

 [click HERE for JPM model](#)


JPMorgan Chase & Co.

JPM 4Q20 EPS Instant Insight

Stock Rating/Industry View: Overweight/Positive**Price Target:** USD 164.00**Price (14-Jan-2021):** USD 141.17**Potential Upside/Downside:** 16%**Tickers:** JPM

Bottom line

EPS was ahead of expectations, driven by a provision for credit losses at a net benefit of \$1.9bn (\$2.9bn of net reserve releases and \$1.1bn of NCOs), compared to expectations of a provision expense. Still, revenues (fee income followed by net interest income) and expenses were both also better than forecasted. Looking out, it guided up its 2021 net interest income expectations, though this will be accompanied by expense growth (up 4%-plus). Of note, it kept its business line ROE targets (normalized environment) unchanged.

Outlook

Net interest income: ~\$55.5bn (was \$54bn in 10-Q) for 2021 (up +\$0.5bn from 2020) including ~\$13.6bn in 1Q21 and \$14bn+ in 4Q21

Expenses: \$68bn-plus for 2021 (vs. \$65.5bn in 2020, including \$2.4bn of incremental investments (non-tech +\$1.5bn, tech +\$0.9bn); said above \$67bn prior

Share repurchase: it intends to begin share repurchase in 1Q21

Business Line targets

CCB - ROE of 25%+/- (NO CHANGE) and an overhead ratio of 50-55% in a normalized environment; Net charge-offs expected to be higher in 2H21 vs. 1H21

CIB - ROE of ~16% (NO CHANGE), revenue of ~\$43B, and an overhead ratio of 54%+/- in a normalized environment

CB - Revised long-term gross IB target of \$4bn (from \$3bn); Maintained long-term targets of \$1bn each of expansion market revenue and international revenue and ~18% ROE (NO CHANGE); In a normalized environment continue to expect a 40%+/- overhead ratio

AWM - In a normalized environment continues to expect long-term AUM flows of 4% of book, revenue growth of 5%, pre-tax margin and ROE of 25%+ (NO CHANGE)

Firm - We note this looks to imply a 17% ROTCE on ~12% CET1

Key takeaways

EPS beat. JPM reported 4Q20 EPS of \$3.79. Our estimate was \$2.51 and consensus was \$2.62. EPS was \$3.07, excluding a \$2.9bn (\$0.72) loan loss reserve release (it noted positive vaccine and stimulus developments contributed to its reserve release). The quarter also included \$540mn of net gains on certain legacy equity investments, \$243mn of revenues from credit adjustments & other largely driven by funding and credit spread tightening on derivatives, and \$70mn of investment securities gains. These were partially offset by a \$276mn of legal expense and \$152mn of MSR risk management losses (\$425mn net benefit; \$0.11).

Revenues up. Managed revenues increased 3% y-o-y and rose 1% linked quarter to \$30.2bn. Tangible book increased 3.4% to \$66.11 (2.1x). It posted a 1.42% ROA, 19% ROE and 24% ROTCE. Its CET1 ratio was unchanged at 13.1%, while its SLR was declined 10bps to 6.9% (5.8% ex. temporary relief). Its LCR was 110%, down from 110%. Its average share count was unchanged.

NII higher. Net interest income rose 2%. Average earning assets rose 3% with loans (+1%) and securities (+4%) higher and trading assets lower (-1%). Period-end loans increased 2% with wholesale (+4%) and credit card (+3%) up and consumer (-1%) lower. CCB loans were little changed with increases in auto (+7%) and card (+3%) offset by declines in home lending (-2%) and consumer & business banking (-2%).

NIM slips. Its net interest margin declined 2bps to 1.80%. Its yield on average earning assets fell 8bps (-4bps ex CIB markets) to 1.97% (loans +3bps, securities -19bps), while its cost of interest bearing liabilities declined 7bps to 0.23% (IBD -2bps to 0.05%). Deposits rose 7% linked quarter with NIBD and IBD posting similar growth rates.

