

Malaysia

Neutral (previously *Overweight*)

Highlighted Companies

Inari-Amertron Bhd

ADD, TP RM3.15, RM2.50 close

We like Inari as a proxy for radio-frequency (RF) content value growth on the back of rising worldwide 5G smartphone penetration. Management is cautiously optimistic that better sales from new projects like fibre optics transceiver module, system-on-module (SOM) assembly and high-power LED going into data centres, automotive and industrial applications will drive sales in FY6/23F.

Pentamaster Corp Bhd

HOLD, TP RM4.15, RM4.10 close

Pentamaster continues to see a healthy order replenishment, as its backlog orders stood at nearly RM500m as at end-Jun 2022. Automotive segment made up the bulk of the backlog orders (c.40%), especially driven by the robust demand for its front-end burn-in and test solutions for SiC and GaN wafers.

Summary Valuation Metrics

P/E (x)	Dec-22F	Dec-23F	Dec-24F
Inari-Amertron Bhd	23.38	22.25	20.59
Pentamaster Corp Bhd	29.19	25.07	22.25
P/BV (x)	Dec-22F	Dec-23F	Dec-24F
Inari-Amertron Bhd	3.68	3.64	3.61
Pentamaster Corp Bhd	4.48	3.89	3.40
Dividend Yield	Dec-22F	Dec-23F	Dec-24F
Inari-Amertron Bhd	4.00%	4.20%	4.61%
Pentamaster Corp Bhd	0.49%	0.61%	0.73%

Analyst(s)



Mohd Shanaz NOOR AZAM

T (60) 3 2635 9254

E shanaz.azam@cgs-cimb.com

Semiconductor

Navigating rough waters

- We expect sector earnings to decline qoq and yoy in 3Q22F, and a softer demand outlook for 2023F amidst the slowdown in global economy.
- We project sector earnings growth of 5-10% in 2022-23F (slower vs. 45% in 2021) due to weaker demand outlook, albeit cushioned by favourable forex.
- We downgrade Malaysian semiconductor sector from *Overweight* to *Neutral*.

Weaker semiconductor demand outlook in 2H22F and 2023F

World Semiconductor Trade Statistics (WSTS) in Aug 22 revised down its 2022F/2023F global semiconductor sales growth forecasts to 13.9%/4.6% (vs. 16.3%/5.1% in Jun 2022), mainly due to reduction in memory prices. While most industry research groups still expect positive semiconductor sales growth in 2022F, most industry research group project an average of 4% yoy decline in semiconductor industry sales in 2023F mainly due to anticipation of a slowdown in global economy and inventory correction. Moreover, we expect softer qoq industry sales in 3Q22F due to weak guidance from the 15 global semiconductor chip manufacturers (ex-memory) – on average they project tepid 1% sequential sales growth in 3Q22F.

Expecting lower qoq sector sales and net profit in 3Q22F

We also expect the Malaysian semiconductor sector – automated test equipment (ATE) and outsourced semiconductor assembly & test (OSAT) – to register qoq decline of 5% in sales and 8% in net profit on aggregate in 3Q22F, due to slowdown in consumer electronics demand especially for mobile and tablets, and impact from China’s zero Covid policy which continues to disrupt supply chains and customers’ qualification processes.

Projecting tepid sector earnings growth in 2022-23F

We expect the sector to deliver net profit growth of 10% in 2022F (lower vs. 2021’s 45%) and 5% in 2023F due to softer industry demand amidst a weaker global economy outlook. We expect growth to be driven by 1) favourable forex movement following ringgit’s depreciation against the US dollar (-11.7% YTD); and 2) structural growth driver such as rising adoption of silicon carbide (SiC) and gallium nitride (GaN). However, we still see a key downside risk to sector earnings in view of longer-than-expected semiconductor inventory digestion and global recession.

Facing industry cyclicality with strong balance sheets

Malaysian OSAT and ATE players under our coverage have experienced 25-68% decline in their share price YTD. We believe the pullback in share prices YTD is reflective of the global demand uncertainty going into 2023F and poor sentiment for the global tech sector amidst a rising interest rate environment and inflationary cost pressure. Nevertheless, these players have strong balance sheets to face the near-term headwinds; all seven ATE and OSAT companies we cover have a net cash position as at end-Jun 2022.

Downgrade semiconductor sector from *Overweight* to *Neutral*

We downgrade the Malaysian semiconductor sector from *Overweight* to *Neutral* in view of the weaker industry demand and sluggish earnings prospects over the next 6-12 months. Malaysian OSAT and ATE sectors trade at 19x and 23x CY23F P/E, about 1 s.d. below their 5-year historical mean P/E of 23x and 31x, respectively. Inari is our sector top pick for Malaysian OSAT due to its higher exposure to the premium smartphone segment and better order visibility from key customer Broadcom. Moreover, we see potential commercialisation of new projects like SOM, transceiver module and high-power LED going into automotive and industrial application as potential catalysts. Meanwhile, we downgrade Unisem from an Add to Hold with a lower RM2.60 TP in view of a sluggish earnings outlook in 2023F and weaker sentiment in tech sector. Despite the softer demand outlook, we think Unisem stands to benefit from its customers’ diversification plan under China Plus One strategy beyond the next 12 months in light of the ongoing trade war.

Potential catalysts and risks ►

We see better-than-expected demand recovery in the semiconductor industry, rising 5G mobile penetration and electric vehicle (EV) adoption and depreciation of the ringgit vs. US\$ as key re-rating catalysts for the sector. Meanwhile, appreciation of the ringgit vs. US\$, longer-than-expected semiconductor inventory digestion and full blown global recession are potential downside risks to our call.

