

This material is neither intended to be distributed to Mainland China investors nor to provide securities investment consultancy services within the territory of Mainland China. This material or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.

## China Credit

### An Evergrande default is neither idiosyncratic nor systemic, but an industry-wide problem

*News flow seems to suggest that Evergrande could tip into default soon. We don't see this as an idiosyncratic event, but rather an industry-wide problem triggered by tighter government control. As the Evergrande saga unfolds amid a deceleration in both housing and land sales, we believe contagion risk would not be left unchecked and that the eventual spillover should be limited. Our base case assumes a standstill to allow an orderly restructuring of Evergrande. Even then, this could still drag down some of the weaker names. However, we don't believe this is likely to pose a systemic threat to the banking sector, as the government has levers to contain this risk. For the Asia credit market, the damage thus far has been limited to China HY property names, while the rest of the space has been holding up much better. We believe the damage has been cushioned by strong technicals as underscored by both inflows into Asia bond funds and the absorption of US\$20 billion of new issuance last week. This should remain the case, in our view.*

- **Not too big-to-fail after all.** Recent news on the suspension of interest payments and the appointment of financial advisors are ominous signs for the default of Evergrande, the largest and also most indebted property developer. The realization is still reverberating through the market. Despite some remarkable headlines calling this the 'Lehman moment' for China, damage remains well contained and limited mostly to the China HY property sector. We believe the market reaction remains rational, probably because the past few months offered plenty of time to digest this eventuality. This is also based on our assumptions that the government would and could contain the risk, given tight government policies have already succeeded in slowing down the property market.
- **An industry-wide problem for developers.** We believe the Evergrande problem is not an idiosyncratic event that could be brushed aside. Without a doubt, the company's overleveraged balance sheet made it vulnerable, but the fast deterioration has been accelerated by the government's policies, i.e. the three red-lines imposed on developers and the property lending limit imposed on banks. These have led to a liquidity squeeze for the whole sector and not just for Evergrande. Several weaker developers that have some near-term refinancing needs are already showing signs of distress with their bonds now trading at 50-60. Indeed, we could potentially see 11 defaults totaling US\$30 billion bond (or 23% default rate for the sector) this year, based on our estimates.
- **Orderly or disorderly restructuring?** The breadth and depth of damage to the sector would much depend on how the Evergrande restructuring would be carried out. Our base case is a standstill for all lenders to give the company time to monetize non-core assets while ensuring timely completion of existing projects. We believe the government would eventually need to intervene to prevent a domino effect across the sector, e.g. facilitating Evergrande's asset sales, and for the sector, allowing easier credit access for homebuyers as well as project companies in areas undergoing a slowdown. As much as we recognize that the government would like to instill more financial discipline in developers and moderate price expectations, we don't believe that it would want to create a near-term systemic risk while trying to prevent one in future. All in all, we

**See page 4 for analyst certification and important disclosures.**

J.P. Morgan 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.

#### Asia Corporate Research

**Soo Chong Lim** AC

(852) 2800-7387

[soochong.lim@jpmorgan.com](mailto:soochong.lim@jpmorgan.com)

**Frank Pan** AC

(852) 2800-0989

[frank.pan@jpmorgan.com](mailto:frank.pan@jpmorgan.com)

**Matthew Hughart** AC

(852) 2800-6518

[matthew.hughart@jpmorgan.com](mailto:matthew.hughart@jpmorgan.com)

**Varun Ahuja, CFA** AC

(852) 2800 6038

[varun.x.ahuja@jpmorgan.com](mailto:varun.x.ahuja@jpmorgan.com)

**Stephanie Yan** AC

(852) 2800 7024

[stephanie.yc.yan@jpmorgan.com](mailto:stephanie.yc.yan@jpmorgan.com)

J.P. Morgan Securities (Asia Pacific) Limited

believe the expected default of Evergrande should have sent a very loud and clear warning to heavily indebted developers. In the meantime, the market could remain jittery until the government reiterates its stabilization stance, especially now that negative expectations could hurt demand further and a rising number of failed land auctions means there are less funds going to local governments. This also creates a second-order impact on the LGFV sector as land sales are the largest fiscal revenue source for the majority of the local governments in China (~40-50% according to WIND), and a material deterioration of their fiscal position due to lower land sale proceeds could weaken their ability to support and in turn pressure some of the LGFVs' ratings.

