

# Singapore Company Update

## AEM Holdings Ltd

Bloomberg: AEM SP | Reuters: AEM.SI

Refer to important disclosures at the end of this report

DBS Group Research . Equity

7 Nov 2024

### BUY (Upgrade from HOLD)

Last Traded Price (7 Nov 2024): SGD1.22 (STI : 3,673.49)

Price Target 12-mth: SGD1.67 (37% upside) (Prev SGD1.34)

#### Analysts

Amanda Tan amandatankh@dbs.com

Lee Keng LING leekeng@dbs.com

#### What's New

- Upgrade to BUY with higher SGD1.67 TP on earnings turnaround and undemanding valuation at c.10-14x FY25-26F earnings
- At the cusp of a multi-year rollout for new customers with new business revenue to double to in FY25 (c.30% revenue)
- Lackluster contributions from Intel could bottom in 2H24
- FY25 pre-exceptional earnings to grow 2x followed by 39% y/y in FY26

#### Price Relative



#### Forecasts and Valuation

FY Dec (SGDmn)	2023A	2024F	2025F	2026F
Revenue	481	347	432	489
EBITDA	65.5	46.0	72.0	87.9
Pre-tax Profit	7.59	6.49	34.8	48.3
Net Profit	(1.2)	5.39	28.9	40.1
Net Pft (Pre Ex.)	25.5	9.79	28.9	40.1
Net Pft Gth (Pre-ex) (%)	(79.9)	(61.7)	194.8	39.0
EPS (S cts)	(0.4)	1.73	9.27	12.9
EPS Pre Ex. (S cts)	8.21	3.14	9.27	12.9
EPS Gth Pre Ex (%)	(80)	(62)	195	39
Diluted EPS (S cts)	(0.4)	1.73	9.27	12.9
Net DPS (S cts)	0.0	0.0	2.32	3.22
BV Per Share (S cts)	150	152	159	169
PE (X)	nm	70.5	13.2	9.5
PE Pre Ex. (X)	14.9	38.8	13.2	9.5
P/Cash Flow (X)	9.3	20.8	2.8	2.6
EV/EBITDA (X)	6.3	8.9	4.2	2.1
Net Div Yield (%)	0.0	0.0	1.9	2.6
P/Book Value (X)	0.8	0.8	0.8	0.7
Net Debt/Equity (X)	0.1	0.1	CASH	CASH
ROAE (%)	(0.2)	1.1	6.0	7.9
Earnings Rev (%):		0	(24)	-
Consensus EPS (S cts):		9.70	22.0	21.1
Other Broker Recs:		B: 1	S: 2	H: 3

Source of all data on this page: Company, DBS, Bloomberg

### Non-consensus upgrade on turnaround

#### Investment Thesis:

**Retains technological superiority in system-level test.** AEM is a pioneer in providing SLT (system-level test) solutions and is around one generation ahead of its competitors. Given its technological superiority, we believe AEM is well positioned to ride on the growing SLT market that has benefitted from the increased complexity of chips and higher test coverage requirements, alongside the need for advanced heterogeneous packaging.

**New technology drives growth in test spend, leading to higher demand for AEM's offerings in the long term.** Notwithstanding near-term volatility, the semiconductor industry is well poised for growth, owing to the push towards digitalisation. McKinsey projects that the semiconductor industry will become a trillion-dollar industry by 2030. Industry megatrends such as artificial intelligence (AI), 5G, and Internet of Things (IoT) will pave the way for growth in test spend, from higher test volumes and test times. Longer test times would also require more of AEM's consumables due to wear and tear.

**At the cusp of a multi-year rollout for new customers.** In the past few years, AEM had announced several customer wins. As at 1H24, AEM was still mainly in the lab verification tool phase but will see a shift into production in 2H24. We believe that the AEM is near an inflexion point and foresee its customer diversification strategy yielding more significant returns starting from end 4Q24 onwards.

**Upgrade to BUY with TP SGD1.67.** Our TP is based on 18x FY25F earnings, which is close to -0.5SD of the historical mean and c.50% discount to peers. AEM is currently trading at undemanding valuations of c.13.8x FY25F earnings. We reduce our FY25F earnings estimates by 24% due to more conservative estimates on new customer contributions, industrial weakness affecting CEI, and lower gross margin assumptions. Despite the earnings revision and consensus having a negative view on the stock, we take a contrarian stance, believing that most of the negatives should be in the rear-view mirror and call for a BUY as we look ahead to FY25 and beyond where AEM is at the cusp of a multi-year rollout for new customers.

#### Key Risks

Slower ramp at new customers, key customer weakness

#### At A Glance

Issued Capital (mn shrs)	313
Mkt. Cap (SGDmn/USDnm)	382 / 288
Major Shareholders (%)	
Venezio Investments	12.5
Employees Provident	9.9
abrdn plc	7.8
Free Float (%)	63.8
3m Avg. Daily Val (USDmn)	3.0

**GIC Industry:** Information Technology / Semiconductors & Semiconductor Equipment



Watchlist the stock on Insights Direct to receive prompt updates

## WHAT'S NEW

### Snagging a chip bargain before it flies

We are upgrading AEM to BUY with a higher TP of SGD1.67. We believe that AEM is at an inflexion point with new customers, and potential for the new fabless AI customer to grow into a key customer account, while Intel revenue should stabilise from 2H24 onwards.

