressed times. In fact, the last deal to price was a $477bn deal from GSO on April 2. As we detailed in our recent report, Loans Decline, Warehouse Worries Increase, we believe there were $12-13bn of loans in US warehouses before the market shutdown. If banks could place AAAs on static deals at an attractive rate (CLO tranches still pay based on 3m Libor), this would be beneficial as it allows them to convert most of these warehouses and potentially pave the way for a re-opening of the CLO market. However, the provision that eligible collateral in the CLO needs to be “newly issued” may make the inclusion of CLOs in TALF almost meaningless. Assuming “newly issued” refers to the same March 23 date as the rest of the facility, there would be virtually no collateral that fits the bill as the loan market is frozen and this in and of itself will not re-open the market. Perhaps banks could create balance sheet CLOs if they have existing commitments that they could fund as loans, but the current bridged book of leveraged loans is fairly modest and this type of securitization is unlikely to make sense for most banks.

Unlike ABS and CLOs, CMBS is the only asset class within the securitized products universe where legacy securities are eligible for the TALF program and new issues are not. Only conduit securities will be eligible and SASB/CRE CLOs will not be eligible. A-S tranches that are AAA rated should also be eligible for this facility and should compress versus A4-A5 tranches. While spreads have already tightened since the wides and are rallying again on the back of today’s announcement, we think it is nonetheless a positive and also puts a cap on the downside. 10y AAA spreads had tightened to about 225bp over swap from 350bp at the wide, and are another 40-60bp tighter today. Even at a 180bp spread on a 10y bond, with a haircut of 20% and funding at 3y OIS+125bp rate, the levered yield is attractive at about 7%, which suggests there is room for further compression. In contrast, financing in the repo market is much more punitive at L+225-250bp. Importantly, we believe that this announcement materially reduces the downside for CMBS AAA spreads.

Municipal Liquidity Facility (MLF)

Quick Facts: The Municipal Liquidity Facility will support lending to states, cities (population of 1mn and up), counties (population 2mn and up), or any instrumentalities thereof that issue on behalf of the State, City, or County for the purpose of managing its cash flows. Only one issuer per state, city, or county is eligible. The SPV will purchase eligible notes directly from issuers, and will be funded with an initial $35bn equity investment from the Treasury, allowing it to buy up to $500 billion of eligible notes. It will cease purchasing notes on September 30, 2020, unless it is extended. Eligible notes include: tax anticipation notes, tax and revenue anticipation notes, bond anticipation notes, and other similar short-term notes with maturities less than or equal to two years. The SPV may purchase these notes up to an aggregate amount of 20% of the issuer’s general revenue from own sources. The Federal Reserve will continue to closely monitor conditions in the primary and secondary markets for municipal securities and will evaluate whether additional measures are needed to support the flow of credit and liquidity.

Views: This is a positive development as it relieves the primary pipeline pressure as some investors were very concerned about its effect on the secondary market. Municipalities will likely tap this program aggressively to address their liquidity needs, but longer-term the challenges are still quite pressing as we expect tax revenues of states and local municipalities to take a $350bn or even larger hit. Additionally, some aspects of this facility need clarification, as it is not obvious at the moment which muni issuers aside from states, cities and counties will be able to tap it**.** Overall, it probably falls short of investor expectations, and as compared to the facilities implemented for corporates. Consequently, if needed, in our view the Fed may make an addition to this program later on.

Analyst(s) Certification(s):
We, Bradley Rogoff, CFA, Scott Schachter, Mikhail Foux, Shobhit Gupta, Brian Monteleone and Bradford Elliott, 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:
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.

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

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

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

Barclays Capital Inc. and/or one of its affiliates does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that Barclays may have a conflict of interest that could affect the objectivity of this report. Barclays Capital Inc. and/or one of its affiliates regularly trades, generally deals as principal and generally provides liquidity (as market maker or otherwise) in the debt securities that are the subject of this research report (and related derivatives thereof). Barclays trading desks may have either a long and / or short position in such securities, other financial instruments and / or derivatives, which may pose a conflict with the interests of investing customers. Where permitted and subject to appropriate information barrier restrictions, Barclays fixed income research analysts regularly interact with its trading desk personnel regarding current market conditions and prices. Barclays fixed income research analysts receive compensation based on various factors including, but not limited to, the quality of their work, the overall performance of the firm (including the profitability of the Investment Banking Department), the profitability and revenues of the Markets business and the potential interest of the firm's investing clients in research with respect to the asset class covered by the analyst. To the extent that any historical pricing information was obtained from Barclays trading desks, the firm makes no representation that it is accurate or complete. All levels, prices and spreads are historical and do not necessarily represent current market levels, prices or spreads, some or all of which may have changed since the publication of this document. Barclays Research Department produces various types of research including, but not limited to, fundamental analysis, equity-linked analysis, quantitative analysis, and trade ideas. Recommendations and trade ideas contained in one type of Barclays Research may differ from those contained in other types of Barclays Research, whether as a result of differing time horizons, methodologies, or otherwise.

In order to access Barclays Statement regarding Research Dissemination Policies and Procedures, please refer to https://publicresearch.barcap.com/S/RD.htm. In order to access Barclays Research Conflict Management Policy Statement, please refer to: https://publicresearch.barcap.com/S/CM.htm.

