

Peter Kong, CFA

peter.kong@cls.com
+60 3 2056 7877

8 August 2023

Malaysia Infrastructure

Gamuda	GAM MK
Rec	BUY
Market cap	US\$2.5bn
3M ADV	US\$4.7m
Price	RM4.40
Target	RM4.95
Up/downside	+12.5%

IJM	IJM MK
Rec	BUY
Market cap	US\$1.1bn
3M ADV	US\$1.5m
Price	RM1.51
Target	RM1.90
Up/downside	+25.8%

SunCon	SCGB MK
Rec	O-PF
Market cap	US\$0.5bn
3M ADV	US\$0.1m
Price	RM1.77
Target	RM1.92
Up/downside	+8.5%

To get back on track

Takeaways from the high-speed rail request for information briefing

MyHSR started its request for information (RFI) process with a briefing on high-speed rail (HSR). Designed to be privately funded, risk may be high for HSR but government is not opposed to a public-private partnership (PPP) to enhance project viability. Getting the project off the ground is a broad sector positive and is supportive of our Overweight stance on the sector, though it is still early days. Mid-November will be a better time to assess this when proposals are submitted.

Private sector takes on more risk but it could be softened by a PPP

- ❑ **Requirements will likely encourage consortiums.** Compared to previous project-delivery-partner model, MyHSR will look to award a contract encompassing design, finance, build, operate and transfer. Financial muscle will be key, as will encouraging consortiums to be formed, especially as entities are required to bring together construction, systems installation, and an operational track record all in a single bid.
- ❑ **Door not closed to funding requests.** The HSR is intended to be developed without government funding or guarantees. Firms nevertheless are welcome to propose and justify the need for government assistance or a risk-sharing model.
- ❑ **Sweetener is key.** Land acquisitions are commonly performed by government. We observe that, regionally, it is common for government to shoulder 20%-50% of the total cost (Fig 1). The Malaysian government appears open to help via a PPP ([link](#)).

On balance, more flexibility and autonomy is given to improve yield

- ❑ **Not seen as prescriptive.** From the RFI, we see that instead of prescribing thresholds and fixed parameters, MyHSR is open to proposals and strategies vis-à-vis the degree of localisation, industry collaboration, number of stations and routes, etc. There is no revised sum for project as yet. To be clear, HSR is still in the feasibility stage.
- ❑ **Just needs an option to connect to Singapore.** News that Singapore is ready ([link](#)) to start HSR talks with Malaysia again raises the viability of HSR (4m passenger movements between KLIA and Singapore annually). Talks had broken down over an assets company dispute ([link](#)). MyHSR allows proposals from Kuala Lumpur to Singapore or to the southern corridor with an option to connect to Singapore.
- ❑ **Improving yield is the task.** MyHSR stressed that firms can include transit-oriented or transit-adjacent developments to create value and supplement fares; this can help shorten the payback period. With significant upfront investments, the concession period could vary, from 30 years (eg, in the UK), at the shorter end, up to 70-80 years. Concession extensions are also common, recently seen for the Jakarta-Bandung HSR.
- ❑ **Optimising.** There are 36 industrial parks along the current route and 117 tourist sites, though operating in silos, MyHSR says adding HSR could be the enabler to create hubs. This is in line with a broader policy harmonisation, such as a geography-based industrial policy under the Madani economic framework. Sue Lin Lim, CLSA's head of research in Malaysia, expounded on the prime minister's economy framework ([link](#)).

Outcome still fluid in our view; we retain our Overweight stance on the sector

- ❑ **Encouraging interest.** There is a three-month window (until 15 Nov) to submit concept proposals, followed by a shortlisting and a winner announcement. MyHSR revealed that at least 30 local and international firms have purchased RFI documents ([link](#)).
- ❑ **Proposals likely still taking shape.** The Edge newspaper cited MMC Corp, MRCB, Berjaya Group, YTL Group and WCT, as firms (all N-R) assessing the HSR ([link](#)). Among locals, YTL has experience in rail concessions, it operates the Express Rail Link that connects KLIA to KL Sentral. We expect firms to evaluate opportunities once RFI documents/details are released by 11 August. We think there may be interest from the likes of Gamuda (as high speed requires tunnels/bridges), IJM and SunCon.
- ❑ **May be a broad-based positive.** Local content usage may be sector positive over a multi-year construction phase, ie, opportunities in the supply chain via materials (cement), consultants, property developers with exposure in the southern corridor (though depends on alignment/stations). We watch out for cannibalisation to airlines or MAHB: Singapore formed c.20% of KLIA international 2019 passenger movements.



To get back on track

Previously there were RM40bn worth of construction opportunities, which would have been split into 60 parcels

We think meeting the requirements of a bid will mean forming a consortium, potentially with foreign firms

Private sector takes on risk but government is open to consider a PPP

MyHSR will be looking for contractors that can shoulder more risk-reward as it looks to award a contract that encompasses design, finance, build, operate, and transfer. This is a departure from the earlier 2018 contract which was based on a project delivery model. Under that procurement model, the construction component worth RM40bn of construction opportunity was removed (split into 60 work packages).

