

Global Markets Daily: Early December Headwinds Not Just From Omicron (Wilson)

- Cyclical assets dropped dramatically on Friday amid fears of the impact of the “omicron” variant. The impact on the economic outlook from omicron is still unclear, given incomplete information. Market moves so far already imply a significant downgrade to growth views. Potential downside scenarios do not appear to be fully reflected but there are also clearly scenarios that prove better than anticipated by the sharp shift in pricing last week.
- The challenge to a sustained recovery comes not just from further potential worries about the new variant, but from the broader news flow between now and the December FOMC. Cyclical tailwinds from the acceleration in US and global demand growth in the last couple of months have been a key support for markets. But the scope for positive surprises is diminishing as expectations catch up; COVID case rates are likely to rise further in the near term; and Fed officials have signaled that continued economic strength will reinforce the case for the accelerated taper that we now expect at their December meeting.
- The market is now pricing clearly below our 3-hike Fed forecast for 2022. Our commodities team also sees the repricing in oil markets as likely to prove excessive relative to the demand outlook. But we think a broad risk recovery may be impeded in the near term by the need to digest the prospect of a more hawkish Fed and a less consistent cyclical tailwind. Ironically, the omicron scare itself may now create the best possibilities for relief in the coming weeks, either because incoming news is better than feared or because it prompts monetary policymakers to take a more cautious stance toward tightening.

Dominic Wilson
+1(212)902-5924 |
dominic.wilson@gs.com
Goldman Sachs & Co. LLC

Early December Headwinds Not Just From Omicron

Markets reacted dramatically on Friday to worries about the new COVID “omicron” variant, with equities and commodities dropping sharply as investors worried anew about fresh travel restrictions and larger potential risks beyond. Cyclical assets performed particularly poorly. The Russell 2000 saw its largest one-day drop since February. Front-month oil prices, which are more sensitive to near-term demand risks than more forward-looking assets and have proven highly sensitive to potential shifts in the outlook for travel, fell by 13%. And US rates market shifted from pricing nearly three Fed hikes in 2022 to pricing a little more than two hikes by the close of the day, with a large rally across global government bond curves.

Investors should consider this report as only a single factor in making their investment decision. For Reg AC certification and other important disclosures, see the Disclosure Appendix, or go to www.gs.com/research/hedge.html.

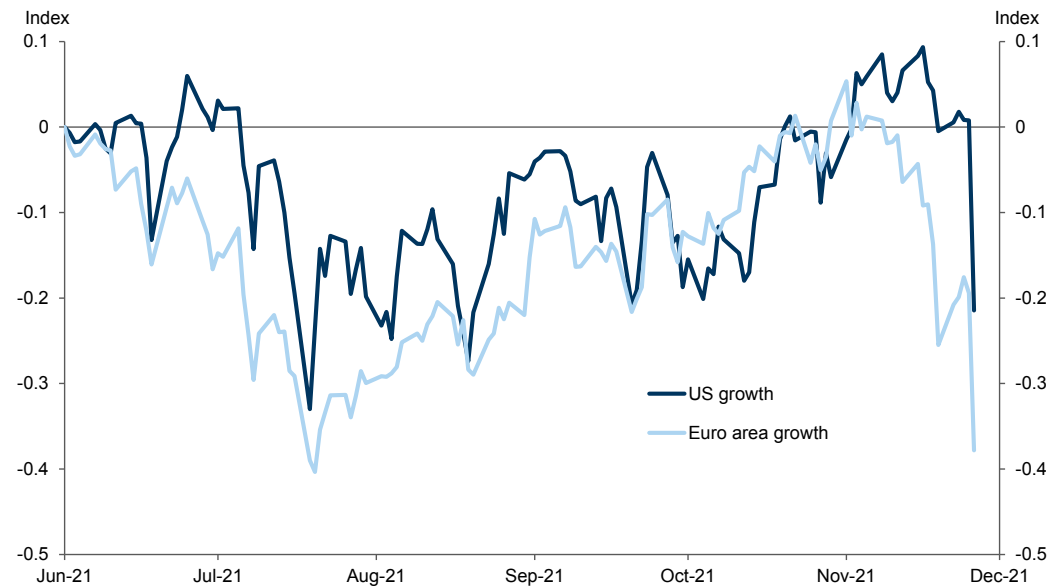
We argued in our recent [2022 markets outlook](#) that, in the context of a flatter overall trajectory for equity markets, the best opportunities were likely to come when the market worried about risks that we thought would ultimately not eventuate. The near-term challenge is that even before the omicron news, the risk picture was already turning more difficult simply on the basis of the run-up to an accelerated taper, the prospect of diminishing help from the data and a likely seasonal pick-up in COVID case rates. With fewer positive catalysts on the horizon in the period between here and the December FOMC, we suspect that worries may have to build further before sustained relief is possible. Ironically, it may be the omicron scare itself that now creates the best possibility of some relief over the period, either because incoming news about the variant is better than feared or because monetary policymakers take a somewhat more cautious stance in response to the news.