All pricing information is indicative only. Unless otherwise indicated, prices are sourced from Refinitiv and reflect the closing price in the relevant trading market, which may not be the last available price at the time of publication.

Types of investment recommendations produced by Barclays FICC Research:
In addition to any ratings assigned under Barclays' formal rating systems, this publication may contain investment recommendations in the form of trade ideas, thematic screens, scorecards or portfolio recommendations that have been produced by analysts in FICC Research. Any such investment recommendations produced by non-Credit Research teams shall remain open until they are subsequently amended, rebalanced or closed in a future research report. Any such investment recommendations produced by the Credit Research teams are valid at current market conditions and may not be otherwise relied upon.

Disclosure of other 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 all investment recommendations published by Barclays FICC Research in the preceding 12 months please refer to https://live.barcap.com/go/research/Recommendations.

Legal entities involved in producing Barclays Research:
Barclays Bank PLC (Barclays, UK)

Barclays Capital Inc. (BCI, US)

Barclays Bank Ireland PLC, Frankfurt Branch (BBI, Frankfurt)

Barclays Bank Ireland PLC, Paris Branch (BBI, Paris)

Barclays Bank Ireland PLC, Milan Branch (BBI, Milan)

Barclays Securities Japan Limited (BSJL, Japan)

Barclays Bank PLC, Hong Kong branch (Barclays Bank, Hong Kong)

Barclays Capital Canada Inc. (BCCI, Canada)

Barclays Bank Mexico, S.A. (BBMX, Mexico)

Barclays Securities (India) Private Limited (BSIPL, India)

Barclays Bank PLC, India branch (Barclays Bank, India)

Barclays Bank PLC, Singapore branch (Barclays Bank, Singapore)

Barclays Bank PLC, DIFC Branch (Barclays Bank, DIFC)

Disclaimer:
This publication has been produced by Barclays Research Department in the Investment Bank of Barclays Bank PLC and/or one or more of its affiliates (collectively and each individually, "Barclays"). It has been prepared for institutional investors and not for retail investors. It has been distributed by one or more Barclays affiliated legal entities listed below. It is provided to our clients for information purposes only, and Barclays makes no express or implied warranties, and expressly disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to any data included in this publication. To the extent that this publication states on the front page that it is intended for institutional investors and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors under U.S. FINRA Rule 2242, it is an "institutional debt research report" and distribution to retail investors is strictly prohibited. Barclays also distributes such institutional debt research reports to various issuers, media, regulatory and academic organisations for their own internal informational news gathering, regulatory or academic purposes and not for the purpose of making investment decisions regarding any debt securities. Media organisations are prohibited from re-publishing any opinion or recommendation concerning a debt issuer or debt security contained in any Barclays institutional debt research report. Any such recipients that do not want to continue receiving Barclays institutional debt research reports should contact debtresearch@barclays.com. Clients that are subscribed to receive equity research reports, will not receive certain cross asset research reports co-authored by equity and FICC research analysts that are distributed as "institutional debt research reports" unless they have agreed to accept such reports. Eligible clients may get access to such cross asset reports by contacting debtresearch@barclays.com. Barclays will not treat unauthorized recipients of this report as its clients and accepts no liability for use by them of the contents which may not be suitable for their personal use. Prices shown are indicative and Barclays is not offering to buy or sell or soliciting offers to buy or sell any financial instrument.

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

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

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

United Kingdom: 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.

European Economic Area ("EEA"): This material is being distributed in the EEA by Barclays Bank PLC. Barclays Bank PLC is not registered in France with the Autorité des marchés financiers or the Autorité de contrôle prudentiel.

Americas: 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.

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).

This material is distributed in Mexico by Barclays Bank Mexico, S.A. This material is distributed in the Cayman Islands and in the Bahamas by Barclays Capital Inc., which it is not licensed or registered to conduct and does not conduct business in, from or within those jurisdictions and has not filed this material with any regulatory body in those jurisdictions.

Japan: This material is being 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.

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

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

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 material, 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 or one of the Barclays group entities. None of Barclays Bank PLC, nor such Barclays group entity, holds an Australian financial services licence and instead relies 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. This material is distributed in New Zealand by Barclays Bank PLC, but it has not been registered, filed or approved by any New Zealand regulatory authority or under or in accordance with the Financial Markets Conduct Act of 2013, and this material is not a disclosure document under New Zealand law.

Middle East: 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.

This material is distributed in the United Arab Emirates (including the Dubai International Financial Centre) and Qatar by Barclays Bank PLC. 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). This material does not constitute or form part of any offer to issue or sell, or any solicitation of any offer to subscribe for or purchase, any securities or investment products in the UAE (including the Dubai International Financial Centre) and accordingly should not be construed as such. Furthermore, this information is being made available on the basis that the recipient acknowledges and understands that the entities and securities to which it may relate have not been approved, licensed by or registered with the UAE Central Bank, the Dubai Financial Services Authority or any other relevant licensing authority or governmental agency in the UAE. The content of this report has not been approved by or filed with the UAE Central Bank or Dubai Financial Services Authority. 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.

Russia: 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.

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 (2020). 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