Previously, the project delivery partner (PDP, or project manager) roles were awarded to Gamuda-MRCB consortium for the northern stretch, and YTL teamed up with a subsidiary of Lembaga Tabung Haji to secure the southern section. We believe that this time around consortiums are more likely to be formed, given that entities either individually or in a consortium will have to meet three criteria: experience in railway, (or highway); experience in design and installation of rail systems; and experience in operating HSR or railway projects.

Figure 1

Comparison of HSR roll out

Country	Japan	China	Taiwan	Laos	Thailand	Indonesia	UK
Project	Tokaido Shinkansen	Beijing-Hong Kong HSR	Taiwan HSR	Lao-China Railway	3-airport HSR link	Jakarta-Bandung HSR	HS1 (Channel Tunnel Rail link)
Value (equivalent US\$ m)	1,000	48,000	15,000	6,000	6,430	7,200	7,400
Length (km)	553	2,300	345	422	220	142	110
Value per distance (US\$ m/km)	2	21	43	14	29	51	67
Project completion date	1964	2018	2007	2021	2029	2023	2007
Connecting cities	Tokyo to Osaka	Beijing to Hong Kong	Nangang to Zuoying	Vientiane to Boten	Don Mueang to U-Tapao	Jakarta to Bandung	London to Channel tunnel
Ridership potential (daily)	229,000	400,000-500,000	196,000	7,000-10,000	147,000	30,000-60,000	70,000
Max speed (km/h)	285	200-350	300	160	250	200-385	320
Private funding (%)	65% by Japan govt, 15% by World Bank, and other sources	Government borne	79%	China/Laos government borne	52%	75%	70%
Remarks/ Concession	Now operated by JR Central	Operated by China Railway Corporation for Mainland China section, and KCR Corporation for the HK section	70 years (originally 35 years)	50 year concession	50 year concession	Extended from 50 to 80 years. By PT Kereta Cepat Indonesia China, a 60-40 JV between Indonesia SOEs and China Railway Group Limited	30 year concession

Source: CLSA, MyHSR, various agencies

Government reportedly open to PPP model

Transport Minister Anthony Loke has commented that the RFI is being conducted to gauge the project's feasibility via a public-private partnership (PPP) model (*link*). The minister stressed that the government is not awarding anything yet. During the RFI briefing, some HSR examples in the region were mentioned, which are being studied. In those examples, it is not uncommon that funding from private segment

Find CLSA research on Bloomberg, Thomson Reuters, FactSet and CapitalIQ - and profit from our evalu@tor proprietary database at clsa.com

Proposals to connect to Singapore or provide an option to connect to Singapore

Companies welcome to propose ways to maximise value including from non-fares

Creating impact in the southern corridor

Some names are reportedly interested

We believe proposals are still taking shape

will range from 50% to 79%. This provides a yardstick with which to compare potential government assistance (although in some instances cost is fully funded by government). Assuming a RM70bn (or US\$20.7bn) price tag for HSR roll-out locally, this would be equivalent to c.US\$45m per KM, within the regional norm.

More flexibility likely given to help improve yield

HSR must be capable of speeds of up to 350 kilometres per hour (km/h), or at least falling under the high-speed definition (usually 250km/h and greater). There is also leeway given for submitted proposals to reach Singapore or to reach the southern corridor of Malaysia with an option to connect to Singapore. The latter raises viability of HSR (10.2m tourists in 2019). In terms of the number of passengers flying from/to Singapore/Kuala Lumpur, the figure is 4m arrivals and departures ([link](#)). Based on previous estimate of RM400 ticket price for a round trip ([link](#)), this is additional opportunity to capture the RM800m of annual revenue, compared to just stopping at Johor, all else equal.

Interested firms are also invited to submit as part of their proposals ways to create more value and supplement fares. Transit-oriented development or transit-adjacent development (defined as more than 400 meter radius from transit station) should help and shorten investment payback period. The concession period for HSR tends to be 50 years or more, and it is not uncommon for it to get extended, as was case in Taiwan's and Indonesia's HSR projects. Recently, we saw a model where the Mass Rapid Transit Corp (MRT Corp Sdn Bhd) emulated Hong Kong MTR Corp's "rail plus model", whereby MRT Corp Sdn Bhd contributed land for property development at Johor Bahru and will share in the profits when units are sold ([link](#)).

MyHSR pointed out that along the route there is no shortage of industrial parks (36), 117 tourist key sites, and 52 multimedia super corridor status assets. MyHSR sees the need for HSR stations as potential stops will turn into clusters and hubs. We expect that policy support would also have to be forthcoming, in creating specific tailored incentives in different geographic locations, for example.

Outcome still fluid in our view; maintain our Overweight stance

Earlier, the Edge newspaper highlighted a few firms that have been discussing the HSR - namely MMC Corp, MRCB, Berjaya Group, YTL Group and WCT (all N-R). We note that YTL has experience in rail concessions, specifically the express rail link that connects between KLIA and KL Sentral.