The impact of the omicron variant on the economic outlook is obviously still quite unclear. The impact is likely to be significant only if the variant proves substantially more likely to evade vaccines or generates more severe outcomes. The early signs have pointed to elevated risk with respect to vaccine evasion, but information is still incomplete and may change in the coming days and weeks. At the same time, the response from policy authorities has been relatively swift, new vaccine boosters may be relatively easy to design if needed and the impending antiviral pills should remain effective. As a result, our global team has [laid out a range of potential scenarios](#), some of which involve intensified worry and some of which involve relief.

The market has also already made a significant downgrade to growth views simply on the basis of the price action late last week. Using our [growth factors](#) as a proxy ([Exhibit 1](#)), at Friday's close markets had reversed nearly all of the upgrade to US cyclical views since mid-August. And in Europe, where cyclical views were already under pressure given the surge in COVID case rates in Germany and elsewhere, the hit to cyclical pricing from the recent peaks has been even more dramatic. We think the [downside \(and severe downside\) scenario](#) that our global team presented is not fully reflected at this point, so it is easy to envisage downside scenarios that lead to further downward pressure. But it is also clearly possible that the news around omicron could ultimately turn out to be better than anticipated by the sharp shift in pricing at the end of the last week.

Exhibit 1: Cyclical views reverse most of the rebound since late summer

Change in US and China growth factors from June 1 to November 26

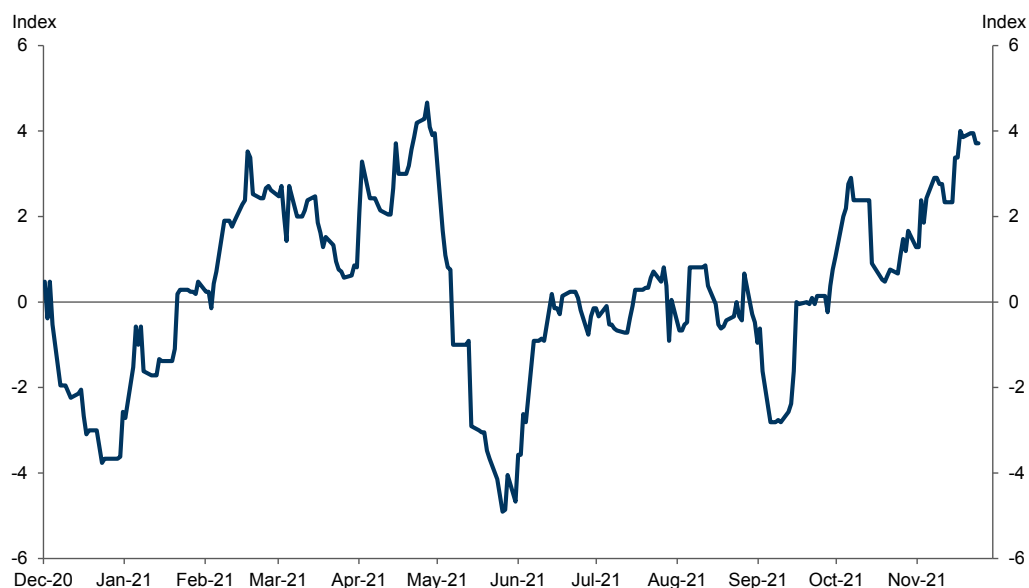


Source: Goldman Sachs, Goldman Sachs Global Investment Research

Beyond renewed downside risks from omicron, the main near-term challenge is that the strongest reason for recent cyclical optimism—consistent positive data surprises, especially from the US—is a less obvious tailwind in the weeks ahead. Over recent months, we have generally taken a more positive stance on cyclical assets—including equities—despite fears of inflation and central bank tightening that have been the major focus over that period. That more positive view has in large part been predicated on the view that the market was underestimating the acceleration in US (and global) demand since the late summer. Our US Current Activity picked up from around 3% in August to nearly 7% in October. Along that track, the US data has delivered consistent strong positive surprises for more than two months ([Exhibit 2](#)), with the last month of data recording almost as positive an outcome as the year-to-date peak for rolling monthly surprises back in April.

Exhibit 2: Strong US data surprises have continued, but are more of a mixed blessing now

US MAP surprise index, 21-day rolling average



Source: Goldman Sachs, Goldman Sachs Global Investment Research

Although constrained supply and upward pressure on inflation were the dominant narratives in the market, this underlying cyclical strength meant that the market was forced to upgrade its cyclical view in response. This helps to explain why we have seen fresh highs in *both* equities and front-end yields in recent weeks. The big shift in central bank pricing has not so far dented this cyclical narrative. Despite a significant pull-forward in the market's expectations of rate hikes from the Fed and other central banks, markets have largely moved their views simply to reflect with higher inflation expectations that left real rates steady even at the front end of the curve and lower at longer maturities. Data, not the Fed's reaction function, drove that shift and the market has essentially priced that most central banks would be dragged reluctantly to acknowledge the more inflationary reality.

