IDEA

October 6, 2024 09:08 PM GMT

China Economics and Equity Strategy | Asia Pacific

What Is the Fiscal Policy Expectation? How to Position?

We expect a Rmb2trn initial fiscal package, likely to be positively received by onshore investors. Index valuations have reached their 5-year averages as internet and ChiNext lag. Minor tactical upside is possible, but watch for volatility spikes in case of external changes and A-share market overheating.

We put the current rally into context and identify investment opportunities by answering the following questions:

Q1 – What is the market expectation for the fiscal package? We expect the announcement of a Rmb2trn fiscal package soon (possibly with the first batch to be unveiled at an Oct 8 NDRC press conference), which could include support for local government financing, infrastructure capex, a modest consumption boost, and/or bank recapitalization. Based on our marketing feedback, the size and timing of the stimulus will likely be viewed positively by onshore investors, as it reaffirms Beijing's commitment to reflation with more concerted policy efforts, albeit using the timetested trial-and-error approach.

Q2 – Where are we vs. China's equity market valuation history? Valuations for major market indices have all largely hit or surpassed 2023's post-Covid reopening peak; similar observations can be seen vs. the 5-year average level. At the sub-index level, ChiNext and the China internet space are still significantly lagging the rally, trading at 27-37% discounts to 2023's peak and the 5-year average. Starboard is the exception, trading at a premium vs. 2023's peak (+21%) and the 5-year average (8%).

Q3 – Where are we vs. previous rallies? We identify five rallies over the last 10 years (Exhibit 1 - Exhibit 4). We observe that:

- On average a rally (MSCI China as benchmark) lasted 231 days with average upside of 65.6% and a valuation re-rating of 55.6%;
- However, the duration and magnitude of each rally show a declining trend, as China's macro slowdown dragged down sentiment and positioning;
- The current rally lags the historical average in both duration and magnitude.
 However, it has beaten the Feb May 2024 recovery rally on both measures.

Q4 – How to position / risks to monitor? The tactical rally is likely to continue. Another 12% or more near-term upside could be driven by a valuation re-rating to narrow the gap with EM. Rising demand in diversification and benchmarking could drive more inflows and upside. We see large-cap internet and broad consumption names as well positioned should swift fiscal policy measures come through and macro signs improve, given attractive valuations and high liquidity. We advise monitoring for market volatility spikes due to potential external factors such as geopolitical moves and/or a global liquidity shift, A-share market overheating, etc.

MORGAN STANLEY ASIA LIMITED

Laura Wang

Equity Strategist
Laura.Wang@morganstanley.com +852 2848-6853

Robin Xing

Chief China Economist

Robin.Xing@morganstanley.com +852 2848-6511

Jenny Zheng, CFA

Economist

Jenny.L.Zheng@morganstanley.com +852 3963-4015

Catherine Chen

Equity Strategist

Catherine.Chen@morganstanley.com +852 3963-4186

Chloe Liu

Equity Strategist

Chloe.Liu1@morganstanley.com +852 2848-5497

Zhipeng Cai

Economis

Zhipeng.Cai@morganstanley.com +852 2239-7820

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

+= Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to FINRA restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

What is the market expectation for fiscal policy?

Size of initial fiscal package likely to be modest at Rmb2trn...Market speculation on an imminent fiscal stimulus package has increased. We expect a Rmb2trn fiscal package to be announced soon. The NDRC press conference on Oct 8 may announce the first batch, followed by the Ministry of Finance in the next few weeks. The key focus will be on support for local government financing and the recapitalization of six major commercial banks, but there may also be a modest boost to consumption and/or social benefits.

...but it could be positively received by onshore investors: Some foreign investors may view a Rmb2trn fiscal package as underwhelming, with insufficient support for economic rebalancing. That said, onshore investors might view this as positive, as the size and timing of the initial stimulus would reaffirm Beijing's reflation commitment with more concerted policy efforts. It is also in line with Beijing's time-tested trial-and-error approach, particularly as policymakers are shifting to adopting new measures to address demand weakness and local government debt.