We believe the industry will be evaluating details/documents from RFI. We think Gamuda may be interested in tunnelling/bridge opportunities, given that precision is needed for high speed. Separately, we think IJM and SunCon may be interested given they were among the members of a consortium submitted a bid for the project delivery partner role in 2018. Mid-November, the deadline for concept proposal submissions will be a good time to reassess this issue.

Valuation details - Gamuda Bhd GAM MK

We value Gamuda's construction division based on 13.5x sustainable earnings and apply 12x sustainable earnings for its local property project, with a 40% discount. We use DCF to value expressway and water supply operations and maintenance concessions. Our target price for Gamuda is based on an estimated fully diluted RNAV/share.

Investment risks - Gamuda Bhd GAM MK

Execution risk on construction projects could lead to cost overruns while a slowdown of the Vietnam economy could dampen demand for property launches in Hanoi and Ho Chi Minh City. We are concerned about EPS dilution from a potential increase in the employee share option scheme and warrants; we include these concerns in our valuation. Given its job concentration in large projects, Gamuda is exposed to policy risk. The ability to replenish jobs before the MRT2 civil works are complete is also a concern. A prolonged Covid-19 outbreak could reduce work efficiency.

Valuation details - IJM Corp Bhd IJM MK

Our valuation reflects PE-based valuations for IJM's construction and industrial divisions and an RNAV-based valuation for its property segment, with an 8.8% WACC and DCF for its concessionaire stakes as well as a discount of 20%.

Investment risks - IJM Corp Bhd IJM MK

With a near-record-high order book, the key risk is execution of projects to ensure profitability and completion according to schedule. Slower property demand due to weaker consumer sentiment has affected IJM's property sales, and the risks are a sustained slowdown or further margin pressure. Rising labour costs could put pressure on construction profit margins. Regulatory risks related to toll-road and port concessions are not uncommon. Prolonged Covid-19 could also hinder operating efficiency.

Valuation details - Sunway Construction Group Bhd SCGB MK

Our target price is derived from 14.0x 24CL earnings, one standard deviation above the 10-year mean PE for the KL Construction index. We accord an above-sector average PE, given the company's flow of internal jobs and strong balance sheet.

Investment risks - Sunway Construction Group Bhd SCGB MK

The main concern is construction risk. Specific risks include lower-than-expected margins (below 5-8%) or if the amount of projects secured falls below our expectation, either due to an inability to secure projects or project rollout delays. Higher-than-expected steel price increases could cut into margins as SunCon hedges steel needs for a future six-month period. On the precast segment, another risk is margin recovery timing, currently in the doldrums due to competition. Prolonged Covid-19 could also reduce operating efficiency.



Research subscriptions

To change your report distribution requirements, please contact your CLSA sales representative or email us at cib@clsa.com. You can also fine-tune your Research Alert email preferences at https://www.clsa.com/member/tools/email_alert/.

Companies mentioned

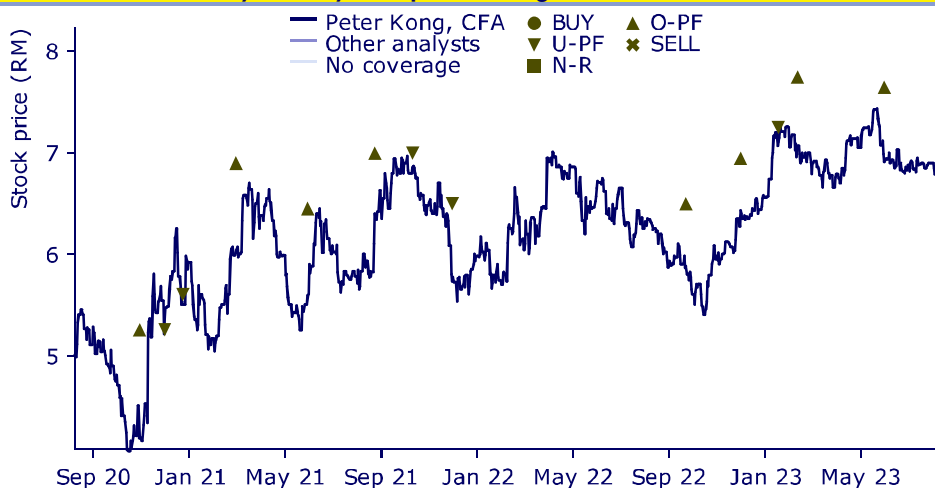
- Berjaya Corp (N-R)
- China Railway (N-R)
- China Railway Group Limited (N-R)
- Gamuda (GAM MK - RM4.40 - BUY)
- IJM (IJM MK - RM1.51 - BUY)
- JR Central (N-R)
- KCR Corporation (N-R)
- Lembaga (N-R)
- Malaysia Airports (MAHB MK - RM6.85 - O-PF)
- MMC (N-R)
- MRCB (N-R)
- PT Kereta Cepat Indonesia China (N-R)
- SunCon (SCGB MK - RM1.77 - O-PF)
- WCT (N-R)
- YTL (N-R)

Analyst certification

The analyst(s) of this report hereby certify that the views expressed in this research report accurately reflect my/our own personal views about the securities and/or the issuers and that no part of my/our compensation was, is, or will be directly or indirectly related to the specific recommendation or views contained in this research report.