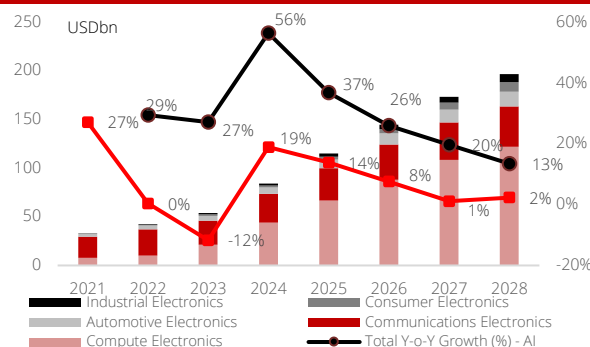
**At the cusp of a multi-year rollout in contributions from new customers.** Over the course of the past few years, AEM had announced several customer wins in the areas of memory, XPU, and systems & hyperscalers. As at 1H24, AEM is still mainly in the lab verification tool phase but will shift into production in 2H24. We believe that AEM is near an inflexion point and foresee its customer diversification strategy yielding more significant returns starting from 4Q24 and into FY25 and beyond. AEM expects new business revenue to double in FY24, and double again in FY25, reaching triple-digit millions.

**Spotlight on new fabless AI customer...** Amongst AEM's new customers, we are of the view that the fabless AI customer holds the most promise of growing to be a key customer account for AEM. For one, AI is a high growth segment within the semiconductor industry, and we believe that there is scope for other AI contenders besides Nvidia to thrive in a growing market. Beyond the initial pre-production verification phase, we understand that large fabless customers typically also dictate test tools installed at their OSAT partner during mass production, reinforcing the case that the opportunity from new customers is not just one-off but a multi-year prospect.

**... with potential to mirror the success story with Intel.** Additionally, the new fabless customer is operating in similar end markets of client computing and data centres, areas where the success of AEM's offerings has been tried and tested with key customer Intel. This gives us optimism that the success could be mirrored with the new fabless AI customer although we acknowledge that it is somewhat premature to say with certainty that AEM can achieve the same magnitude in contributions from the new fabless customer.

**Key milestones to watch: the pace of customer contributions and new program acquisitions.** While still nascent, we believe that AEM's intent is to acquire more programme wins across test insertions which are steps towards developing the new fabless AI customer into a key customer account in the future. Key milestones to monitor include significant contract wins or new program acquisitions. Currently, AEM has announced that its advanced SLT insertions will be used for next generation AI devices, and they will also be supplying automated burn in test solutions to the major fabless provider of AI chips.

### AI semiconductor revenue growth outpacing overall market

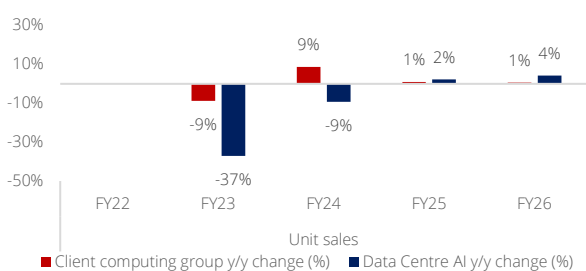


Source: Gartner, DBS

**Addressing the big elephant in the room – lackluster contributions from Intel could bottom in 2H24.** We estimate contribution from Intel at c.SGD150mn per year in FY25-FY26 and our assumptions are as follows:

- **SGD100mn in base revenue (excluding incremental revenue from non-cancellable POs) from Intel per year.** We estimate that Intel's contribution will be around SGD50mn in 2H24 (vs SGD 90mn in 1H24), based on management's comments that Intel's share of test cell solutions reach parity or cross over to nearly 50:50 as we approach the end of the year. Despite a recovering semiconductor market and consensus expecting Intel's volumes to grow by low-mid single digits, we believe that an annualized base revenue of SGD100mn in FY25-26 (-c.40% y/y compared to our FY24 estimates) is fair given Intel's intention to save USD500m+ annually on test spend. We are projecting a flattish base revenue from 2H24 onwards as wallet spend from Intel has already been reduced substantially and we think that the bulk of savings from reducing non-standard tests should have already been incorporated.
- **Incremental SGD50mn from drawdown of purchase orders annually between FY25-FY27.** Given the take or pay arrangement, Intel would have to start drawing down on its SGD280mn non-cancellable purchase order (first mentioned during 3Q22 results release). Our channel checks indicate that this will be over the span of 1Q25 to 2H27 and we have conservatively projected an annual incremental boost of c.SGD50mn to revenue from Intel between FY25 and FY27 (totaling c.50% of the contract value). This estimate considers partial fulfillment of the contract, with the remainder forming part of the base revenue.