- **Some moderation in economic growth.** The property sector directly accounts for 14% of the China economy and 25% if the indirect contribution is included. As such, the economy would take a knock if the property sector were to slow drastically. This could in turn put some pressure on China credit fundamentals. We believe that the property sector would likely feel the brunt of the pressure. While non-property names would not be sheltered, we don't expect this to lead to any material rating pressure, especially for IG corporates. Nonetheless, some decompression in spreads through small widening in the BBB-rated China credits (especially real estate and LGFVs) is likely, in our view while we think other sectors such as utilities and tech should be relatively more resilient.
- **Systemic risk for banks is remote.** Evergrande's bank borrowing is only 0.22% of the system's loans. We therefore see little risk to the system from the event, although some banks with larger exposure may experience a material hit to earnings. China Minsheng Banking is most exposed in this regard, as the developer accounts for nearly 0.80% of loans. Nonetheless, the bank last week said the regulator blessed its plan to redeem the US\$1.4bn of offshore additional Tier 1 (AT1) on the first call date, December 14, suggesting a comfortable outlook on capitalization. Wider stress across property appears manageable as well, in our view. The sector represents roughly 7% of system loans, while construction is another 3%. Our equity counterparts have stress tested this exposure with a 32% NPL ratio for developers and a 5% NPL ratio for construction lending. The stress test shows a 64bp average decline in the common equity Tier 1 ratio for banks in their coverage. To be clear, such a stress scenario is not a base case, and we note the system benefits from balance sheet reserves equal to 3.4% of loans and a 10.5% CET1 ratio. Further, we expect regulators to have their hands on the many levers at their disposal to manage volatility in the financial system.
- **China bank credit is a shelter in the current storm.** The US\$ credit market is largely represented by the system's strongest banks; the two banks with the largest exposure to Evergrande, Minsheng and Everbright, represent only 1.7% of China financials in the JACI. Indeed, China AT1 have tightened 25bp in the time EVERRE '25s have dropped 50pts. We thus think China banks, including AT1 from SOE issuers, will remain defensive and can be a relatively good place to hide from market volatility.
- **Fund inflows have helped to compartmentalize risks.** We have not seen the Evergrande problem spill over to the wider credit market. Even in the property sector that is feeling the brunt of the pressure, double-B property names have held their ground relatively well. We attribute this to continued inflow into Asia bond funds, and thus far we have only seen three weeks of outflows (e.g. the first week of April and the first two weeks of August) so far this year. This probably explained how the market could easily absorb US\$20 billion of new

supply (including some China HY property bonds) last week. As such, fund flows would remain one gauge of risk from this industry-wide problem boiling over to the wider market.

- **A bifurcated market for now.** We believe performance could diverge further in the near term, as investors reduce exposure to weaker credits. We expect names such Wanda Commercial and Logan to outperform either due to recurring income from non-residential businesses or a favorable demand outlook driven by an influx of new residents. Downward pressure on China single-B property names is likely to continue until we see the government showing some leniency to the property sector. That said, we also believe that valuations for the sector have factored in an extreme case scenario. Stripping off those potential default names, the sector is now trading at z+1464 and implied default rate of 19%, based on 300bp excess return and 40a % recovery rate. Including our estimated 23% default rate this year, this means close to 40% of China HY property bonds would default, which looks excessive, in our view. We also do not expect much spillover to other sectors for now under our base case assumption that the government would relax somewhat to provide developers some breathing space.
- **China-growth sensitive sectors could be nonetheless affected if contagion risks increase:** While our base case remains that contagion risks from the Evergrande episode can be contained through policy measures and broad sector support if required, we think any delays in such support forthcoming could reprice some China-growth sensitive sectors especially in the commodities space – base metals and steel but less so for oil.