Fees income little changed. Fee income declined 1% with increases in credit card, asset management, investment banking and lending & deposit fees more than offset by a seasonal decline in principal transaction and lower mortgage fees.

Costs controlled. Expenses declined 2% y-o-y and decreased 5% from 3Q20 to \$16.0bn. The y-o-y decline was driven by lower volume- and revenue-related expense partially offset by higher investments in the business. Its managed overhead ratio was 53%. Its effective tax rate was 19.4% (+40bps), while managed was 24.2%.

Asset quality benign. Its NAL ratio improved 7bps to 1.04%. Its NCO ratio declined 5bps to 0.44%. Wholesale NCOs increased 12bps to 0.19%, consumer declined 3bps to 0.05%, and credit card fell 75bps to 2.17% (-84bps y-o-y). The provision for credit losses was a net benefit of \$1.9bn (\$2.9bn of net reserve releases and \$1.1bn of NCOs), compared to an expense of \$0.6bn in the prior quarter. It had a wholesale reserve release of \$2.0bn, reflecting an improvement in the macro-economic scenarios and the continued ability of clients to access liquidity and capital markets. The consumer reserve release was \$0.9bn, in Home Lending, primarily due to improvements in HPI expectations and portfolio run-off. It had a \$0.6bn release in 3Q20. Its reserve/loan ratio declined 31bps to 2.95%.

Line of Business Revenue Drivers

Consumer & Community Banking - Revenues rose 3% y-o-y and increased 12% sequentially to \$4.3bn. Consumer & Business Banking revenues increased fell 14% y-o-y, driven by the impact of deposit margin compression largely offset by growth in deposit balances. Home Lending revenue increased 16% y-o-y, driven by higher net production revenue, largely offset by lower net interest income on lower balances and spread compression as well as lower servicing revenue. And, Card & Auto revenue decreased 7% y-o-y, driven by lower Card net interest income on lower balances.

Corporate & Investment Banking - Revenues rose 17% y-o-y and slipped 2% linked quarter to \$11.4bn. Total trading revenues rose 20% y-o-y (guided to +20%) but declined 10% linked quarter to \$5.9bn. FICC rose 15% y-o-y, driven by strong performance in Credit, Currencies & Emerging Markets and Commodities. Equities increased 32%, predominantly driven by strong client activity in derivatives and Cash Equities. Securities Services was little changed. Investment banking fees increased 34% y-o-y (guided to up 20%) and rose 18% linked quarter to \$2.6bn as advisory jumped 95%, debt underwing was unchanged, and equity underwriting declined 2%.

Commercial Banking - Revenues rose 7% y-o-y and increased 8% from 3Q20 to \$2.5bn. Relative to the prior year, growth was driven by higher deposit balances and fees, higher lending revenue due to increased portfolio spreads, and higher investment banking revenue largely offset by lower deposit margin.

Asset & Wealth Management - Revenues rose 10% y-o-y and increased 9% q-o-q to \$3.9bn. Relative to 4Q19, it benefited from higher performance and management fees, as well as higher deposit and loan balances, partially offset by deposit margin compression.

8:30am conference call

- **listen only: domestic 866-541-2724; int'l 706-634-7246**
- **reply domestic 855-859-2056; int'l 404-537-3406 passcode 1942428**

EPS Reconciliation (\$mn, except per share amounts)

 [download image](#)

Source: Barclays Research and Company

Results Relative to Expectations (FULL MODEL ATTACHED)

 [download image](#)

Source: Barclays Research, S&P Global Market Intelligence, and Company

Jason M. Goldberg, CFA | Managing Director | [Equity Research – LARGE-CAP BANKS](#)
Tel +1 212 526 8580 | Mobile +1 917 566 3090 | jason.goldberg@barclays.com
Barclays, 745 7th Avenue, 17th Floor; New York, NY 10019 | www.barclays.com
Marketing deck: [U.S. Large-Cap Banks Initial 2021 Outlook Slide Deck](#) (12/2/20)
Homepage: <https://live.barcap.com/go/research/analyst/LB00427>
2021 Conferences:
May 18-19: Americas Select Franchise Conference
Sept 13-15: Global Financial Services Conference

Restricted - External

Analyst(s) Certification(s):

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

Important Disclosures:

Barclays 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 the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

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:

Where any companies are the subject of this research report, for current important disclosures regarding those companies 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.