Important disclosures

Recommendation history of Malaysia Airports Holdings Bhd MAHB MK



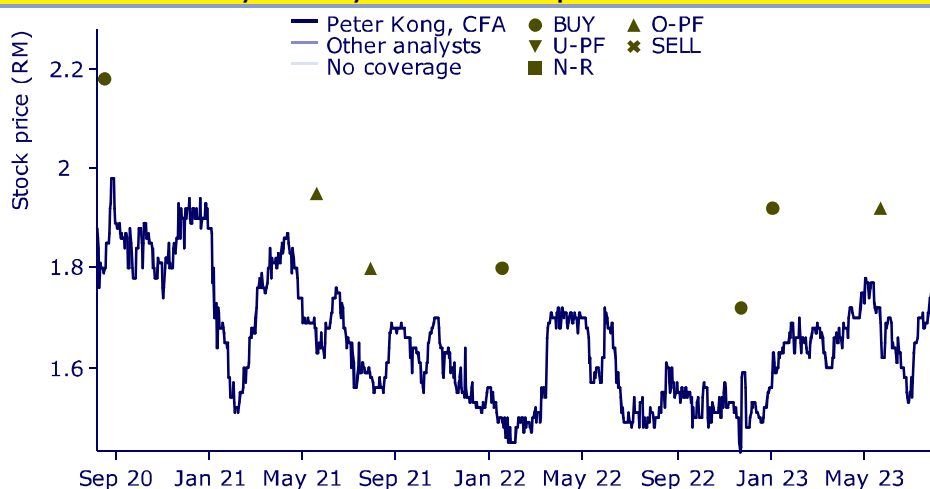
Date	Rec	Target	Date	Rec	Target
31 May 2023	O-PF	7.65	24 Aug 2021	O-PF	7.00
10 Feb 2023	O-PF	7.75	31 May 2021	O-PF	6.45
17 Jan 2023	U-PF	7.25	01 Mar 2021	O-PF	6.90
30 Nov 2022	O-PF	6.95	24 Dec 2020	U-PF	5.60
22 Sep 2022	O-PF	6.50	01 Dec 2020	U-PF	5.25
30 Nov 2021	U-PF	6.50	30 Oct 2020	O-PF	5.25
11 Oct 2021	U-PF	7.00			

Source: CLSA

Click to rate this research



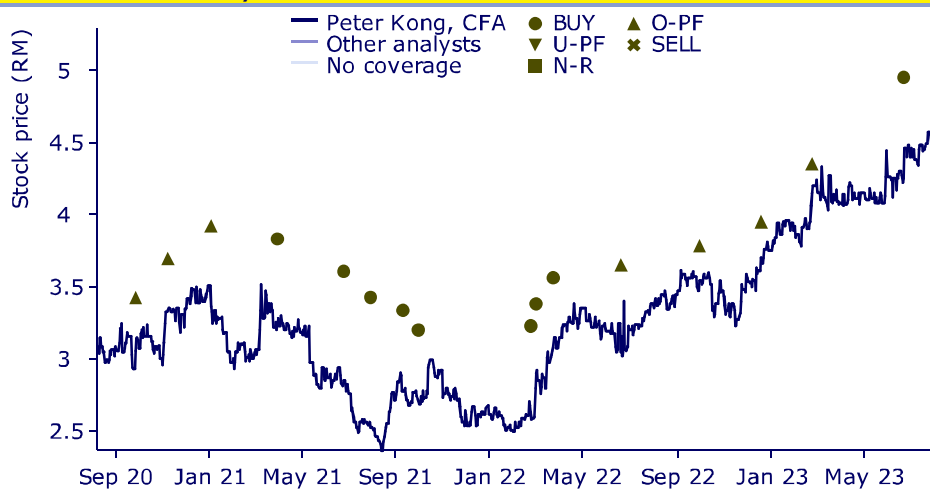
Recommendation history of Sunway Construction Group Bhd SCGB MK



Date	Rec	Target	Date	Rec	Target
23 May 2023	O-PF	1.92	30 Jul 2021	O-PF	1.80
03 Jan 2023	BUY	1.92	21 May 2021	O-PF	1.95
23 Nov 2022	BUY	1.72	19 Aug 2020	BUY	2.18
17 Jan 2022	BUY	1.80			