**Analyst Certification:** The Research Analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple Research Analysts are primarily responsible for this report, the Research Analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the Research Analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect the Research Analyst’s personal views about any and all of the subject securities or issuers; and (2) no part of any of the Research Analyst’s compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the Research Analyst(s) in this report. For all Korea-based Research Analysts listed on the front cover, if applicable, they also certify, as per KOFIA requirements, that the Research Analyst’s analysis was made in good faith and that the views reflect the Research Analyst’s own opinion, without undue influence or intervention.

All authors named within this report are Research Analysts unless otherwise specified. In Europe, Sector Specialists (Sales and Trading) may be shown on this report as contacts but are not authors of the report or part of the Research Department.

**Research excerpts:** This material may include excerpts from previously published research. For access to the full reports, including analyst certification and important disclosures, please contact your salesperson or the covering analyst’s team or visit [www.jpmorganmarkets.com](http://www.jpmorganmarkets.com).

## Important Disclosures

---

- **Market Maker/ Liquidity Provider:** J.P. Morgan is a market maker and/or liquidity provider in the financial instruments of/related to Dalian Wanda.
- **Client:** J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as clients: Dalian Hexing Investment Co Ltd, a parent company of Dalian Wanda.
- **Client/Investment Banking:** J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as investment banking clients: Dalian Hexing Investment Co Ltd, a parent company of Dalian Wanda.
- **Client/Non-Investment Banking, Securities-Related:** J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as clients, and the services provided were non-investment-banking, securities-related: Dalian Hexing Investment Co Ltd, a parent company of Dalian Wanda.
- **Client/Non-Securities-Related:** J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as clients, and the services provided were non-securities-related: Dalian Hexing Investment Co Ltd, a parent company of Dalian Wanda.
- **Investment Banking Compensation Received:** J.P. Morgan has received in the past 12 months compensation for investment banking services from Dalian Hexing Investment Co Ltd, a parent company of Dalian Wanda.
- **Potential Investment Banking Compensation:** J.P. Morgan expects to receive, or intends to seek, compensation for investment banking services in the next three months from Dalian Hexing Investment Co Ltd, a parent company of Dalian Wanda.
- **Non-Investment Banking Compensation Received:** J.P. Morgan has received compensation in the past 12 months for products or services other than investment banking from Dalian Hexing Investment Co Ltd, a parent company of Dalian Wanda.
- **Debt Position:** J.P. Morgan may hold a position in the debt securities of Logan Group, Dalian Wanda, if any.

**Company-Specific Disclosures:** Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan-covered companies, and certain non-covered companies, by visiting <https://www.jpmm.com/research/disclosures>, calling 1-800-477-0406, or e-mailing [research.disclosure.inquiries@jpmorgan.com](mailto:research.disclosure.inquiries@jpmorgan.com) with your request.

A history of J.P. Morgan investment recommendations disseminated during the preceding 12 months can be accessed on the Research & Commentary page of <http://www.jpmorganmarkets.com> where you can also search by analyst name, sector or financial instrument.