<h3>ESG in a nutshell</h3>	
<p>We think the material ESG issues relating to the Malaysian semiconductor sector revolve around human capital, specifically the availability of skilled talent and dependency on migrant workers. However, we do not see the treatment of migrant workers as a material issue given that the sector is in compliance with the Responsible Business Alliance (RBA) standard that ensures working conditions in the electronics industry supply chain are safe, workers are treated with respect and dignity, and business operations are environmentally responsible. Hence, we think this actually differentiates the semiconductor sector from other manufacturing industries in Malaysia. Nevertheless, we see room for improvement for the sector in terms of environmental impact disclosure and carbon neutrality targets.</p>	
<h3>Keep your eye on</h3> <p>In the 12th Malaysia Plan (2021-2025), the government indicated that the number of migrant workers will be capped at 15% of total workforce to reduce the country's dependency on migrant workers across various sectors. We estimate that migrant workers currently make up 20-30% of the operational workforce of the average semiconductor assembly and test (OSAT) service provider in Malaysia.</p>	<h3>Implications</h3> <p>We do not see the potential ruling of a 15% cap on migrant workers as a major issue for Malaysian OSAT given that the sector has been investing in automation in order to improve efficiency and also to combat the impact of rising wages. On the contrary, the move could accelerate the adoption of industry 4.0 automation solutions among Malaysian OSAT players and benefit Malaysian automated test equipment (ATE) players with exposure in automation solutions. Meanwhile, we see no impact from the migrant worker cap ruling on the ATE sector as we estimate that over 90% of ATE employees are locals and given the greater technical knowledge required for ATE compared to production floor operators for OSAT.</p>
<h3>ESG highlights</h3> <p>Within our coverage universe, Inari, MPI, Pentamaster and Unisem are constituents of the Bursa Malaysia FTSE4Good Index. These companies are ranked within the top 25% by ESG Ratings in FBM EMAS, except for Pentamaster, which is ranked within top 26-50% by ESG Ratings.</p>	<h3>Implications</h3> <p>We think companies on the FTSE4GOOD Index could command a premium valuation relative to peers as more institutional investors incorporate ESG ratings into their investment strategies.</p>
<h3>Trends</h3> <p>We see the lack of human capital development, especially in the technical aspects, as posing a key challenge to the sector's future prospects given its dependence on human capital to innovate and stay ahead of the competition. Moreover, we believe competition for engineering talent from MNCs expanding in Penang will make it harder for the sector to attract engineering talent and scale-up operations.</p>	<h3>Implications</h3> <p>In order to address the issue, we understand that companies like Inari, MPI and Pentamaster have had to embark on multiple industry and academic collaborations, such as structured internship programmes, smart partnerships and new curriculum development based on industry applications, in a bid to ensure a healthy pipeline of human capital. Such programmes have contributed positively to the local community.</p>

SOURCES: CGS-CIMB RESEARCH, REFINITIV

Figure 1: Historical daily US\$ 1 vs Ringgit



SOURCES: CGS-CIMB RESEARCH, BLOOMBERG, COMPANY REPORTS

Figure 2: Semiconductor industry sales growth forecast in 2022F and 2023F

	2022F	2023F
Gartner, July	7.4	(2.5)
IDC, August	9.7	6.0
Future Horizons, August	6.0	(22.0)
WSTS, August	13.9	4.6
IC Insights, August	7.0	na
Cowan Research, September	12.1	na
Semiconductor Intelligence, September	5.0	(6.0)
Average	8.7	(4.0)

SOURCES: CGS-CIMB RESEARCH, WSTS, VARIOUS

Figure 3: WSTS' semiconductor industry sales growth forecast in 2022F and 2023F

	Sales (US\$ bn)					Annual growth (%)			
	2019	2020	2021	2022F	2023F	2020	2021	2022F	2023F
Americas	79	95	121	150	157	21.3	27.4	23.5	4.8
Europe	40	38	48	54	56	(5.8)	27.3	14.0	3.2
Japan	36	36	44	50	52	1.3	19.8	14.2	5.0
Asia Pacific	258	271	343	379	396	5.1	26.5	10.5	4.7
Total	412	440	556	633	662	6.8	26.2	13.9	4.6

SOURCES: CGS-CIMB RESEARCH, WSTS

Figure 4: WSTS' semiconductor industry sales growth forecast in 2022F and 2023F

	Sales (US\$ bn)					Annual growth (%)			
	2019	2020	2021	2022F	2023F	2020	2021	2022F	2023F
Discrete	24	24	30	33	35	(0.3)	27.4	10.1	3.8
Optoelectronics	42	40	43	44	45	(2.8)	7.4	0.2	3.7
Sensors	14	15	19	22	23	10.7	28.0	16.6	3.9
Integrated Circuits	333	361	463	534	559	8.4	28.2	15.3	4.8
Analog	54	56	74	90	96	3.2	33.1	21.9	6.4
Micro	66	70	80	85	88	4.9	15.1	5.9	3.6
Logic	107	118	155	192	208	11.1	30.8	24.1	8.1
Memory	106	117	154	167	167	10.4	30.9	8.2	0.6
Total	412	440	556	633	662	6.8	26.2	13.9	4.6

SOURCES: CGS-CIMB RESEARCH, WSTS

Figure 5: SEMI's semiconductor equipment spending forecast in 2022-23F

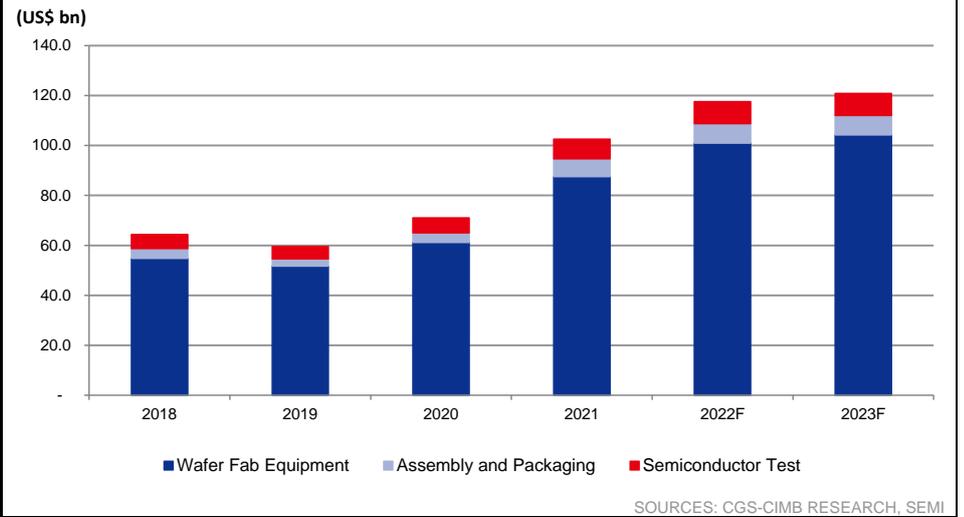


Figure 6: Historical quarterly and CGS-CIMB forecast for Malaysian ATE & OSAT sector net profit in 3Q22F