The market's recent worry has been squarely focused on the omicron variant. But we think the challenge for a full market recovery, at least until the December FOMC meeting, is that the recent cyclical tailwind is likely to be less supportive of the risk picture, even without fresh worry about omicron. We expect the economic news to remain firm, both on the growth front in this coming week but also in the upcoming inflation report. But after a very strong and consistent run of positive surprises, and a meaningful upgrade to market pricing of US growth at least until the omicron news hit, expectations are also catching up. At the same time, the near-term health risks are rising and had been doing so ahead of the omicron news. That has already been visible in Europe, where increased case growth has weighed on local assets since the start of November. US case growth is starting to rise too and may well pick up further following the Thanksgiving holiday. The new variant is obviously a potent reminder that the risks of mutations that lower the efficacy of current preventive measures cannot be ruled out.

With Fed officials—including San Francisco Fed President Daly most recently—also

signaling that strength in the economic data similar to recent months would support the case for an accelerated taper, strong data may now be more tightly linked to tightening in the market's mind. Our US team changed their Fed call on Wednesday to forecast an acceleration in the speed of asset purchase tapering at the upcoming meeting that would complete that process in March, and a shift from 2 to 3 forecast hikes for 2022. This shift comes in response to comments from a number of Fed officials that the threshold to speeding up the taper timeline was lower than we had initially expected. This—and related concerns about the potential for a significantly faster hiking profile in the dot plot—have more of the flavor of a hawkish “reaction function” shift, at least relative to market expectations, than the shifts we have seen up until this point. As we move towards the Fed meeting, those concerns are likely to stay in place and if the health news remains concerning, there may be some accompanying worry that the Fed is shifting stance at a point where the economic and health risks are rising.

Our baseline view is that the economic risks from the virus and the Fed will likely prove manageable, and that ongoing vaccinations and health innovations are still moving in a positive direction. But as we saw with the delta outbreaks over the summer, it may take some time for cyclical assets to reflect this if the news flow is deteriorating. And if cyclical concerns are driven by worries about increased health risks, strong spot economic data may not provide much reassurance and may in fact prove counter-productive if it fuels the perception that policymakers will remain more hawkish. Even where central banks have not yet made much of a hawkish turn, markets may still worry that a more dovish response—if needed—is going to be slower to come in the current inflation and policy environment.