**Intel unit sales (#k)**



Source: Visible Alpha, DBS

**Summary of key revenue assumptions**

<b>FY25</b>	<ul style="list-style-type: none"> <li>SGD151mn from Intel (base SGD100mn, PO SGD51mn)</li> <li>SGD 130mn from new customers</li> <li>SGD151mn from CEI</li> </ul>
<b>FY26</b>	<ul style="list-style-type: none"> <li>SGD154mn from Intel</li> <li>SGD170mn from new customers</li> <li>SGD166mn from CEI</li> </ul>
<b>Changes to our new business estimates</b>	<p>Despite optimism on its new customer momentum, we acknowledge that product rollouts at end markets are uncertain, which may defer but not halt the ramp of AEM offerings to new customers. We therefore temper our expectations and pare back our estimates for revenue from new test insertions to SGD65mn and SGD130mn for FY24 and FY25, accounting for 20-30% of our full year estimates.</p>

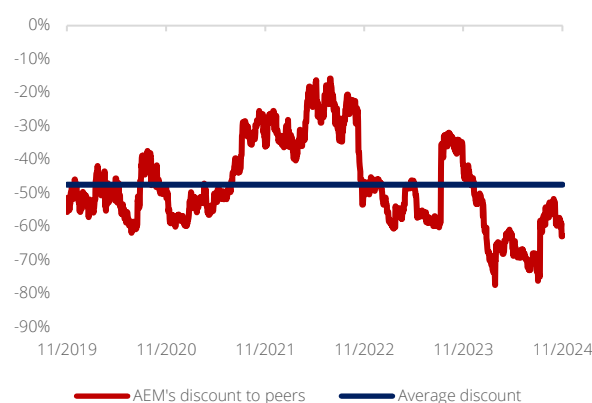
Source: DBS estimates

Despite the cut in new customer contributions, AEM's revenue/earnings are still expected to grow by 24.7%/194.8% y/y (pre exceptionals) in FY25 after the slump in FY23-24. Thereafter, we project revenue/earnings to recover 13.1%/39.0% in FY26 on the back of new customer contributions.

**Key risks are momentum of new customer contributions and magnitude of decline from key customer.** Changes to the macroeconomy or customers' operating environment may affect product rollouts which could delay new customers' uptake of AEM's solutions. In addition, while we have projected a c.40% decline in base revenue from Intel, more aggressive than expected cost cutting measures at Intel pose a risk to AEM. Further, Intel's 5N4Y strategy, which involves transitioning to smaller process nodes, could benefit AEM by extending test times. However, this advantage could be counterbalanced by Intel simplifying its product roadmap and reducing the number of product variants in its portfolio.

**Valuations fairly reasonable with negatives likely priced in.** On a PE basis, AEM currently trades at 13.8x FY25 earnings, below -0.5SD of the historical mean. Valuations are also depressed on a PB basis, with AEM trading below book value at 0.8x. We believe that pessimism surrounding the key customer has been priced in and market sentiment appears to be stable with the share price mainly rangebound. While the upcoming 3Q24 results is still expected to remain weak given that an initial order of >SGD20mn will only ship in 4Q24, we are calling for a BUY as we look ahead to FY25 and beyond where AEM is at the cusp of a multi-year rollout for new customers. Any dips or weaknesses going forward could be good opportunities to accumulate as we remain convicted by the longer-term story of AEM.

**AEM discount to peers below average**



Source: Bloomberg, DBS

Note: Peers comprise Advantest, Teradyne, and Cohu

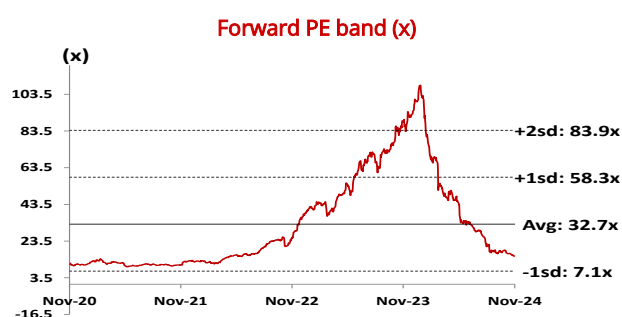
**Upgrade to BUY with TP SGD1.67.** Our TP is based on 18x FY25F earnings, which is close to -0.5SD of the historical mean and c.50% discount to peers. We reduce our FY25F earnings estimates by 24% due to more conservative projections on new customer contributions, industrial weakness affecting CEI, and lower gross margin assumptions. Despite the earnings revision and consensus having a negative view on the stock, we take a contrarian stance, believing that most of the negatives should be in the rear-view mirror. Hence, we expect the discount between AEM and its peers to revert to the historical mean at c.50%. We are upgrading the stock to a BUY with AEM's earnings turnaround underway as it emerges from testing times.

**Company Background**

AEM is a solutions provider for the back-end testing of the semiconductor manufacturing process. It works closely with its key customer Intel to design, engineer, and manufacture the test handlers. AEM then provides field support and post-sales replacements.

