

5 May 2020

Energy & Petrochemicals | Exploration & Production

## PTT Exploration & Production (PTTEP TB)

**Buy** (Maintained)

### Crude Oil Market Set To Recover

Target Price (Return): THB108.00 (27.8%)  
 Price: THB84.50  
 Market Cap: USD10,322m  
 Avg Daily Turnover (THB/USD): 2,143m/66.9m

- Maintain BUY, new TP of THB108.00 from THB91.00, 28% upside with 3% FY20F yield.** PTT Exploration & Production's 1Q20 earnings amounted to THB8.6bn (-26% QoQ), on lower sales volume and prices. We believe the crude oil market is on its path to recovery, with the upsurge in demand and production curtailment expected to start this month. As such, we believe there should be further upside to this stock.
- 1Q20 net profit was at THB8.6bn (-26% QoQ) as sales volume fell to 363kboepd (-8% QoQ),** lower than its 394kboepd target for the quarter. This was due to a lower nomination from PTT, and lower crude oil loadings from its project in Malaysia. ASP was at USD44.81/boe (-7.2% QoQ) as crude oil prices crashed in March, while the natural gas price remained high, at USD6.87/mmbtu. Major non-recurring items were the FX impact, which resulted in USD225m non-cash tax expenses, as well as a USD25m well write-off for the Zawtika project in Myanmar. However, this was partially offset by crude oil price hedging, with gains of USD170m. Unit costs fell to USD30.95/boe, as SG&A expenses decreased from the lack of one-off items for the quarter.
- Lower guidance for the year.** The company's guided sales volume is now 7% lower, at 362kboepd. The drop is mainly due to the lower nomination from PTT for the year. We think PTT will also look to increase LNG imports this year, as pricing is quite favourable. Its crude oil price forecast is now USD38.00/bbl (Dubai). This is now the same as our forecast of US40.00/bbl (Brent), where Dubai crude trades at a c.USD2.00-3.00/bbl discount to Brent. For 2020F, its EBITDA margin is expected to be lower at 65-70%, from 70-75%. For 2Q20F, average sales volume is expected at 349kboepd, while the natural gas price is estimated at USD6.20/mmbtu.
- We slash FY20F earnings by 26% to THB25bn,** and lower capex by 20% as per guidance. We also trim FY21-22F earnings by 11-12%, as we lower our crude oil price forecast (Brent) to USD55.00/bbl, from USD60.00/bbl. We maintain our long-term crude oil price at USD60.00/bbl.
- BUY, as market outlook is improving.** The crude oil price (Brent) has seen huge swings in the past month, from a high of USD34.11/bbl to a low of USD19.33/bbl. It is now at around USD24.60/bbl. The high volatility points to the uncertainty in the oil market as a result of the COVID-19 pandemic, as countries went into lockdown – resulting in a crash in oil demand. As countries ease out of lockdowns, crude oil demand should recover. With OPEC+ production cuts kicking in from May onwards, and higher-cost producers curtailing production, our crude oil price expectations of USD45.00/bbl for 4Q20 should be attainable. With this, we increase our TP to THB108.00, based on a DCF (WACC 9.26%, from 10.48%) valuation.

#### Analyst

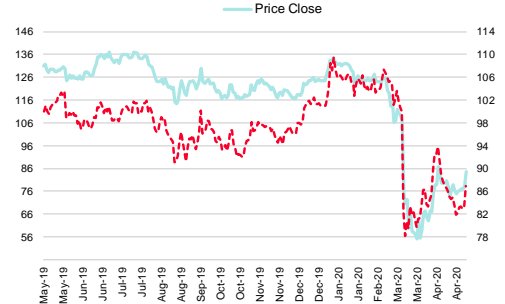
Kannika Siamwalla CFA  
 +66 2088 9744  
[kannika.si@rhbgroup.com](mailto:kannika.si@rhbgroup.com)