The good news is that market has already made a significant shift towards pricing these risks at the tail end of last week. This may create (indeed, already has created) the basis for some near-term relief if the incoming information on omicron is more reassuring. But we think the broad mix of worries about a more hawkish Fed stance and increased concern about the risks to the cyclical picture from the health side may not dissipate clearly, at least until the December FOMC.

Ultimately, we expect this episode to create opportunities to engage more aggressively with equity longs. But given the calendar ahead, we think it is likely too soon to expect a sustained rebound. Reassuring news on omicron itself is perhaps the most obvious potential positive catalyst here. A more dovish tone from the large slate of Fed speakers this week in response to these fresh risks would also help, but we think is unlikely at so early a juncture.

The opportunities opening up in oil are potentially more immediately interesting. This is partly because of our strongly bullish structural view, but also reflects the very large repricing that we have seen here. Our Commodities team thinks that the move so far is already consistent with a severe hit to demand growth assumptions and view the repricing as excessive. The uncertainties over the outlook could still dominate in the near term though.

After Friday's repricing, the opportunities for short rates positions in the US front end, where our new Fed profile is now meaningfully above the forwards for 2022 are

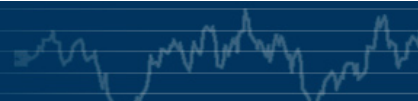
opening up more clearly again. We think the current environment should reinforce the flattening bias in the US curve. We still think that longer-dated inflation (5y5y inflation in the US, specifically) is underpriced, but the current backdrop poses some near-term risk to that view.

In Europe, renewed cyclical risks are a headwind to our paid SEK 5y recommendation, although the combination of downside growth risks and potential underdelivery on ECB QE in December points to wider sovereign spreads—we favour short BTPs vs Bonos.

In FX, the combination of heightened COVID risks and a faster Fed taper have reinforced upside risks to our broad Dollar forecasts. Unless the omicron fears settle quickly, G3 currencies are also likely to trade on a firmer footing against cyclical and commodity currencies for a while longer.

We highlighted the disconnect between high levels of macro uncertainty and relatively low levels of implied volatility in our market outlook. We have pointed out that this disconnect makes sense as long as the market continues to exhibit high confidence that the broad recovery remains on track even as it struggles to forecast the month-by-month data flow accurately. But the flip side is that markets are vulnerable to anything that shakes that confidence, particularly more challenging news on the health front or more persistent underlying inflation pressure. So we may see a period of higher volatility until one or other elements fade from the near-term picture.

TRADE IDEAS



Best Trade Ideas Across Assets

For pricing, charts, and a list of previous recommendations, please visit our [Trade Ideas page](#).

1. Stay long SGD vs short TWD, opened on October 29, 2020, at 20.95 (indexed at 100), with a revised total return target of 111, and a revised stop of 105, currently trading at 105.95.
2. Stay long 10-year OFZs, USD-unhedged, opened on August 26, 2021 at a yield level of 7.02% and with USD/RUB at 74.02, with total return indexed at 100, a target of 110 and a revised stop of 90, currently trading at 90.65.
3. Position for wider 12-year HGBs bond-swap spreads, opened on September 30, 2021, at -15bp, with a revised target of 50bp, and a stop of -50bp, currently trading at 34bp.
4. Stay short AUD/MXN, opened on October 5, 2021, at 100, with a target of 106, and a stop of 96, currently trading at of 96.96.
5. Stay short 6m10y straddle, opened on 8 October, 2021, at 41bp (running premium), with a target of 25bp and a stop of 50bp, currently trading at 42.3.
6. Stay short AUD/CAD, opened on 3 November, 2021, at 0.9218, with a target of 0.85, and a stop of 0.96, currently trading at 0.911.

