

# Citi Global Wealth Investments Asia Strategy

February 20, 2023

Ken Peng Head – Asia Investment Strategy +852 2868-8904

ken.peng@citi.com

Ligang Liu Head – Asia Economic Analysis +852 2868-8979 ligang.liu@citi.com

Calvin Ha +852 2868-8477 calvin.ha@citi.com

Wang Shurong +852 2868-8977 shurong.wang@citi.com

# China can Recover without Solving all of its Problems

#### **SUMMARY**

- Two months after COVID-zero policies ended, China's equity rally is taking a break.
   Many observers are focusing on the lack of progress in some facets of the Chinese economy as risks to the recovery.
- We believe that structural problems do not need to be resolved this year in order for the recovery to carry through. The potential for earnings growth and valuation repair can be realized without addressing every imbalance in China's economy and society.
- First, there is plenty of evidence of recovery. Lunar New Year tourism saw substantial growth from last year. Mobility indicators suggest urban traffic had already recovered to pre-pandemic levels. Domestic flights had also seen notable recovery, while international flights had just begun. Purchasing managers indices showed strong services recovery, while manufacturing has narrowed declines, though is still teetering at breakeven. Credit growth remained robust.
- There are also some areas of concern. Early mortgage repayments caught some attention, but are small in scale compared with precautionary savings accumulated in 2022. Property sales still lag, but are picking up after the COVID spread and the holiday. Unemployment remains high but is falling, which is a positive direction for markets. Geopolitical tensions will remain a thorny issue, but the recovery appears to be a bigger driver this year.
- Earnings revisions continue to move up, while valuation repair is lagging, even after the strong rally in Nov-Jan. Eight of 10 sectors have valuations below historical mean. We believe investors are likely to position for the next phase of recovery during the current setback.

As China's economy makes progress, many concerns arose, but are unlikely to stop the recovery China's recovery appears to be well on track. But markets have little patience, as many of China's problems are still unresolved, such as weak property sales, early mortgage repayments, unemployment, geopolitical tensions, Fed policy and the USD, or whether the excess deposits from last year were real. While these concerns present legitimate risks to the outlook, we believe a cyclical recovery does not require all structural problems to be resolved.

After a 60% rally from November to January, the MSCI China index consolidated by 7% in February. This seems to be very typical of any bull market. When the initial short covering phase is done, the market takes a break. Upward earnings revisions continue, while valuations remain low, which are likely to bring broader participation for the next phase.

In this note, we lay out the evidence for recovery and try to address some of the market concerns. The recent setback in markets may present the opportunity to get on the train.

# Evidence of China's recovery

- Lunar New Year holiday domestic travellers increased 23%y/y. Domestic tourism revenue rose 30%y/y, and returned to 73% of 2019 levels. Post-Lunar New Year mobility data also continued to improve, including urban road traffic and subway ridership, which are now 13% above 2019 levels (**Figure 1**). Domestic air passenger traffic is 25% above a year ago. But since international travel has yet to rebound, total flight traffic is still 3% below year-ago and 19% below 2019 levels.
- Services PMIs rebounded sharply in January to 54.4 and 52.9 for the official and Caixin surveys, respectively. Manufacturing PMIs were less in unison, with the offical survey rebounding from 47.0 in Dec to 50.1 in Jan. The Caixin survey was remarkably flat at 49.0 to 49.2 for Dec-Jan, somehow missing the volatility at the turn of the year. Compared to the other major economies, China's manufacturing PMI is now the highest after lagging badly in 2022 (Figure 2).
- Property sales are picking up strongly in February. Anecdotal data show that both new and existing home sales jumped in the first week of February in both top-tier and lower-tier cities, just after the Lunar New Year holiday. Land sales have also resumed, with nationwide sales rising 34% from the depressed levels of 2022, led by lower-tier cities (Figure 3). For example, the first land auction in the Year of the Rabbit in suburban Beijing sold six plots, half at ceiling prices (prices are capped by regulators and have floors defined by the selling local government).

mobility, manufacturing and services activity, and property have all shown evidence of recovery

Holiday consumption,

Figure 1: Recovery Signals

Figure 2: China's manufacturing PMI is again in expansion, also the highest among major economies

2

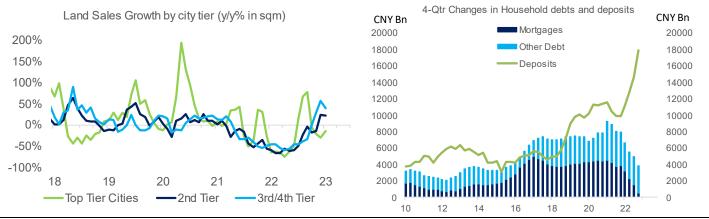
	2000 8/			Manufacturing PMIs		
	2023 Y/Y%	% of 2019 Levels	54		■ 2022	
Lunar New Year Golden Week			52 -		■ 4Q 2022	
Domestic Tourists	23%	89%	50 -		■ Jan-23	
Tourism Revenue	30%	73%				
Macau Visitors	297%	57%	48 -			
Macau Gross Gaming Revenue	83%	46%	46 -			
Mobility in Febr	uary		46			
Traffic Congestion	27%	N/A	44 -			
Subway Ridership	63%	113%	42			
Airline Passengers	-3%	81%		US Euro Area	a Japan China	

Source: Bloomberg, Haver Analytics, as of 10 Feb 2023.

Source: Haver Analytics, as of Jan 2023.

Figure 3: Land sales turned to positive growth after depressed 2022

Figure 4: The buildup in household deposits far outpaced additional debt in 2022



Source: CREIS, Citi Research, China Property—Poised for Sales-Driven Source: Haver Analytics, as of Dec 2022. Rebound; Multiple Early Signals Flashing, as of 8 Feb 2023.

# Addressing Concerns

Are households making early mortgage repayments rather than spending?

Yes. While debt servicing will take away from consumption, we believe Chinese households have set aside enough precautionary savings to do both.