The analysts responsible for preparing this research report have received compensation based upon various factors including the firm's total revenues, a portion of which is generated by investment banking activities, 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.

Analysts regularly conduct site visits to view the material operations of covered companies, but Barclays policy prohibits them from accepting payment or reimbursement by any covered company of their travel expenses for such visits.

Barclays 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 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>.

Risk Disclosure(s)

Master limited partnerships (MLPs) are pass-through entities structured as publicly listed partnerships. For tax purposes, distributions to MLP unit holders may be treated as a return of principal. Investors should consult their own tax advisors before investing in MLP units.

Mentioned Stocks (Ticker, Date, Price)

JPMorgan Chase & Co. (JPM, 14-Jan-2021, USD 141.17), Overweight/Positive, A/CD/CE/D/GE/I/J/K/L/M/N/S

Valuation Methodology: Our price target is \$164 and is based on 15.5x our 2022 EPS estimate of \$10.60.

Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target: Main risks to valuation include ongoing litigation risk, unanticipated movements in interest rates, slower than forecasted capital markets revenues, and the uncertain regulatory environment. Like other big banks, its legal and regulatory risks are above-average.

Ratings and Price Target History:

JPMorgan Chase & Co.



Source: IDC, Barclays Research

Publication Date	Closing Price	Rating	Adjusted Price Target
04-Jan-2021	125.87		164.00
08-Apr-2020	94.30		144.00
14-Jan-2020	138.80		170.00
06-Jan-2020	138.23		168.00
02-Jan-2019	99.31		140.00
16-Jan-2018	112.27		135.00

On 15-Jan-2018, prior to any intra-day change that may have been published, the rating for this security was Overweight, and the adjusted price target was 132.00.

Source: Bloomberg, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

Unless otherwise indicated, prices are sourced from Bloomberg and reflect the closing price in the relevant trading market, which may not be the last available price at the time of publication.

Disclosure Legend:

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

B: An employee or non-executive director of Barclays PLC is a director of this issuer.

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

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

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

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

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

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

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

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

GD: One of the Research Analysts on the fundamental credit coverage team (and/or a member of his or her household) has a long position in the common equity securities of this issuer.

GE: One of the Research Analysts on the fundamental equity coverage team (and/or a member of his or her household) has a long position in the common equity securities of this issuer.

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

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

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

K: Barclays Bank PLC and/or an affiliate has received non-investment banking related compensation (including compensation for brokerage services, if applicable) from this issuer within the past 12 months.

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

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

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

O: Not in use.

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

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

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

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

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

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

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

Guide to the Barclays Fundamental Equity Research Rating System:

Our coverage analysts use a relative rating system in which they rate stocks as Overweight, Equal Weight or Underweight (see definitions below) relative to other companies covered by the analyst or a team of analysts that are

deemed to be in the same industry ("the industry coverage universe"). To see a list of companies that comprise a particular industry coverage universe, please go to <https://publicresearch.barclays.com>.

In addition to the stock rating, we provide industry views which rate the outlook for the industry coverage universe as Positive, Neutral or Negative (see definitions below). A rating system using terms such as buy, hold and sell is not the equivalent of our rating system. Investors should carefully read the entire research report including the definitions of all ratings and not infer its contents from ratings alone.