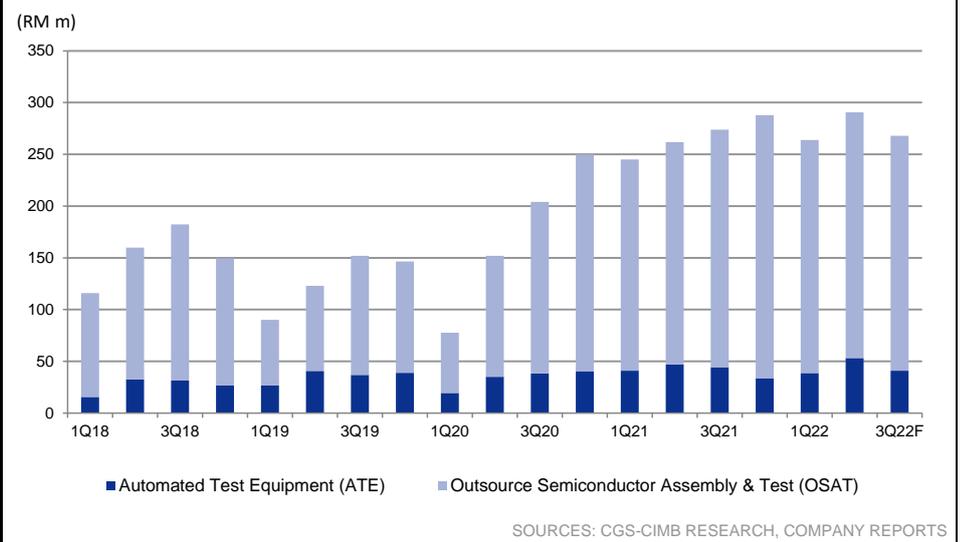
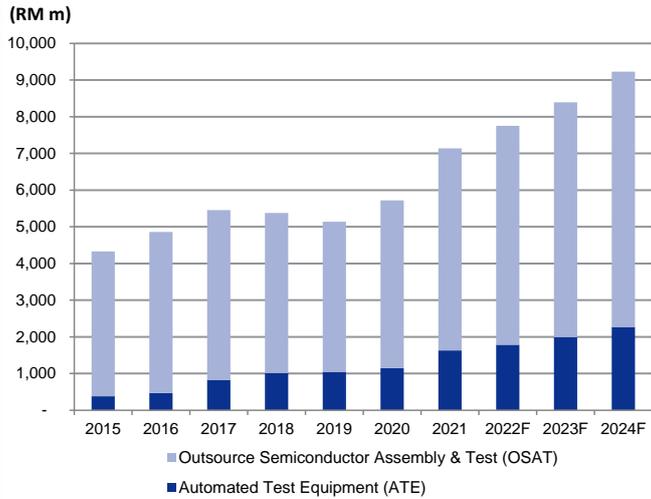
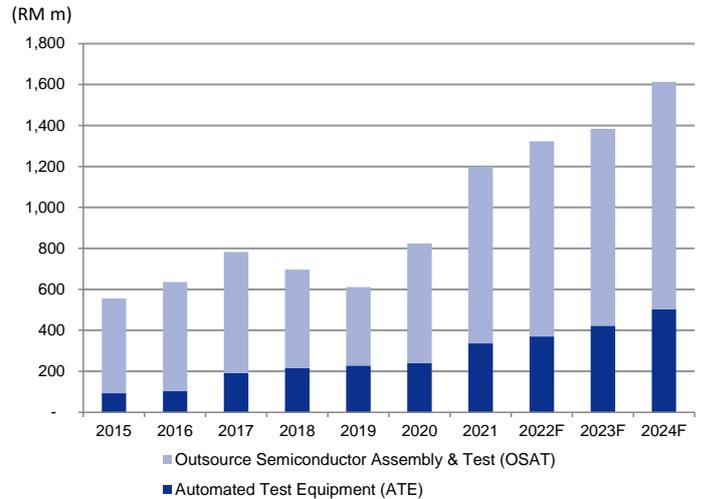


Figure 7: Historical annual and CGS-CIMB forecast for Malaysian ATE & OSAT revenue in 2022-24F



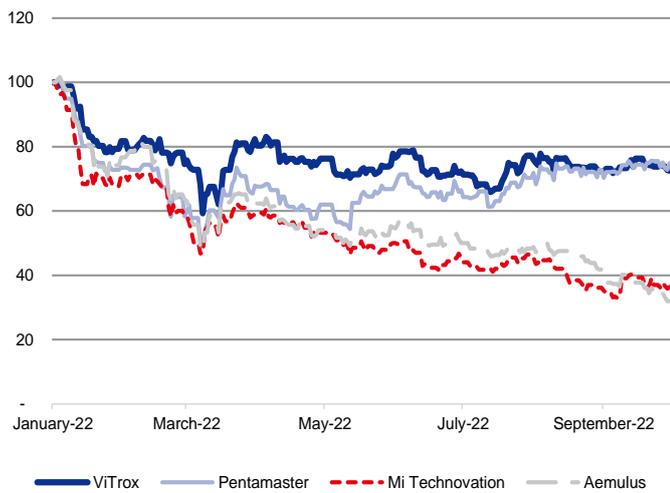
SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 8: Historical annual and CGS-CIMB forecast for Malaysian ATE & OSAT net profit in 2022-24F



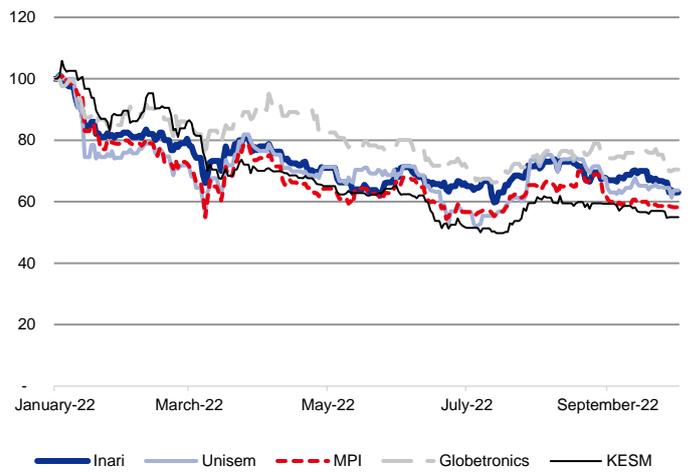
SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 9: YTD share prices performance for Malaysian ATE (ViTrox, Pentamaster, Mi Technovation & Aemulus)



SOURCES: CGS-CIMB RESEARCH, BLOOMBERG, COMPANY REPORTS

Figure 10: YTD share price performance for Malaysian OSAT (Inari-Amertron, Globetronics, KESM Industries, MPI and Unisem)



SOURCES: CGS-CIMB RESEARCH, BLOOMBERG, COMPANY REPORTS

Figure 11: Malaysian ATE's 1-year forward P/E (x)



Figure 12: Malaysian OSAT's 1-year forward P/E (x)



Figure 13: Malaysian ATE and OSAT players total cash and total borrowings balances as at end-Jun 2022

Company	Total cash (RM m)	Total borrowings (RM m)	Net cash/debt (RM m)	Shareholders funds at-end Jun 2022 (RM m)
ATE				
Aemulus	67	37	31	187
Mi Technovation	382	84	299	1,035
Pentamaster	431	2	429	582
ViTrox	299	76	223	783
OSAT				
Globetronics	189	-	189	302
*KESM industries	177	27	150	362
Inari-Amertron	1,971	-	1,971	2,505
MPI	965	193	772	2,000
Unisem	628	197	431	2,392

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

* Denotes – KESM has odd-year end and refers to the latest financial quarter performance ending Jul-2022