**Logan Group - J.P. Morgan Credit Opinion History**

	Date	Action	Rating/Designation	Ticker/ISIN
Issuer	15 Feb 19	Upgrade	Overweight	LOGPH
7% perp '22 *	01 Aug 19	Upgrade	Neutral	XS1619838292
7% perp '22 *	14 Feb 20	Upgrade	Overweight	XS1619838292
11.25% '19	13 Jul 17	Terminate	Not Covered	XS1063367509
4.7% '26	29 Jun 21	Initiate	Overweight	XS2342970402
5.125% '18	15 Nov 18	Terminate	Not Covered	XS1711177045
5.25% '23	15 Feb 19	Upgrade	Overweight	XS1618597535
5.25% '23	24 Feb 21	Downgrade	Neutral	XS1618597535
5.25% '23	29 Jun 21	Upgrade	Overweight	XS1618597535
5.75% '22	23 Mar 18	Upgrade	Neutral	XS1541978851
6.375% '21	15 Nov 18	Upgrade	Overweight	XS1772325210
6.375% '21	01 Aug 19	Downgrade	Neutral	XS1772325210
6.375% '21	29 Jun 21	Terminate	Not Covered	XS1772325210
6.875% '21	29 Jun 21	Terminate	Not Covered	XS1808311424
7.5% '21	13 Sep 18	Initiate	Neutral	XS1870205819
7.7% '20	13 Sep 18	Terminate	Not Covered	XS1342837264
8.75% '20	07 Dec 18	Initiate	Overweight	XS1920256564
8.75% '20	16 Sep 20	Downgrade	Neutral	XS1920256564
8.75% '20	29 Jun 21	Terminate	Not Covered	XS1920256564
9.75% '17	11 Jan 18	Terminate	Not Covered	XS1143878517

**Dalian Wanda - J.P. Morgan Credit Opinion History**

	Date	Action	Rating/Designation	Ticker/ISIN
Issuer	23 Jun 17	Upgrade	Overweight	DALWAN
7.25% '24 *	20 Jul 17	Upgrade	Overweight	XS1023280271
4.875% '18	15 Nov 18	Downgrade	Neutral	XS0989286850
4.875% '18	15 Feb 19	Terminate	Not Covered	XS0989286850
6.875% '23	21 Jan 20	Initiate	Overweight	XS2100658066
6.95% '22	28 Nov 19	Initiate	Overweight	XS2078814147
7.5% '22	15 Nov 19	Initiate	Neutral	XS2029997942

\*Indicates representative/primary bond/instrument.

The table(s) above show the recommendation changes made by J.P. Morgan Credit Research Analysts in the subject company and/or instruments over the past three years (or, if no recommendation changes were made during that period, the most recent change). Notes: Effective April 11, 2016, J.P. Morgan changed its Credit Research Ratings System. Please see the Explanation of Credit Research Ratings below for the new definitions. The previous rating system no longer should be relied upon. For the history prior to April 11, 2016, please call 1-800-447-0406 or e-mail [research.disclosure.inquiries@jpmorgan.com](mailto:research.disclosure.inquiries@jpmorgan.com).

**Explanation of Credit Research Valuation Methodology, Ratings and Risk to Ratings:**

J.P. Morgan uses a bond-level rating system that incorporates valuations (relative value) and our fundamental view on the security. Our fundamental credit view of an issuer is based on the company's underlying credit trends, overall creditworthiness and our opinion on whether the issuer will be able to service its debt obligations when they become due and payable. We analyze, among other things, the company's cash flow capacity and trends and standard credit ratios, such as gross and net leverage, interest coverage and liquidity ratios. We also analyze profitability, capitalization and asset quality, among other variables, when assessing financials. Analysts also rate the issuer, based on the rating of the benchmark or representative security. Unless we specify a different recommendation for the company's individual securities, an issuer recommendation applies to all of the bonds at the same level of the issuer's capital structure. We may also rate certain loans and preferred securities, as applicable. This report also sets out within it the material underlying assumptions used.

We use the following ratings for bonds (issues), issuers, loans, and preferred securities: Overweight (over the next three months, the recommended risk position is expected to outperform the relevant index, sector, or benchmark); Neutral (over the next three months, the recommended risk position is expected to perform in line with the relevant index, sector, or benchmark); and Underweight (over the next three months, the recommended risk position is expected to underperform the relevant index, sector, or benchmark). J.P. Morgan Emerging Markets Sovereign Research uses Marketweight, which is equivalent to Neutral. NR is Not Rated. In this case, J.P. Morgan has removed the rating for this particular security or issuer because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating no longer should be relied upon. An NR designation is not a recommendation or a rating. NC is Not Covered. An NC designation is not a rating or a recommendation.