#### Share Performance (%)

	YTD	1m	3m	6m	12m
Absolute	(32.1)	34.1	(32.9)	(31.0)	(36.7)
Relative	(14.5)	14.4	(18.3)	(12.3)	(14.5)
52-wk Price low/high (THB)					55.0 – 137

PTT Exploration & Production (PTTEP TB)



Source: Bloomberg

Forecasts and Valuation	Dec-18	Dec-19	Dec-20F	Dec-21F	Dec-22F
Total turnover (THBm)	171,809	191,053	177,917	205,090	222,497
Recurring net profit (THBm)	36,206	48,803	25,220	39,480	39,206
Recurring net profit growth (%)	3.7	34.8	(48.3)	56.5	(0.7)
Recurring P/E (x)	9.27	6.87	13.30	8.50	8.56
P/B (x)	0.9	0.9	0.9	0.8	0.8
P/CF (x)	2.99	2.96	3.64	2.98	2.73
Dividend Yield (%)	5.9	7.1	3.0	4.7	4.7
EV/EBITDA (x)	2.04	2.41	2.54	2.03	1.90
Return on average equity (%)	9.5	13.1	6.9	10.3	9.6
Net debt to equity (%)	net cash	1.7	net cash	net cash	net cash

Source: Company data, RHB

5 May 2020

Energy &amp; Petrochemicals | Exploration &amp; Production

## Financial Exhibits

Asia	Financial summary (THB)	Dec-18	Dec-19	Dec-20F	Dec-21F	Dec-22F
Thailand	Recurring EPS	9.12	12.29	6.35	9.94	9.88
Energy & Petrochemicals	DPS	5.00	6.00	2.54	3.98	3.95
<b>PTT Exploration &amp; Production</b>	BVPS	98.13	89.94	93.75	99.72	105.64
PTTEP TB	Return on average equity (%)	9.5	13.1	6.9	10.3	9.6
Buy						
	<b>Valuation metrics</b>	<b>Dec-18</b>	<b>Dec-19</b>	<b>Dec-20F</b>	<b>Dec-21F</b>	<b>Dec-22F</b>
<b>Valuation basis</b>	Recurring P/E (x)	9.27	6.87	13.30	8.50	8.56
DCF valuation	P/B (x)	0.9	0.9	0.9	0.8	0.8
	FCF Yield (%)	20.3	(2.4)	9.6	7.3	4.6
<b>Key drivers</b>	Dividend Yield (%)	5.9	7.1	3.0	4.7	4.7
Our TP is mostly sensitive to:	EV/EBITDA (x)	2.04	2.41	2.54	2.03	1.90
i. Long-term crude oil price assumptions;	EV/EBIT (x)	3.92	4.50	6.87	4.44	4.36
ii. USD/THB exchange rate.						
	<b>Income statement (THBm)</b>	<b>Dec-18</b>	<b>Dec-19</b>	<b>Dec-20F</b>	<b>Dec-21F</b>	<b>Dec-22F</b>
<b>Key risks</b>	Total turnover	171,809	191,053	177,917	205,090	222,497
Crude oil price volatility	Gross profit	74,459	84,172	55,648	78,095	80,690
	EBITDA	124,863	135,112	119,139	144,040	154,327
<b>Company Profile</b>	Depreciation and amortisation	(59,809)	(62,811)	(75,138)	(78,043)	(87,144)