Stock Rating

Overweight - The stock is expected to outperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

Equal Weight - The stock is expected to perform in line with the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

Underweight - The stock is expected to underperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

Rating Suspended - The rating and target price have been suspended temporarily due to market events that made coverage impracticable or to comply with applicable regulations and/or firm policies in certain circumstances including where the Investment Bank of Barclays Bank PLC is acting in an advisory capacity in a merger or strategic transaction involving the company.

Industry View

Positive - industry coverage universe fundamentals/valuations are improving.

Neutral - industry coverage universe fundamentals/valuations are steady, neither improving nor deteriorating.

Negative - industry coverage universe fundamentals/valuations are deteriorating.

Distribution of Ratings:

Barclays Equity Research has 1628 companies under coverage.

47% have been assigned an Overweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Buy rating; 49% of companies with this rating are investment banking clients of the Firm; 72% of the issuers with this rating have received financial services from the Firm.

36% have been assigned an Equal Weight rating which, for purposes of mandatory regulatory disclosures, is classified as a Hold rating; 43% of companies with this rating are investment banking clients of the Firm; 68% of the issuers with this rating have received financial services from the Firm.

14% have been assigned an Underweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Sell rating; 33% of companies with this rating are investment banking clients of the Firm; 60% of the issuers with this rating have received financial services from the Firm.

Guide to the Barclays Research Price Target:

Each analyst has a single price target on the stocks that they cover. The price target represents that analyst's expectation of where the stock will trade in the next 12 months. Upside/downside scenarios, where provided, represent potential upside/potential downside to each analyst's price target over the same 12-month period.

Top Picks:

Barclays Equity Research's "Top Picks" represent the single best alpha-generating investment idea within each industry (as defined by the relevant "industry coverage universe"), taken from among the Overweight-rated stocks within that industry. Barclays Equity Research publishes "Top Picks" reports every quarter and analysts may also publish intra-quarter changes to their Top Picks, as necessary. While analysts may highlight other Overweight-rated stocks in their published research in addition to their Top Pick, there can only be one "Top Pick" for each industry. To view the current list of Top Picks, go to the Top Picks page on Barclays Live (<https://live.barcap.com/go/keyword/TopPicks>).

To see a list of companies that comprise a particular industry coverage universe, please go to <https://publicresearch.barclays.com>.

Types of investment recommendations produced by Barclays Equity 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 within Equity Research. Any such investment recommendations shall remain open until they are subsequently amended, rebalanced or closed in a future research report.

Disclosure of other investment recommendations produced by Barclays Equity Research:

Barclays Equity 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 Equity 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 to any "Authorised User" located in a Restricted EEA Country by Barclays Bank Ireland PLC. The Restricted EEA Countries are Austria, Bulgaria, Estonia, Finland, Hungary, Iceland, Liechtenstein, Lithuania, Luxembourg, Malta, Portugal, Romania, Slovakia and Slovenia. For any other "Authorised User" located in a country of the European Economic Area, this material is being distributed by Barclays Bank PLC. Barclays Bank Ireland PLC is a bank authorised by the Central Bank of Ireland whose registered office is at 1 Molesworth Street, Dublin 2, Ireland. Barclays Bank PLC is not registered in France with the Autorité des marchés financiers or the Autorité de contrôle prudentiel. Authorised User means each individual associated with the Client who is notified by the Client to Barclays and authorised to use the Research Services. The Restricted EEA Countries will be amended if required.

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 INZ000269539 (member of NSE and BSE); Depository Participant with the National Securities & Depositories Limited (NSDL): DP ID: IN-DP-NSDL-299-2008; Investment Adviser: INA000000391. BSIPL is also registered as a Mutual Fund Advisor having AMFI ARN No. 53308. The registered office of BSIPL is at 208, Ceejay House, Shivsagar Estate, Dr. A. Besant Road, Worli, Mumbai - 400 018, India. Telephone No: +91 22 67196363. Fax number: +91 22 67196399. 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 (2021). 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