For CDS, we use the following rating system: Long Risk (over the next three months, the credit return on the recommended position is expected to exceed the relevant index, sector or benchmark); Neutral (over the next three months, the credit return on the recommended position is expected to match the relevant index, sector or benchmark); and Short Risk (over the next three months, the credit return on the recommended position is expected to underperform the relevant index, sector or benchmark).

### J.P. Morgan Credit Research Ratings Distribution, as of July 03, 2021

	Overweight	Neutral	Underweight
Global Credit Research Universe*	30%	54%	15%
IB clients**	64%	64%	65%

\*Please note that the percentages might not add to 100% because of rounding.

\*\*Percentage of subject companies within each of the "buy," "hold" and "sell" categories for which J.P. Morgan has provided investment banking services within the previous 12 months.

The Credit Research Rating Distribution is at the issuer level. Issuers with an NR or an NC designations are not included in the table above. This information is current as of the end of the most recent calendar quarter.

**Analysts' Compensation:** The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

**Registration of non-US Analysts:** Unless otherwise noted, the non-US analysts listed on the front of this report are employees of non-US affiliates of J.P. Morgan Securities LLC, may not be registered as research analysts under FINRA rules, may not be associated persons of J.P. Morgan Securities LLC, and may not be subject to FINRA Rule 2241 or 2242 restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

### Other Disclosures

J.P. Morgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide.

Any long form nomenclature for references to China; Hong Kong; Taiwan; and Macau within this research material are Mainland China; Hong Kong SAR (China); Taiwan (China); and Macau SAR (China).

JPMorgan research may, from time to time, write on issuers or securities targeted by economic or financial sanctions imposed or administered by the governmental authorities of the U.S., EU, UK or other relevant jurisdictions (Sanctioned Securities). Nothing in this report is intended to be read or construed as encouraging, facilitating, promoting or otherwise approving investment or dealing in such Sanctioned Securities. Clients should be aware of their own legal and compliance obligations when making investment decisions.

**Options and Futures related research:** If the information contained herein regards options- or futures-related research, such information is available only to persons who have received the proper options or futures risk disclosure documents. Please contact your J.P. Morgan Representative or visit <https://www.theocc.com/components/docs/riskstoc.pdf> for a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options or [http://www.finra.org/sites/default/files/Security\\_Futures\\_Risk\\_Disclosure\\_Statement\\_2018.pdf](http://www.finra.org/sites/default/files/Security_Futures_Risk_Disclosure_Statement_2018.pdf) for a copy of the Security Futures Risk Disclosure Statement.

**Changes to Interbank Offered Rates (IBORs) and other benchmark rates:** Certain interest rate benchmarks are, or may in the future become, subject to ongoing international, national and other regulatory guidance, reform and proposals for reform. For more information, please consult: [https://www.jpmorgan.com/global/disclosures/interbank\\_offered\\_rates](https://www.jpmorgan.com/global/disclosures/interbank_offered_rates)

**Private Bank Clients:** Where you are receiving research as a client of the private banking businesses offered by JPMorgan Chase & Co. and its subsidiaries ("J.P. Morgan Private Bank"), research is provided to you by J.P. Morgan Private Bank and not by any other division of J.P. Morgan, including, but not limited to, the J.P. Morgan Corporate and Investment Bank and its Global Research division.