7. Close an equal-weighted basket of CZK, PLN and SEK vs EUR, opened on November 9, 2021, at 100, with a target of 105 and a stop of 97.5, for a potential total return loss of 2.50%.
8. Receive KRW 2-year IRS, opened on November 9, 2021, at 1.86%, with a target of 1.6% and a stop of 2.3%, currently trading at 1.85%.
9. Stay long 3-year SA inflation breakeven, opened on November 9, 2021, at 3.87%, with a target of 4.6% and a stop of 3.2%, currently trading at 3.81%.
10. Pay PLN vs receive CZK 5-year IRS, opened on November 9, 2021, at -0.24%, with a target of 0.5% and a stop of -0.6%, currently trading at -0.03%.
11. Stay long the iBoxx leveraged loan index vs. the iBoxx HY bond index at a 1.25 to 1x ratio, opened on November 9, 2021, at 0.0%, with a target of +1.00% and a stop of -1.00%, currently trading at 0.01%.
12. Stay long the BBG US HY Energy Index vs. the BBG USD HY Corporate Index, both rates-hedged, at a 1 to 1.1 notional ratio, opened on November 9, 2021, at 0.0%, with a target of +1.00% and a stop of -1.00%, currently trading at 0.04%.
13. Stay long AAA CLOs hedged vs. CMBX 10 AAA at a 1 to 1x notional ratio, opened on November 9, 2021, at 0.0%, with a target of +0.70% and a stop of -0.70%, currently trading at 0.16%.
14. Receive 2y vs pay 10y EUR OIS (2s10s steepener), opened on November 9, 2021, at 0.39%, with a target of 0.65% and a stop of 0.25%, currently trading at 0.44%.
15. Pay SEK 5y swaps outright, opened on November 9, 2021, at 0.59%, with a target of 1.00% and a stop of 0.40%, currently trading at 0.60%.
16. Stay long 10y Bonos vs BTPs on a 1.25:1 weighting, opened on November 9, 2021, at 37bp, with a target of 50bp and a stop of 30bp, currently trading at 44bp.
17. Add US 2s5s10s belly cheapening butterflies via 3m ATM payers, opened on November 9, 2021, at 0bp, with a target of 18bp, and a stop of -12bp, currently trading at 4bp.
18. Buy 5y5y US breakevens, opened on November 9, 2021, at 2.29%, with a target of 2.55%, and a stop of 2.10%, currently trading at 2.16%.
19. Stay long MSCI EM vs. short EMBIG-Div (duration hedged), opened on November 9, 2021, at 100, with a total return target of 108 and a stop of 96, currently trading at 98.30.
20. Close Mexico and Russian equities (in USD), opened on November 9, 2021, at 100, with a target of 112 and a revised stop of 90, for a potential loss of 10%.
21. Stay long Egyptian equities, opened on November 9, 2021, at 11588, with an EGX30 target of 13500 and a stop of 10800, currently trading at 11278.
22. Close Dec-23 Brent, opened on November 9, 2021, at \$72.05/bbl, with a target of \$80/bbl and a stop of \$66/bbl, closed at stop of \$66/bbl.
23. Stay long Dec-23 CME Copper, opened on November 9, 2021, at \$9325/mt, with a target of \$11,000/mt and a stop of \$8,600/mt, currently trading at \$9,282/mt.
24. Pair shorts in EDZ3 with longs in BAZ2, opened on November 15, 2021, at 26bp,

with a target of 0bp and a stop of 40bp, currently trading at 21bp.

For the exclusive use of NICOLE.ZANCANELLA@COMMUNITYGROUP.IT

Disclosure Appendix

Reg AC

I, Dominic Wilson, hereby certify that all of the views expressed in this report accurately reflect my personal views, which have not been influenced by considerations of the firm's business or client relationships.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

Disclosures

Regulatory disclosures

Disclosures required by United States laws and regulations

See company-specific regulatory disclosures above for any of the following disclosures required as to companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; for equity securities, market making and/or specialist role. Goldman Sachs trades or may trade as a principal in debt securities (or in related derivatives) of issuers discussed in this report.

