

# US EQUITY RESEARCH

19 Jun 2023

## Advanced Micro Devices Inc

Accelerating market share gains cushion against macroeconomic headwinds

### Company Overview

Founded in 1969, Advanced Micro Devices (AMD) is one of the largest suppliers of microprocessors and graphics processors worldwide to computing OEMs. AMD designs and sells CPUs and graphics processing units (GPUs) for desktops, notebooks and gaming consoles, as well as for datacenter and professional environments. AMD's key product families include Ryzen processors for personal computers, Radeon processors for graphics and EPYC processors for servers. By segments, Data Center (including server CPU, data center GPU) accounted for 22% of 2Q22 revenue, Client segment (desktop and notebook PC processors) 33%, Gaming (GPUs and game console products) 25% and the Embedded products (AMD and Xilinx products) division 20%.

### Investment Overview

**Gaining share in a growing market with \$300b total addressable market.** AMD sees a \$300b TAM consisting of \$125b in Data Centre, \$50b in PCs, and \$37b in gaming on the back of artificial intelligence, trends towards hybrid work and gaming, and greater demand for data centres and cloud as digitalization marches on. AMD has a strong track record of innovation, design agility and proven execution. AMD has been gaining market share from Intel with its share of the processor market reaching 31.3% in 4Q22 compared to 28.5% a year earlier. The company launched a new processor in Aug-22; the Ryzen 7000 processor is a significant improvement from its predecessor, and also more efficient than Intel's current 12th Gen Alder Lake CPUs. AMD's technology and product roadmap 2025, including new CPUs in PCs and servers with superior performance, remains on track. We believe this could potentially further increase its market share in next 2-3 years.

**Expansion into data centers offers diversification and offsets weakness in PC and GPU segments.** AMD has diversified its business into datacenter and embedded segments. Share of Data centre & embedded has increased from 15% in 2019 to 45% in 2022. Their recent acquisition of (1) Xilinx, whose products allow AMD to gain market share in datacenters, as well as in the 5G communications, automotive, industrial, aerospace and defense markets; and (2) startup Pensando, whose platform helps to expand AMD's data center product portfolio with a high-performance data processing unit (DPU). Growth from these two key segments should help to offset weakening demand for PCs and GPUs due to macroeconomic headwinds.

**Well-positioned for revenue growth and margin expansion:** Combination of market share gains, roadmap execution & Xilinx/Pensando synergies could drive revenue and earnings growth over the next 2-3 years. On a proforma basis, gross margins of AMD + Xilinx is 52% compared to 48% without Xilinx. In 3-4 years, AMD is targeting gross margins above 57% on product mix and cost improvements. Consensus estimates are more prudent at 54%/55% for FY25/FY26 however they reflect growing margins from 45% in FY22.

**We have a BUY recommendation on AMD with a higher TP of US\$136.90 per share.** Our TP is based on a 3.8x forward P/BV, equivalent to 2.2 SD below its historical average. We like AMD for its strong innovation pace, clear roadmap and reliable execution. Our conservative target P/BV multiple is de-risked in the face of macro uncertainties and slower CPU outlook in the near term.

### Risks

**Key exposure to PC market.** AMD typically derives ~50% of its revenue from the PC end market, which is highly correlated with economic conditions. Any economic headwind could slow down demand.

**Direct competitors.** AMD has direct competition with Intel and NVIDIA in the microprocessor and graphics markets, respectively. Therefore, any material share gains/losses could result in upside / downside to its earnings outlook.

Disclaimer: The information contained in this document is intended only for use by the person to whom it has been delivered and should not be disseminated or distributed to third parties without our prior written consent. DBS accepts no liability whatsoever with respect to the use of this document or its contents. Please refer to Disclaimer found at the end of this document

Analyst

Ling Lee Keng | groupresearch@dbs.com

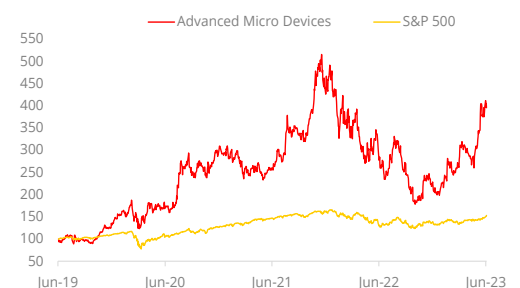
### Key Financial Data

Bloomberg Ticker	AMD US
Sector	Information Technology
Share Price (USD)	124.24
DBS Rating	BUY
12-mth Target Price (USD)	136.9
Market Cap (USDb)	200.1
Volume (m shares)	85.6
Free float (%)	99.4
Dividend yield (%)	-
Net Debt to Equity (%)	-5.4
Fwd. P/E (x)	43.5
P/Book (x)	3.7
ROE (%)	0.7

Closing price and data as of 15 Jun 2023

Source: Bloomberg Finance L.P., DBS Bank

### Indexed Share Price vs Composite Index Performance



Source: Bloomberg Finance L.P.

## FINANCIAL SUMMARY (USD, M)

FY Dec	FY2021A	FY2022A	FY2023F	FY2024F	FY2025F
Sales	16,434	23,601	22,993	27,280	30,990
% y-o-y	68.3	43.6	-2.6	18.6	13.6
Gross Profit	7,929	12,273	11,738	14,783	17,082
% y-o-y	82.2	54.8	-4.4	25.9	15.5
EBITDA	4,476	6,971	5,821	8,018	9,662
% y-o-y	127.3	55.7	-16.5	37.8	20.5
Net Profit (Loss)	3,435	5,504	4,628	6,495	8,343
% y-o-y	118.1	60.2	-15.9	40.4	28.4
FCF	3,220	3,115	3,846	5,431	6,603
CAPEX	301	450	510	595	607
EBITDA Margin %	27.2	29.5	25.3	29.4	31.2
Net Margin %	20.9	23.3	20.1	23.8	26.9
ROA (%)	32.1	13.8	5.1	6.2	7.8
ROE (%)	51.5	17.7	6.2	8.7	11.0
Tax Rate %	12.7	13.0	12.5	13.3	13.2

Source: Refinitiv

## VALUATION MATRIX

FY Dec	FY2021A	FY2022A	FY2023F	FY2024F	FY2025F
P/E	44.6	35.6	43.6	29.7	23.6
P/B	20.1	3.7	3.6	3.4	3.0
Dividend Yield	0.0	0.0	0.0	0.0	0.0
EV/EBITDA (x)	44.0	28.3	33.9	24.6	20.4
FCF Yield %	2.1	1.6	1.1	2.7	2.9

Source: Refinitiv

## CREDIT &amp; CASHFLOW METRICS

FY Dec	FY2021A	FY2022A	FY2023F	FY2024F	FY2025F
Debt / Equity	-	-	-	-	-
Net Debt / Equity	CASH	CASH	CASH	CASH	CASH
Debt / Assets	-	-	-	-	-
Net Debt / Assets	CASH	CASH	CASH	CASH	CASH
EBITDA / Int Exp	131.6	79.2	70.0	90.2	120.5
ST Debt / Total Debt	0.1	0.4	0.4	0.3	0.2
Debt / EBITDA	99.7	0.0	-	-	-
[Cash + CFO] / ST Debt	22.8	-	-	-	-
Receivables Days	52.8	53.7	-	-	-
Days Payable	41.8	62.3	-	-	-
Inventory Days	71.8	81.7	-	-	-

Source: Refinitiv

Disclaimer: The information contained in this document is intended only for use by the person to whom it has been delivered and should not be disseminated or distributed to third parties without our prior written consent. DBS accepts no liability whatsoever with respect to the use of this document or its contents. Please refer to Disclaimer found at the end of this document

## Target Price & Ratings History



Source: DBS Bank

Analyst: Ling Lee Keng

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

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

### 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.

Disclaimer: The information contained in this document is intended only for use by the person to whom it has been delivered and should not be disseminated or distributed to third parties without our prior written consent. DBS accepts no liability whatsoever with respect to the use of this document or its contents. Please refer to Disclaimer found at the end of this document

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 a proprietary position in Advanced Micro Devices Inc recommended in this report as of 31 May 2023.

#### 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.

Disclaimer: The information contained in this document is intended only for use by the person to whom it has been delivered and should not be disseminated or distributed to third parties without our prior written consent. DBS accepts no liability whatsoever with respect to the use of this document or its contents. Please refer to Disclaimer found at the end of this document

## 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 <a href="mailto:dbsvhk@dbs.com">dbsvhk@dbs.com</a></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 <a href="mailto:research@th.dbs.com">research@th.dbs.com</a></p>

Disclaimer: The information contained in this document is intended only for use by the person to whom it has been delivered and should not be disseminated or distributed to third parties without our prior written consent. DBS accepts no liability whatsoever with respect to the use of this document or its contents. Please refer to Disclaimer found at the end of this document

<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 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>

Disclaimer: The information contained in this document is intended only for use by the person to whom it has been delivered and should not be disseminated or distributed to third parties without our prior written consent. DBS accepts no liability whatsoever with respect to the use of this document or its contents. Please refer to Disclaimer found at the end of this document

**DBS Regional Research Offices**

---

**HONG KONG**

**DBS (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: Paul Yong  
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: Maynard Priajaya Arif  
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: indonesiaesearch@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