**Legal entity responsible for the production and distribution of research:** The legal entity identified below the name of the Reg AC Research Analyst who authored this material is the legal entity responsible for the production of this research. Where multiple Reg AC Research Analysts authored this material with different legal entities identified below their names, these legal entities are jointly responsible for the production of this research. Research Analysts from various J.P. Morgan affiliates may have contributed to the production of this material but may not be licensed to carry out regulated activities in your jurisdiction (and do not hold themselves out as being able to do so). Unless otherwise stated below, this material has been distributed by the legal entity responsible for production. If you have any queries, please contact the relevant Research Analyst in your jurisdiction or the entity in your jurisdiction that has distributed this research material.

### Legal Entities Disclosures and Country/Region-Specific Disclosures:

**Argentina:** JPMorgan Chase Bank N.A Sucursal Buenos Aires is regulated by Banco Central de la República Argentina ("BCRA" - Central Bank of Argentina) and Comisión Nacional de Valores ("CNV" - Argentinian Securities Commission" - ALYC y AN Integral N°51). **Australia:** J.P. Morgan Securities Australia Limited ("JPMSAL") (ABN 61 003 245 234/AFS Licence No: 238066) is regulated

by the Australian Securities and Investments Commission and is a Market, Clearing and Settlement Participant of ASX Limited and CHIX. This material is issued and distributed in Australia by or on behalf of JPMSAL only to "wholesale clients" (as defined in section 761G of the Corporations Act 2001). A list of all financial products covered can be found by visiting

<https://www.jpmm.com/research/disclosures>. J.P. Morgan seeks to cover companies of relevance to the domestic and international investor base across all Global Industry Classification Standard (GICS) sectors, as well as across a range of market capitalisation sizes. If applicable, in the course of conducting public side due diligence on the subject company(ies), the Research Analyst team may at times perform such diligence through corporate engagements such as site visits, discussions with company representatives, management presentations, etc. Research issued by JPMSAL has been prepared in accordance with J.P. Morgan Australia's Research Independence Policy which can be found at the following link: [J.P. Morgan Australia - Research Independence Policy](#). **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. Ombudsman J.P. Morgan: 0800-7700847 / [ouvidoria.jp.morgan@jpmorgan.com](mailto:ouvidoria.jp.morgan@jpmorgan.com). **Canada:** J.P. Morgan Securities Canada Inc. is a registered investment dealer, regulated by the Investment Industry Regulatory Organization of Canada and the Ontario Securities Commission and is the participating member on Canadian exchanges. This material is distributed in Canada by or on behalf of J.P.Morgan Securities Canada Inc. **Chile:** Inversiones J.P. Morgan Limitada is an unregulated entity incorporated in Chile. **China:** J.P. Morgan Securities (China) Company Limited has been approved by CSRC to conduct the securities investment consultancy business. **Dubai International Financial Centre (DIFC):** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - The Gate, West Wing, Level 3 and 9 PO Box 506551, Dubai, UAE. This material has been distributed by JP Morgan Chase Bank, N.A., Dubai Branch to persons regarded as professional clients or market counterparties as defined under the DFSA rules. **European Economic Area (EEA):** Unless specified to the contrary, research is distributed in the EEA by J.P. Morgan AG ("JPM AG"), which is a member of the Frankfurt Stock Exchange, is authorised by the European Central Bank ("ECB") and is regulated by the Federal Financial Supervisory Authority (BaFin). JPM AG is a company incorporated in the Federal Republic of Germany with a registered office at Taunustor 1, 60310 Frankfurt am Main, the Federal Republic of Germany. The material has been distributed in the EEA to persons regarded as professional investors (or equivalent) pursuant to Art. 4 para. 1 no. 10 and Annex II of MiFID II and its respective implementation in their home jurisdictions ("EEA professional investors"). This material must not be acted on or relied on by persons who are not EEA professional investors. Any investment or investment activity to which this material relates is only available to EEA relevant persons and will be engaged in only with EEA relevant persons. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong, and J.P. Morgan Broking (Hong Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. JP Morgan Chase Bank, N.A., Hong Kong (CE Number AAL996) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission, is organized under the laws of the United States with limited liability. **India:** J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai – 400098, is registered with the Securities and Exchange Board of India (SEBI) as a 'Research Analyst' having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited and the Bombay Stock Exchange Limited (SEBI Registration Number – INZ000239730) and as a Merchant Banker (SEBI Registration Number - MB/INM000002970). Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: [www.jpmip.com](http://www.jpmip.com). JPMorgan Chase Bank, N.A. - Mumbai Branch is licensed by the Reserve Bank of India (RBI) (Licence No. 53/ Licence No. BY.4/94; SEBI - IN/CUS/014/ CDSL : IN-DP-CDSL-444-2008/ IN-DP-NSDL-285-2008/ INBI00000984/ INE231311239) as a Scheduled Commercial Bank in India, which is its primary license allowing it to carry on Banking business in India and other activities, which a Bank branch in India are permitted to undertake. For non-local research material, this material is not distributed in India by J.P. Morgan India Private Limited. **Indonesia:** PT J.P. Morgan Sekuritas Indonesia is a member of the Indonesia Stock Exchange and is regulated by the OJK a.k.a. BAPEPAM LK. **Korea:** J.P. Morgan Securities (Far East) Limited, Seoul Branch, is a member of the Korea Exchange (KRX). JPMorgan Chase Bank, N.A., Seoul Branch, is licensed as a branch office of foreign bank (JPMorgan Chase Bank, N.A.) in Korea. Both entities are regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). For non-macro research material, the material is distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch. **Japan:** JPMorgan Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X), which is a Participating Organization of Bursa Malaysia Berhad and holds a Capital Markets Services License issued by the Securities Commission in Malaysia. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V. and J.P. Morgan Grupo Financiero are members of the Mexican Stock Exchange and are authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to "wholesale clients" (as defined in the Financial Advisers Act 2008). JPMSAL is registered as a Financial Service Provider under the Financial Service providers (Registration and Dispute Resolution) Act of 2008. **Pakistan:** J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Russia:** CB J.P. Morgan Bank International LLC is regulated by the Central Bank of Russia. **Singapore:** This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MCI (P) 018/04/2020 and Co. Reg. No.: 199405335R], which is a member of the Singapore Exchange Securities Trading Limited, and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore) [MCI (P) 052/09/2020], both of which are regulated by the Monetary Authority of Singapore. This material is issued and distributed in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of