The following are additional required disclosures: **Ownership and material conflicts of interest:** Goldman Sachs policy prohibits its analysts, professionals reporting to analysts and members of their households from owning securities of any company in the analyst's area of coverage.

Analyst compensation: Analysts are paid in part based on the profitability of Goldman Sachs, which includes investment banking revenues. **Analyst as officer or director:** Goldman Sachs policy generally prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director or advisor of any company in the analyst's area of coverage. **Non-U.S. Analysts:** Non-U.S. analysts may not be associated persons of Goldman Sachs & Co. LLC and therefore may not be subject to FINRA Rule 2241 or FINRA Rule 2242 restrictions on communications with subject company, public appearances and trading securities held by the analysts.

Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, except to the extent already made above pursuant to United States laws and regulations. **Australia:** Goldman Sachs Australia Pty Ltd and its affiliates are not authorised deposit-taking institutions (as that term is defined in the Banking Act 1959 (Cth)) in Australia and do not provide banking services, nor carry on a banking business, in Australia. This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act, unless otherwise agreed by Goldman Sachs. In producing research reports, members of the Global Investment Research Division of Goldman Sachs Australia may attend site visits and other meetings hosted by the companies and other entities which are the subject of its research reports. In some instances the costs of such site visits or meetings may be met in part or in whole by the issuers concerned if Goldman Sachs Australia considers it is appropriate and reasonable in the specific circumstances relating to the site visit or meeting. To the extent that the contents of this document contains any financial product advice, it is general advice only and has been prepared by Goldman Sachs without taking into account a client's objectives, financial situation or needs. A client should, before acting on any such advice, consider the appropriateness of the advice having regard to the client's own objectives, financial situation and needs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests and a copy of Goldman Sachs' Australia Sell-Side Research Independence Policy Statement are available at: <https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html>. **Brazil:** Disclosure information in relation to CVM Resolution n. 20 is available at <https://www.gs.com/worldwide/brazil/area/gir/index.html>. Where applicable, the Brazil-registered analyst primarily responsible for the content of this research report, as defined in Article 20 of CVM Resolution n. 20, is the first author named at the beginning of this report, unless indicated otherwise at the end of the text. **Canada:** Goldman Sachs Canada Inc. is an affiliate of The Goldman Sachs Group Inc. and therefore is included in the company specific disclosures relating to Goldman Sachs (as defined above). Goldman Sachs Canada Inc. has approved of, and agreed to take responsibility for, this research report in Canada if and to the extent that Goldman Sachs Canada Inc. disseminates this research report to its clients. **Hong Kong:** Further information on the securities of covered companies referred to in this research may be obtained on request from Goldman Sachs (Asia) L.L.C. **India:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (India) Securities Private Limited, Research Analyst - SEBI Registration Number INH000001493, 951-A, Rational House, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India, Corporate Identity Number U74140MH2006FTC160634, Phone +91 22 6616 9000, Fax +91 22 6616 9001. Goldman Sachs may beneficially own 1% or more of the securities (as such term is defined in clause 2 (h) the Indian Securities Contracts (Regulation) Act, 1956) of the subject company or companies referred to in this research report. **Japan:** See below. **Korea:** This research, and any access to it, is intended only for "professional investors" within the meaning of the Financial Services and Capital Markets Act, unless otherwise agreed by Goldman Sachs. Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (Asia) L.L.C., Seoul Branch. **New Zealand:** Goldman Sachs New Zealand Limited and its affiliates are neither "registered banks" nor "deposit takers" (as defined in the Reserve Bank of New Zealand Act 1989) in New Zealand. This research, and any access to it, is intended for "wholesale clients" (as defined in the Financial Advisers Act 2008) unless otherwise agreed by Goldman Sachs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests is available at: <https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html>. **Russia:** Research reports distributed in the Russian Federation are not advertising as defined in the Russian legislation, but are information and analysis not having product promotion as their main purpose and do not provide appraisal within the meaning of the Russian legislation on appraisal activity. Research reports do not constitute a personalized investment recommendation as defined in Russian laws and regulations, are not addressed to a specific client, and are prepared without analyzing the financial circumstances, investment profiles or risk profiles of clients. Goldman Sachs assumes no responsibility for any investment decisions that may be taken by a client or any other person based on this research report. **Singapore:** Goldman Sachs (Singapore) Pte. (Company Number: 198602165W), which is regulated by the Monetary Authority of Singapore, accepts legal responsibility for this research, and should be contacted with respect to any matters arising from, or in connection with, this research. **Taiwan:** This material is for reference only and must not be reprinted without permission. Investors should carefully consider their own investment risk. Investment results are the responsibility of the individual investor. **United Kingdom:** Persons who would be categorized as retail clients in the United Kingdom, as such term is defined in the rules of the Financial Conduct Authority, should read this research in conjunction with prior Goldman Sachs research on the covered companies referred to herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risks warnings, and a glossary of certain financial terms used in this report, are available from Goldman Sachs International on request.