Government arm for oil & gas exploration. Major assets are predominantly in Thailand, with exposure to Myanmar, Malaysia, Indonesia, UAE and Oman.	Operating profit	65,054	72,301	44,001	65,997	67,182
	Net interest	(5,016)	(4,599)	(8,485)	(8,918)	(10,503)
	Pre-tax profit	59,971	69,754	36,642	57,460	57,060
	Taxation	(23,764)	(20,952)	(11,422)	(17,980)	(17,854)
	Reported net profit	36,206	48,803	25,220	39,480	39,206
	Recurring net profit	36,206	48,803	25,220	39,480	39,206
	<b>Cash flow (THBm)</b>	<b>Dec-18</b>	<b>Dec-19</b>	<b>Dec-20F</b>	<b>Dec-21F</b>	<b>Dec-22F</b>
	Change in working capital	16,245	3,641	(7,033)	(4,494)	(2,879)
	Cash flow from operations	112,328	113,203	92,198	112,648	123,092
	Capex	(44,289)	(121,113)	(60,010)	(88,169)	(107,531)
	Cash flow from investing activities	(77,069)	(140,399)	(43,821)	(93,968)	(107,346)
	Dividends paid	(16,872)	(19,850)	(23,820)	(10,088)	(15,792)
	Cash flow from financing activities	(48,194)	(11,019)	(24,663)	(24,481)	(56,722)
	Cash at beginning of period	146,008	132,448	97,596	121,310	115,509
	Net change in cash	(12,935)	(38,216)	23,714	(5,800)	(40,977)
	Ending balance cash	132,448	97,597	121,310	115,509	74,532
	<b>Balance sheet (THBm)</b>	<b>Dec-18</b>	<b>Dec-19</b>	<b>Dec-20F</b>	<b>Dec-21F</b>	<b>Dec-22F</b>
	Total cash and equivalents	132,448	97,596	121,310	115,509	74,533
	Tangible fixed assets	408,913	467,215	452,087	462,213	482,600
	Total investments	10,822	16,281	15,243	15,480	15,633
	Total assets	632,256	669,464	685,290	694,537	677,100
	Short-term debt	13,208	551	0	0	0
	Total long-term debt	49,932	103,230	103,230	88,599	47,517
	Total liabilities	242,683	312,405	313,099	298,658	257,698
	Total equity	389,573	357,059	372,191	395,878	419,402
	Total liabilities & equity	632,256	669,464	685,290	694,537	677,100
	<b>Key metrics</b>	<b>Dec-18</b>	<b>Dec-19</b>	<b>Dec-20F</b>	<b>Dec-21F</b>	<b>Dec-22F</b>
	Revenue growth (%)	16.3	11.2	(6.9)	15.3	8.5
	Recurrent EPS growth (%)	3.7	34.8	(48.3)	56.5	(0.7)
	Gross margin (%)	43.3	44.1	31.3	38.1	36.3
	Operating EBITDA margin (%)	72.7	70.7	67.0	70.2	69.4
	Net profit margin (%)	21.1	25.5	14.2	19.2	17.6
	Dividend payout ratio (%)	54.8	48.8	40.0	40.0	40.0
	Capex/sales (%)	25.8	63.4	33.7	43.0	48.3
	Interest cover (x)	8.44	9.92	4.54	6.55	5.97