the Securities and Futures Act, Cap. 289 (SFA). This material is not intended to be issued or distributed to any retail investors or any other investors that do not fall into the classes of “accredited investors,” “expert investors” or “institutional investors,” as defined under Section 4A of the SFA. Recipients of this material in Singapore are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the material. As at the date of this material, JPMSS is a designated market maker for certain structured warrants listed on the Singapore Exchange where the underlying securities may be the securities discussed in this material. Arising from its role as a designated market maker for such structured warrants, JPMSS may conduct hedging activities in respect of such underlying securities and hold or have an interest in such underlying securities as a result. The updated list of structured warrants for which JPMSS acts as designated market maker may be found on the website of the Singapore Exchange Limited: <http://www.sgx.com>. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited and JPMorgan Chase Bank, N.A., Johannesburg Branch are members of the Johannesburg Securities Exchange and are regulated by the Financial Services Board. **Taiwan:** J.P. Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. Material relating to equity securities is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited, subject to the license scope and the applicable laws and the regulations in Taiwan. According to Paragraph 2, Article 7-1 of Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers (as amended or supplemented) and/or other applicable laws or regulations, please note that the recipient of this material is not permitted to engage in any activities in connection with the material that may give rise to conflicts of interests, unless otherwise disclosed in the “Important Disclosures” in this material. **Thailand:** This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission, and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500. **UK:** Unless specified to the contrary, research is distributed in the UK by J.P. Morgan Securities plc (“JPMS plc”) which is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. JPMS plc is registered in England & Wales No. 2711006, Registered Office 25 Bank Street, London, E14 5JP. This material is directed in the UK only to: (a) persons having professional experience in matters relating to investments falling within article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) (Order) 2005 (“the FPO”); (b) persons outlined in article 49 of the FPO (high net worth companies, unincorporated associations or partnerships, the trustees of high value trusts, etc.); or (c) any persons to whom this communication may otherwise lawfully be made; all such persons being referred to as “UK relevant persons”. This material must not be acted on or relied on by persons who are not UK relevant persons. Any investment or investment activity to which this material relates is only available to UK relevant persons and will be engaged in only with UK relevant persons. Research issued by JPMS plc has been prepared in accordance with JPMS plc’s policy for prevention and avoidance of conflicts of interest related to the production of Research which can be found at the following link: [J.P. Morgan EMEA - Research Independence Policy](#). **U.S.:** J.P. Morgan Securities LLC (“JPMS”) is a member of the NYSE, FINRA, SIPC, and the NFA. JPMorgan Chase Bank, N.A. is a member of the FDIC. Material published by non-U.S. affiliates is distributed in the U.S. by JPMS who accepts responsibility for its content.

**General:** Additional information is available upon request. The information in this material has been obtained from sources believed to be reliable. While all reasonable care has been taken to ensure that the facts stated in this material are accurate and that the forecasts, opinions and expectations contained herein are fair and reasonable, JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) make no representations or warranties whatsoever to the completeness or accuracy of the material provided, except with respect to any disclosures relative to J.P. Morgan and the Research Analyst's involvement with the issuer that is the subject of the material. Accordingly, no reliance should be placed on the accuracy, fairness or completeness of the information contained in this material. Any data discrepancies in this material could be the result of different calculations and/or adjustments. J.P. Morgan accepts no liability whatsoever for any loss arising from any use of this material or its contents, and neither J.P. Morgan nor any of its respective directors, officers or employees, shall be in any way responsible for the contents hereof, apart from the liabilities and responsibilities that may be imposed on them by the relevant regulatory authority in the jurisdiction in question, or the regulatory regime thereunder. Opinions, forecasts or projections contained in this material represent J.P. Morgan's current opinions or judgment as of the date of the material only and are therefore subject to change without notice. Periodic updates may be provided on companies/industries based on company-specific developments or announcements, market conditions or any other publicly available information. There can be no assurance that future results or events will be consistent with any such opinions, forecasts or projections, which represent only one possible outcome. Furthermore, such opinions, forecasts or projections are subject to certain risks, uncertainties and assumptions that have not been verified, and future actual results or events could differ materially. The value of, or income from, any investments referred to in this material may fluctuate and/or be affected by changes in exchange rates. All pricing is indicative as of the close of market for the securities discussed, unless otherwise stated. Past performance is not indicative of future results. Accordingly, investors may receive back less than originally invested. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipients of this material must make their own independent decisions regarding any securities or financial instruments mentioned herein and should seek advice from such independent financial, legal, tax or other adviser as they deem necessary. J.P. Morgan may trade as a principal on the basis of the Research Analysts' views and research, and it may also engage in transactions for its own account or for its clients' accounts in a manner inconsistent with the views taken in this material, and J.P. Morgan is under no obligation to ensure that such other communication is brought to the attention of any recipient of this material. Others within J.P. Morgan, including Strategists, Sales staff and other Research Analysts, may take views that are inconsistent with those taken in this material. Employees of J.P. Morgan not

involved in the preparation of this material may have investments in the securities (or derivatives of such securities) mentioned in this material and may trade them in ways different from those discussed in this material. This material is not an advertisement for or marketing of any issuer, its products or services, or its securities in any jurisdiction.

"Other Disclosures" last revised July 17, 2021.

---

**Copyright 2021 JPMorgan Chase & Co. All rights reserved. This material or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.**