European Union and United Kingdom: Disclosure information in relation to Article 6 (2) of the European Commission Delegated Regulation (EU) (2016/958) supplementing Regulation (EU) No 596/2014 of the European Parliament and of the Council (including as that Delegated Regulation is implemented into United Kingdom domestic law and regulation following the United Kingdom's departure from the European Union and the European Economic Area) with regard to regulatory technical standards for the technical arrangements for objective presentation of investment recommendations or other information recommending or suggesting an investment strategy and for disclosure of particular interests or indications of conflicts of interest is available at <https://www.gs.com/disclosures/europeanpolicy.html> which states the European Policy for Managing Conflicts of Interest in Connection with Investment Research.

Japan: Goldman Sachs Japan Co., Ltd. is a Financial Instrument Dealer registered with the Kanto Financial Bureau under registration number Kinsho

69, and a member of Japan Securities Dealers Association, Financial Futures Association of Japan and Type II Financial Instruments Firms Association. Sales and purchase of equities are subject to commission pre-determined with clients plus consumption tax. See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

Global product; distributing entities

The Global Investment Research Division of Goldman Sachs produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; Public Communication Channel Goldman Sachs Brazil: 0800 727 5764 and / or contatogoldmanbrasil@gs.com. Available Weekdays (except holidays), from 9am to 6pm. Canal de Comunicação com o Público Goldman Sachs Brasil: 0800 727 5764 e/ou contatogoldmanbrasil@gs.com. Horário de funcionamento: segunda-feira à sexta-feira (exceto feriados), das 9h às 18h; in Canada by either Goldman Sachs Canada Inc. or Goldman Sachs & Co. LLC; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman Sachs & Co. LLC. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom.

Effective from the date of the United Kingdom's departure from the European Union and the European Economic Area ("Brexit Day") the following information with respect to distributing entities will apply:

Goldman Sachs International ("GSI"), authorised by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA, has approved this research in connection with its distribution in the United Kingdom.