A flurry of early mortgage repayments since the end of last year has created some concern recently that Chinese consumers may be more eager to pay down debt than to consume. But Chinese households had accumulated 18 trillion yuan in new deposits in 2022, a record 15% of GDP. This is equivalent to 46% of all outstanding mortgages.

Meanwhile, household debt increases were the smallest in a decade. The fear of unfinished projects was so intense that for all of 2022, home sales were down 28% to just 11.6 trillion, while only 480 billion of new mortgages were taken out to finance these humbled purchases (**Figure 4**). In other words, the loan-to-value ratio in 2022 was a paltry 4.1%.

#### Are those trillions of new deposits real?

Yes, they are. Some researchers point out that actual excess savings are not nearly as large, and those savings disproportionately belong to the wealthy.

While these are correct observations, they confuse an income statement concept (savings) with cash flows (deposits). Savings account for income minus consumption, but does not capture outlays for investment into property and securities. In 2022 households did not make the usual property and stock/bond investments, which lifted deposits, while the lack of consumption would have lifted both savings and deposits. As a result, deposits are a better indicator of potential ammunition for consumption and investment in 2023.

The uneven distribution is a meaningful concern. Unlike the fiscal handouts that were common in the US and Europe, China's stimulus was done through infrastructure, bank credit and lockdown subsidies, while employment income actually weakened. This would suggest that a majority of the new deposits belong to high income households who would have lower propensity to consume. Still, this issue would unlikely have a major impact on markets, as the high income households have more investment capital.

Precautionary savings appear enough to consume and service debt

Deposit surge reflects delayed spending and investment, which is fuel for recovery in both economy and markets

#### Property sales are still weak, will that drag the recovery?

Property sales have shown some early signs of rebound after holiday Unlikely, because property sales are poised to recover. In January, property sales remained tepid at -33%y/y at the largest developers. But this was a month of nationwide COVID infections followed by the Lunar New Year holiday. In the week after the holiday (Jan 30 – Feb 5), property sales rebounded sharply, according to local market data. Sales may still be short of year-ago levels, but the rebound was nationwide across high and low tier cities (**Figure 5**). And as noted previously, land sales have begun to rebound as well across the nation (**Figure 3**)

Perhaps the longer-term prospects remain poor for property development. But even with a 20% recovery this year, property sales would still be just at 2016 levels, which should not cause concern for overcapacity yet.

#### With job prospects still uncertain, will households spend their savings?

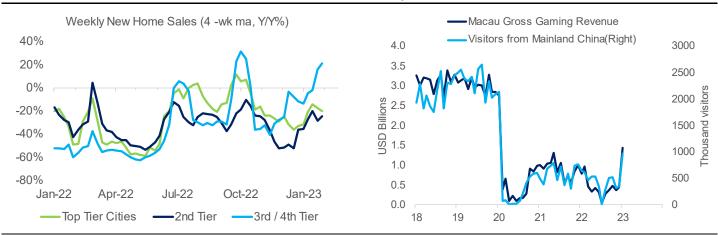
First, the revenge spending has already begun, and has more room to go. For example, Macau gaming revenue surged by 82.5%y/y in January, though still well below 2019 levels (**Figure 6**). Mainland visitors jumped by 150% during the holiday week. Traffic at restaurants, movie theaters and shopping malls have also surged. When retail data is reported for Jan-Feb together on March 15, it is likely to be notably positive.

Labor market friction is real. So are the recovery in labor demand and the fall in unemployment rate As for jobs, some observed that youth unemployment remains high. Still others observed that the 30-plus segment of the labor force is facing problems, as employers prefer younger and cheaper applicants. This friction is driven mainly by the decline of job availability in the internet sector, such as platforms and online education. But these sectors are seeing fresh demand growth, just one month into the beginning of service sector recovery. Even at this early stage of recovery, the unemployment rate in both the youth and 30+ segments have fallen recently, just faster in the younger group (**Figure 7**).

As we noted in the past, equity bull markets happen when unemployment is high and falling, rather than low and rising. Labor force friction is more likely to produce higher wages and inflation in areas of undercapacity, such as air travel and hospitality. This is something the central bank would need to worry about in time. But for now, the impact on markets is likely limited when overall demand for labor is on the rise. Even in the longer run, the aging demographic trend would likely ease labor force frictions, as the definition of "young" is likely to rise.

Figure 5: Property market activity recover in early February, right after Lunar New Year

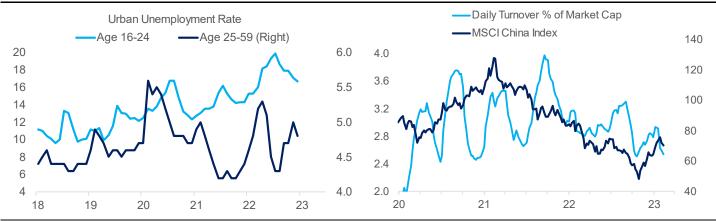
Figure 6: Macau gaming revenues jumped by 83%y/y in January, as Mainland visitors surged 150%y/y during holiday week



Source: CREIS, Citi Research, China Property—Poised for Sales-Driven Source: Haver, as of Nov 2022 Rebound; Multiple Early Signals Flashing, as of 8 Feb 2023.

Figure 7: Youth unemployment is coming down from high levels faster than overall labor market

Figure 8: The rally in Chinese equities had 40% lower turnover compared to 2020-21 highs, reflecting low participation



Source: Citi Research forecasts, Global Economic Outlook & Strategy, Haver Analytics, as of 18 Jan 2023.

Source: Haver, as of Nov 2022 Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

#### Missed the first rally? So did most others, and that's why there is likely a second leg

Rally so far has had low participation, the next phase is likely to see broader inflows Still some precautionary deposits came out of the stock and bond markets last year. But the recent rally had 40% lower turnover, compared to the frenzy period of 3Q 2020, or the bubble peak of 1Q 2021, or the initial period of common prosperity in 3Q 2021 (**Figure 8**). This low participation is common in both offshore HK and onshore A-share markets, implying large numbers of Chinese investors still sitting on the sidelines with idle deposits to deploy among the things they held off in 2022.

#### Will inflation come back and end easy policy?

Yes, but not right away. China's inflation data remain weak. CPI rose just .1 %y/y in January, while core CPI remained at 1.0%y/y. Industrial deflation also continued in January, as PPI was -0.8%y/y. These still reflect the economically crushing COVID zero policies in 2022.

As demand rebounds, inflation is likely to rebound as well. It would take some time to get to levels that might warrant policy concern. In fact, there may be additional consumption supportive policies to be announced surrounding the national legislative meetings in March. We suspect that People's Bank of China (PBOC) may turn more neutral and pay more attention to inflation by the mid-year policy meetings in July. Potential rate hikes are possible by year-end if inflation rebounds sharply.

But most importantly, a level of inflation that might be consistent with policy tightening would also imply a much higher level for equities (**Figure 9**). As a result, we would expect another leg of equity rally before the PBOC turns hawkish.

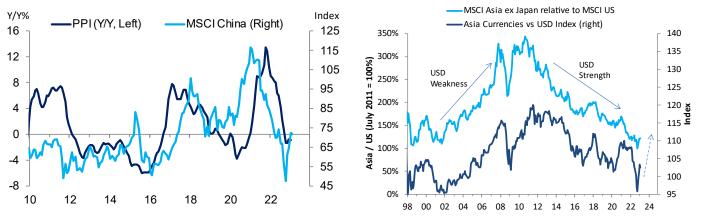
#### USD is rebounding again. Will external risks drag China down?

The recent bout of strong US labor and inflation data amid hawkish rhetoric from the Fed has set off a rebound in the USD. However, the US economy is also showing more signs of fatigue after the historically aggressive tightening campaign the Fed had already put in place. Manufacturing PMI new orders have fallen to a recessionary level of 42.5; banks are tightening lending standards consistent with the lead-up to recession. And the strength in jobs and retail sales may dissipate once seasonal factors become less dominant.

Monetary policy may turn more hawkish when inflation rebounds, but further equity rebound is likely to accompany the return of inflation

Figure 9: China's PPI remains in deflation but is likely to lift up along with economic and equity recovery

# Figure 10: USD bear markets have been positive for Asian relative equity performance



PPI is producer prices index. Source: Citi Research forecasts, Global Source: Haver, as of Nov 2022 Economic Outlook & Strategy, Haver Analytics, as of 18 Jan 2023.

Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

USD bear market is likely to return along with weaker US growth, Asian equities may outperform We expect China to potentially turn to unwind stimulus late this year. Incidentally, that is also when we expect the Fed to pivot to rate cuts. This will likely support Asian currencies and would be supportive of our positive view for equities in the region. The last USD bear market versus Asian currencies started in 2002 when Asia exited five years of deflation from the Asian Financial Crisis. This was a period of strong relative equity performance for Asia (**Figure 10**. Even though the current backdrop isn't as positive as that time when China just joined the WTO, it could still draw some parallels.

#### Will US-China tensions curb the extent of investor interest?

Yes, this is one of the main open ended concerns that is keeping many investors at bay.

ust as the balloon incident calms down, China's closer ties with Iran becomes another challenge to further talks between the world's two largest economies. The strategic competition between the two countries is likely to continue for many years to come. The US curbs on China's access to technology and to US investors, though not impenetrable, are likely to get tougher.

Geopolitical tensions may be less impactful during initial economic recovery

Still, we continue to believe that in 2023 geopolitical overtures are less likely to be impactful on markets because the potential for economic recovery is strong. Beyond initial recovery and after valuations return to a level consistent with economic expansion, however, the market may be more influenced by geopolitical tensions.

#### Earnings revised up more than valuations

Earnings revisions have continued in the direction we expected. In the three months through mid-February, consensus EPS estimates for 2023 had been revised up by 7%, which is nearly halfway to the 15% we estimated for the year (see CIO Bulletin: China's Reopening Rally, Part 2, 16 Jan 2023). Meanwhile, the forward PE ratio remains below historical mean at 10.8x. When revision momentum had been this strong in the past, the valuations were much more generous (Figure 11).

At a sector level, revisions have been uneven. Eight of 10 sectors remain below ten-year average valuations (**Figure 12**). The IT sector stands out, as the farthest below historical mean in terms of valuations, while its earnings revision momentum is also strong. The IT sector is likely to be a candidate for catch up in the next phase of recovery, as investors shift from companies that had the highest beta to those that have the best growth profile at reasonable valuations.

Earnings revisions are progressing faster than valuation repair

IT, Healthcare and Financials offer growth opportunities at reasonable valuations The strongest revisions came in the Healthcare sector, and the sector is expected to grow the most in the coming two years. This helps to explain its higher valuations, which are at par with its 10-year average. Similar to IT, healthcare is likely to be among the targets for investors seeking growth in the next phase of recovery.

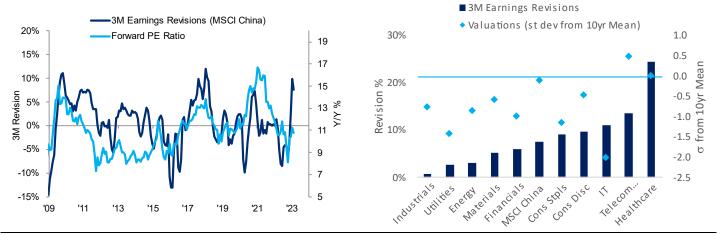
The Telecom services sector valuation comparisons are made difficult from adding internet content platforms to the sector that used to consist mainly of network operators. But here too earnings revisions are strong.

Financials may see continued upward revisions. Banks may see net interest margins improve along with steep yield curve and higher rate expectations, as well as less asset quality worries. Similarly, insurers are seeing fewer asset quality worries, as well as improving investment returns. Brokers and wealth managers may benefit from a revival in market activity.

Sectors like Materials, Energy and Industrials face more difficulties in earnings revisions, as their results were less challenged in 2021-22. These sectors may enjoy some cyclical demand pickup, but tend to have less robust long-term prospects.

Figure 11: Earnings revisions are progressing faster than valuations

Figure 12: Eight of 10 sectors remain below historical mean valuations, while earnings revisions vary



Source: Bloomberg, as of 15 Feb 2023.

Note: Valuations are measured as standard deviations ( $\sigma$ ) from mean for the forward price/earnings ratio for each sector index. Source: Bloomberg, as of 15 Feb 2023

All views/ forecasts are expressions of opinion and are subject to change without notice and are not a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Past performance is no guarantee of future results. Real results may vary.

### **Disclosures**

In any instance where distribution of this communication ("Communication") is subject to the rules of the US Commodity Futures Trading Commission ("CFTC"), this communication constitutes an invitation to consider entering into a derivatives transaction under US CFTC Regulations §§ 1.71 and 23.605, where applicable, but is not a binding offer to buy/sell any financial instrument.

This Communication is prepared by Citi Global Wealth Investments ("CGWI") which is comprised of the Investments and Capital Markets capabilities of Citi Private Bank, Citi Personal Wealth Management and International Personal Bank U.S.

Citi Private Bank and Citi Personal Wealth Management are businesses of Citigroup Inc. ("Citigroup"), which provides its clients access to a broad array of products and services available through bank and non-bank affiliates of Citigroup. Not all products and services are provided by all affiliates or are available at all locations. In the U.S., investment products and services are provided by Citigroup Global Markets Inc. ("CGMI"), member FINRA and SIPC, and Citi Private Advisory, LLC ("CPA"), member FINRA and SIPC and Citi Global Alternatives, LLC ("CGA"). CGMI accounts are carried by Pershing LLC, member FINRA, NYSE, SIPC. CPA acts as distributor of certain alternative investment products to clients of Citi Private Bank. Insurance is offered by Citi Personal Wealth Management through Citigroup Life Agency LLC ("CLA"). In California, CLA does business as Citigroup Life Insurance Agency, LLC (license number 0G56746). CGMI, CPA, CGA and Citibank, N.A. are affiliated companies under the common control of Citigroup.

Outside the U.S., investment products and services are provided by other Citigroup affiliates. Investment Management services (including portfolio management) are available through CGMI, CGA, Citibank, N.A. and other affiliated advisory businesses. These Citigroup affiliates, including CGA, will be compensated for the respective investment management, advisory, administrative, distribution and placement services they may provide.

International Personal Bank U.S. ("IPB U.S."), is a business of Citigroup which provides its clients access to a broad array of products and services available through Citigroup, its bank and non-bank affiliates worldwide (collectively, "Citi"). Through IPB U.S. prospects and clients have access to the Citigold® Private Client International, Citigold® International, International Personal, Citi Global Executive Preferred, and Citi Global Executive Account Packages. Investment products and services are made available through Citi Personal Investments International ("CPII"), a business of Citigroup which offers securities through CGMI, member FINRA and SIPC, an investment advisor and broker–dealer registered with the Securities and Exchange Commission CGMI and investment accounts are carried by Pershing LLC, member FINRA, NYSE, and SIPC. Insurance is offered by CPII through CLA. In California, CLA does business as Citigroup Life Insurance Agency, LLC (license number 0G56746). Citibank N.A., CGMI and CLA are affiliated companies under common control of Citigroup Inc.

CGWI personnel are not research analysts, and the information in this Communication is not intended to constitute "research", as that term is defined by applicable regulations. Unless otherwise indicated, any reference to a research report or research recommendation is not intended to represent the whole report and is not in itself considered a recommendation or research report.

This Communication is provided for information and discussion purposes only, at the recipient's request. The recipient should notify CGWI immediately should it at any time wish to cease being provided with such information. Unless otherwise indicated, (i) it does not constitute an offer or recommendation to purchase or sell any security, financial instrument or other product or service, or to attract any funding or deposits, and (ii) it does not constitute a solicitation if it is not subject to the rules of the CFTC (but see discussion above regarding communication subject to CFTC rules) and (iii) it is not intended as an official confirmation of any transaction.

Unless otherwise expressly indicated, this Communication does not take into account the investment objectives, risk profile or financial situation of any particular person and as such, investments mentioned in this document may not be suitable for all investors. Citi is not acting as an investment or other advisor, fiduciary or agent. The information contained herein is not intended to be an exhaustive discussion of the strategies or concepts mentioned herein or tax or legal advice. Recipients of this Communication should obtain advice based on their own individual circumstances from their own tax, financial, legal and other advisors about the risks and merits of any transaction before making an investment decision, and only make such decisions on the basis of their own objectives, experience, risk profile and resources.

The information contained in this Communication is based on generally available information and, although obtained from sources believed by Citi to be reliable, its accuracy and completeness cannot be assured, and such information may be incomplete or condensed. Any assumptions or information contained in this Communication constitute a judgment only as of the date of this document or on any specified dates and is subject to change without notice. Insofar as this Communication may contain historical and forward looking information, past performance is neither a guarantee nor an indication of future results, and future results may not meet expectations due to a variety of economic, market and other factors. Further, any projections of potential risk or return are illustrative and should not be taken as limitations of the maximum possible loss or gain. Any prices, values or estimates provided in this Communication (other than those that are identified as being historical) are indicative only, may change without notice and do not represent firm quotes as to either price or size, nor reflect the value Citi may assign a security in its inventory. Forward looking information does not indicate a level at which Citi is prepared to do a trade and may not account for all relevant assumptions and future conditions. Actual conditions may vary substantially from estimates which could have a negative impact on the value of an instrument.

Views, opinions and estimates expressed herein may differ from the opinions expressed by other Citi businesses or affiliates, and are not intended to be a forecast of future events, a guarantee of future results, or investment advice, and are subject to change without notice based on market and other conditions. Citi is under no duty to update this document and accepts no liability for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained in or derived from this Communication.

Investments in financial instruments or other products carry significant risk, including the possible loss of the principal amount invested. Financial instruments or other products denominated in a foreign currency are subject to exchange rate fluctuations, which may have an adverse effect on the price or value of an investment in such products. This Communication does not purport to identify all risks or material considerations which may be associated with entering into any transaction.

Structured products can be highly illiquid and are not suitable for all investors. Additional information can be found in the disclosure documents of the issuer for each respective structured product described herein. Investing in structured products is intended only for experienced and sophisticated investors who are willing and able to bear the high economic risks of such an investment. Investors should carefully review and consider potential risks before investing.

OTC derivative transactions involve risk and are not suitable for all investors. Investment products are not insured, carry no bank or government guarantee and may lose value. Before entering into these transactions, you should: (i) ensure that you have obtained and considered relevant information from independent reliable sources concerning the financial, economic and political conditions of the relevant markets; (ii) determine that you have the necessary knowledge, sophistication and experience in financial, business and investment matters to be able to evaluate the risks involved, and that you are financially able to bear such risks; and (iii) determine, having considered the foregoing points, that capital markets transactions are suitable and appropriate for your financial, tax, business and investment objectives.

This material may mention options regulated by the US Securities and Exchange Commission. Before buying or selling options you should obtain and review the current version of the Options Clearing Corporation booklet, Characteristics and Risks of Standardized Options. A copy of the booklet can be obtained upon request from Citigroup Global Markets Inc., 390 Greenwich Street, 3rd Floor, New York, NY 10013.

If you buy options, the maximum loss is the premium. If you sell put options, the risk is the entire notional below the strike. If you sell call options, the risk is unlimited. The actual profit or loss from any trade will depend on the price at which the trades are executed. The prices used herein are historical and may not be available when you order is entered. Commissions and other transaction costs are not considered in these examples. Option trades in general and these trades in particular may not be appropriate for every investor. Unless noted otherwise, the source of all graphs and tables in this report is Citi. Because of the importance of tax considerations to all option transactions, the investor considering options should consult with his/her tax advisor as to how their tax situation is affected by the outcome of contemplated options transactions.

None of the financial instruments or other products mentioned in this Communication (unless expressly stated otherwise) is (i) insured by the Federal Deposit Insurance Corporation or any other governmental authority, or (ii) deposits or other obligations of, or guaranteed by, Citi or any other insured depository institution.

Citi often acts as an issuer of financial instruments and other products, acts as a market maker and trades as principal in many different financial instruments and other products, and can be expected to perform or seek to perform investment banking and other services for the issuer of such financial instruments or other products. The author of this Communication may have discussed the information contained therein with others within or outside Citi, and the author and/or such other Citi personnel may have already acted on the basis of this information (including by trading for Citi's proprietary accounts or communicating the information contained herein to other customers of Citi). Citi, Citi's personnel (including those with whom the author may have consulted in the preparation of this communication), and other customers of Citi may be long or short the financial instruments or other products referred to in this Communication, may have acquired such positions at prices and market conditions that are no longer available, and may have interests different from or adverse to your interests.

IRS Circular 230 Disclosure: Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside Citi. Any statement in this Communication regarding tax matters is not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

Neither Citi nor any of its affiliates can accept responsibility for the tax treatment of any investment product, whether or not the investment is purchased by a trust or company administered by an affiliate of Citi. Citi assumes that, before making any commitment to invest, the investor and (where applicable, its beneficial owners) have taken whatever tax, legal or other advice the investor/beneficial owners consider necessary and have arranged to account for any tax lawfully due on the income or gains arising from any investment product provided by Citi.

This Communication is for the sole and exclusive use of the intended recipients, and may contain information proprietary to Citi which may not be reproduced or circulated in whole or in part without Citi's prior consent. The manner of circulation and distribution may be restricted by law or regulation in certain countries. Persons who come into possession of this document are required to inform themselves of, and to observe such restrictions. Citi accepts no liability whatsoever for the actions of third parties in this respect. Any unauthorized use, duplication, or disclosure of this document is prohibited by law and may result in prosecution.

Other businesses within Citigroup Inc. and affiliates of Citigroup Inc. may give advice, make recommendations, and take action in the interest of their clients, or for their own accounts, that may differ from the views expressed in this document. All expressions of opinion are current as of the date of this document and are subject to change without notice. Citigroup Inc. is not obligated to provide updates or changes to the information contained in this document.

The expressions of opinion are not intended to be a forecast of future events or a guarantee of future results. Past performance is not a guarantee of future results. Real results may vary.

Although information in this document has been obtained from sources believed to be reliable, Citigroup Inc. and its affiliates do not guarantee its accuracy or completeness and accept no liability for any direct or consequential losses arising from its use. Throughout this publication where charts indicate that a third party (parties) is the source, please note that the attributed may refer to the raw data received from such parties. No part of this document may be copied, photocopied or duplicated in any form or by any means, or distributed to any person that is not an employee, officer, director, or authorized agent of the recipient without Citigroup Inc.'s prior written consent.

Citigroup Inc. may act as principal for its own account or as agent for another person in connection with transactions placed by Citigroup Inc. for its clients involving securities that are the subject of this document or future editions of the document.

Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer's credit rating, or creditworthiness, causes a bond's price to decline. High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made.

(MLP's) - Energy Related MLPs May Exhibit High Volatility. While not historically very volatile, in certain market environments Energy Related MLPS may exhibit high volatility.

Changes in Regulatory or Tax Treatment of Energy Related MLPs. If the IRS changes the current tax treatment of the master limited partnerships included in the Basket of Energy Related MLPs thereby subjecting them to higher rates of taxation, or if other regulatory authorities enact regulations which negatively affect the ability of the master limited partnerships to generate income or distribute dividends to holders of common units, the return on the Notes, if any, could be dramatically reduced. Investment in a basket of Energy Related MLPs may expose the investor to concentration risk due to industry, geographical, political, and regulatory concentration.

Mortgage-backed securities ("MBS"), which include collateralized mortgage obligations ("CMOs"), also referred to as real estate mortgage investment conduits ("REMICs"), may not be suitable for all investors. There is the possibility of early return of principal due to mortgage prepayments, which can reduce expected yield and result in reinvestment risk. Conversely, return of principal may be slower than initial prepayment speed assumptions, extending the average life of the security up to its listed maturity date (also referred to as extension risk).

Additionally, the underlying collateral supporting non-Agency MBS may default on principal and interest payments. In certain cases, this could cause the income stream of the security to decline and result in loss of principal. Further, an insufficient level of credit support may result in a downgrade of a mortgage bond's credit rating and lead to a higher probability of principal loss and increased price volatility. Investments in subordinated MBS involve greater credit risk of default than the senior classes of the same issue. Default risk may be pronounced in cases where the MBS security is secured by, or evidencing an interest in, a relatively small or less diverse pool of underlying mortgage loans.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements. Price volatility may also occur from other factors including, but not limited to, prepayments, future prepayment expectations, credit concerns, underlying collateral performance and technical changes in the market.

Alternative investments referenced in this report are speculative and entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in the fund, potential lack of diversification, absence of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds and advisor risk.

Asset allocation does not assure a profit or protect against a loss in declining financial markets.

The indexes are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance.

Past performance is no guarantee of future results.

International investing entails greater risk, as well as greater potential rewards compared to US investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economics.

Investing in smaller companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity.

Factors affecting commodities generally, index components composed of futures contracts on nickel or copper, which are industrial metals, may be subject to a number of additional factors specific to industrial metals that might cause price volatility. These include changes in the level of industrial activity using industrial metals (including the availability of substitutes such as manmade or synthetic substitutes); disruptions in the supply chain, from mining to storage to smelting or refining; adjustments to inventory; variations in production costs, including storage, labor and energy costs; costs associated with regulatory compliance, including environmental regulations; and changes in industrial, government and consumer demand, both in individual consuming nations and internationally. Index components concentrated in futures contracts on agricultural products, including grains, may be subject to a number of additional factors specific to agricultural products that might cause price volatility. These include weather conditions, including floods, drought and freezing conditions; changes in government policies; planting decisions; and changes in demand for agricultural products, both with end users and as inputs into various industries.

The information contained herein is not intended to be an exhaustive discussion of the strategies or concepts mentioned herein or tax or legal advice. Readers interested in the strategies or concepts should consult their tax, legal, or other advisors, as appropriate.

Diversification does not guarantee a profit or protect against loss. Different asset classes present different risks.

Citibank, N.A., Hong Kong / Singapore organized under the laws of U.S.A. with limited liability. This communication is distributed in Hong Kong by Citi Private Bank operating through Citibank N.A., Hong Kong Branch, which is registered in Hong Kong with the Securities and Futures Commission for Type 1 (dealing in securities), Type 4 (advising on securities), Type 6 (advising on corporate finance) and Type 9 (asset management) regulated activities with CE No: (AAP937) or in Singapore by Citi Private Bank operating through Citibank, N.A., Singapore Branch which is regulated by the Monetary Authority of Singapore. Any questions in connection with the contents in this communication should be directed to registered or licensed representatives of the relevant aforementioned entity. The contents of this communication have not been reviewed by any regulatory authority in Hong Kong or any regulatory authority in Singapore. This communication contains confidential and proprietary information and is intended only for recipient in accordance with accredited investors requirements in Singapore (as defined under the Securities and Futures Act (Chapter 289 of Singapore) (the "Act" )) and professional investors requirements in Hong Kong(as defined under the Hong Kong Securities and Futures Ordinance and its subsidiary legislation). For regulated asset management services, any mandate will be entered into only with Citibank, N.A., Hong Kong Branch and/or Citibank, N.A. Singapore Branch, as applicable. Citibank, N.A., Hong Kong Branch or Citibank, N.A., Singapore Branch may sub-delegate all or part of its mandate to another Citigroup affiliate or other branch of Citibank, N.A. Any references to named portfolio managers are for your information only, and this communication shall not be construed to be an offer to enter into any portfolio management mandate with any other Citigroup affiliate or other branch of Citibank, N.A. and, at no time will any other Citigroup affiliate or other branch of Citibank, N.A. or any other Citigroup

communication shall operate to remove, exclude or restrict any of your rights or obligations of Citibank under applicable laws and regulations. Citibank, N.A., Hong Kong Branch does not intend to rely on any provisions herein which are inconsistent with its obligations under the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission, or which mis-describes the actual services to be provided to you.

Citibank, N.A. is incorporated in the United States of America and its principal regulators are the US Office of the Comptroller of Currency and Federal Reserve under US laws, which differ from Australian laws. Citibank, N.A. does not hold an Australian Financial Services License under the Corporations Act 2001 as it enjoys the benefit of an exemption under ASIC Class Order CO 03/1101 (remade as ASIC Corporations (Repeal and Transitional) Instrument 2016/396 and extended by ASIC Corporations (Amendment) Instrument 2021/510).

In the United Kingdom, Citibank N.A., London Branch (registered branch number BR001018), Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB, is authorized and regulated by the Office of the Comptroller of the Currency (USA) and authorized by the Prudential Regulation Authority. Subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. The contact number for Citibank N.A., London Branch is +44 (0)20 7508 8000.

Citibank Europe plc (UK Branch), is a branch of Citibank Europe plc, which is authorised and regulated by the Central Bank of Ireland and the European Central Bank. Authorised by the Prudential Regulation Authority. Subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. Citibank Europe plc, UK Branch is registered as a branch in the register of companies for England and Wales with registered branch number BR017844. Its registered address is Citigroup Centre, Canada Square, Canary Wharf, London E14 5LB. VAT No.: GB 429 6256 29. Citibank Europe plc is registered in Ireland with number 132781, with its registered office at 1 North Wall Quay, Dublin 1. Citibank Europe plc is regulated by the Central Bank of Ireland. Ultimately owned by Citigroup Inc., New York, USA.

Citibank Europe plc, Luxembourg Branch, registered with the Luxembourg Trade and Companies Register under number B 200204, is a branch of Citibank Europe plc. It is subject to the joint supervision of the European Central bank and the Central Bank of Ireland. It is furthermore subject to limited regulation by the Commission de Surveillance du Secteur Financier (the CSSF) in its role as host Member State authority and registered with the CSSF under number B00000395. Its business office is at 31, Z.A. Bourmicht, 8070 Bertrange, Grand Duchy of Luxembourg. Citibank Europe plc is registered in Ireland with company registration number 132781. It is regulated by the Central Bank of Ireland under the reference number C26553 and supervised by the European Central Bank. Its registered office is at 1 North Wall Quay, Dublin 1, Ireland.

In Jersey, this document is communicated by Citibank N.A., Jersey Branch which has its registered address at PO Box 104, 38 Esplanade, St Helier, Jersey JE4 8QB. Citibank N.A., Jersey Branch is regulated by the Jersey Financial Services Commission. Citibank N.A. Jersey Branch is a participant in the Jersey Bank Depositors Compensation Scheme. The Scheme offers protection for eligible deposits of up to £50,000. The maximum total amount of compensation is capped at £100,000,000 in any 5 year period. Full details of the Scheme and banking groups covered are available on the States of Jersey website www.gov.je/dcs, or on request.

In Canada, Citi Private Bank is a division of Citibank Canada, a Schedule II Canadian chartered bank. References herein to Citi Private Bank and its activities in Canada relate solely to Citibank Canada and do not refer to any affiliates or subsidiaries of Citibank Canada operating in Canada. Certain investment products are made available through Citibank Canada Investment Funds Limited ("CCIFL"), a wholly owned subsidiary of Citibank Canada. Investment Products are subject to investment risk, including possible loss of principal amount invested. Investment Products are not insured by the CDIC, FDIC or depository insurance regime of any jurisdiction and are not guaranteed by Citigroup or any affiliate thereof.

This document is for information purposes only and does not constitute an offer to sell or a solicitation of an offer to buy any securities to any person in any jurisdiction. The information set out herein may be subject to updating, completion, revision, verification and amendment and such information may change materially.

Citigroup, its affiliates and any of the officers, directors, employees, representatives or agents shall not be held liable for any direct, incidental, special, or consequential damages, including loss of profits, arising out of the use of information contained herein, including through errors whether caused by negligence or otherwise.

CCIFL is not currently a member, and does not intend to become a member of the Mutual Fund Dealers Association of Canada ("MFDA"); consequently, clients of CCIFL will not have available to them investor protection benefits that would otherwise derive from membership of CCIFL in the MFDA, including coverage under any investor protection plan for clients of members of the MFDA.

#### Global Consumer Bank (Asia Pacific and EMEA):

"Citi analysts" refer to investment professionals within Citi Research ("CR"), Citi Global Markets Inc. ("CGMI"), Citi Global Wealth Investments ("CGWI") and voting members of the Citi Global Investment Committee. Citibank N.A. and its affiliates / subsidiaries provide no independent research or analysis in the substance or preparation of this document.

The information in this document has been obtained from reports issued by CGMI and CGWI. Such information is based on sources CGMI and CGWI believe to be reliable. CGMI and CGWI, however, do not guarantee its accuracy and it may be incomplete or condensed. All opinions and estimates constitute CGMI and CGWI's judgment as of the date of the report and are subject to change without notice. This document is for general information purposes only and is not intended as a recommendation or an offer or solicitation for the purchase or sale of any security or currency. No part of this document may be reproduced in any manner without the written consent of Citibank N.A. Information in this document has been prepared without taking account of the objectives, financial situation, or needs of any particular investor. Any person considering an investment should consider the appropriateness of the investment having regard to their objectives, financial situation, or needs, and should seek independent advice on the suitability or otherwise of a particular investment. Investments are not deposits, are not obligations of, or guaranteed or insured by Citibank N.A., Citigroup Inc., or any of their affiliates or subsidiaries, or by any local government or insurance agency, and are subject to investment risk, including the possible loss of the principal amount invested. Investors investing in funds denominated in non-local currency should be aware of the risk of exchange rate fluctuations that may cause a loss of principal. Past performance is not indicative of future performance, prices can go up or down. Investment products are not

available to US persons. Investors should be aware that it is his/her responsibility to seek legal and/or tax advice regarding the legal and tax consequences of his/her investment transactions. If an investor changes residence, citizenship, nationality, or place of work, it is his/her responsibility to understand how his/her investment transactions are affected by such change and comply with all applicable laws and regulations as and when such becomes applicable. Citibank does not provide legal and/or tax advice and is not responsible for advising an investor on the laws pertaining to his/her transaction.

Citi Research (CR) is a division of Citigroup Global Markets Inc. (the "Firm"), which 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. For more information, please refer to https://www.citivelocity.com/cvr/eppublic/citi\_research\_disclosures.

#### **Market Specific Disclosures**

Australia: This document is distributed in Australia by Citigroup Pty Limited ABN 88 004 325 080, AFSL No. 238098, Australian credit licence 238098. Any advice is general advice only. It was prepared without taking into account your objectives, financial situation, or needs. Before acting on this advice you should consider if it's appropriate for your particular circumstances. You should also obtain and consider the relevant Product Disclosure Statement and terms and conditions before you make a decision about any financial product, and consider if it's suitable for your objectives, financial situation, or needs. Investors are advised to obtain independent legal, financial, and taxation advice prior to investing. Past performance is not an indicator of future performance. Investment products are not available to US people and may not be available in all jurisdictions.

**People's Republic of China:** This document is distributed by Citibank (China) Co., Ltd in the People's Republic of China (excluding the Special Administrative Regions of Hong Kong and Macau, and Taiwan).

Hong Kong: This document is distributed in Hong Kong by Citibank (Hong Kong) Limited ("CHKL") and Citibank N.A.. Citibank N.A. and its affiliates / subsidiaries provide no independent research or analysis in the substance or preparation of this document. Investment products are not available to US persons and not all products and services are provided by all affiliates or are available at all locations. Prices and availability of financial instruments can be subject to change without notice. Certain high-volatility investments can be subject to sudden and large falls in value that could equal the amount invested.

**India:** This document is distributed in India by Citibank N.A. Investment are subject to market risk including that of loss of principal amounts invested. Products so distributed are not obligations of, or guaranteed by, Citibank and are not bank deposits. Past performance does not guarantee future performance. Investment products cannot be offered to US and Canada Persons. Investors are advised to read and understand the Offer Documents carefully before investing.

Indonesia: This report is made available in Indonesia through Citibank N.A., Indonesia Branch. Citibank N. A., is a bank that is licensed, registered and supervised by the Indonesia Financial Services Authority (OJK).

**Korea:** This document is distributed in South Korea by Citibank Korea Inc. Investors should be aware that investment products are not guaranteed by the Korea Deposit Insurance Corporation and are subject to investment risk including the possible loss of the principal amount invested. Investment products are not available to US persons.

Malaysia: Investment products are not deposits and are not obligations of, not guaranteed by, and not insured by, Citibank Berhad, Citibank N.A., Citigroup Inc. or any of their affiliates or subsidiaries, or by any government or insurance agency. Investment products are subject to investment risks, including the possible loss of the principal amount invested. These are provided for general information only and are not intended as a recommendation or an offer or solicitation for the purchase or sale of any security or currency or other investment products. Citibank Berhad does not represent the information herein as accurate, true or complete, makes no warranty express or implied regarding it and no liability whatsoever will be accepted by Citibank Berhad, whether in contract, tort or otherwise, for the accuracy or completeness of such information including any error of fact or omission herein which may lead to any direct or consequential loss, damages, costs or expenses arising from any reliance upon or use of the information in the material. The contents of these materials have not been reviewed by the Securities Commission Malaysia.

**Philippines:** This document is made available in Philippines by Citicorp Financial Services and Insurance Brokerage Phils. Inc, and Citibank N.A. Philippine Branch. Investors should be aware that Investment products are not insured by the Philippine Deposit Insurance Corporation or Federal Deposit Insurance Corporation or any other government entity.

**Singapore:** This report is distributed in Singapore by Citibank Singapore Limited ("CSL"). Investment products are not insured under the provisions of the Deposit Insurance and Policy Owners' Protection Schemes Act of Singapore and are not eligible for deposit insurance coverage under the Deposit Insurance Scheme.

**Thailand:** This document contains general information and insights distributed in Thailand by Citigroup and is made available in English language only. Citi does not dictate or solicit investment in any specific securities and similar products. Investment contains certain risk, please study prospectus before investing. Not an obligation of, or guaranteed by, Citibank. Not bank deposits. Subject to investment risks, including possible loss of the principal amount invested. Subject to price fluctuation. Past performance does not guarantee future performance. Not offered to US persons.

**UAE:** This document is distributed in UAE by Citibank, N.A. UAE. Citibank N.A. UAE is licensed by UAE Securities and Commodities Authority ("SCA") to undertake the financial activity as Promoter under license number 602003. Citibank N.A. UAE is registered with Central Bank of UAE under license numbers BSD/504/83 for Al Wasl Branch Dubai, 13/184/2019 for Mall of the Emirates Branch Dubai, BSD/2819/9 for Sharjah Branch, and BSD/692/83 for Abu Dhabi Branch. This is not an official statement of Citigroup Inc. and may not reflect all of your investments with or made through Citibank. For an accurate record of your accounts and transactions, please consult your official statement. Before making any investment, each investor must obtain the investment offering materials, which include a description of the risks, fees and expenses and the performance history, if any, which may be considered in connection with making an investment decision. Each investor should carefully consider the risks associated with the investment and make a determination based upon the investor's own particular circumstances, that the investment is consistent with the investor's investment objectives. At any time, Citigroup companies may compensate affiliates and their representatives for providing products and services to clients.

United Kingdom: This document is distributed in the U.K. by Citibank UK Limited and in Jersey by Citibank N.A., Jersey Branch.

Citibank UK Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Our firm's Financial Services Register number is 805574. Citibank UK Limited is a company limited by shares registered in England and Wales with registered address at Citigroup Centre, Canada Square, Canary Wharf, London E14 5LB, Companies House Registration No. 11283101.

Citibank N.A., Jersey Branch is regulated by the Jersey Financial Services Commission. Citi International Personal Bank is registered in Jersey as a business name of Citibank N.A. The address of Citibank N.A., Jersey Branch is P.O. Box 104, 38 Esplanade, St Helier, Jersey JE4 8QB. Citibank N.A. is incorporated with limited liability in the USA. Head office: 399 Park Avenue, New York, NY 10043, USA.

© All rights reserved Citibank UK Limited and Citibank N.A. (2023).

**Vietnam:** This document is distributed in Vietnam by Citibank, N.A., - Ho Chi Minh City Branch and Citibank, N.A. - Hanoi Branch, licensed foreign bank's branches regulated by the State Bank of Vietnam. Investment contains certain risk, please study product's prospectus, relevant disclosures and disclaimers and the terms and conditions for details before investing. Investment products are not offered to US persons.

© 2023 Citigroup Inc. Citi, Citi and Arc Design and other marks used herein are service marks of Citigroup Inc. or its affiliates, used and registered throughout the world.