## AEM Holdings Ltd

### Historical PE and PB band



Source: Bloomberg, DBS estimates



Source: Bloomberg, DBS estimates

### Income Statement (SGDmn)

FY Dec	2022A	2023A	2024F	2025F	2026F
Revenue	870	481	347	432	489
Cost of Goods Sold	(597)	(352)	(260)	(316)	(352)
<b>Gross Profit</b>	<b>274</b>	<b>129</b>	<b>86.7</b>	<b>117</b>	<b>137</b>
Other Opng (Exp)/Inc	(113)	(88.8)	(70.1)	(77.0)	(85.0)
<b>Operating Profit</b>	<b>160</b>	<b>40.5</b>	<b>16.5</b>	<b>39.8</b>	<b>51.9</b>
Other Non Op (Exp)/Inc	0.0	0.0	0.0	0.0	0.0
Associates & JV Inc	(0.3)	(0.6)	0.0	0.0	0.0
Net Interest (Exp)/Inc	(1.3)	(5.5)	(5.6)	(5.0)	(3.6)
Exceptional Gain/(Loss)	0.0	(26.7)	(4.4)	0.0	0.0
<b>Pre-tax Profit</b>	<b>159</b>	<b>7.59</b>	<b>6.49</b>	<b>34.8</b>	<b>48.3</b>
Tax	(31.4)	(8.8)	(1.1)	(5.9)	(8.2)
Minority Interest	0.0	0.0	0.0	0.0	0.0
Preference Dividend	0.0	0.0	0.0	0.0	0.0
<b>Net Profit</b>	<b>127</b>	<b>(1.2)</b>	<b>5.39</b>	<b>28.9</b>	<b>40.1</b>
Net Profit before Except.	127	25.5	9.79	28.9	40.1
EBITDA	184	65.5	46.0	72.0	87.9
<b>Growth</b>					
Revenue Gth (%)	53.9	(44.7)	(28.0)	24.7	13.1
EBITDA Gth (%)	46.4	(64.3)	(29.9)	56.7	22.0
Opg Profit Gth (%)	43.3	(74.8)	(59.2)	140.6	30.5
Net Profit Gth (Pre-ex) (%)	38.2	(79.9)	(61.7)	194.8	39.0
<b>Margins &amp; Ratio</b>					
Gross Margins (%)	31.4	26.9	25.0	27.0	28.0
Opg Profit Margin (%)	18.4	8.4	4.8	9.2	10.6
Net Profit Margin (%)	14.6	(0.2)	1.6	6.7	8.2
ROAE (%)	28.7	(0.2)	1.1	6.0	7.9
ROA (%)	16.8	(0.2)	0.8	4.1	5.4
ROCE (%)	22.0	3.2	0.7	3.8	5.6
Div Payout Ratio (%)	25.0	-	0.0	25.0	25.0
Net Interest Cover (x)	122.2	7.3	2.9	8.0	14.6

Source: Company, DBS

## AEM Holdings Ltd

### Interim Income Statement (SGDmn)

FY Dec	1H2022	2H2022	1H2023	2H2023	1H2024
Revenue	540	330	275	206	174
Cost of Goods Sold	(374)	(223)	(192)	(160)	(130)
<b>Gross Profit</b>	<b>166</b>	<b>107</b>	<b>83.0</b>	<b>46.3</b>	<b>43.4</b>
Other Oper. (Exp)/Inc	(63.2)	(50.2)	(57.5)	(31.4)	(39.9)
<b>Operating Profit</b>	<b>103</b>	<b>57.2</b>	<b>25.6</b>	<b>14.9</b>	<b>3.46</b>
Other Non Opg (Exp)/Inc	0.0	0.0	0.0	0.0	0.0
Associates & JV Inc	(0.5)	0.18	1.11	(1.8)	(0.3)
Net Interest (Exp)/Inc	(0.6)	(0.8)	(2.8)	(2.7)	(2.1)
Exceptional Gain/(Loss)	0.0	0.0	0.0	(26.7)	0.0
<b>Pre-tax Profit</b>	<b>102</b>	<b>56.7</b>	<b>23.9</b>	<b>(16.3)</b>	<b>1.03</b>
Tax	(19.0)	(12.4)	(4.1)	(4.6)	(0.2)
Minority Interest	0.0	0.0	0.0	0.0	0.0
<b>Net Profit</b>	<b>83.1</b>	<b>44.3</b>	<b>19.7</b>	<b>(20.9)</b>	<b>0.82</b>
Net profit bef Except.	83.1	44.3	19.7	5.82	0.82
EBITDA	113	70.2	39.9	27.4	18.4
<b>Growth</b>					
Revenue Gth (%)	44.8	(38.9)	(16.6)	(25.1)	(15.8)
EBITDA Gth (%)	33.5	(38.1)	(43.1)	(31.4)	(32.9)
Opg Profit Gth (%)	36.8	(44.5)	(55.3)	(41.7)	(76.7)
Net Profit Gth (%)	33.1	(46.7)	(55.4)	(205.9)	(103.9)
<b>Margins</b>					
Gross Margins (%)	30.8	32.5	30.2	22.4	25.0
Opg Profit Margins (%)	19.1	17.3	9.3	7.2	2.0
Net Profit Margins (%)	15.4	13.4	7.2	(10.1)	0.5

### Balance Sheet (SGDmn)

FY Dec	2022A	2023A	2024F	2025F	2026F
Net Fixed Assets	40.1	40.3	33.5	24.0	15.9
Invts in Associates & JVs	15.2	8.82	8.82	8.82	8.82
Other LT Assets	160	168	163	158	152
Cash	128	102	102	214	326
ST Investment	0.0	0.0	0.0	0.0	0.0
Inventory	368	329	328	238	169
Debtors	92.9	60.1	61.7	77.0	87.1
Net Intangibles Assets	116	125	121	116	110
Other Current Assets	2.15	1.58	1.58	1.58	1.58
<b>Total Assets</b>	<b>806</b>	<b>709</b>	<b>698</b>	<b>721</b>	<b>761</b>
ST Debt	13.7	83.9	83.9	83.9	83.9
Creditor	119	74.8	64.1	60.5	67.5
Other Current Liab	35.6	18.9	13.6	18.4	20.7
LT Debt	130	42.5	42.5	42.5	42.5
Other LT Liabilities	14.3	14.5	14.5	14.5	14.5
Shareholder's Equity	485	467	473	494	525
Minority Interests	8.40	6.93	6.93	6.93	6.93
<b>Total Cap. &amp; Liab.</b>	<b>806</b>	<b>709</b>	<b>698</b>	<b>721</b>	<b>761</b>
Non-Cash Wkg. Capital	308	297	313	237	169
Net Cash/(Debt)	(15.5)	(24.5)	(24.3)	87.5	200
Debtors Turn (avg days)	46.3	58.0	64.2	58.6	61.2
Creditors Turn (avg days)	95.5	108.4	110.0	80.3	73.9
Inventory Turn (avg days)	182.3	389.5	519.6	364.2	234.8
Asset Turnover (x)	1.1	0.6	0.5	0.6	0.7
Current Ratio (x)	3.5	2.8	3.1	3.3	3.4
Quick Ratio (x)	1.3	0.9	1.0	1.8	2.4
Net Debt/Equity (X)	0.0	0.1	0.1	CASH	CASH
Net Debt/Equity ex MI (X)	0.0	0.1	0.1	CASH	CASH
Capex to Debt (%)	24.9	20.5	14.2	14.2	17.4

Source: Company, DBS

## AEM Holdings Ltd

### Cash Flow Statement (SGDmn)

FY Dec	2022A	2023A	2024F	2025F	2026F
Pre-Tax Profit	159	7.59	6.49	34.8	48.3
Dep. & Amort.	23.5	25.7	29.4	32.3	36.0
Tax Paid	(21.6)	(28.9)	(6.4)	(1.1)	(5.9)
Assoc. & JV Inc/(loss)	0.28	0.64	0.0	0.0	0.0
Chg in Wkg.Cap.	(198)	31.9	(11.3)	71.0	65.9
Other Operating CF	5.30	3.85	0.0	0.0	0.0
<b>Net Operating CF</b>	<b>(32.1)</b>	<b>40.8</b>	<b>18.3</b>	<b>137</b>	<b>144</b>
Capital Exp.(net)	(35.6)	(25.9)	(18.0)	(18.0)	(22.0)
Other Invs.(net)	(1.6)	0.0	0.0	0.0	0.0
Invs in Assoc. & JV	0.0	5.12	0.0	0.0	0.0
Div from Assoc & JV	0.0	0.0	0.0	0.0	0.0
Other Investing CF	(1.2)	0.55	0.0	0.0	0.0
<b>Net Investing CF</b>	<b>(38.4)</b>	<b>(20.2)</b>	<b>(18.0)</b>	<b>(18.0)</b>	<b>(22.0)</b>
Div Paid	(36.2)	(11.1)	0.0	(7.2)	(10.0)
Chg in Gross Debt	34.7	(16.0)	0.0	0.0	0.0
Capital Issues	0.0	0.0	0.0	0.0	0.0
Other Financing CF	(17.1)	(20.4)	0.0	0.0	0.0
<b>Net Financing CF</b>	<b>(18.6)</b>	<b>(47.4)</b>	<b>0.0</b>	<b>(7.2)</b>	<b>(10.0)</b>
Currency Adjustments	0.74	0.91	0.0	0.0	0.0
Chg in Cash	(88.4)	(25.9)	0.25	112	112
Opg CFPS (S cts)	53.8	2.88	9.49	21.2	25.2
Free CFPS (S cts)	(21.9)	4.80	0.08	38.2	39.3

Source: Company, DBS

### Target Price & Ratings 12-mth History



Note: Share price and Target price are adjusted for corporate actions.

S.No.	Date of Report	Closing Price	12-mth Target Price	Rating
1:	14 Nov 23	3.16	2.97	HOLD
2:	01 Mar 24	2.22	2.24	HOLD
3:	10 May 24	1.95	1.95	HOLD
4:	15 Aug 24	1.24	1.34	HOLD

Source: DBS

Analysts: Amanda Tan

Lee Keng LING

DBS Group Research recommendations are based on an Absolute Total Return\* Rating system, defined as follows:

**STRONG BUY** (>20% total return over the next 3 months, with identifiable share price catalysts within this time frame)

**BUY** (>15% total return over the next 12 months for small caps, >10% for large caps)

**HOLD** (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps)

**FULLY VALUED** (negative total return, i.e., > -10% over the next 12 months)

**SELL** (negative total return of > -20% over the next 3 months, with identifiable share price catalysts within this time frame)

\*Share price appreciation + dividends

Completed Date: 7 Nov 2024 21:20:44 (SGT)

Dissemination Date: 8 Nov 2024 15:24:19 (SGT)

Sources for all charts and tables are DBS unless otherwise specified.