Figure 14: Sector comparison

	Bloomberg Ticker	Recom.	Price	Target Price	Market Cap (US\$ m)	P/E (x)		P/BV (x)		Recurring ROE (%)		EV/EBITDA (x)		Dividend Yield (%)	
						CY22F	CY23F	CY22F	CY23F	CY22F	CY23F	CY22F	CY23F	CY22F	CY23F
Foundries															
TSMC	2330 TT	Not rated	429.00	na	350,554	11.6	11.4	4.0	3.2	37.6	31.0	7.0	6.3	2.7	2.9
SMIC	981 HK	Add	16.14	23.90	22,655	9.4	9.2	0.9	0.9	8.2	9.9	8.7	8.6	2.7	2.3
GlobalFoundries	GFS US	Not rated	51.67	na	27,909	20.4	21.4	2.9	2.2	14.5	15.0	8.6	7.5	-	-
Hua Hong	1347 HK	Not rated	18.00	na	2,991	8.3	9.0	0.9	0.8	12.1	10.0	4.1	3.9	1.2	1.7
Win Semi	3105 TT	Not rated	127.50	na	1,703	23.0	17.2	1.7	1.6	7.4	11.1	9.9	7.9	4.6	4.3
Sector						14.6	13.7	2.1	1.7	16.0	15.4	7.7	6.8	2.2	2.2
Dagang NeXchange	DNEX MK	Add	0.79	1.50	534	11.4	9.6	1.3	1.1	13.1	12.5	3.5	3.9	1.0	1.9
Malaysian OSAT															
KESM	KESM MK	Hold	6.56	7.30	61	n.m.	n.m.	0.8	0.8	0.4	1.5	2.3	2.1	1.1	1.3
Inari-Amertron	INRI MK	Add	2.50	3.15	2,008	23.4	22.3	3.7	3.6	18.2	16.5	12.6	12.2	4.0	4.2
MPI	MPI MK	Hold	28.52	32.00	1,222	19.3	18.8	2.8	2.5	16.0	14.3	7.1	6.6	1.1	1.2
Unisem	UNI MK	Hold	2.61	2.60	907	17.2	19.0	1.8	1.7	11.6	9.4	7.6	8.1	2.7	2.3
Globetronics	GTB MK	Not rated	1.18	na	170	16.9	15.3	2.6	2.5	15.4	16.8	8.5	7.6	5.1	n.m.
Sector						19.2	18.8	2.3	2.2	12.3	11.7	7.6	7.3	2.8	2.3
Malaysian ATE															
Aemulus	AMLS MK	Add	0.41	0.76	59	15.9	11.3	1.5	1.4	11.5	12.9	6.4	5.8	3.2	4.1
Mi Technovation	MI MK	Hold	1.24	1.60	239	16.6	12.4	1.1	1.0	6.6	8.3	7.2	5.9	3.2	4.0
Pentamaster	PENTA MK	Hold	4.10	4.15	628	29.2	25.1	4.5	3.9	17.0	16.6	14.5	12.5	0.5	0.6
ViTrox	VITRO MK	Not rated	7.27	na	1,479	34.6	30.5	8.1	6.8	25.1	23.8	31.3	27.2	0.7	0.8
Sector						26.8	22.7	4.5	3.9	16.2	16.2	17.7	15.2	1.5	1.8
Taiwan OSAT															
ASE Holding	3711 TT	Not rated	79.80	na	10,964	5.8	6.5	1.2	1.2	22.3	18.1	3.8	4.0	9.6	9.2
PTI	6239 TT	Not rated	78.40	na	1,876	6.5	7.1	1.1	1.1	17.4	13.9	2.8	2.8	8.4	8.4
Chippbond	6147 TT	Not rated	51.40	na	1,196	7.1	8.1	0.9	0.9	13.1	11.4	3.8	3.7	8.8	8.4
Sector						6.5	7.2	1.1	1.1	17.6	14.5	3.5	3.5	8.9	8.7
China OSAT															
JCET	600584 CH	Not rated	21.43	na	5,359	12.5	11.6	1.6	1.4	13.4	12.9	6.1	5.6	1.0	1.1
TSHT	002185 CH	Not rated	8.10	na	3,648	20.6	18.3	1.6	1.5	8.3	8.6	8.8	7.7	0.5	0.5
TFME	002156 CH	Not rated	15.08	na	2,816	19.0	15.4	1.8	1.6	9.3	10.5	7.2	6.2	0.4	1.1
Sector						17.4	15.1	1.7	1.5	10.4	10.7	7.3	6.5	0.7	0.9
Global RF															
Murata	6981 JT	Not rated	6,943	na	32,400	13.8	13.2	1.8	1.7	13.9	13.3	9.2	7.2	2.1	2.3
Broadcom	AVGO US	Not rated	468.00	na	184,997	11.8	11.2	8.2	6.8	64.9	55.4	10.2	9.7	3.7	4.1
Qorvo	QRVO US	Not rated	84.94	na	8,496	8.6	8.9	2.0	1.9	19.9	23.4	7.3	7.4	0.0	0.0
Skyworks	SWKS US	Not rated	90.44	na	14,100	7.9	7.5	2.5	2.2	29.0	27.5	6.4	6.8	2.7	2.8
Sector						10.5	10.2	3.6	3.1	31.9	29.9	8.2	7.8	2.1	2.3
Global IDM															
Texas Instruments	TXN US	Not rated	163.04	na	146,047	16.8	17.9	9.9	8.9	62.5	52.0	12.6	11.6	2.9	3.2
Analog Devices	ADI US	Not rated	149.06	na	74,646	14.9	15.4	2.1	2.1	12.9	11.5	10.8	10.8	2.1	2.3
NXP	NXPI US	Not rated	156.95	na	39,904	10.7	11.1	4.9	4.3	45.9	39.2	8.7	8.7	2.2	2.4
Infineon	IFX GR	Not rated	23.99	na	31,056	12.4	13.1	2.2	2.0	17.9	16.2	7.7	8.1	1.4	1.6
Sector						13.7	14.4	4.8	4.3	34.8	29.7	10.0	9.8	2.2	2.4

SOURCES: CGS-CIMB RESEARCH, BLOOMBERG, COMPANY REPORTS

DISCLAIMER

The content of this report (including the views and opinions expressed therein, and the information comprised therein) has been prepared by and belongs to CGS-CIMB. Reports relating to a specific geographical area are produced and distributed by the corresponding CGS-CIMB entity as listed in the table below.

This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation.

By accepting this report, the recipient hereof represents and warrants that he is entitled to receive such report in accordance with the restrictions set forth below and agrees to be bound by the limitations contained herein (including the “Restrictions on Distributions” set out below). Any failure to comply with these limitations may constitute a violation of law. This publication is being supplied to you strictly on the basis that it will remain confidential. No part of this report may be (i) copied, photocopied, duplicated, stored or reproduced in any form by any means; or (ii) redistributed or passed on, directly or indirectly, to any other person in whole or in part, for any purpose without the prior written consent of CGS-CIMB.