Source: Company data, RHB

5 May 2020

Energy &amp; Petrochemicals | Exploration &amp; Production

**Figure 1: 1Q20 net profit fell 25% YoY to THB8.6bn**

FYE Dec (THBm)	1Q19	4Q19	1Q20	% QoQ	% YoY
Turnover	42,860	53,893	46,986	(12.8)	9.6
EBIT	15,686	18,180	24,255	33.4	54.6
EBIT margin (%)	37%	34%	52%		
Net interest	(947)	(1,479)	(1,614)	9.2	70.4
Pretax profit	15,770	17,154	22,280	29.9	41.3
Pretax margin (%)	37%	32%	47%		
Taxation	(3,377)	(5,725)	(14,106)	146.4	317.7
Net profit	12,479	11,619	8,613	(25.9)	(31.0)
Net margin (%)	29%	22%	18%		
Recurring net profit	11,833	11,624	9,083	(21.9)	(23.2)
Recurring net profit margin(%)	28%	22%	19%		
EPS (THB)	3.03	2.93	2.14	(26.9)	(29.4)

Source: Company data, RHB

**Figure 2: 1Q20F major operating variables: 1Q20 sales volume was much lower than targeted**

FYE Dec (THBm)	1Q19	4Q19	1Q20	% QoQ	% YoY	Comment QoQ
Dubai (average, USD/bbl)	63.41	62.0	50.4	(18.7)	(20.5)	Crude oil price plummeted in March as the OPEC+ agreement collapsed and COVID-19 outbreak started to dent demand
<b>Sales breakdown</b>						
Sales volume (boepd)	319,230	395,028	363,411	(8.0)	13.8	There was lower nomination from PTT for natural gas from the Gulf of Thailand, while Malaysia's crude oil loading was lower than levels recorded in 4Q19
Average sales price (USD/boe)	46.21	48.28	44.81	(7.2)	(3.0)	Softer crude oil price
Natural gas price (USD/mmbtu)	6.92	6.95	6.87	(1.2)	(0.7)	Natural gas price began to decline
Liquid (USD/bbl)	58.82	61.94	52.75	(14.8)	(10.3)	Moves in tandem with crude oil prices
<b>Cost breakdown (USD/boe)</b>						
Finance cost	1.99	1.72	1.96	14.0	(1.5)	
DDA	15.99	15.90	16.22	2.0	1.4	
Royalties	4.25	4.17	3.72	(10.8)	(12.5)	
SG&A	2.11	3.56	1.94	(45.5)	(8.1)	Lower, as there were no one-time items
Exploration exp.	0.29	0.76	1.17	53.9	303.4	Dry well write-off from Zawtika (Myanmar), at USD25m
Operating exp.	4.70	7.72	5.94	(23.1)	26.4	
<b>Total cost</b>	<b>29.33</b>	<b>33.83</b>	<b>30.95</b>	<b>(8.5)</b>	<b>5.5</b>	

Source: Company data, RHB

5 May 2020

Energy &amp; Petrochemicals | Exploration &amp; Production

Figure 3: PTTEP lowers its 2020F guidance, with 1Q20 numbers falling short of expectations

Guidance as of	Dec 19		1Q20 actual	Apr 20	
	1Q2020	FY2020		2Q20	FY2020
Ave. sales volume (kboed)	394	391	363	349	362
Ave gas price (USD/mmbtu)	6.80	6.40	6.87	6.20	5.90
Unit cost (USD/boe)	32.0	32.0	31.0	30-31	30-31
EBITDA margin	70-75%	70-75%	72%	65-70%	65-70%

Source: Company data, RHB

Figure 4: Earnings and TP revision

	2020F	2021F	2022F
Net profit (THB m, new)	25,220	39,480	39,206
Net profit (THB m, old)	34,083	44,252	44,563
% change	-26%	-11%	-12%
EPS (THB, new)	6.35	9.94	9.88
EPS (THB, old)	8.59	11.15	11.22
% change	-26%	-11%	-12%
Target price (THB/share, new)	107.9		
Target price (THB, old)	90.5		
% change	19.2%		

Source: Company data, RHB

Figure 5: DCF valuation

	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24	Dec-25	Dec-26	Dec-27	Dec-28	Dec-29
EBITDA	119,139	144,040	154,327	160,140	151,249	151,249	151,249	151,249	151,249	151,249
Taxes	(14,095)	(20,789)	(21,162)	(35,142)	(30,406)	(30,406)	(30,406)	(30,406)	(30,406)	(30,250)
(Changes in WC)	(7,033)	(4,494)	(2,879)	-	-	-	-	-	-	-
(Net capital expenditures)	(65,646)	(93,341)	(103,602)	(89,063)	(73,346)	(73,346)	(73,346)	(73,346)	(73,346)	(73,346)
FCF	32,685	25,736	27,004	36,255	47,817	47,817	47,817	47,817	47,817	47,973
PV of cash flow	29,916	21,561	20,706	25,445	30,717	28,115	25,733	23,553	21,558	19,796
PV of perpetuity	169,457									
Enterprise value - DCF	247,099									
Other projects										
WACC	9.3%									
Total enterprise value	416,556									
(Total debt)	(103,230)									
(PV Off BS Liabilities)	-									
Cash & ST investments	114,866									
Shares, ending (mn)	3,970									
NPV per share	108									
	<b>Current</b>	<b>Prior</b>								
Risk free rate %	1.0%	1.0%								
Beta	1.40	1.40								
Risk premium %	12.1%	13.1%								
Cost of equity %	13.5%	14.5%								
% debt - target	50%	50%								
% equity - target	50%	50%								
WACC	9.26%	10.48%								