All statements in this report attributable to Gartner represent DBS' interpretation of data, research opinion or viewpoints published as part of a syndicated subscription service by Gartner, Inc., and have not been reviewed by Gartner. Each Gartner publication speaks as of its original publication date. The opinions expressed in Gartner publications are not representations of fact and are subject to change without notice.

#### GENERAL DISCLOSURE/DISCLAIMER

**This report is prepared by DBS Bank Ltd.** This report is solely intended for the clients of DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd, its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS Bank Ltd.

The research set out in this report is based on information obtained from sources believed to be reliable, but we (which collectively refers to DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd, its respective connected and associated corporations, affiliates and their respective directors, officers, employees and agents (collectively, the "DBS Group") have not conducted due diligence on any of the companies, verified any information or sources or taken into account any other factors which we may consider to be relevant or appropriate in preparing the research. Accordingly, we do not make any representation or warranty as to the accuracy, completeness or correctness of the research set out in this report. Opinions expressed are subject to change without notice. This research is prepared for general circulation. Any recommendation contained in this document does not have regard to the specific investment objectives, financial situation and the particular needs of any specific addressee. This document is for the information of addressees only and is not to be taken in substitution for the exercise of judgement by addressees, who should obtain separate independent legal or financial advice. The DBS Group accepts no liability whatsoever for any direct, indirect and/or consequential loss (including any claims for loss of profit) arising from any use of and/or reliance upon this document and/or further communication given in relation to this document. This document is not to be construed as an offer or a solicitation of an offer to buy or sell any securities. The DBS Group, along with its affiliates and/or persons associated with any of them may from time to time have interests in the securities mentioned in this document. The DBS Group, may have positions in, and may effect transactions in securities mentioned herein and may also perform or seek to perform broking, investment banking and other banking services for these companies.

Any valuations, opinions, estimates, forecasts, ratings or risk assessments herein constitutes a judgment as of the date of this report, and there can be no assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments. The information in this document is subject to change without notice, its accuracy is not guaranteed, it may be incomplete or condensed, it may not contain all material information concerning the company (or companies) referred to in this report and the DBS Group is under no obligation to update the information in this report.

This publication has not been reviewed or authorized by any regulatory authority in Singapore, Hong Kong or elsewhere. There is no planned schedule or frequency for updating research publication relating to any issuer.

The valuations, opinions, estimates, forecasts, ratings or risk assessments described in this report were based upon a number of estimates and assumptions and are inherently subject to significant uncertainties and contingencies. It can be expected that one or more of the estimates on which the valuations, opinions, estimates, forecasts, ratings or risk assessments were based will not materialize or will vary significantly from actual results. Therefore, the inclusion of the valuations, opinions, estimates, forecasts, ratings or risk assessments described herein IS NOT TO BE RELIED UPON as a representation and/or warranty by the DBS Group (and/or any persons associated with the aforesaid entities), that:



- (a) such valuations, opinions, estimates, forecasts, ratings or risk assessments or their underlying assumptions will be achieved, and  
(b) there is any assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments stated therein.

Please contact the primary analyst for valuation methodologies and assumptions associated with the covered companies or price targets.

Any assumptions made in this report that refers to commodities, are for the purposes of making forecasts for the company (or companies) mentioned herein. They are not to be construed as recommendations to trade in the physical commodity or in the futures contract relating to the commodity referred to in this report.

DBSVUSA, a US-registered broker-dealer, does not have its own investment banking or research department, has not participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months and does not engage in market-making.

#### ANALYST CERTIFICATION

The research analyst(s) primarily responsible for the content of this research report, in part or in whole, certifies that the views about the companies and their securities expressed in this report accurately reflect his/her personal views. The analyst(s) also certifies that no part of his/her compensation was, is, or will be, directly or indirectly, related to specific recommendations or views expressed in the report. The research analyst (s) primarily responsible for the content of this research report, in part or in whole, certifies that he or his associate<sup>1</sup> does not serve as an officer of the issuer or the new listing applicant (which includes in the case of a real estate investment trust, an officer of the management company of the real estate investment trust; and in the case of any other entity, an officer or its equivalent counterparty of the entity who is responsible for the management of the issuer or the new listing applicant) and the research analyst(s) primarily responsible for the content of this research report or his associate does not have financial interests<sup>2</sup> in relation to an issuer or a new listing applicant that the analyst reviews. DBS Group has procedures in place to eliminate, avoid and manage any potential conflicts of interests that may arise in connection with the production of research reports. The research analyst(s) responsible for this report operates as part of a separate and independent team to the investment banking function of the DBS Group and procedures are in place to ensure that confidential information held by either the research or investment banking function is handled appropriately. There is no direct link of DBS Group's compensation to any specific investment banking function of the DBS Group.

#### COMPANY-SPECIFIC / REGULATORY DISCLOSURES

1. DBS Bank Ltd, DBS HK, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"), DBSVUSA, or their subsidiaries and/or other affiliates have proprietary position in Nvidia Corporation, Intel Corp recommended in this report as of 30 Sep 2024.

#### Compensation for investment banking services:

2. DBSVUSA does not have its own investment banking or research department, nor has it participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months. Any US persons wishing to obtain further information, including any clarification on disclosures in this disclaimer, or to effect a transaction in any security discussed in this document should contact DBSVUSA exclusively.

#### Disclosure of previous investment recommendation produced:

3. DBS Bank Ltd, DBS HK, DBSVS, DBSVUSA, their subsidiaries and/or other affiliates may have published other investment recommendations in respect of the same securities / instruments recommended in this research report during the preceding 12 months. Please contact the primary analyst listed on page 1 of this report to view previous investment recommendations published by DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"), their subsidiaries and/or other affiliates in the preceding 12 months.


---

<sup>1</sup> An associate is defined as (i) the spouse, or any minor child (natural or adopted) or minor step-child, of the analyst; (ii) the trustee of a trust of which the analyst, his spouse, minor child (natural or adopted) or minor step-child, is a beneficiary or discretionary object; or (iii) another person accustomed or obliged to act in accordance with the directions or instructions of the analyst.

<sup>2</sup> Financial interest is defined as interests that are commonly known financial interest, such as investment in the securities in respect of an issuer or a new listing applicant, or financial accommodation arrangement between the issuer or the new listing applicant and the firm or analysis. This term does not include commercial lending conducted at arm's length, or investments in any collective investment scheme other than an issuer or new listing applicant notwithstanding the fact that the scheme has investments in securities in respect of an issuer or a new listing applicant.



## RESTRICTIONS ON DISTRIBUTION

<b>General</b>	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.
<b>Australia</b>	<p>This report is being distributed in Australia by DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS") or DBSV HK. DBS Bank Ltd holds Australian Financial Services Licence no. 475946.</p> <p>DBS Bank Ltd, DBSVS and DBSV HK are exempted from the requirement to hold an Australian Financial Services Licence under the Corporation Act 2001 ("CA") in respect of financial services provided to the recipients. Both DBS and DBSVS are regulated by the Monetary Authority of Singapore under the laws of Singapore, and DBSV HK is regulated by the Hong Kong Securities and Futures Commission under the laws of Hong Kong, which differ from Australian laws.</p> <p>Distribution of this report is intended only for "wholesale investors" within the meaning of the CA.</p>
<b>Hong Kong</b>	<p>This report has been prepared by a personnel of DBS Bank Ltd, who is not licensed by the Hong Kong Securities and Futures Commission to carry on the regulated activity of advising on securities in Hong Kong pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). This report is being distributed in Hong Kong and is attributable to DBS Bank (Hong Kong) Limited ("DBS HK"), a registered institution registered with the Hong Kong Securities and Futures Commission to carry on the regulated activity of advising on securities pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). DBS Bank Ltd., Hong Kong Branch is a limited liability company incorporated in Singapore.</p> <p>For any query regarding the materials herein, please contact Dennis Lam (Reg No. AH8290) at dbsvhk@dbs.com</p>
<b>Indonesia</b>	This report is being distributed in Indonesia by PT DBS Vickers Sekuritas Indonesia.
<b>Malaysia</b>	<p>This report is distributed in Malaysia by AllianceDBS Research Sdn Bhd ("ADBSR"). Recipients of this report, received from ADBSR are to contact the undersigned at 603-2604 3333 in respect of any matters arising from or in connection with this report. In addition to the General Disclosure/Disclaimer found at the preceding page, recipients of this report are advised that ADBSR (the preparer of this report), its holding company Alliance Investment Bank Berhad, their respective connected and associated corporations, affiliates, their directors, officers, employees, agents and parties related or associated with any of them may have positions in, and may effect transactions in the securities mentioned herein and may also perform or seek to perform broking, investment banking/corporate advisory and other services for the subject companies. They may also have received compensation and/or seek to obtain compensation for broking, investment banking/corporate advisory and other services from the subject companies.</p> <p style="text-align: right;">   Wong Ming Tek, Executive Director, ADBSR </p>
<b>Singapore</b>	This report is distributed in Singapore by DBS Bank Ltd (Company Regn. No. 196800306E) or DBSVS (Company Regn No. 198600294G), both of which are Exempt Financial Advisers as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. DBS Bank Ltd and/or DBSVS, may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, DBS Bank Ltd accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact DBS Bank Ltd at 6878 8888 for matters arising from, or in connection with the report.
<b>Thailand</b>	<p>This report is being distributed in Thailand by DBS Vickers Securities (Thailand) Co Ltd.</p> <p>For any query regarding the materials herein, please contact Chanpen Sirithanarattanukul at research@th.dbs.com</p>
<b>United Kingdom</b>	<p>This report is produced by DBS Bank Ltd which is regulated by the Monetary Authority of Singapore.</p> <p>This report is disseminated in the United Kingdom by DBS Bank Ltd, London Branch ("DBS UK"). DBS UK is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority</p>

	<p>and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request.</p> <p>In respect of the United Kingdom, this report is solely intended for the clients of DBS UK, its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS UK. This communication is directed at persons having professional experience in matters relating to investments. Any investment activity following from this communication will only be engaged in with such persons. Persons who do not have professional experience in matters relating to investments should not rely on this communication.</p>
<b>Dubai International Financial Centre</b>	<p>This communication is provided to you as a Professional Client or Market Counterparty as defined in the DFSA Rulebook Conduct of Business Module (the "COB Module"), and should not be relied upon or acted on by any person which does not meet the criteria to be classified as a Professional Client or Market Counterparty under the DFSA rules.</p> <p>This communication is from the branch of DBS Bank Ltd operating in the Dubai International Financial Centre (the "DIFC") under the trading name "DBS Bank Ltd. (DIFC Branch)" ("DBS DIFC"), registered with the DIFC Registrar of Companies under number 156 and having its registered office at units 608 - 610, 6th Floor, Gate Precinct Building 5, PO Box 506538, DIFC, Dubai, United Arab Emirates.</p> <p>DBS DIFC is regulated by the Dubai Financial Services Authority (the "DFSA") with a DFSA reference number F000164. For more information on DBS DIFC and its affiliates, please see <a href="http://www.dbs.com/ae/our-network/default.page">http://www.dbs.com/ae/our-network/default.page</a>.</p> <p>Where this communication contains a research report, this research report is prepared by the entity referred to therein, which may be DBS Bank Ltd or a third party, and is provided to you by DBS DIFC. The research report has not been reviewed or authorised by the DFSA. Such research report is distributed on the express understanding that, whilst the information contained within is believed to be reliable, the information has not been independently verified by DBS DIFC.</p> <p>Unless otherwise indicated, this communication does not constitute an "Offer of Securities to the Public" as defined under Article 12 of the Markets Law (DIFC Law No.1 of 2012) or an "Offer of a Unit of a Fund" as defined under Article 19(2) of the Collective Investment Law (DIFC Law No.2 of 2010).</p> <p>The DFSA has no responsibility for reviewing or verifying this communication or any associated documents in connection with this investment and it is not subject to any form of regulation or approval by the DFSA. Accordingly, the DFSA has not approved this communication or any other associated documents in connection with this investment nor taken any steps to verify the information set out in this communication or any associated documents, and has no responsibility for them. The DFSA has not assessed the suitability of any investments to which the communication relates and, in respect of any Islamic investments (or other investments identified to be Shari'a compliant), neither we nor the DFSA has determined whether they are Shari'a compliant in any way.</p> <p>Any investments which this communication relates to may be illiquid and/or subject to restrictions on their resale. Prospective purchasers should conduct their own due diligence on any investments. If you do not understand the contents of this document you should consult an authorised financial adviser.</p>
<b>United States</b>	<p>This report was prepared by DBS Bank Ltd. DBSVUSA did not participate in its preparation. The research analyst(s) named on this report are not registered as research analysts with FINRA and are not associated persons of DBSVUSA. The research analyst(s) are not subject to FINRA Rule 2241 restrictions on analyst compensation, communications with a subject company, public appearances and trading securities held by a research analyst. This report is being distributed in the United States by DBSVUSA, which accepts responsibility for its contents. This report may only be distributed to Major U.S. Institutional Investors (as defined in SEC Rule 15a-6) and to such other institutional investors and qualified persons as DBSVUSA may authorize. Any U.S. person receiving this report who wishes to effect transactions in any securities referred to herein should contact DBSVUSA directly and not its affiliate.</p>
<b>Other jurisdictions</b>	<p>In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is intended only for qualified, professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions.</p>

---

DBS Regional Research Offices

---

**HONG KONG**

**DBS Bank (Hong Kong) Ltd**

Contact: Dennis Lam  
13th Floor One Island East,  
18 Westlands Road,  
Quarry Bay, Hong Kong  
Tel: 852 3668 4181  
Fax: 852 2521 1812  
e-mail: dbsvhk@dbs.com

**SINGAPORE**

**DBS Bank Ltd**

Contact: Andy Sim  
12 Marina Boulevard,  
Marina Bay Financial Centre Tower 3  
Singapore 018982  
Tel: 65 6878 8888  
e-mail: groupresearch@dbs.com  
Company Regn. No. 196800306E

**INDONESIA**

**PT DBS Vickers Sekuritas (Indonesia)**

Contact: William Simadiputra  
DBS Bank Tower  
Ciputra World 1, 32/F  
Jl. Prof. Dr. Satrio Kav. 3-5  
Jakarta 12940, Indonesia  
Tel: 62 21 3003 4900  
Fax: 6221 3003 4943  
e-mail: indonesiaresearch@dbs.com

**THAILAND**

**DBS Vickers Securities (Thailand) Co Ltd**

Contact: Chanpen Sirithanarattanakul  
989 Siam Piwat Tower Building,  
9th, 14th-15th Floor  
Rama 1 Road, Pathumwan,  
Bangkok Thailand 10330  
Tel. 66 2 857 7831  
Fax: 66 2 658 1269  
e-mail: research@th.dbs.com  
Company Regn. No 0105539127012  
Securities and Exchange Commission, Thailand