Source: CLSA

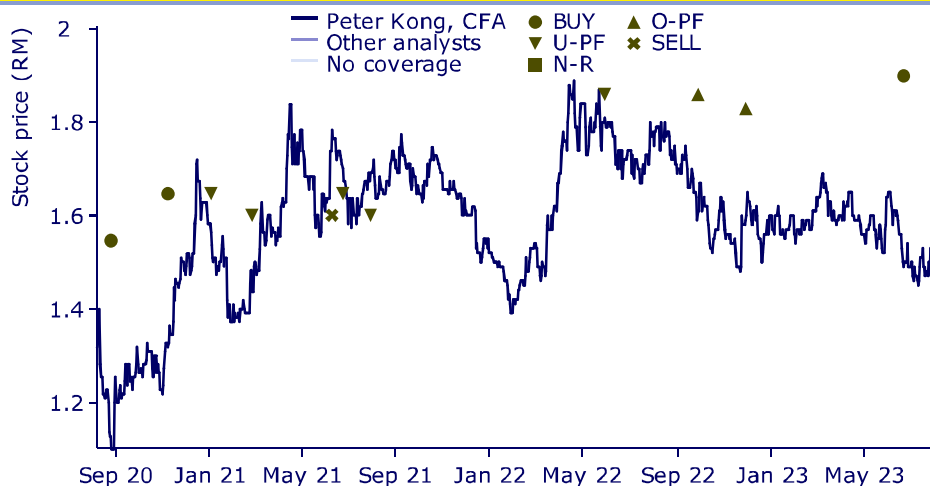
Recommendation history of Gamuda Bhd GAM MK



Date	Rec	Target	Date	Rec	Target
22 Jun 2023	BUY	4.95	30 Sep 2021	BUY	3.20*
23 Feb 2023	O-PF	4.35	10 Sep 2021	BUY	3.33*
19 Dec 2022	O-PF	3.95	30 Jul 2021	BUY	3.42*
30 Sep 2022	O-PF	3.79*	25 Jun 2021	BUY	3.61*
20 Jun 2022	O-PF	3.65*	31 Mar 2021	BUY	3.83*
24 Mar 2022	BUY	3.56*	04 Jan 2021	O-PF	3.92*
02 Mar 2022	BUY	3.38*	09 Nov 2020	O-PF	3.70*
23 Feb 2022	BUY	3.23*	28 Sep 2020	O-PF	3.42*

Source: CLSA; * Adjusted for corporate action

Recommendation history of IJM Corp Bhd IJM MK



Date	Rec	Target	Date	Rec	Target
22 Jun 2023	BUY	1.90	10 Jun 2021	SELL	1.60*
29 Nov 2022	O-PF	1.83	26 Feb 2021	U-PF	1.60*
28 Sep 2022	O-PF	1.86	04 Jan 2021	U-PF	1.65*
30 May 2022	U-PF	1.86	09 Nov 2020	BUY	1.65*
30 Jul 2021	U-PF	1.60*	27 Aug 2020	BUY	1.55*
24 Jun 2021	U-PF	1.65*			

Source: CLSA; * Adjusted for corporate action

CLSA ("CLSA") in this report refers to CLSA Limited, CLSA Americas, LLC, CLSA Australia Pty Ltd, CLSA India Private Limited, PT CLSA Sekuritas Indonesia, CLSA Securities Japan Co., Ltd., CLSA Securities Korea Ltd., CLSA Securities Malaysia Sdn. Bhd., CLSA Philippines, Inc, CLSA Singapore Pte Ltd, CLSA Securities (Thailand) Limited, CLSA (UK), CLSA Europe B.V. and/or their respective affiliates. CLST ("CLST") in this report refers to CL Securities Taiwan Co., Ltd.

The policies of CLSA and CLST are to only publish research that is impartial, independent, clear, fair, and not misleading. Regulations or market practice of some jurisdictions/markets prescribe certain disclosures to be made for certain actual, potential or perceived conflicts of interests relating to a research report as below. This research disclosure should be read in conjunction with the research disclaimer as set out hereof and at www.clsa.com/disclaimer.html, the Terms and Conditions of Use as set out at <https://www.clsa.com/terms-and-conditions-of-use/> and the applicable regulation of the concerned market where the analyst is stationed and hence subject to. Investors are strongly encouraged to review this disclaimer before investing.

Neither analysts nor their household members or associates may have a financial interest in, or be an officer, director or advisory board member of companies covered by the analyst unless disclosed herein. In circumstances where an analyst has a pre-existing holding in any securities under coverage, those holdings are grandfathered and the analyst is prohibited from trading such securities.

The analysts included herein hereby confirm that they have not been placed under any undue influence, intervention or pressure by any person/s in compiling this research report. In addition, the analysts attest that they were not in possession of any material, non-public information regarding the subject company that has securities listed in the relevant jurisdiction(s) at the time of publication of this report. (For full disclosure of interest for all companies covered by CLSA in this report, please refer to http://www.clsa.com/member/research_disclosures/ for details.)

As analyst(s) of this report, I/we hereby certify that the views expressed in this research report accurately reflect my/our own personal views about the securities and/or the issuers and that no part of my/our compensation was, is, or will be directly or indirectly related to the specific recommendation or views contained in this report or to any investment banking relationship with the subject

company covered in this report (for the past one year) or otherwise any other relationship with such company which leads to receipt of fees from the company except in ordinary course of business of the company. The analyst/s also state/s and confirm/s that he/she/they has/have not been placed under any undue influence, intervention or pressure by any person/s in compiling this research report. In addition, the analysts included herein attest that they were not in possession of any material, non-public information regarding the subject company that has securities listed in the relevant jurisdiction(s) at the time of publication of this report. The analysts further confirm that none of the information used in this report was received from CLSA's Corporate Finance department or CLSA's and/or CLST's Sales and Trading business. Save from the disclosure below (if any), the analyst(s) is/are not aware of any material conflict of interest.