Source: Company data, RHB

## Recommendation Chart



Source: RHB, Bloomberg

Date	Recommendation	Target Price	Price
2020-03-18	Buy	91	57
2020-03-09	Buy	120	75
2020-02-12	Buy	147	128
2020-02-11	Buy	147	126
2020-01-31	Buy	147	125
2020-01-23	Buy	147	129
2019-12-17	Buy	144	123
2019-11-07	Buy	150	125
2019-10-31	Buy	150	121

Source: RHB, Bloomberg

## RHB Guide to Investment Ratings

<b>Buy:</b>	Share price may exceed 10% over the next 12 months
<b>Trading Buy:</b>	Share price may exceed 15% over the next 3 months, however longer-term outlook remains uncertain
<b>Neutral:</b>	Share price may fall within the range of +/- 10% over the next 12 months
<b>Take Profit:</b>	Target price has been attained. Look to accumulate at lower levels
<b>Sell:</b>	Share price may fall by more than 10% over the next 12 months
<b>Not Rated:</b>	Stock is not within regular research coverage

### Investment Research Disclaimers

RHB has issued this report for information purposes only. This report is intended for circulation amongst RHB and its affiliates' clients generally or such persons as may be deemed eligible by RHB to receive this report 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. This report is not intended, and should not under any circumstances be construed as, an offer or a solicitation of an offer to buy or sell the securities referred to herein or any related financial instruments.

This report may further consist of, whether in whole or in part, summaries, research, compilations, extracts or analysis that has been prepared by RHB's strategic, joint venture and/or business partners. No representation or warranty (express or implied) is given as to the accuracy or completeness of such information and accordingly investors should make their own informed decisions before relying on the same.

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 the applicable laws or regulations. By accepting this report, the recipient hereof (i) represents and warrants that it is lawfully able to receive this document under the laws and regulations of the jurisdiction in which it is located or other applicable laws and (ii) acknowledges and agrees to be bound by the limitations contained herein. Any failure to comply with these limitations may constitute a violation of applicable laws.

All the information contained herein is based upon publicly available information and has been obtained from sources that RHB believes to be reliable and correct at the time of issue of this report. However, such sources have not been independently verified by RHB and/or its affiliates and this report does not purport to contain all information that a prospective investor may require. The opinions expressed herein are RHB's present opinions only and are subject to change without prior notice. RHB is not under any obligation to update or keep current the information and opinions expressed herein or to provide the recipient with access to any additional information. Consequently, RHB does not guarantee, represent or warrant, expressly or impliedly, as to the adequacy, accuracy, reliability, fairness or completeness of the information and opinion contained in this report. Neither RHB (including its officers, directors, associates, connected parties, and/or employees) nor does any of its agents accept any liability for any direct, indirect or consequential losses, loss of profits and/or damages that may arise from the use or reliance of this research report and/or further communications given in relation to this report. Any such responsibility or liability is hereby expressly disclaimed.

Whilst every effort is made to ensure that statement 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 and must not be construed as a representation that the matters referred to therein will occur. Different assumptions by RHB or any other source may yield substantially different results and recommendations contained on one type of research product may differ from recommendations contained in other types of research. The performance of currencies may affect the value of, or income from, the securities or any other financial instruments referenced in this report. Holders of depositary receipts backed by the securities discussed in this report assume currency risk. Past performance is not a guide to future performance. Income from investments may fluctuate. The price or value of the investments to which this report relates, either directly or indirectly, may fall or rise against the interest of investors.