The information contained in this research report is prepared from data believed to be correct and reliable at the time of issue of this report. CGS-CIMB may or may not issue regular reports on the subject matter of this report at any frequency and may cease to do so or change the periodicity of reports at any time. CGS-CIMB has no obligation to update this report in the event of a material change to the information contained in this report. CGS-CIMB does not accept any obligation to (i) check or ensure that the contents of this report remain current, reliable or relevant, (ii) ensure that the content of this report constitutes all the information a prospective investor may require, (iii) ensure the adequacy, accuracy, completeness, reliability or fairness of any views, opinions and information, and accordingly, CGS-CIMB, its affiliates and related persons including China Galaxy International Financial Holdings Limited (“CGIFHL”) and CIMB Group Sdn. Bhd. (“CIMBG”) and their respective related corporations (and their respective directors, associates, connected persons and/or employees) shall not be liable in any manner whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance thereon or usage thereof. In particular, CGS-CIMB disclaims all responsibility and liability for the views and opinions set out in this report.

Unless otherwise specified, this report is based upon sources which CGS-CIMB considers to be reasonable. Such sources will, unless otherwise specified, for market data, be market data and prices available from the main stock exchange or market where the relevant security is listed, or, where appropriate, any other market. Information on the accounts and business of company(ies) will generally be based on published statements of the company(ies), information disseminated by regulatory information services, other publicly available information and information resulting from our research.

Whilst every effort is made to ensure that statements of facts made in this report are accurate, all estimates, projections, forecasts, expressions of opinion and other subjective judgments contained in this report are based on assumptions considered to be reasonable as of the date of the document in which they are contained and must not be construed as a representation that the matters referred to therein will occur. Past performance is not a reliable indicator of future performance. The value of investments may go down as well as up and those investing may, depending on the investments in question, lose more than the initial investment. No report shall constitute an offer or an invitation by or on behalf of CGS-CIMB or any of its affiliates (including CGIFHL, CIMBG and their respective related corporations) to any person to buy or sell any investments.

CGS-CIMB, its affiliates and related corporations (including CGIFHL, CIMBG and their respective related corporations) and/or their respective directors, associates, connected parties and/or employees may own or have positions in securities of the company(ies) covered in this research report or any securities related thereto and may from time to time add to or dispose of, or may be materially interested in, any such securities. Further, CGS-CIMB, its affiliates and their respective related corporations (including CGIFHL, CIMBG and their respective related corporations) do and seek to do business with the company(ies) covered in this research report and may from time to time act as market maker or have assumed an underwriting commitment in securities of such company(ies), may sell them to or buy them from customers on a principal basis and may also perform or seek to perform significant investment banking, advisory, underwriting or placement services for or relating to such company(ies) as well as solicit such investment, advisory or other services from any entity mentioned in this report.

CGS-CIMB or its affiliates (including CGIFHL, CIMBG and their respective related corporations) may enter into an agreement with the company(ies) covered in this report relating to the production of research reports. CGS-CIMB may disclose the contents of this report to the company(ies) covered by it and may have amended the contents of this report following such disclosure.

The analyst responsible for the production of this report hereby certifies that the views expressed herein accurately and exclusively reflect his or her personal views and opinions about any and all of the issuers or securities analysed in this report and were prepared independently and autonomously. No part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations(s) or view(s) in this report. The analyst(s) who prepared this research report is prohibited from receiving any compensation, incentive or bonus based on specific investment banking transactions or for providing a specific recommendation for, or view of, a particular company. Information barriers and other arrangements may be established where necessary to prevent conflicts of interests arising. However, the analyst(s) may receive compensation that is based on his/their coverage of company(ies) in the performance of his/their duties or the performance of his/their recommendations and the research personnel involved in the preparation of this report may also participate in the solicitation of the businesses as described above. In reviewing this research report, an investor should be aware that any or all of the foregoing, among other things, may give rise to real or potential conflicts of interest. Additional information is, subject to the duties of confidentiality, available on request.

Reports relating to a specific geographical area are produced by the corresponding CGS-CIMB entity as listed in the table below. The term “CGS-CIMB” shall denote, where appropriate, the relevant entity distributing or disseminating the report in the particular jurisdiction referenced below, or, in every other case except as otherwise stated herein, CGS-CIMB Securities International Pte. Ltd. and its affiliates, subsidiaries and related corporations.

Country	CGS-CIMB Entity	Regulated by
Hong Kong	CGS-CIMB Securities (Hong Kong) Limited	Securities and Futures Commission Hong Kong
India	CGS-CIMB Securities (India) Private Limited	Securities and Exchange Board of India (SEBI)
Indonesia	PT CGS-CIMB Sekuritas Indonesia	Financial Services Authority of Indonesia
Malaysia	CGS-CIMB Securities Sdn. Bhd.	Securities Commission Malaysia
Singapore	CGS-CIMB Securities (Singapore) Pte. Ltd.	Monetary Authority of Singapore
South Korea	CGS-CIMB Securities (Hong Kong) Limited, Korea Branch	Financial Services Commission and Financial Supervisory Service
Thailand	CGS-CIMB Securities (Thailand) Co. Ltd.	Securities and Exchange Commission Thailand

Other Significant Financial Interests:

(i) As of September 30, 2022 CGS-CIMB has a proprietary position in the securities (which may include but not be limited to shares, warrants, call warrants and/or any other derivatives) in the following company or companies covered or recommended in this report:

(a) -

(ii) Analyst Disclosure: As of October 4, 2022, the analyst(s) who prepared this report, and the associate(s), has / have an interest in the securities (which may include but not be limited to shares, warrants, call warrants and/or any other derivatives) in the following company or companies covered or recommended in this report:

(a) -

This report does not purport to contain all the information that a prospective investor may require. Neither CGS-CIMB nor any of its affiliates (including CGIFHL, CIMBG and their related corporations) make any guarantee, representation or warranty, express or implied, as to the adequacy, accuracy, completeness, reliability or fairness of any such information and opinion contained in this report. Neither CGS-CIMB nor any of its affiliates nor their related persons (including CGIFHL, CIMBG and their related corporations) shall be liable in any manner whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance thereon or usage thereof.

This report is general in nature and has been prepared for information purposes only. It is intended for circulation amongst CGS-CIMB's clients generally and does not have regard to the specific investment objectives, financial situation and the particular needs of any specific person who may receive this report. The information and opinions in this report are not and should not be construed or considered as an offer, recommendation or solicitation to buy or sell the subject securities, related investments or other financial instruments or any derivative instrument, or any rights pertaining thereto.

Investors are advised to make their own independent evaluation of the information contained in this research report, consider their own individual investment objectives, financial situation and particular needs and consult their own professional and financial advisers as to the legal, business, financial, tax and other aspects before participating in any transaction in respect of the securities of company(ies) covered in this research report.

The securities of such company(ies) may not be eligible for sale in all jurisdictions or to all categories of investors.

Restrictions on Distributions

Australia: Despite anything in this report to the contrary, this research is provided in Australia by CGS-CIMB Securities (Singapore) Pte. Ltd. and CGS-CIMB Securities (Hong Kong) Limited. This research is only available in Australia to persons who are "wholesale clients" (within the meaning of the Corporations Act 2001 (Cth) and is supplied solely for the use of such wholesale clients and shall not be distributed or passed on to any other person. You represent and warrant that if you are in Australia, you are a "wholesale client". This research is of a general nature only and has been prepared without taking into account the objectives, financial situation or needs of the individual recipient. CGS-CIMB Securities (Singapore) Pte. Ltd. and CGS-CIMB Securities (Hong Kong) Limited do not hold, and are not required to hold an Australian financial services license. CGS-CIMB Securities (Singapore) Pte. Ltd. and CGS-CIMB Securities (Hong Kong) Limited rely on "passporting" exemptions for entities appropriately licensed by the Monetary Authority of Singapore (under ASIC Class Order 03/1102) and the Securities and Futures Commission in Hong Kong (under ASIC Class Order 03/1103).

Canada: This research report has not been prepared in accordance with the disclosure requirements of Dealer Member Rule 3400 – Research Restrictions and Disclosure Requirements of the Investment Industry Regulatory Organization of Canada. For any research report distributed by CIBC, further disclosures related to CIBC conflicts of interest can be found at <https://researchcentral.cibcwm.com>.

China: For the purpose of this report, the People's Republic of China ("PRC") does not include the Hong Kong Special Administrative Region, the Macau Special Administrative Region or Taiwan. The distributor of this report has not been approved or licensed by the China Securities Regulatory Commission or any other relevant regulatory authority or governmental agency in the PRC. This report contains only marketing information. The distribution of this report is not an offer to buy or sell to any person within or outside PRC or a solicitation to any person within or outside of PRC to buy or sell any instruments described herein. This report is being issued outside the PRC to a limited number of institutional investors and may not be provided to any person other than the original recipient and may not be reproduced or used for any other purpose.

France: Only qualified investors within the meaning of French law shall have access to this report. This report shall not be considered as an offer to subscribe to, or used in connection with, any offer for subscription or sale or marketing or direct or indirect distribution of financial instruments and it is not intended as a solicitation for the purchase of any financial instrument.

Germany: This report is only directed at persons who are professional investors as defined in sec 31a(2) of the German Securities Trading Act (WpHG). This publication constitutes research of a non-binding nature on the market situation and the investment instruments cited here at the time of the publication of the information.

The current prices/yields in this issue are based upon closing prices from Bloomberg as of the day preceding publication. Please note that neither the German Federal Financial Supervisory Agency (BaFin), nor any other supervisory authority exercises any control over the content of this report.

Hong Kong: This report is issued and distributed in Hong Kong by CGS-CIMB Securities (Hong Kong) Limited ("CHK") which is licensed in Hong Kong by the Securities and Futures Commission for Type 1 (dealing in securities) and Type 4 (advising on securities) activities. Any investors wishing to purchase or otherwise deal in the securities covered in this report should contact the Head of Sales at CGS-CIMB Securities (Hong Kong) Limited. The views and opinions in this research report are our own as of the date hereof and are subject to change. If the Financial Services and Markets Act of the United Kingdom or the rules of the Financial Conduct Authority apply to a recipient, our obligations owed to such recipient therein are unaffected.

CHK has no obligation to update its opinion or the information in this research report.
This publication is strictly confidential and is for private circulation only to clients of CHK.
CHK does not make a market on other securities mentioned in the report.

India: This report is issued and distributed in India by CGS-CIMB Securities (India) Private Limited (“CGS-CIMB India”). CGS-CIMB India is a subsidiary of CGS-CIMB Securities International Pte. Ltd. which in turn is a 50:50 joint venture company of CGIFHL and CIMBG. The details of the members of the group of companies of CGS-CIMB can be found at www.cgs-cimb.com, CGIFHL at www.chinastock.com.hk/en/ACG/ContactUs/index.aspx and CIMBG at www.cimb.com/en/who-we-are.html. CGS-CIMB India is registered with the National Stock Exchange of India Limited and BSE Limited as a trading and clearing member (Merchant Banking Number: INM000012037) under the Securities and Exchange Board of India (Stock Brokers and Sub-Brokers) Regulations, 1992. In accordance with the provisions of Regulation 4(g) of the Securities and Exchange Board of India (Investment Advisers) Regulations, 2013, CGS-CIMB India is not required to seek registration with the Securities and Exchange Board of India (“SEBI”) as an Investment Adviser. CGS-CIMB India is registered with SEBI (SEBI Registration Number: INZ000209135) as a Research Analyst (INH000000669) pursuant to the SEBI (Research Analysts) Regulations, 2014 (“Regulations”).

This report does not take into account the particular investment objectives, financial situations, or needs of the recipients. It is not intended for and does not deal with prohibitions on investment due to law/jurisdiction issues etc. which may exist for certain persons/entities. Recipients should rely on their own investigations and take their own professional advice before investment.

The report is not a “prospectus” as defined under Indian Law, including the Companies Act, 2013, and is not, and shall not be, approved by, or filed or registered with, any Indian regulator, including any Registrar of Companies in India, SEBI, any Indian stock exchange, or the Reserve Bank of India. No offer, or invitation to offer, or solicitation of subscription with respect to any such securities listed or proposed to be listed in India is being made, or intended to be made, to the public, or to any member or section of the public in India, through or pursuant to this report.

The research analysts, strategists or economists principally responsible for the preparation of this research report are segregated from the other activities of CGS-CIMB India and they have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues, client feedback and competitive factors. Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed or proposed to be performed by CGS-CIMB India or its affiliates.

CGS-CIMB India does not have actual / beneficial ownership of 1% or more securities of the subject company in this research report, at the end of the month immediately preceding the date of publication of this research report. However, since affiliates of CGS-CIMB India are engaged in the financial services business, they might have in their normal course of business financial interests or actual / beneficial ownership of one per cent or more in various companies including the subject company in this research report.

CGS-CIMB India or its associates, may: (a) from time to time, have long or short position in, and buy or sell the securities of the subject company in this research report; or (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the subject company in this research report or act as an advisor or lender/borrower to such company or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.

CGS-CIMB India, its associates and the analyst engaged in preparation of this research report have not received any compensation for investment banking, merchant banking or brokerage services from the subject company mentioned in the research report in the past 12 months.

CGS-CIMB India, its associates and the analyst engaged in preparation of this research report have not managed or co-managed public offering of securities for the subject company mentioned in the research report in the past 12 months. The analyst from CGS-CIMB India engaged in preparation of this research report or his/her relative (a) do not have any financial interests in the subject company mentioned in this research report; (b) do not own 1% or more of the equity securities of the subject company mentioned in the research report as of the last day of the month preceding the publication of the research report; (c) do not have any material conflict of interest at the time of publication of the research report

Indonesia: This report is issued and distributed by PT CGS-CIMB Sekuritas Indonesia (“CGS-CIMB Indonesia”). The views and opinions in this research report are our own as of the date hereof and are subject to change. CGS-CIMB Indonesia has no obligation to update its opinion or the information in this research report. This report is for private circulation only to clients of CGS-CIMB Indonesia. Neither this report 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 Indonesian capital market laws and regulations.

This research report is not an offer of securities in Indonesia. The securities referred to in this research report have not been registered with the Financial Services Authority (Otoritas Jasa Keuangan) 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 law and regulations.

Ireland: CGS-CIMB is not an investment firm authorised in the Republic of Ireland and no part of this document should be construed as CGS-CIMB acting as, or otherwise claiming or representing to be, an investment firm authorised in the Republic of Ireland.

Malaysia: This report is distributed in Malaysia by CGS-CIMB Securities Sdn. Bhd. (“CGS-CIMB Malaysia”) solely for the benefit of and for the exclusive use of our clients. Recipients of this report are to contact CGS-CIMB Malaysia, at Level 29, Menara Bumiputra-Commerce, No. 11, Jalan Raja Laut, 50350 Kuala Lumpur, Malaysia, in respect of any matters arising from or in connection with this report. CGS-CIMB Malaysia has no obligation to update, revise or reaffirm its opinion or the information in this research report after the date of this report. CGS-CIMB Malaysia may act or acts as a market maker in the capital market products of the following companies: ([Malaysia Market Maker Company List - Click here](#))

New Zealand: In New Zealand, this report is for distribution only to persons who are wholesale clients pursuant to section 5C of the Financial Advisers Act 2008.

Singapore: This report is issued and distributed by CGS-CIMB Securities (Singapore) Pte Ltd (“CGS-CIMB Singapore”). CGS-CIMB Singapore is a capital markets services licensee under the Securities and Futures Act (Chapter 289). Accordingly, it is exempted from the requirement to hold a financial adviser’s licence under the Financial Advisers Act, Cap 110 (“FAA”) for advising on investment products, by issuing or promulgating research analyses or research reports, whether in electronic, print or other form. CGS-CIMB Singapore is subject to the applicable rules under the FAA unless it is able to avail itself to any prescribed exemptions.

Recipients of this report are to contact CGS-CIMB Singapore, 10 Marina Boulevard, Marina Bay Financial Centre Tower 2, #09-01, Singapore 018983

in respect of any matters arising from, or in connection with this report. CGS-CIMB Singapore has no obligation to update its opinion or the information in this research report. This publication is strictly confidential and is for private circulation only. If you have not been sent this report by CGS-CIMB Singapore directly, you may not rely, use or disclose to anyone else this report or its contents.

If the recipient of this research report is not an accredited investor, expert investor or institutional investor, CGS-CIMB Singapore accepts legal responsibility for the contents of the report without any disclaimer limiting or otherwise curtailing such legal responsibility. If the recipient is an accredited investor, expert investor or institutional investor, the recipient is deemed to acknowledge that CGS-CIMB Singapore is exempt from certain requirements under the FAA and its attendant regulations, and as such, is exempt from complying with the following:

- (a) Section 25 of the FAA (obligation to disclose product information);
- (b) Section 27 (duty not to make recommendation with respect to any investment product without having a reasonable basis where you may be reasonably expected to rely on the recommendation) of the FAA;
- (c) MAS Notice on Information to Clients and Product Information Disclosure [Notice No. FAA-N03];
- (d) MAS Notice on Recommendation on Investment Products [Notice No. FAA-N16];
- (e) Section 36 (obligation on disclosure of interest in specified products), and
- (f) any other laws, regulations, notices, directive, guidelines, circulars and practice notes which are relates to the above, to the extent permitted by applicable laws, as may be amended from time to time, and any other laws, regulations, notices, directive, guidelines, circulars, and practice notes as we may notify you from time to time. In addition, the recipient who is an accredited investor, expert investor or institutional investor acknowledges that as CGS-CIMB Singapore is exempt from Section 27 of the FAA, the recipient will also not be able to file a civil claim against CGS-CIMB Singapore for any loss or damage arising from the recipient's reliance on any recommendation made by CGS-CIMB Singapore which would otherwise be a right that is available to the recipient under Section 27 of the FAA .

CGS-CIMB Singapore, its affiliates and related corporations, their directors, associates, connected parties and/or employees may own or have positions in specified products of the company(ies) covered in this research report or any specified products related thereto and may from time to time add to or dispose of, or may be materially interested in, any such specified products. Further, CGS-CIMB Singapore, its affiliates and its related corporations do and seek to do business with the company(ies) covered in this research report and may from time to time act as market maker or have assumed an underwriting commitment in specified products of such company(ies), may sell them to or buy them from customers on a principal basis and may also perform or seek to perform significant investment banking, advisory, underwriting or placement services for or relating to such company(ies) as well as solicit such investment, advisory or other services from any entity mentioned in this report.

CGS-CIMB Singapore does not make a market on other specified products mentioned in the report.

South Korea: This report is issued and distributed in South Korea by CGS-CIMB Securities (Hong Kong) Limited, Korea Branch ("CGS-CIMB Korea") which is licensed as a cash equity broker, and regulated by the Financial Services Commission and Financial Supervisory Service of Korea. In South Korea, this report is for distribution only to professional investors under Article 9(5) of the Financial Investment Services and Capital Market Act of Korea ("FSCMA").

Spain: This document is a research report and it is addressed to institutional investors only. The research report is of a general nature and not personalised and does not constitute investment advice so, as the case may be, the recipient must seek proper advice before adopting any investment decision. This document does not constitute a public offering of securities.

CGS-CIMB is not registered with the Spanish Comision Nacional del Mercado de Valores to provide investment services.

Sweden: This report contains only marketing information and has not been approved by the Swedish Financial Supervisory Authority. The distribution of this report is not an offer to sell to any person in Sweden or a solicitation to any person in Sweden to buy any instruments described herein and may not be forwarded to the public in Sweden.

Switzerland: This report has not been prepared in accordance with the recognized self-regulatory minimal standards for research reports of banks issued by the Swiss Bankers' Association (Directives on the Independence of Financial Research).

Thailand: This report is issued and distributed by CGS-CIMB Securities (Thailand) Co. Ltd. ("CGS-CIMB Thailand") based upon sources believed to be reliable (but their accuracy, completeness or correctness is not guaranteed). The statements or expressions of opinion herein were arrived at after due and careful consideration for use as information for investment. Such opinions are subject to change without notice and CGS-CIMB Thailand has no obligation to update its opinion or the information in this research report.

Corporate Governance Report (CGR): ([Thai CGR and Anti-Corruption of Thai Listed Companies - Click here](#))

The disclosure of the survey result of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the Market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an evaluation of operation and is not based on inside information.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey result may be changed after that date. CGS-CIMB Thailand does not confirm nor certify the accuracy of such survey result.

Score Range:	90 - 100	80 – 89	70 - 79	Below 70	No Survey Result
Description:	Excellent	Very Good	Good	N/A	N/A

United Arab Emirates: The distributor of this report has not been approved or licensed by the UAE Central Bank or any other relevant licensing authorities or governmental agencies in the United Arab Emirates. This report is strictly private and confidential and has not been reviewed by, deposited or registered with UAE Central Bank or any other licensing authority or governmental agencies in the United Arab Emirates. This report is being issued outside the United Arab Emirates to a limited number of institutional investors and must not be provided to any person other than the original recipient and may not be reproduced or used for any other purpose. Further, the information contained in this report is not intended to lead to the sale of investments under any subscription agreement or the conclusion of any other contract of whatsoever nature within the territory of the United Arab Emirates.

United Kingdom and European Economic Area (EEA): In the United Kingdom and European Economic Area, this material is also being distributed by CGS-CIMB Securities (UK) Limited ("CGS-CIMB UK"). CGS-CIMB UK is authorized and regulated by the Financial Conduct Authority and its

registered office is at 53 New Broad Street, London EC2M 1JJ. The material distributed by CGS-CIMB UK has been prepared in accordance with CGS-CIMB's policies for managing conflicts of interest arising as a result of publication and distribution of this material. This material is for distribution only to, and is solely directed at, selected persons on the basis that those persons: (a) are eligible counterparties and professional clients of CGS-CIMB UK; (b) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"), (c) fall within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc") of the Order; (d) are outside the United Kingdom subject to relevant regulation in each jurisdiction, material (all such persons together being referred to as "relevant persons"). This material is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this material relates is available only to relevant persons and will be engaged in only with relevant persons.

This material is categorised as non-independent for the purposes of CGS-CIMB UK and therefore does not provide an impartial or objective assessment of the subject matter and does not constitute independent research. Consequently, this material has not been prepared in accordance with legal requirements designed to promote the independence of research and will not be subject to any prohibition on dealing ahead of the dissemination of research. Therefore, this material is considered a marketing communication.

United States: This research report is distributed in the United States of America by CGS-CIMB Securities (USA) Inc, a U.S. registered broker-dealer and an affiliate of CGS-CIMB Securities Sdn. Bhd., CGS-CIMB Securities (Singapore) Pte Ltd, PT CGS-CIMB Sekuritas Indonesia, CGS-CIMB Securities (Thailand) Co. Ltd, CGS-CIMB Securities (Hong Kong) Limited and CGS-CIMB Securities (India) Private Limited, and is distributed solely to persons who qualify as "U.S. Institutional Investors" as defined in Rule 15a-6 under the Securities and Exchange Act of 1934. This communication is only for Institutional Investors whose ordinary business activities involve investing in shares, bonds, and associated securities and/or derivative securities and who have professional experience in such investments. Any person who is not a U.S. Institutional Investor or Major Institutional Investor must not rely on this communication. The delivery of this research report to any person in the United States of America is not a recommendation to effect any transactions in the securities discussed herein, or an endorsement of any opinion expressed herein. CGS-CIMB Securities (USA) Inc, is a FINRA/SIPC member and takes responsibility for the content of this report. For further information or to place an order in any of the above-mentioned securities please contact a registered representative of CGS-CIMB Securities (USA) Inc.

CGS-CIMB Securities (USA) Inc. does not make a market on other securities mentioned in the report.

CGS-CIMB Securities (USA) Inc. has not managed or co-managed a public offering of any of the securities mentioned in the past 12 months.

CGS-CIMB Securities (USA) Inc. has not received compensation for investment banking services from any of the company mentioned in the past 12 months.

CGS-CIMB Securities (USA) Inc. neither expects to receive nor intends to seek compensation for investment banking services from any of the company mentioned within the next 3 months.

United States Third-Party Disclaimer: If this report is distributed in the United States of America by Raymond James & Associates, Inc ("RJA"), this report is third-party research prepared for and distributed in the United States of America by RJA pursuant to an arrangement between RJA and CGS-CIMB Securities International Pte. Ltd. ("CGS-CIMB"). CGS-CIMB is not an affiliate of RJA. This report is distributed solely to persons who qualify as "U.S. Institutional Investors" or as "Major U.S. Institutional Investors" as defined in Rule 15a-6 under the Securities and Exchange Act of 1934, as amended. This communication is only for U.S. Institutional Investors or Major U.S. Institutional Investor whose ordinary business activities involve investing in shares, bonds, and associated securities and/or derivative securities and who have professional experience in such investments. Any person who is not a U.S. Institutional Investor or Major U.S. Institutional Investor must not rely on this communication. The delivery of this report to any person in the U.S. is not a recommendation to effect any transactions in the securities discussed herein, or an endorsement of any opinion expressed herein. If you are receiving this report in the U.S from RJA, a FINRA/SIPC member, it takes responsibility for the content of this report. For further information or to place an order in any of the above-mentioned securities please contact a registered representative of CGS-CIMB Securities (USA) Inc. or RJA. <https://raymondjames.com/InternationalEquityDisclosures>

Other jurisdictions: In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is only for distribution to professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions.

Distribution of stock ratings and investment banking clients for quarter ended on 30 June 2022		
643 companies under coverage for quarter ended on 30 June 2022		
	Rating Distribution (%)	Investment Banking clients (%)
Add	68.4%	0.8%
Hold	24.6%	0.0%
Reduce	7.0%	0.2%

Recommendation Framework**Stock Ratings**

Definition:

- Add** The stock's total return is expected to exceed 10% over the next 12 months.
- Hold** The stock's total return is expected to be between 0% and positive 10% over the next 12 months.
- Reduce** The stock's total return is expected to fall below 0% or more over the next 12 months.

The total expected return of a stock is defined as the sum of the: (i) percentage difference between the target price and the current price and (ii) the forward net dividend yields of the stock. Stock price targets have an investment horizon of 12 months.

Sector Ratings

Definition:

- Overweight** An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation.
- Neutral** A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
- Underweight** An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation.

Country Ratings

Definition:

- Overweight** An Overweight rating means investors should be positioned with an above-market weight in this country relative to benchmark.
- Neutral** A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.
- Underweight** An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.

#03c