Key to CLSA/CLST investment rankings: BUY: Total stock return (including dividends) expected to exceed 20%; O-PF (aka ACCUMULATE): Total expected return below 20% but exceeding market return; U-PF (aka REDUCE): Total expected return positive but below market return; SELL: Total return expected to be negative. For relative performance, we benchmark the 12-month total forecast return (including dividends) for the stock against the 12-month forecast return (including dividends) for the market on which the stock trades.

"High Conviction" Ideas are not necessarily stocks with the most upside/downside, but those where the Research Head/Strategist believes there is the highest likelihood of positive/negative returns. The list for each market is monitored weekly.

Overall rating distribution for CLSA (exclude CLST) only Universe: Overall rating distribution: BUY / Outperform - CLSA: 74.67%, Underperform / SELL - CLSA: 25.33%, Restricted - CLSA: 0.00%; Data as of 1 Jul 2023. Investment banking clients as a % of rating category: BUY / Outperform - CLSA: 13.65%, Underperform / SELL - CLSA: 2.47%; Restricted - CLSA: 0.00%. Data for 12-month period ending 1 Jul 2023.

Overall rating distribution for CLST only Universe: Overall rating distribution: BUY / Outperform - CLST: 61.11%, Underperform / SELL - CLST: 38.89%, Restricted - CLST: 0.00%. Data as of 1 Jul 2023. Investment banking clients as a % of rating category: BUY / Outperform - CLST: 0.00%, Underperform / SELL - CLST: 0.00%.

Restricted - CLST: 0.00%. Data for 12-month period ending 1 Jul 2023.

There are no numbers for Hold/Neutral as CLSA/CLST do not have such investment rankings. For a history of the recommendation, price targets and disclosure information for companies mentioned in this report please write to: CLSA Group Compliance, 18/F, One Pacific Place, 88 Queensway, Hong Kong and/or; CLST Compliance (27/F, 95, Section 2 Dun Hua South Road, Taipei 10682, Taiwan, telephone (886) 2 2326 8188). EVA® is a registered trademark of Stern, Stewart & Co. "CL" in charts and tables stands for CLSA estimates, "CT" stands for CLST estimates, "CRR" stands for CRR Research estimates and "CS" for Citic Securities estimates unless otherwise noted in the source.

Charts and tables sourced to CLSA in this report may include data extracted from CLSA's automated databases, which derive their original data from a range of sources. These can include: companies; analyst estimates/calculations; local exchanges and/or third-party data or market pricing providers such as Bloomberg, FactSet or IBES. Additional information on data sources for specific charts or tables can be obtained by contacting the publishing analysts.

This report is subject to and incorporates the terms and conditions of use set out on the www.clsa.com website (<https://www.clsa.com/disclaimer.html>) and <https://www.clsa.com/terms-and-conditions-of-use/> and the references to "publication/communication" or "Publications" thereof shall include this report. Neither this report nor any portion hereof may be reprinted, sold, resold, copied, reproduced, distributed, redistributed, published, republished, displayed, posted or transmitted in any form or media or by any means without the written consent of CLSA and/or CLST. CLSA and/or CLST has/have produced this report for private circulation to professional, institutional and/or wholesale clients only, and may not be distributed to retail investors. The information, opinions and estimates herein are not directed at, or intended for distribution to or use by, any person or entity in any jurisdiction where doing so would be contrary to law or regulation or which would subject CLSA and/or CLST to any additional registration or licensing requirement within such jurisdiction. The information and statistical data (for private or public companies) herein have been obtained from sources we believe to be reliable. Such information has not been independently verified and CLSA and/or CLST makes no representation or warranty as to its fairness, adequacy, accuracy, completeness or correctness. The replication of any third party views in this report should not be treated necessarily as an indication that CLSA and/or CLST agrees with or concurs with such views. None of CLSA and/or CLST, its affiliates and their respective directors, officers, employees, advisers and representatives makes any representation or warranty, express or implied, as to and no reliance should be placed on, the fairness, accuracy, completeness or correctness of such data or information contained herein or any statement made in this report. Any opinions or estimates herein reflect the judgment of CLSA and/or CLST at the date of this report and are subject to change at any time without notice. Where any part of the information, opinions or estimates contained herein reflects the views and opinions of a sales person or a non-analyst, such views and opinions may not correspond to the published view of CLSA and/or CLST. Any price target given in the report may be projected from one or more valuation models and hence any price target may be subject to the inherent risk of the selected model as well as other external risk factors. Where the publication does not contain ratings, the material should not be construed as research but is offered as factual commentary. It is not intended to, nor should it be used to form an investment opinion about the non-rated companies.

This report is for information purposes only and it does not constitute or contain, and should not be considered as an offer or invitation to sell, or any solicitation or invitation of any offer to subscribe for or purchase any securities in any jurisdiction and recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. This is not intended to provide professional, investment or any other type of advice or recommendation and does not take into account the particular investment objectives, financial situation or needs of individual recipients. Before acting on any information in this report, you should consider whether it is suitable for your particular circumstances and, if appropriate, seek professional advice, including

legal or tax advice. Investments involve risks, and investors should exercise prudence and their own judgment in making their investment decisions. The value of any investment or income may go down as well as up, and investors may not get back the full (or any) amount invested. Investments that are denominated in foreign currencies may fluctuate in value as a result of exposure to movements of exchange rate. Past performance is not necessarily a guide to future performance or liquidity. CLSA and/or CLST do/does not accept any responsibility and cannot be held liable for any person's use of or reliance on the information and opinions contained herein. To the extent permitted by applicable securities laws and regulations, CLSA and/or CLST accept(s) no liability whatsoever for any direct or consequential loss arising from the use of this report or its contents.

To maintain the independence and integrity of our research, our Corporate Finance, Sales Trading, Asset Management and Research business lines are distinct from one another. This means that CLSA's Research department is not part of and does not report to CLSA's Corporate Finance department or CLSA's Sales and Trading business. Accordingly, neither the Corporate Finance department nor the Sales and Trading department supervises or controls the activities of CLSA's research analysts. CLSA's research analysts report to the management of the Research department, who in turn report to CLSA's senior management. CLSA has put in place a number of internal controls designed to manage conflicts of interest that may arise as a result of CLSA engaging in Corporate Finance, Sales and Trading, Asset Management and Research activities. Some examples of these controls include: the use of information barriers and other controls designed to ensure that confidential information is only shared on a "need to know" basis and in compliance with CLSA's Chinese Wall policies and procedures; measures designed to ensure that interactions that may occur among CLSA's Research personnel, Corporate Finance, Asset Management, and Sales and Trading personnel, CLSA's financial product issuers and CLSA's research analysts do not compromise the integrity and independence of CLSA's research.

Subject to any applicable laws and regulations at any given time, CLSA, CLST, their respective affiliates, officers, directors or employees may have used the information contained herein before publication and may have positions in, or may from time to time purchase or sell or have a material interest in any of the securities mentioned or related securities, or may currently or in future have or have had a business or financial relationship with, or may provide or have provided corporate finance/capital markets and/or other services to, the entities referred to herein, their advisors and/or any other connected parties. As a result, you should be aware that CLSA and/or CLST and/or their respective affiliates, officers, directors or employees may have one or more conflicts of interest. Regulations or market practice of some jurisdictions/markets prescribe certain disclosures to be made for certain actual, potential or perceived conflicts of interests relating to research reports. Details of the disclosable interest can be found in certain reports as required by the relevant rules and regulation and the full details of conflict of interest with companies under coverage are available at http://www.clsa.com/member/research_disclosures/. Disclosures therein include the position of CLSA and CLST only. Unless specified otherwise, CLSA did not receive any compensation or other benefits from the subject company, covered in this report, or from any third party. If investors have any difficulty accessing this website, please contact webadmin@clsa.com. If you require disclosure information on previous dates, please contact compliance_hk@clsa.com.

Any disputes related to this report shall be governed by the laws of Hong Kong and to the non-exclusive jurisdiction of the courts of Hong Kong in connection with any suite, action or proceeding arising out of or in connection with this material. In the event any of the provisions in these Terms of Use shall be held to be unenforceable, that provision shall be enforced to the maximum extent permissible to reflect the intention underlying the unenforceable term, and the remainder of these General Disclaimer shall be unimpaired.

This report is distributed for and on behalf of CLSA (for research compiled by non-US and non-Taiwan analyst(s)), CLSA Americas, LLC (for research compiled by US analyst(s)) and/or CLST (for research compiled by Taiwan analyst(s)) in Australia by CLSA Australia Pty Ltd (ABN 53 139 992 331/AFSL License No: 350159); in Hong Kong by CLSA Limited (Incorporated in Hong Kong with limited liability); in

India by CLSA India Private Limited, (Address: 8/F, Dalamal House, Nariman Point, Mumbai 400021. Tel No: +91-22-66505050. Fax No: +91-22-22840271; CIN: U67120MH1994PLC083118; SEBI Registration No: INZ000001735 as Stock Broker, INM000010619 as Merchant Banker and INH000001113 as Research Analyst; in Indonesia by PT CLSA Sekuritas Indonesia; in Japan by CLSA Securities Japan Co., Ltd.; in Korea by CLSA Securities Korea Ltd.; in Malaysia by CLSA Securities Malaysia Sdn. Bhd.; in the Philippines by CLSA Philippines Inc (a member of Philippine Stock Exchange and Securities Investors Protection Fund); in Singapore by CLSA Singapore Pte Ltd and solely to persons who qualify as an "Institutional Investor", "Accredited Investor" or "Expert Investor" MCI (P) 042/11/2022; in Thailand by CLSA Securities (Thailand) Limited; in Taiwan by CLST (for reports compiled by Taiwan analyst(s) or CLSA (for non Taiwan stock reports to CLSA clients) and in the European Economic Area ("EEA") by CLSA Europe BV and in the United Kingdom by CLSA (UK).

Hong Kong: This research report is distributed by CLSA Limited. This research report is distributed in Hong Kong only to professional investors (as defined in the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) and any rules promulgated thereunder) and may not be distributed to retail investors. Recipients should contact CLSA Limited, Tel: +852 2600 8888 in respect of any matters arising from, or in connection with, the analysis or report.

Australia: CLSA Australia Pty Ltd ("CAPL") (ABN 53 139 992 331/AFS License No: 350159) is regulated by the Australian Securities and Investments Commission ("ASIC") and is a Market Participant of ASX Limited and Cboe Australia Pty Ltd. This material is issued and distributed by CAPL in Australia to "wholesale clients" only. This material does not take into account the specific investment objectives, financial situation or particular needs of the recipient. The recipient of this material must not distribute it to any third party without the prior written consent of CAPL. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001. CAPL's research coverage universe spans listed securities across the ASX All Ordinaries index, securities listed on offshore markets, unlisted issuers and investment products which Research management deem to be relevant to the investor base from time to time. CAPL seeks to cover companies of relevance to its domestic and international investor base across a variety of sectors.

India: CLSA India Private Limited, incorporated in November 1994 provides equity brokerage services (SEBI Registration No: INZ000001735), research services (SEBI Registration No: INH000001113) and merchant banking services (SEBI Registration No: INM000010619) to global institutional investors, pension funds and corporates. CLSA and its associates may have debt holdings in the subject company. Further, CLSA and its associates, in the past 12 months, may have received compensation for non-investment banking services and/or non-securities related services from the subject company. For further details of "associates" of CLSA India please contact Compliance-India@clsa.com. Registration granted by SEBI and certification from NISM in no way guarantee performance of CLSA India Private Limited or provide any assurance of returns to investors. Compliance officer & Grievance officer: Neeta Sanghavi, Tel: 22 6650 5050. Email address of Compliance officer and Grievance cell: compliance-india@clsa.com.

Singapore: This report is distributed in Singapore by CLSA Singapore Pte Ltd to institutional investors, accredited investors or expert investors (each as defined under the Financial Advisers

Regulations) only. Singapore recipients should contact CLSA Singapore Pte Ltd, 80 Raffles Place, #18-01, UOB Plaza 1, Singapore 048624, Tel: +65 6416 7888, in respect of any matters arising from, or in connection with, the analysis or report. By virtue of your status as an institutional investor, accredited investor or expert investor, CLSA Singapore Pte Ltd is exempted from complying with certain requirements under the Financial Advisers Act 2001, the Financial Advisers Regulations and the relevant Notices and Guidelines issued thereunder (as disclosed in Part C of the Securities Dealing Services – Singapore Annex of the CLSA terms of business), in respect of any financial advisory services that CLSA Singapore Pte Ltd may provide to you. MCI (P) 042/11/2022.

United States of America: Where any section of the research is compiled by US analyst(s), it is distributed by CLSA Americas, LLC. Where any section is compiled by non-US analyst(s), it is distributed into the United States by CLSA (except CLSA Americas, LLC) solely to persons who qualify as "Major US Institutional Investors" as defined in Rule 15a-6 under the Securities and Exchange Act of 1934 and who deal with CLSA Americas, LLC. However, the delivery of this research report to any person in the United States shall not be deemed a recommendation to effect any transactions in the securities discussed herein or an endorsement of any opinion expressed herein. Any recipient of this research in the United States wishing to effect a transaction in any security mentioned herein should do so by contacting CLSA Americas, LLC.

The United Kingdom: This document is a marketing communication. It has not been prepared in accordance with the legal requirements designed to promote the independence of investment research, and is not subject to any prohibition on dealing ahead of the dissemination of investment research. The document is disseminated in the UK by CLSA (UK) and directed at persons having professional experience in matters relating to investments, as defined in the relevant applicable local regulations. Any investment activity to which it relates is only available to such persons. If you do not have professional experience in matters relating to investments you should not rely on this document. Where research material is compiled by UK analyst(s), it is produced and disseminated by CLSA (UK). For the purposes of the Financial Conduct Rules in the UK such material is prepared and intended as substantive research material. CLSA (UK) is authorised and regulated by the Financial Conduct Authority.

The European Economic Area ("EEA"): research is distributed by CLSA Europe BV, authorised and regulated by the Netherlands Authority for Financial Markets.

CLSA Securities Malaysia Sdn. Bhd (CLSA Malaysia)'s research coverage universe spans listed securities across the FBM KLCI Index, securities listed on offshore markets, unlisted issuers and investment products which Research management deem to be relevant to the investor base from time to time. CLSA Malaysia seeks to cover companies of relevance to its domestic and international investor base across a variety of sectors.

For all other jurisdiction-specific disclaimers please refer to <https://www.clsa.com/disclaimer.html>. The analysts/contributors to this report may be employed by any relevant CLSA entity or CLST, which is different from the entity that distributes the report in the respective jurisdictions. © 2023 CLSA and/or CL Securities Taiwan Co., Ltd. ("CLST").

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.