This report does not purport to be comprehensive or to contain all the information that a prospective investor may need in order to make an investment decision. The recipient of this report is making its own independent assessment and decisions regarding any securities or financial instruments referenced herein. Any investment discussed or recommended in this report may be unsuitable for an investor depending on the investor's specific investment objectives and financial position. The material in this report is general information intended for recipients who understand the risks of investing in financial instruments. This report does not take into account whether an investment or course of action and any associated risks are suitable for the recipient. Any recommendations contained in this report must therefore not be relied upon as investment advice based on the recipient's personal circumstances. Investors should make their own independent evaluation of the information contained herein, consider their own investment objective, financial situation and particular needs and seek their own financial, business, legal, tax and other advice regarding the appropriateness of investing in any securities or the investment strategies discussed or recommended in this report.

This report may contain forward-looking statements which are often but not always identified by the use of words such as "believe", "estimate", "intend" and "expect" and statements that an event or result "may", "will" or "might" occur or be achieved and other similar expressions. Such forward-looking statements are based on assumptions made and information currently available to RHB and are subject to known and

unknown risks, uncertainties and other factors which may cause the actual results, performance or achievement to be materially different from any future results, performance or achievement, expressed or implied by such forward-looking statements. Caution should be taken with respect to such statements and recipients of this report should not place undue reliance on any such forward-looking statements. RHB expressly disclaims any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or circumstances after the date of this publication or to reflect the occurrence of unanticipated events.

The use of any website to access this report electronically is done at the recipient's own risk, and it is the recipient's sole responsibility to take precautions to ensure that it is free from viruses or other items of a destructive nature. This report may also provide the addresses of, or contain hyperlinks to, websites. RHB takes no responsibility for the content contained therein. Such addresses or hyperlinks (including addresses or hyperlinks to RHB own website material) are provided solely for the recipient's convenience. The information and the content of the linked site do not in any way form part of this report. Accessing such website or following such link through the report or RHB website shall be at the recipient's own risk.

This report may contain information obtained from third parties. Third party content providers do not guarantee the accuracy, completeness, timeliness or availability of any information and are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, or for the results obtained from the use of such content. Third party content providers give no express or implied warranties, including, but not limited to, any warranties of merchantability or fitness for a particular purpose or use. Third party content providers shall not be liable for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including lost income or profits and opportunity costs) in connection with any use of their content.

The research analysts 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. The research analysts that authored this report are precluded by RHB in all circumstances from trading in the securities or other financial instruments referenced in the report, or from having an interest in the company(ies) that they cover.

The contents of this report is strictly confidential and may not be copied, reproduced, published, distributed, transmitted or passed, in whole or in part, to any other person without the prior express written consent of RHB and/or its affiliates. This report has been delivered to RHB and its affiliates' clients for information purposes only and upon the express understanding that such parties will use it only for the purposes set forth above. By electing to view or accepting a copy of this report, the recipients have agreed that they will not print, copy, videotape, record, hyperlink, download, or otherwise attempt to reproduce or re-transmit (in any form including hard copy or electronic distribution format) the contents of this report. RHB and/or its affiliates accepts no liability whatsoever for the actions of third parties in this respect.

The contents of this report are subject to copyright. Please refer to Restrictions on Distribution below for information regarding the distributors of this report. Recipients must not reproduce or disseminate any content or findings of this report without the express permission of RHB and the distributors.

The securities mentioned in this publication may not be eligible for sale in some states or countries or certain categories of investors. The recipient of this report should have regard to the laws of the recipient's place of domicile when contemplating transactions in the securities or other financial instruments referred to herein. The securities discussed in this report may not have been registered in such jurisdiction. Without prejudice to the foregoing, the recipient is to note that additional disclaimers, warnings or qualifications may apply based on geographical location of the person or entity receiving this report.

The term "RHB" shall denote, where appropriate, the relevant entity distributing or disseminating the report in the particular jurisdiction referenced below, or, in every other case, RHB Investment Bank Berhad and its affiliates, subsidiaries and related companies.

### RESTRICTIONS ON DISTRIBUTION

#### Malaysia

This report is issued and distributed in Malaysia by RHB Investment Bank Berhad ("RHBIB"). The views and opinions in this report are our own as of the date hereof and is 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. RHBIB has no obligation to update its opinion or the information in this report.

#### Thailand

This report is issued and distributed in the Kingdom of Thailand by RHB Securities (Thailand) PCL, a licensed securities company that is authorised by the Ministry of Finance, regulated by the Securities and Exchange Commission of Thailand and is a member of the Stock Exchange of Thailand. The Thai Institute of Directors Association has disclosed the Corporate Governance Report of Thai Listed Companies made pursuant to the policy of the Securities and Exchange Commission of Thailand. RHB Securities (Thailand) PCL does not endorse, confirm nor certify the result of the Corporate Governance Report of Thai Listed Companies.



## Indonesia

This report is issued and distributed in Indonesia by PT RHB Sekuritas Indonesia. This research does not constitute an offering document and it should not be construed as an offer of securities in Indonesia. Any securities offered or sold, directly or indirectly, in Indonesia or to any Indonesian citizen or corporation (wherever located) or to any Indonesian resident in a manner which constitutes a public offering under Indonesian laws and regulations must comply with the prevailing Indonesian laws and regulations.

## Singapore

This report is issued and distributed in Singapore by RHB Securities Singapore Pte Ltd which is a holder of a capital markets services licence and an exempt financial adviser regulated by the Monetary Authority of Singapore. RHB Securities Singapore Pte Ltd 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, RHB Securities Singapore Pte Ltd accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact RHB Securities Singapore Pte Ltd in respect of any matter arising from or in connection with the report.

## Hong Kong

This report is distributed in Hong Kong by RHB Securities Hong Kong Limited (興業橋豐證券有限公司) (CE No.: ADU220) ("RHBSHK") which is licensed in Hong Kong by the Securities and Futures Commission for Type 1 (dealing in securities). Any investors wishing to purchase or otherwise deal in the securities covered in this report should contact RHBSHK. RHBSHK is a wholly owned subsidiary of RHB Hong Kong Limited; for the purposes of disclosure under the Hong Kong jurisdiction herein, please note that RHB Hong Kong Limited with its affiliates (including but not limited to RHBSHK) will collectively be referred to as "RHBHK." RHBHK conducts a full-service, integrated investment banking, asset management, and brokerage business. RHBHK does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this research report. Investors should consider this report as only a single factor in making their investment decision. Importantly, please see the company-specific regulatory disclosures below for compliance with specific rules and regulations under the Hong Kong jurisdiction. Other than company-specific disclosures relating to RHBHK, this research report is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such.

## United States

This report was prepared by RHB and is being distributed solely and directly to "major" U.S. institutional investors as defined under, and pursuant to, the requirements of Rule 15a-6 under the U.S. Securities and Exchange Act of 1934, as amended (the "Exchange Act"). Accordingly, access to this report via Bursa Marketplace or any other Electronic Services Provider is not intended for any party other than "major" US institutional investors, nor shall be deemed as solicitation by RHB in any manner. RHB is not registered as a broker-dealer in the United States and does not offer brokerage services to U.S. persons. Any order for the purchase or sale of the securities discussed herein that are listed on Bursa Malaysia Securities Berhad must be placed with and through Auerbach Grayson ("AG"). Any order for the purchase or sale of all other securities discussed herein must be placed with and through such other registered U.S. broker-dealer as appointed by RHB from time to time as required by the Exchange Act Rule 15a-6. This report is confidential and not intended for distribution to, or use by, persons other than the recipient and its employees, agents and advisors, as applicable. Additionally, where research is distributed via Electronic Service Provider, the analysts whose names appear in this report are not registered or qualified as research analysts in the United States and are not associated persons of Auerbach Grayson AG or such other registered U.S. broker-dealer as appointed by RHB from time to time and therefore may not be subject to any applicable restrictions under Financial Industry Regulatory Authority ("FINRA") rules on communications with a subject company, public appearances and personal trading. Investing in any non-U.S. securities or related financial instruments discussed in this research report may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the U.S. