

16 Oct 2022 11:48:52 ET | 13 pages

# China Economics

## Continuity With Rebalancing – Takeaways from the 20th Party National Congress Political Report

### CITI'S TAKE

The 20<sup>th</sup> National Congress of the Communist Party of China (CPC) opened on October 16. General-Secretary Xi Jinping delivered an opening speech, known as the *Political Report* (PR). We see the PR signals pragmatism, continuity, and rebalancing. It articulates the CPC's policy thinking and could help clarify some concerns on China's policy directions. Economic development remains the top priority. The CPC remains committed to market-based reform and opening-up. Technology and innovation are further underscored with national security elevated to the highest level ever. We discuss eight highlights and near-term implications.

**The long-awaited Party Congress** — The 20<sup>th</sup> National Congress of the CPC opened in Beijing on October 16. General-Secretary Xi Jinping delivered the opening speech, known as the *Political Report* (PR). The Congress will continue until October 22 with a new Central Committee elected. The first Plenum will likely follow on October 23, electing the Political Bureau and its Standing Committee. The new economic team will be put in place at the National People's Congress (NPC) next March.

**Takeaways from the Political Report** — The PR signals pragmatism, continuity, and rebalancing in our view. To some extent, there is little surprise from the 20<sup>th</sup> PR, which doesn't put forward too many new concepts this time. Instead, it serves more like a summary of the CPC's current policies and could help dispel some concerns on China's directions due to certain recent policy actions. We see eight highlights from the PR: **[1]** Development remains the No.1 priority. **[2]** The CPC vows to uphold market-based reform and opening up. **[3]** Dual-Circulation Economics will be the organizing framework for economic policies. **[4]** Technology and innovation only become more important. **[5]** The emphasis on common prosperity remains, but doesn't imply an overhaul of the current income distribution system. **[6]** National security is elevated to the highest level ever. **[7]** Unsurprisingly there is no hint on the future of the Dynamic-Zero Covid (DZC) strategy. **[8]** The CPC has a cautious assessment on China's external environment, but is confident in China's engagement with the world at the same time.

**Near-term implications: from risk management to real business** — We believe the PR signals a pragmatic turn at the top level within the CPC. We reckon that a new political economy cycle will begin with politics settled. The accelerating policy momentum seems to suggest that the new cycle has already unfolded since the Beidaihe meeting in early August. As the first year for the new Political Bureau, 2023 could be a year of refocus on economic development. Guided by the pragmatism signaled by the PR, the new economic team could take a holistic approach to tackle challenges the Chinese economy is faced with today, especially Covid and property. Despite no rhetoric change this time, signals and actions post the Party Congress would be more important for our ongoing assessment for the reopening outlook in our view. We maintain our baseline that preparation to exit from the DCZ could take place in the coming months, and we could see a meaningful deviation from DCZ next year.

---

**Xiangrong Yu** <sup>AC</sup>

+852-2501-2754

xiangrong.yu@citi.com

**Xinyu Ji** <sup>AC</sup>

+852-2501-2792

xinyu.ji@citi.com

**Xiaowen Jin, CFA** <sup>AC</sup>

+852-2501-2766

xiaowen.jin@citi.com

---

See Appendix A-1 for Analyst Certification, Important Disclosures and Research Analyst Affiliations.

Citi Research 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. Certain products (not inconsistent with the author's published research) are available only on Citi's portals.

# Continuity With Rebalancing – Takeaways from the 20th Party National Congress Political Report

**The most important political event of the decade for China.** The 20<sup>th</sup> National Congress of the Communist Party of China (CPC) opened on October 16, 2022. General-Secretary Xi Jinping delivered an opening speech, known as the *Political Report* (PR). The Congress will later elect the new Central Committee of the CPC and conclude on October 22. The 20<sup>th</sup> Central Committee will then hold its first Plenum on October 23 and decide on the composition of the Politburo and its Standing Committee, the CPC's top decision-making body. For background materials, please refer to our [CPC leadership Primer](#) and [Party Congress Preview](#).

**The Political Report shows pragmatism, continuity, and rebalancing.** Having been the top leader for a decade, General-Secretary Xi has articulated his vision for China and put his ideas to work. His latest speech has only 14.4k words, 55% shorter than the PR presented to the 19<sup>th</sup> Party Congress. The speech should have covered most important points as a digest of the full report, which was reported to be 72 pages and is yet to be released ([Zaobao](#), Oct 16). [The 19th PR](#) coined “Xi Jinping Thought”, redefined the “Principal Contradiction” for the socialist China, and (re)introduced key ideas such as “high-quality development” and “common prosperity”. The new PR doesn't seem to have launched many new ideological concepts or theories. It mainly reiterates and clarifies the goals, plans, principles, and ideas established earlier, with some pragmatic rebalancing. We flag the highlights below:

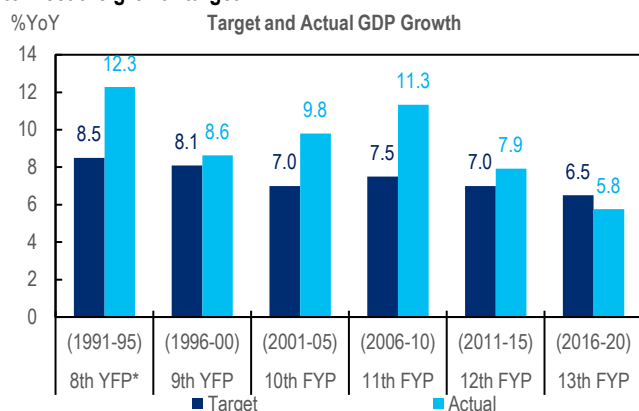
## [1] Development as the No.1 priority

**Chinese-style modernization.** Unsurprisingly, the PR reiterates the second centenary goal of “building China into a prosperous modern socialist country” by 2049 and eventually achieving “the great rejuvenation of the Chinese nation”. For the first time, it specifies “Chinese-style modernization” as the road toward the goals.

**The PR affirms economic development as the party's “first priority”,** stating that “high-quality development is the No.1 priority for the construction of a modern socialist country on all the fronts”. It pledges to push forward both “the effective improvement of the quality and the reasonable growth of the quantity” of the economy.

The reiteration is similar in spirit to Deng Xiaoping's idea that “development is the absolute principle”. After all, with GDP per capita ~US\$12,000, growth remains the ultimate solution to many challenges facing China, in our view. The PR should help dispel concerns that China might shift away from economic growth to ideological pursuits.

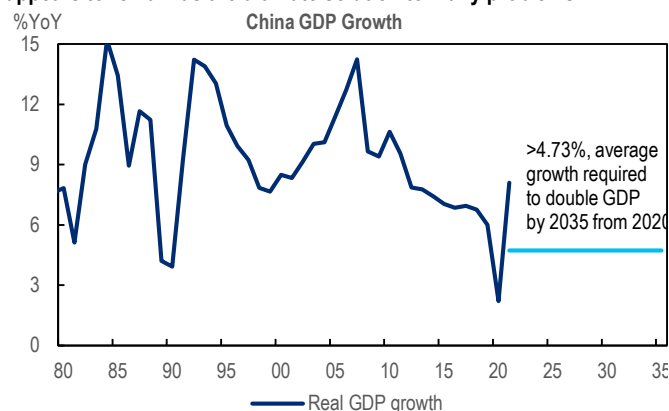
**Figure 1. The previous 13<sup>th</sup> Five-Year Plan was the only FYP that failed to meet the growth target**



© 2022 Citigroup Inc. No redistribution without Citigroup's written permission.

Source: NBS, Wind, Citi Research

**Figure 2. With GDP per capita at ~US\$12,000 as of 2021, growth appears to remain as the ultimate solution to many problems**



© 2022 Citigroup Inc. No redistribution without Citigroup's written permission.

Source: NBS, Wind, Citi Research

## [2] Market-based reform and opening up

**The PR highlights the importance of the socialist market economy**, a framework outlined by Deng Xiaoping and Jiang Zemin. It vows to uphold China's basic economic structure, developing the state-owned sector, and supporting the private sector. Markets will continue to "play a decisive role in resources allocation", while government should play a better role.

**Meanwhile, China will not cut itself off from the rest of the world.** The PR underscores opening-up as the "basic state policy", pledging to push forward high-level opening up. For the first time, the CPC pledges to step up "institutional opening-up" on rules, regulations, management, standards, and others. To put into context, China's opening-up in the past few decades has been mainly on goods and capital flows. Institutional opening-up seems to be emerging as the next venue for opening-up.

Reform and opening-up are not new ideas, but given certain policy actions in the past few years, the PR's reassurance clarifies the direction for China's road ahead. It may help ease the fear about the reverse of market-based reform and opening-up, although the implementation remains to be seen.

## [3] Dual-Circulation Economics (DCE)

**DCE remains as the organizing framework for economic policies.** Regarding the external circulation, the PR calls for efforts to enhance its quality, also signalling a continuity from previous years. On the other hand, the PR mentions to "combine the demand-expansion strategy with structural supply-side reforms" to energize the domestic circulation and to increase its sustainability. Consumption will be promoted together with a [renewed push on infrastructure investment \(II\)](#), in our view. The PR continues to emphasize food and energy security and promote self-dependent innovation via an enhanced "new whole-nation system" on the supply side.

**The focus will be on the real economy**, according to the PR. It implies that the financial sector and the real estate could play at best a supplementary role, in our opinion. Key areas to be supported include new industrialization, rural revitalization, and new urbanization, among others. As a reflection of pragmatism, General-Secretary Xi's speech doesn't mention the mantra that "housing is for living, not for

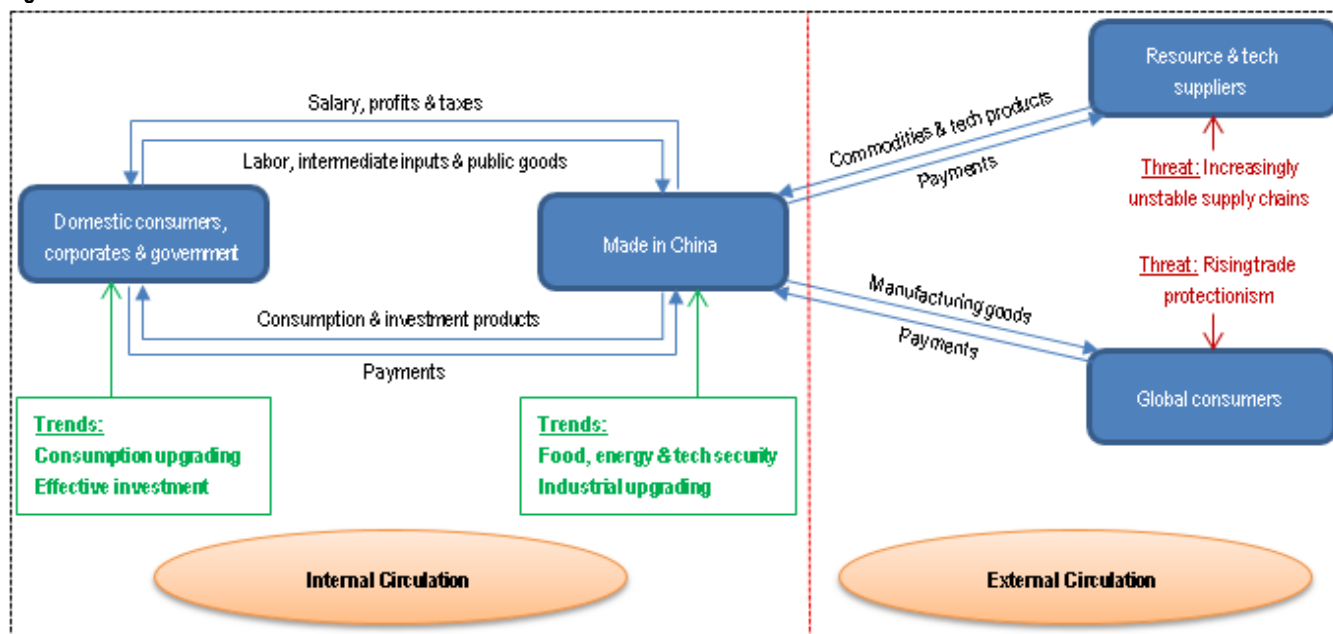
speculation”, although it could remain in the full text of the PR as in the last Party Congress ([Zaobao](#), Oct 16). Its absence from the speech could already suggest a twist on the policy stance amid the prolonged property downturn.

#### [4] Technology and innovation

The PR underlines the strategy of “rejuvenating the country through science and education”, crafted by Jiang Zemin. The push on technology and innovation is at least as forceful as the 19<sup>th</sup> PR. It calls for joint efforts to achieve breakthroughs in core technologies and realize “high-level technology self-dependence and self-strengthening”. The “new whole-nation system” will focus on key areas that are original and leading, including, as discussed in [the 14th FYP](#), AI, quantum information, integrated circuit, life & health, brain science, biological breeding, and aerospace, among others. Linked with supply-chain security, technology and innovation are also a matter of national security, according to the PR.

The PR also highlights the role of education in innovation, as “talent is the first resources”. In the 19<sup>th</sup> PR, education was mostly mentioned in the discussion of social welfare, yet in the new PR, education and talent strategy are mostly discussed in the section on technology and innovation.

Figure 3. A framework of Dual-Circulation Economics



© 2022 Citigroup Inc. No redistribution without Citigroup's written permission.

Source: Citi Research

#### [5] Common prosperity

The emphasis on common prosperity remains, as we expected. The PR sees common prosperity as a defining feature of Chinese-style modernization, but it also seems to see it as a result of development and focuses more on how to promote it through social welfare and public service.

The PR implies no fundamental change to the current allocation mechanism. Allocation by labor remains the majority with multiple other methods. The PR encourages “hard work to get rich”, promotes “equality of opportunities” and

implement the “employment-first strategy” – none is inconsistent with the market economy. The leadership is also determined to promote the social security system, expanding its coverage. All signals a continuity from the past.

**The only new signal is the mention to “regulate the wealth accumulation mechanism” for the first time.** We think it could indicate an intention to crack down illegal and unethical behaviors in the markets. However, the speech doesn’t single out “the disorderly expansion of capital” this time.

#### **[6] National security**

Security is elevated to the highest level ever. The following three points may be relevant for the economy: **[1] Supply chains.** The PR vows to ensure the security of key supply chains, supported by self-independent innovation. **[2] Food security.** It reiterates that China will solidify the foundation of food security and safeguard the red line of 1.8bn *mu* arable land. **[3] Energy security.** The PR pushes for the efforts to achieve carbon neutrality in a “proactive and steady” manner. China’s energy policy has taken a pragmatic turn, acknowledging that coal remains a key part in China’s energy structure, and the PR calls for clean usage of it.

#### **[7] Dynamic-Zero Covid (DZC)**

**The PR offers no hint on the exit from DZC, unsurprisingly.** As a strategic report, it doesn’t discuss specific pandemic measures. The PR notes that DZC has protected people’s lives and health to the greatest extent and that China has achieved encouraging outcomes from balancing Covid prevention and economic development. For the future, it only pledges to improve the public health system, the epidemic control system, and the emergency response capacity.

#### **[8] Foreign policy: cautious assessment, but with rising confidence**

**The PR has a very cautious assessment about China’s current standing.** The CPC leadership is acting on bottom-line thinking, preparing for “roaring waves” or even “violent storms”. To be sure, it is not the first time that General-Secretary Xi uses such words. At the 40<sup>th</sup> Anniversary of reform and opening-up in 2018, he also mentioned that during the process of reform, China could encounter “unprecedented violent storms” ([Xinhua](#), Dec 18, 2018). It could be a metaphor for China’s external environment, which has been constantly deteriorating since the US-China trade conflicts. Such an assessment could underpin the overarching importance of national security in the PR.

**The PR also signals rising confidence in foreign affairs.** General-Secretary Xi continues to stress China’s independent foreign policy of peace, but also adds to “fight against all forms of hegemonism and double standards”. The PR reiterates the existing rhetoric of the Taiwan issue, which could remain a flashpoint for US-China tensions. It urges the “democratization of international relations” and calls for “genuine multilateralism”. China will continue to promote the high-quality development of the *Belt and Road Initiative*. The PR is explicit that China will stand with developing countries.

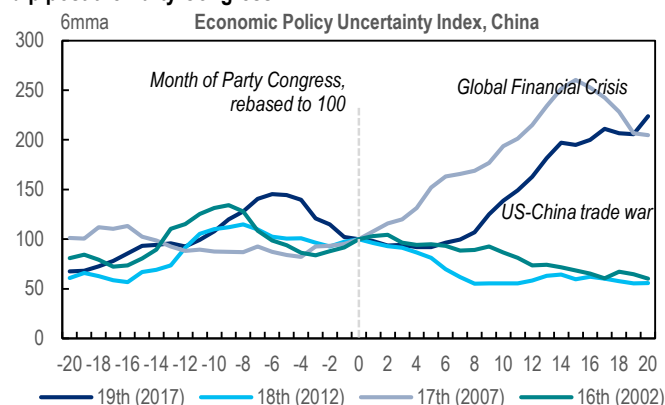
#### **Near-term implications: from risk management to real business**

**The Political Report in our view signals policy continuity with pragmatic rebalancing at the top level.** General-Secretary Xi’s speech is much shorter compared with previous congresses, but he has addressed mounting concerns on the Chinese economy due to certain policy actions in recent years. It would be a fair

assessment that there is little surprise from the 20<sup>th</sup> PR. Economic development remains the top priority. The leadership remains committed to market-based reform and opening-up. Technology and innovation are further underscored with national security elevated to the highest level ever. Instead of putting forward new concepts or theories, the 20<sup>th</sup> PR seems to serve as a summary of recent policies and attempt to clarify the mounting concerns in one go.

**We see the PR as the latest signal and also the most important signal that a new political economy cycle may be under way.** Economic development could return as the main focus with politics settled. Looking at past congresses, the economic policy uncertainty index typically moderated post the event barring external shocks such as the Global Financial Crisis and the US-China trade conflicts. It could strike an uptick prior to the congress, likely a result of political uncertainty. The growth of FAI, a major tool for the government to drive growth in China, also stabilized post the congress year amid its long-run downward trend in the past two decades. A similar pattern could have started to unfold this time.

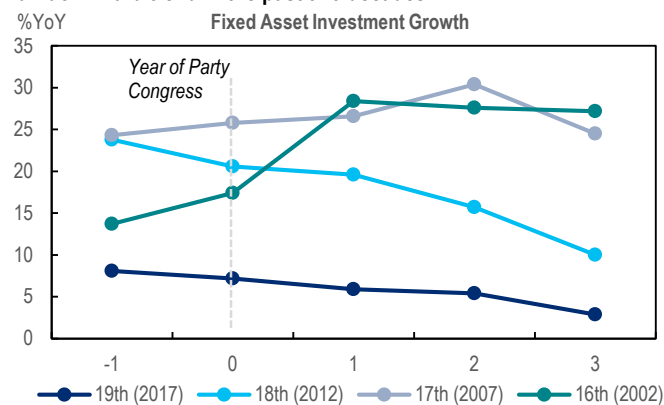
**Figure 4. Barring external shocks, economic policy uncertainty could dip post the Party Congress**



© 2022 Citigroup Inc. No redistribution without Citigroup's written permission.

Source: EPU, Citi Research

**Figure 5. FAI growth stabilized post the Congress year amid its long-run downward trend in the past two decades**



© 2022 Citigroup Inc. No redistribution without Citigroup's written permission.

Source: NBS, Wind, Citi Research

**We reckon the policy mode would shift from “risk management” to “real business” with a refocus on the economy in 2023**, the first year for the new Political Bureau. Besides the latest pragmatic twist from the PR, policy execution has been improving since the Beidaihe meeting in early August. New policy measures announced since August have accumulated to ~RMB2trn, or ~1.8% of GDP, in addition to rate cuts and property support. We believe policymakers will not shy away from incremental measures to bring the economy back on track. With the low base set this year, **we expect the government to still express the growth target as “around 5.5%” for 2023E.**

We tend to think Beijing will likely take pragmatic measures to tackle property and Covid challenges, but would also monitor actions down the road. Following the Party's 20<sup>th</sup> National Congress, a new economic team will be in place at the NPC in March 2023. The new team could be better equipped to work out a holistic approach to tackle the Covid situation and the housing sector. The central government recently added support for the property sector, aiming to stabilize sales. More support could come in the coming months. Right before the Congress, China's top official newspaper *People's Daily* published multiple articles in a row to urge the public to enhance their patience with DZC. China CDC's expert panel head Dr.

Liang Wannian also said “no timeline” for exit from zero-Covid controls ([Gov](#), Oct 13). These undermine the chance for an imminent reopening, but have no material impact on our base case for a meaningful deviation from DZC after the NPC. Signals and actions post the Party Congress would be more important for our ongoing assessment for the reopening outlook.

**Figure 6. Momentum of policy announcements has been picking up since August**

Date	Summary	RMB bn	% of 2022 GDP
<b>Monetary</b>			
Aug-15	10bp cut of 1Y MLF		
Sep-14	Relending for capex on equipment upgrade for manufacturers	200	0.17
Sep	The PBoC resumed PSL in Sep, extending RMB108bn to policy banks		
<b>Property</b>			
Aug-19	Special loans to ensure delivery, reportedly amounted to RMB200bn	200	0.17
Aug-22	15bp cut of 5y LPR		
Aug-24	Government guarantee for bond issuance of developers as reported by WSJ		
Sep-29	Lifted the constraints on mortgage rate floors for first-time home buyers in selected cities		
Sep-30	Refund of personal income tax for home sellers who buy a new one within a year		
Sep-30	15bp cut of lending rate of housing provident fund		
Sep-30	Big banks to ramp up lendings to developers as reported by Bloomberg		
<b>Fiscal</b>			
Aug-24	Clarified local governments have >RMB500bn special bonds quota for issuance by end-Oct	500	0.43
Sep-08	Fiscal subsidy for interest payment on loans for equipment purchase and upgrade R&D and capex: increase the pre-tax deduction ratio for R&D expense; 100% pre-tax deduction for equipment purchase in Q4 for high-tech companies; 100% pre-tax deduction for basic research expenditure		
Sep-14	Extended tax deferral and accelerate tax credit rebate for manufacturing and selected SMEs	472	0.41
Sep-27	Further fee deferral including sewage disposal fee and others	116	0.10
<b>Quasi-fiscal</b>			
Aug-24	Added RMB300bn to policy banks for infrastructure investment	300	0.26
Aug-31	Expand the scope of infrastructure investment supported by policy banks, included old town renovation, provincial level highway and others		
Sep-22	Further support for logistics: 10% cut for toll fees for highways, targeted financing support for highway companies, 20% cut for government set cargo charges		
Sep-27	Accelerate infrastructure construction in rural areas, aiming to complete RMB300bn investment within the year	300	0.26

© 2022 Citigroup Inc. No redistribution without Citigroup's written permission.

Source: Gov, Citi Research



If you are visually impaired and would like to speak to a Citi representative regarding the details of the graphics in this document, please call USA 1-888-800-5008 (TTY: 711), from outside the US +1-210-677-3788

## Appendix A-1

### ANALYST CERTIFICATION

The research analysts primarily responsible for the preparation and content of this research report are either (i) designated by "AC" in the author block or (ii) listed in bold alongside content which is attributable to that analyst. If multiple AC analysts are designated in the author block, each analyst is certifying with respect to the entire research report other than (a) content attributable to another AC certifying analyst listed in bold alongside the content and (b) views expressed solely with respect to a specific issuer which are attributable to another AC certifying analyst identified in the price charts or rating history tables for that issuer shown below. Each of these analysts certify, with respect to the sections of the report for which they are responsible: (1) that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc. and its affiliates; and (2) no part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in this report.

### IMPORTANT DISCLOSURES

**Disclosure for investors in the Republic of Turkey:** Under Capital Markets Law of Turkey (Law No: 6362), the investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided in accordance with a contract of engagement on investment advisory concluded between brokerage houses, portfolio management companies, non-deposit banks and clients. Comments and recommendations stated here rely on the individual opinions of the ones providing these comments and recommendations. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations. Furthermore, Citi Research is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies and/or trades on securities covered in this 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, however investors should also note that the Firm has in place organisational and administrative arrangements to manage potential conflicts of interest of this nature.

Analysts' compensation is determined by Citi Research management and Citigroup's senior management and is based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates (the "Firm"). Compensation is not linked to specific transactions or recommendations. Like all Firm employees, analysts receive compensation that is impacted by overall Firm profitability which includes investment banking, sales and trading, and principal trading revenues. One factor in equity research analyst compensation is arranging corporate access events between institutional clients and the management teams of covered companies. Typically, company management is more likely to participate when the analyst has a positive view of the company.

For financial instruments recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in such financial instruments (and any underlying instruments) and may act as principal in connection with transactions in such instruments. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Unless stated otherwise neither the Research Analyst nor any member of their team has viewed the material operations of the Companies for which an investment view has been provided within the past 12 months.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Research product ("the Product"), please contact Citi Research, 388 Greenwich Street, 6th Floor, New York, NY, 10013, Attention: Legal/Compliance [E6WYB6412478]. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures). Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Pursuant to the Market Abuse Regulation a history of all Citi Research recommendations published during the preceding 12-month period can be accessed via Citi Velocity (<https://www.citivelocity.com/cv2>) or your standard distribution portal. Historical disclosures (for up to the past three years) will be provided upon request.

### RESEARCH ANALYST AFFILIATIONS / NON-US RESEARCH ANALYST DISCLOSURES

The legal entities employing the authors of this report are listed below (and their regulators are listed further herein). Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization (but are employed by an affiliate of the member organization) and therefore may not be subject to the FINRA Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Citigroup Global Markets Asia Limited

Xiaowen Jin, CFA; Xiangrong Yu; Xinyu Ji

### OTHER DISCLOSURES

Any price(s) of instruments mentioned in recommendations are as of the prior day's market close on the primary market for the instrument, unless otherwise stated.

The completion and first dissemination of any recommendations made within this research report are as of the Eastern date-time displayed at the top of the Product. If the Product references views of other analysts then please refer to the price chart or rating history table for the date/time of completion and first dissemination with respect to that view.



European regulations require that where a recommendation differs from any of the author's previous recommendations concerning the same financial instrument or issuer that has been published during the preceding 12-month period that the change(s) and the date of that previous recommendation are indicated. Please refer to the trade history in the published research or contact the research analyst.

Citi Research has implemented policies for identifying, considering and managing potential conflicts of interest arising as a result of publication or distribution of investment research. A description of these policies can be found at [https://www.citivelocity.com/cvr/epublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/epublic/citi_research_disclosures).

The proportion of all Citi Research research recommendations that were the equivalent to "Buy", "Hold", "Sell" at the end of each quarter over the prior 12 months (with the % of these that had received investment firm services from Citi in the prior 12 months shown in brackets) is as follows: Q2 2022 Buy 33% (66%), Hold 43% (55%), Sell 23% (50%), RV 0.6% (88%); Q1 2022 Buy 34% (67%), Hold 43% (55%), Sell 23% (48%), RV 0.6% (84%); Q4 2021 Buy 33% (66%), Hold 43% (55%), Sell 23% (49%), RV 0.7% (81%); Q3 2021 Buy 34% (68%), Hold 43% (58%), Sell 23% (49%), RV 0.7% (76%). For the purposes of disclosing recommendations other than for equity (whose definitions can be found in the corresponding disclosure sections), "Buy" means a positive directional trade idea; "Sell" means a negative directional trade idea; and "Relative Value" means any trade idea which does not have a clear direction to the investment strategy.

European regulations require a 5 year price history when past performance of a security is referenced. CitiVelocity's Charting Tool ([https://www.citivelocity.com/cv2/#go/CHARTING\\_3\\_Equities](https://www.citivelocity.com/cv2/#go/CHARTING_3_Equities)) provides the facility to create customisable price charts including a five year option. This tool can be found in the Data & Analytics section under any of the asset class menus in CitiVelocity (<https://www.citivelocity.com/>). For further information contact CitiVelocity support ([https://www.citivelocity.com/cv2/go/CLIENT\\_SUPPORT](https://www.citivelocity.com/cv2/go/CLIENT_SUPPORT)). The source for all referenced prices, unless otherwise stated, is DataCentral, which sources price information from Thomson Reuters. Past performance is not a guarantee or reliable indicator of future results. Forecasts are not a guarantee or reliable indicator of future performance.

Investors should always consider the investment objectives, risks, and charges and expenses of an ETF carefully before investing. The applicable prospectus and key investor information document (as applicable) for an ETF should contain this and other information about such ETF. It is important to read carefully any such prospectus before investing. Clients may obtain prospectuses and key investor information documents for ETFs from the applicable distributor or authorized participant, the exchange upon which an ETF is listed and/or from the applicable website of the applicable ETF issuer. The value of the investments and any accruing income may fall or rise. Any past performance, prediction or forecast is not indicative of future or likely performance. Any information on ETFs contained herein is provided strictly for illustrative purposes and should not be deemed an offer to sell or a solicitation of an offer to purchase units of any ETF either explicitly or implicitly. The opinions expressed are those of the authors and do not necessarily reflect the views of ETF issuers, any of their agents or their affiliates.

Citigroup Global Markets India Private Limited and/or its affiliates may have, from time to time, actual or beneficial ownership of 1% or more in the debt securities of the subject issuer.

Please be advised that pursuant to Executive Order 13959 as amended (the "Order"), U.S. persons are prohibited from investing in securities of any company determined by the United States Government to be the subject of the Order. This research is not intended to be used or relied upon in any way that could result in a violation of the Order. Investors are encouraged to rely upon their own legal counsel for advice on compliance with the Order and other economic sanctions programs administered and enforced by the Office of Foreign Assets Control of the U.S. Treasury Department.

This communication is directed at persons who are "Eligible Clients" as such term is defined in the Israeli Regulation of Investment Advice, Investment Marketing and Investment Portfolio Management law, 1995 (the "Advisory Law"). Within Israel, this communication is not intended for retail clients and Citi will not make such products or transactions available to retail clients. The presenter is not licensed as investment advisor or marketer by the Israeli Securities Authority ("ISA") and this communication does not constitute investment or marketing advice. The information contained herein may relate to matters that are not regulated by the ISA. Any securities which are the subject of this communication may not be offered or sold to any Israeli person except pursuant to an exemption from the Israeli public offering rules, including according to the Israeli Securities Law.

Citi Research generally disseminates its research to the Firm's global institutional and retail clients via both proprietary (e.g., Citi Velocity and Citi Personal Wealth Management) and non-proprietary electronic distribution platforms. Certain research may be disseminated only via the Firm's proprietary distribution platforms; however such research will not contain changes to earnings forecasts, target price, investment or risk rating or investment thesis or be otherwise inconsistent with the author's previously published research. Certain research is made available only to institutional investors to satisfy regulatory requirements. Individual Citi Research analysts may also opt to circulate published research to one or more clients by email; such email distribution is discretionary and is done only after the research has been disseminated. The level and types of services provided by Citi Research analysts to clients may vary depending on various factors such as the client's individual preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with the Firm and legal and regulatory constraints.

Pursuant to Comissão de Valores Mobiliários Resolução 20 and ASIC Regulatory Guide 264, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. Statements and views concerning ESG (environmental, social, governance) factors are typically based upon public statements made by the affected company or other public news, which the author may not have independently verified. ESG factors are one consideration that investors may choose to examine when making investment decisions. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies

discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Research does not set a predetermined frequency for publication, if the Product is a fundamental equity or credit research report, it is the intention of Citi Research to provide research coverage of the covered issuers, including in response to news affecting the issuer. For non-fundamental research reports, Citi Research may not provide regular updates to the views, recommendations and facts included in the reports. Notwithstanding that Citi Research maintains coverage on, makes recommendations concerning or discusses issuers, Citi Research may be periodically restricted from referencing certain issuers due to legal or policy reasons. Where a component of a published trade idea is subject to a restriction, the trade idea will be removed from any list of open trade ideas included in the Product. Upon the lifting of the restriction, the trade idea will either be re-instated in the open trade ideas list if the analyst continues to support it or it will be officially closed. Citi Research may provide different research products and services to different classes of customers (for example, based upon long-term or short-term investment horizons) that may lead to differing conclusions or recommendations that could impact the price of a security contrary to the recommendations in the alternative research product, provided that each is consistent with the rating system for each respective product.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

**Important Disclosures for Bell Potter Customers:** Bell Potter is making this Product available to its clients pursuant to an agreement with Citigroup Global Markets Australia Pty Limited. Neither Citigroup Global Markets Australia Pty Limited nor any of its affiliates has made any determination as to the suitability of the information provided herein and clients should consult with their Bell Potter financial advisor before making any investment decision.

**The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by.**

The Product is made available in **Australia** through Citigroup Global Markets Australia Pty Limited. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. Citigroup Global Markets Australia Pty Limited is not an Authorised Deposit-Taking Institution under the Banking Act 1959, nor is it regulated by the Australian Prudential Regulation Authority.

The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários ("CVM"), BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBIMA - Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais. Av. Paulista, 1111 - 14º andar(parte) - CEP: 01311920 - São Paulo - SP.

If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3.

This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile.

**Disclosure for investors in the Republic of Colombia :** This communication or message does not constitute a professional recommendation to make investment in the terms of article 2.40.1.1.2 of Decree 2555 de 2010 or the regulations that modify, substitute or complement it. Para la elaboración y distribución de informes de investigación y de comunicaciones generales de que trata este artículo no se requiere ser una entidad vigilada por la Superintendencia Financiera de Colombia.

The Product is made available in **Germany** by Citigroup Global Markets Europe AG ("CGME"), which is regulated by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht BaFin). CGME, Reuterweg 16, 60323 Frankfurt am Main.

Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A.(organized under the laws of U.S. A. with limited liability), Champion Tower, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document.

The Product is made available in **India** by Citigroup Global Markets India Private Limited (CGM), which is regulated by the Securities and Exchange Board of India (SEBI), as a Research Analyst (SEBI Registration No. INH000000438). CGM is also actively involved in the business of merchant banking and stock brokerage in India, and is registered with SEBI in this regard. CGM's registered office is at 1202, 12th Floor, FIFC, G Block, Bandra Kurla Complex, Bandra East, Mumbai - 400098. CGM's Corporate Identity Number is U99999MH2000PTC126657, and its contact details are: Tel: +9102261759999 Fax: +9102261759961. The Investor Charter in respect of Research Analysts and Complaints information can be found at [https://www.citivelocity.com/cvr/eppublic/citi\\_research\\_disclosures](https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures)

The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations.

The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A, Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel.

The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Otemachi Park

Building, 1-1-1 Otemachi, Chiyoda-ku, Tokyo 100-8132 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help.

The product is made available in the **Kingdom of Saudi Arabia** in accordance with Saudi laws through Citigroup Saudi Arabia, which is regulated by the Capital Market Authority (CMA) under CMA license (17184-31). 2239 Al Urubah Rd – Al Olaya Dist. Unit No. 18, Riyadh 12214 – 9597, Kingdom Of Saudi Arabia.

The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Center, 50 Saemunan-ro, Jongno-gu, Seoul 03184, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/websquare/index.jsp?w2xPath=/wq/fundMgr/DISFundMgrAnalystList.xml&divisionId=MDIS03002002000000&serviceId=SDIS030020020000>. The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Services Commission and the Financial Supervisory Service. Address is Citibank Center, 50 Saemunan-ro, Jongno-gu, Seoul 03184, Korea. This research report is intended to be provided only to Professional Investors as defined in the Financial Investment Services and Capital Market Act and its Enforcement Decree in Korea.

The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product.

The Product is made available in **Mexico** by Citibanamex Casa de Bolsa, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Citibanamex which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comision Nacional Bancaria y de Valores. Actuario Roberto Medellín 800, Zedec Santa Fe, Álvaro Obregón, 01219 Ciudad de México, CDMX.

In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000.

The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200.

The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas.

The Product is made available in **Poland** by Biuro Maklerskie Banku Handlowego (DMBH), separate department of Bank Handlowy w Warszawie S.A. a subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Biuro Maklerskie Banku Handlowego (DMBH), ul.Senatorska 16, 00-923 Warszawa.

The Product is made available in the **Russian Federation** through AO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow.

The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigold/Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289).

Citigroup Global Markets (Pty) Ltd. is incorporated in the **Republic of South Africa** (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa.

The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the license scope and the applicable laws and regulations in the Republic of China. CGMTS is regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS]. Pursuant to the applicable laws and regulations in the Republic of China, the recipient of the Product shall not take advantage of such Product to involve in any matters in which the recipient may have conflicts of interest. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus.

The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 399 Interchange 21 Building, 18th Floor, Sukhumvit Road, Klongtoey Nua, Wattana, Bangkok 10110, Thailand.



The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Büyükdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey.

In the **U.A.E.**, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different Citi Research ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties.

The Product is made available in **United Kingdom** by Citigroup Global Markets Limited, which is authorised by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA. This material may relate to investments or services of a person outside of the UK or to other matters which are not authorised by the PRA nor regulated by the FCA and the PRA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB.

The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013.

Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Europe AG ("CGME"), which is regulated by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht-BaFin).

The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted. Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. The yield and average life of CMOs (collateralized mortgage obligations) referenced in this Product will fluctuate depending on the actual rate at which mortgage holders prepay the mortgages underlying the CMO and changes in current interest rates. Any government agency backing of the CMO applies only to the face value of the CMO and not to any premium paid. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product.

Citi Research product may source data from dataCentral. dataCentral is a Citi Research proprietary database, which includes the Firm's estimates, data from company reports and feeds from Thomson Reuters. The source for all referenced prices, unless otherwise stated, is DataCentral. Past performance is not a guarantee or reliable indicator of future results. Forecasts are not a guarantee or reliable indicator of future performance. The printed and printable version of the research report may not include all the information (e.g. certain financial summary information and comparable company data) that is linked to the online version available on the Firm's proprietary electronic distribution platforms.

**Card Insights.** Where this report references Card Insights data, Card Insights consists of selected data from a subset of Citi's proprietary credit card transactions. Such data has undergone rigorous security protocols to keep all customer information confidential and secure; the data is highly aggregated and anonymized so that all unique customer identifiable information is removed from the data prior to receipt by the report's author or distribution to external parties. This data should be considered in the context of other economic indicators and publicly available information. Further, the selected data represents only a subset of Citi's proprietary credit card transactions due to the selection methodology or other limitations and should not be considered as indicative or predictive of the past or future financial performance of Citi or its credit card business.

Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. Part of this product may contain Sustainalytics proprietary information that may not be reproduced, used, disseminated, modified nor published in any manner without the express written consent of Sustainalytics. Sustainalytics, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Any information attributed to Sustainalytics is provided solely for informational purposes and on its own should not be considered an offer to buy or sell a security. Neither Sustainalytics nor all its third-party suppliers provide investment advice (as defined in the applicable jurisdiction) or any other form of (financial) advice. The information is provided "as is" and, therefore Sustainalytics assumes no responsibility for errors or omissions. Sustainalytics cannot be held liable for damage arising from the use of this product or information contained herein in any manner whatsoever. Where data is attributed to Morningstar that data is © 2022 Morningstar, Inc. All Rights Reserved. That information: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.

The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in any way form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

© 2022 Citigroup Global Markets Inc. Citi Research is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. The research data in this report are not

intended to be used for the purpose of (a) determining the price of or amounts due in respect of (or to value) one or more financial products or instruments and/or (b) measuring or comparing the performance of, or defining the asset allocation of a financial product, a portfolio of financial instruments, or a collective investment undertaking, and any such use is strictly prohibited without the prior written consent of Citi Research. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party.

---

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

---