European Economic Area: GSI, authorised by the PRA and regulated by the FCA and the PRA, disseminates research in the following jurisdictions within the European Economic Area: the Grand Duchy of Luxembourg, Italy, the Kingdom of Belgium, the Kingdom of Denmark, the Kingdom of Norway, the Republic of Finland, Portugal, the Republic of Cyprus and the Republic of Ireland; GS - Succursale de Paris (Paris branch) which, from Brexit Day, will be authorised by the French Autorité de contrôle prudentiel et de résolution ("ACPR") and regulated by the Autorité de contrôle prudentiel et de résolution and the Autorité des marchés financiers ("AMF") disseminates research in France; GSI - Sucursal en España (Madrid branch) authorized in Spain by the Comisión Nacional del Mercado de Valores disseminates research in the Kingdom of Spain; GSI - Sweden Bankfilial (Stockholm branch) is authorized by the SFSa as a "third country branch" in accordance with Chapter 4, Section 4 of the Swedish Securities and Market Act (Sw. lag (2007:528) om värdepappersmarknaden) disseminates research in the Kingdom of Sweden; Goldman Sachs Bank Europe SE ("GSBE") is a credit institution incorporated in Germany and, within the Single Supervisory Mechanism, subject to direct prudential supervision by the European Central Bank and in other respects supervised by German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and Deutsche Bundesbank and disseminates research in the Federal Republic of Germany and those jurisdictions within the European Economic Area where GSI is not authorised to disseminate research and additionally, GSBE, Copenhagen Branch filial af GSBE, Tyskland, supervised by the Danish Financial Authority disseminates research in the Kingdom of Denmark; GSBE - Sucursal en España (Madrid branch) subject (to a limited extent) to local supervision by the Bank of Spain disseminates research in the Kingdom of Spain; GSBE - Succursale Italia (Milan branch) to the relevant applicable extent, subject to local supervision by the Bank of Italy (Banca d'Italia) and the Italian Companies and Exchange Commission (Commissione Nazionale per le Società e la Borsa "Consob") disseminates research in Italy; GSBE - Succursale de Paris (Paris branch), supervised by the AMF and by the ACPR disseminates research in France; and GSBE - Sweden Bankfilial (Stockholm branch), to a limited extent, subject to local supervision by the Swedish Financial Supervisory Authority (Finansinspektionen) disseminates research in the Kingdom of Sweden.

General disclosures

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. The information, opinions, estimates and forecasts contained herein are as of the date hereof and are subject to change without prior notification. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by our Global Investment Research Division. Goldman Sachs & Co. LLC, the United States broker dealer, is a member of SIPC (<https://www.sipc.org>).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, principal trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

We and our affiliates, officers, directors, and employees, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research, unless otherwise prohibited by regulation or Goldman Sachs policy.

The views attributed to third party presenters at Goldman Sachs arranged conferences, including individuals from other parts of Goldman Sachs, do not necessarily reflect those of Global Investment Research and are not an official view of Goldman Sachs.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research is focused on investment themes across markets, industries and sectors. It does not attempt to distinguish between the prospects or performance of, or provide analysis of, individual companies within any industry or sector we describe.

Any trading recommendation in this research relating to an equity or credit security or securities within an industry or sector is reflective of the investment theme being discussed and is not a recommendation of any such security in isolation.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options and futures disclosure documents which are available from Goldman Sachs sales representatives or at <https://www.theocc.com/about/publications/character-risks.jsp> and

https://www.fiadocumentation.org/fia/regulatory-disclosures_1/fia-uniform-futures-and-options-on-futures-risk-disclosures-booklet-pdf-version-2018.

Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

Differing Levels of Service provided by Global Investment Research: The level and types of services provided to you by the Global Investment Research division of GS may vary as compared to that provided to internal and other external clients of GS, depending on various factors including your individual preferences as to the frequency and manner of receiving communication, your risk profile and investment focus and perspective (e.g., marketwide, sector specific, long term, short term), the size and scope of your overall client relationship with GS, and legal and regulatory constraints. As an example, certain clients may request to receive notifications when research on specific securities is published, and certain clients may request that specific data underlying analysts' fundamental analysis available on our internal client websites be delivered to them electronically through data feeds or otherwise. No change to an analyst's fundamental research views (e.g., ratings, price targets, or material changes to earnings estimates for equity securities), will be communicated to any client prior to inclusion of such information in a research report broadly disseminated through electronic publication to our internal client websites or through other means, as necessary, to all clients who are entitled to receive such reports.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For research, models or other data related to one or more securities, markets or asset classes (including related services) that may be available to you, please contact your GS representative or go to <https://research.gs.com>.

Disclosure information is also available at <https://www.gs.com/research/hedge.html> or from Research Compliance, 200 West Street, New York, NY 10282.

© 2021 Goldman Sachs.

No part of this material may be (i) copied, photocopied or duplicated in any form by any means or (ii) redistributed without the prior written consent of The Goldman Sachs Group, Inc.

For the exclusive use of NICOLE.ZANCANELLA@COMMUNITYGROUP.IT