More meaningful fiscal support for housing and social welfare spending is needed:

Investors we talk to agree that for decisive reflation, more central government leveraging up is needed to support housing inventory digestion and social welfare reforms – a key to boosting consumption by reducing precautionary savings and negative wealth effects. In our view, the optimal stimulus size should be Rmb10trn over a two-year horizon, which could effectively lift the GDP deflator back to a healthy level of 2-2.5% in 2025-26. That said, given Beijing's trial-and-error approach, the initial stimulus size will likely remain modest over the next 1-2 years. A "whatever it takes" moment could be triggered by a rapid decline in our Social Dynamics Indicator (see China Musings: Addressing Your Top Questions on China Stimulus, Sep 29, 2024).

3

Where are we in the rally vs. history?

Question 1 – Where are we vs. China's equity market valuation history

Key observations:

- Valuations for major market indices have all largely hit or surpassed 2023's post-Covid reopening peak;
- Similar observations can be seen vs. 5-year averages;
- At the sub-index level, ChiNext board and the China internet space still significantly lag, trading at 27-37% discounts to 2023's peak and the 5-year average;
- Starboard is the exception, trading at a premium vs. 2023's peak (+21%) and the 5-year average (8%).

Exhibit 1: Major index valuation vs. history

Index	MSCI China	Hang Seng Index	Hang Seng Tech Index	CSI 300	Shanghai Composite	ChiNext	Internet Composite Index	Starboard	MSCIEM	MSCI APxJ
Current valuation (12-mon fwd P/E)	11.4	10.4	21.2	13.4	13.3	26.6	16.3	55.1	12.8	15.2
Peak valuation (Dec 22 - Feb 23)	11.7	10.5	43.5	12.3	12.6	36.2	24.0	45.4	12.5	14.6
Premium / Discount v.s. peak	-2.7%	-1.1%	-51.4%	8.7%	6.0%	-26.5%	-32.1%	21.3%	2.5%	3.9%
Avg valuation in past 5 years	11.7	10.3	32.0	12.4	12.2	37.5	25.7	51.0	12.5	15.0
Premium / Discount v.s. 5 years avg	-2.4%	0.8%	-33.9%	7.4%	9.7%	-28.9%	-36.6%	8.1%	1.9%	1.0%
Standard deviation	2.4	1.8	11.1	1.6	1.3	12.2	9.0	14.3	1.4	2.3
Premium/Discount vs. 5-yr avg (in stdev)	-0.1x	0.0x	-1.0x	0.6x	0.9x	-0.9x	-1.0x	0.3x	0.2x	0.1x

Source: Datastream, BBG, Morgan Stanley Research. Data as of Oct 3, 2024

More detailed read-through: As indicated in Exhibit 1, the three major components of the China equity space – the onshore A-share market, the Hong Kong market, and the major ADR indices (CSI 300, Hang Seng Index and MSCI China) are trading at forward P/Es of 10-13x (as of Oct 3, 2024), up 13.1%, 12.6%, and 14.8%, respectively, vs. one week ago (Sep 26, 2024). The current valuation level is comparable to the prior peak at the end of 2022 / beginning of 2023 (with CSI 300, HSI and MSCI China trading at 12.3x, 10.5x and 11.7x), while MSCI China's valuation is still 38% below its all-time peak in Feb 2021.

From the perspective of 5-year averages, MSCI China is trading 2.4% below, while the Hang Seng Index and CSI 300 were 0.8% and 7.4% above the 5-year averages (as of Oct 3). Tech indices have been trading much higher versus broad indices, with the Hang Seng Tech, ChiNext Internet Composite Index and Starboard trading at forward P/Es of 21.2x, 26.6x, 16.3x, and 55.1x, while most of them (except for Starboard) are trading at 1 standard deviation below and around -30% discount vs. the 5-year average (Exhibit 1).

MSCI China and Hang Seng Index are now 2.7% and 1.1% below prior peak valuations in Dec 2022 to Feb 2023, while the CSI 300 and Shanghai Composite are 8.7% and 6.0% above their peaks for that period, respectively.

Question 2 – Where are we vs. previous rallies?

Key observations:

 Across the five previous rallies we have identified, on average they (MSCI China as benchmark) have lasted 231 days, with average upside of 65.6% and a valuation rerating of 55.6% (the average would be 233 days, upside of 36.4% and a valuation re-rating of 36.5% for the Hang Seng Index and 224 days, 53.5% and 47.3% for

- Shanghai Composite).
- However, the duration and magnitude of each rally show a declining trend, as China's macro slowdown has taken the driver's seat, dragging down sentiment and positioning;
- The current rally so far lags the historical average in both duration and magnitude.
 However, it has beaten the Feb-May 2024 recovery rally on both measures.

Exhibit 2: MSCI China bull market table

MSCI China bull market table									
Start Date	End Date	Trough Date	# of days lasted (in trading days)	Index level return in USD%	Valuation rerating in %	# of days taken to fall to the next trough	Index level decline in USD% from peak to trough		
5/7/2014	4/27/2015	9/3/2015	254	48.6%	50.3%	94	-33.9%		
2/12/2016	1/26/2018	10/29/2018	511	111.6%	70.0%	197	-33.1%		
3/19/2020	2/17/2021	3/15/2022	240	86.5%	87.1%	280	-54.8%		
10/31/2022	1/27/2023	1/19/2024	65	59.7%	47.4%	256	-33.4%		
1/29/2024	5/22/2024	8/5/2024	83	21.6%	23.1%	54	-13.2%		
Historical 5 rallies average			231	65.6%	55.6%	176.2	-33.7%		
9/23/2024	10/3/2024	N/A	9	27.1%	26.2%	N/A	N/A		

Source: Datastream, Bloomberg, Morgan Stanley Research. Data as of Oct 3, 2024

Exhibit 3: Hang Seng Index bull market table

Hang Seng Index bull market table									
Start Date	End Date	Trough Date	# of days lasted (in trading days)	Index level return in USD%	Valuation rerating in %	# of days taken to fall to the next trough	Index level decline in USD% from peak to trough		
5/7/2014	5/4/2015	9/9/2015	259	29.3%	31.7%	93	-21.3%		
2/11/2016	1/31/2018	10/24/2018	515	76.7%	53.8%	191	-23.4%		
3/30/2020	2/17/2021	10/20/2021	233	34.2%	63.2%	176	-16.2%		
11/7/2022	2/10/2023	1/18/2024	70	27.7%	19.7%	245	-27.1%		
2/6/2024	6/4/2024	8/21/2024	86	14.4%	14.1%	57	-5.5%		
Historical 5 rallies average		233	36.4%	36.5%	152.4	-18.7%			
9/23/2024	10/3/2024	N/A	9	21.5%	20.3%	N/A	N/A		

Source: Datastream, Bloomberg, Morgan Stanley Research. Data as of Oct 3, 2024

Exhibit 4: Shanghai Composite bull market table

Shanghai Composite bull market table									
Start Date	End Date	Trough Date	# of days lasted (in trading days)	Index level return in USD%	Valuation rerating in %	# of days taken to fall to the next trough	Index level decline in USD% from peak to trough		
7/22/2014	6/12/2015	8/25/2015	234	148.7%	148.8%	53	-44.4%		
5/13/2016	1/26/2018	12/26/2018	446	29.8%	23.2%	239	-35.5%		
3/23/2020	2/18/2021	4/25/2022	239	52.0%	21.9%	308	-21.3%		
10/31/2022	4/21/2023	1/17/2024	125	20.9%	31.3%	194	-17.8%		
2/5/2024	5/21/2024	9/18/2024	77	16.2%	11.0%	87	-12.2%		
Historical 5 rallies average			224	53.5%	47.3%	176.2	-26.3%		
9/23/2024	10/3/2024	N/A	9	22.1%	21.3%	N/A	N/A		

Source: Datastream, Bloomberg, Morgan Stanley Research. Data as of Oct 3, 2024

History recap: Five China equity market rallies in the last ten years

1) May/July 2014 - Apr/May/June 2015, the biggest A-share market rally in the past 10 years. A series of policy announcements had preceded the kickoff of this cycle, including a) the announcement from Premier Li Keqiang that the Stock Connect program would be launched (April 10, 2014), b) followed by the proposed plan to extend the margin transaction timeline to 18 months (July 22, 2014), and c) the launch of Shanghai / Shenzhen – Hong Kong Stock Connect (Nov 17 and Dec 5, 2014), among others. This was the biggest A-share market rally recorded over the last 10 years, measured by trough-to-peak index moves, with the Shanghai Composite Index up 149% in US\$ terms (Exhibit 4).

^{*}Please scroll down for a quick recap of the five previous rallies we have identified.

The rally eventually stopped rather abruptly due to: 1) concerns about over-leverage built up in the equity market through margin financing (including from OTC channels), which had led to a targeted crackdown; and 2) more importantly, macro fundamentals were still under pressure with overcapacity in old economy sectors, PPI deflation persisting, soaring debt-to-GDP levels, and declining ROE. See our report explaining the bull cycle rationale.

For MSCI China and Hang Seng, both had gone through a bull cycle within largely the same time frame, but on a much smaller scale (48.6% up for MSCI China and 29.3% up for Hang Seng, Exhibit 2, Exhibit 3). This is because: 1) many of the liquidity relaxation measures (margin financing, brokerage account opening relaxation etc.) were A-share specific; 2) A-share market didn't get included into MSCI China until 2018; and 3) even MSCI China was still dominated by cyclical and SOE companies at the time as ADRs weren't included until late 2016.

2) Feb/May 2016 - Jan 2018, the longest rally backed by structural reforms and fundamental improvement, and the biggest one for the offshore space (Hang Seng, MSCI China). The next biggest Chinese stock rally occurred from Feb 2016 to Jan 2018. We see the following as major drivers behind this rally: a) macro and consumption recovery as well as a real estate up cycle; b) successful supply side reform which had cut down excess capacity, de-leveraged and improved ROE significantly for the Old Economy sectors (energy, industrials, materials); and c) major equity market-friendly events and supply side supportive policies. These included Shenzhen/HK Southbound flows kicking in, MSCI including Chinese ADRs (largely Chinese large-cap internet companies) into global indices from late 2016, as well as MSCI's announcement that A shares were to be included in its EM indices in two phases. This is the largest rally over the past 10 years for the offshore indices - MSCI China and Hang Seng, which rose by ~112% and 77%, respectively. This rally ended as a result of: a) policy tightening as well as shadow banking and trust product clean-up; b) US/China trade tensions kicking off; and c) profit-taking after the fulfillment/ execution of several major index inclusion/ rebalancing events.

3) Mar 2020 - Feb 2021 with the biggest valuation re-rating for the offshore market. The next nearly-one-year rally occurred from early 2020 to early 2021 during the Covid period. Main drivers behind this rally included: a) the Chinese government's forceful anti-Covid measures during the initial phase, a stance taken much earlier than rest of the world; b) rapid penetration of platform economies including e-commerce, online education, and others; and c) easing at a global level which helped with market liquidity and risk sentiment - the Fed rate cut and 2 trillion USD stimulus plans (the FOMC delivered two huge rate cuts at unscheduled emergency meetings in March 2020, returning the federal funds target rate range of zero to 0.25%), and QFII/RQFII rule relaxation. Eventually, the market entered a persistent downward trend on the back of a) policy tightening and rising yield; b) proactive effort to deflate the housing bubble, starting from "three red line" announcement; and c) regulatory tightening across multiple sectors including gaming, education, and healthcare.

4) Oct/Nov 2022 - Jan/Feb/Apr 2023 – the post-Covid reopening rally. The fourth rally lasted for shorter period starting from late 2022, with Covid relaxation, guidelines and reopening on Nov 11, 2022, beating market expectation. Investors were excited at the macro growth potential, but ended up disappointed from 2Q2023 with signs of slowdown across major macro data prints and further deterioration of housing deflation.

5) Jan/Feb 2024 - May/June 2024 - the National Team rescue. The latest rally in early 2024 lasted just three months and had two legs: a) in Feb-Apr, market sentiment somewhat stabilized and then rose gradually, primarily caused by a step-up of government market rescue measures and some early signs of macro stabilization; and b) more importantly, external global factors had helped to drive the rally to a different level with global geopolitical tension rising, and some heightened volatility in the US and Japan markets. The rally lost momentum as the global market returned to normal, while China's temporary signs of macro stabilization once again proved to be transitory and short-lived.

How to position from here & risks to monitor

We believe there will be three legs to this latest rally, and the low-hanging fruit has already been picked:

- Leg 1: In the near term, technically ~15% upside based on the relending program's borrowing cost at 2.25% vs. the CSI 300's dividend yield of 2.6% at the start of the rally. This has already been priced in by now.
- Leg 2: Up to 12% upside implied by re-rating opportunity. Still ongoing. Global investors are becoming more willing to give Chinese equities a higher valuation on the hope that China will combat debt-deflation. We look at the post Covid reopening valuation peak as a reference point, where MSCI China traded as high as 12x forward P/E, compared with the index's current valuation of around 11.4x. Alternatively, during that period, MSCI China's valuation discount to MSCI EM had collapsed to a low single digit. MSCI China now trades at a 12% discount vs. MSCI EM. A repeat of history in terms of the relative valuation gap convergence with the EM market would imply a further valuation re-rating opportunity of similar scale.

Additional upside for this leg could be driven by asset allocation diversification and benchmarking. China's index weight in MSCI EM has climbed from 24% to over 29% in only one month. Given rising global uncertainty on the macro, geopolitical, and cyclical fronts, we see an increasing chance of rising allocations to China, with an independent and separate cycle to the rest of the world. We advise closely monitoring the following on the external fronts: Fed rate cut pace (our US economists continue to expect two more 25bps cuts this year), US election dynamics, and the global geopolitical environment.

- Leg 3: Earnings growth needs to catch up. For the current rally to go further, investors will need to see more concrete evidence of China breaking out of its debt-deflation loop (which the Feb-May 2024 rally failed to do). For that to happen we would likely need to see the following:
- Fiscal policy follow-through by the late Oct NPC standing committee meeting, with a commitment to fiscal spending expansion targeting consumption stimulus and local government projects. The Oct 8 NDRC press conference will be the first event to watch;
- More details regarding the PBOC equity purchase programs with regular and transparent communication;
- More signals of accelerated excess housing inventory clearing through: 1) improved housing sales; and 2) more forceful implementation of the government-sponsored housing inventory relending program;
- Further fiscal policy affirmation by CEWC (Central Economic Work Conference) in Dec 2024:
- Corporate earnings growth bottoming out by 1Q/2Q25.

How to position: As each of these milestones is reached, beneficiaries of the rally will likely shift towards reflationary related and higher beta stocks. We see the large cap internet space and broad consumption as being well positioned given their still attractive valuation, large cap nature and high liquidity, as well as their exposure to reflation. As a

secondary derivative, as corporate capex picks up and investment activities start to reaccelerate, stocks exposed to industrials and materials, as well as IT related spending could also benefit. We also closely monitor any major rollout of social welfare benefits, for example, a major refunding of medical insurance coverage could particularly benefit healthcare companies.

Risks to watch:

- Market getting overheated? Our last reading of A-share sentiment index before the National Day holiday suggested that the absolute level is still well within the normal range, however the pace of the jump (doubling in one week before and after the PBOC and Politburo announcements) has never been seen, and could trigger our sentiment reading to approach an overheated threshold level soon. Meanwhile, the risk of an A-share frenzy bears watching as prolonged stock-selling restrictions (e.g. IPOs, shareholder selling) might set the stage for a potential boom-and-bust cycle.
- Has government policy follow-through under-delivered? We would like to see certain milestones as laid out above to be reached in a timely fashion. However, there seems to be some gap between what's needed as a stimulus package (Rmb10trn, in our view) and what's likely to be delivered (Rmb2-3trn each year for two years).
- **External factors** include geopolitical uncertainties, the US Fed rate cut path, and US elections, as well as other external events that cannot be predicted.



Disclosure Section

The information and opinions in Morgan Stanley Research were prepared or are disseminated by Morgan Stanley Asia Limited (which accepts the responsibility for its contents) and/or Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research), and/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International plc, Seoul Branch, and/or Morgan Stanley Australia Limited (A.B.N. 67003734576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents), and/or Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19009 145555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents), and/or Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at 18th Floor, Tower 2, One World Center, Plot-841, Jupiter Textile Mill Compound, Senapati Bapat Marg, Lower Parel, Mumbai 400013, India Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com which accepts the responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research, and their affiliates (collectively, "Morgan Stanley").

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Catherine Chen; Chloe Liu; Laura Wang.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important Regulatory Disclosures on Subject Companies

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of September 30, 2024)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

MORGAN STANLEY RESEARCH 9



	Coverage Universe			stment Banking Clients	Other Material Investment Services Clients (MISC)		
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1425	38%	332	43%	23%	656	39%
Equal-weight/Hold	1724	46%	358	46%	21%	792	47%
Not-Rated/Hold	3	0%	0	0%	0%	1	0%
Underweight/Sell	588	16%	81	11%	14%	238	14%
Total	3,740		771			1687	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (1): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below. Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below. Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC & E*TRADE Securities LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to www.morganstanley.com/researchdisclosures.

Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC and E*TRADE Securities LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (http://www.morganstanley.com/terms.html). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (http://www.morganstanley.com/terms.html). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research. Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research



may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited (*MSTL*). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Certain information in Morgan Stanley Research was sourced by employees of the Shanghai Representative Office of Morgan Stanley Asia Limited for the use of Morgan Stanley Asia Limited. Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V which is regulated by Comision Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118)); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at 18th Floor, Tower 2, One World Center, Plot-841, Jupiter Textile Mill Compound, Senapati Bapat Marg, Lower Parel, Mumbai 400013, India Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com; in Canada by Morgan Stanley Canada Limited; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 149169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are high net worth entities falling within Article 49(2)(a) to (d) of the Order; or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended) may otherwise lawfully be communicated or caused to be communicated. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan Stanley International Holdings and A2X (Pty) and AInc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA) or by Morgan Stanley & Co. International plc (ADGM Branch), regulated by the Financial Services Regulatory Authority Abu Dhabi (the FSRA), and is directed at Professional Clients only, as defined by the DFSA or the FSRA, respectively. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets

MORGAN STANLEY RESEARCH 11



the regulatory criteria of a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. 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.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The issuers and/or fixed income products recommended or discussed in certain fixed income research reports may not be continuously followed. Accordingly, investors should regard those fixed income research reports as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or individual fixed income products. Morgan Stanley may hold, from time to time, material financial and commercial interests regarding the company subject to the Research report.

Registration granted by SEBI and certification from the National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

The following authors are neither Equity Research Analysts/Strategists nor Fixed Income Research Analysts/Strategists and are not opining on or expressing recommendations on equity or fixed income securities: Zhipeng Cai; Robin Xing; Jenny Zheng, CFA.

© 2024 Morgan Stanley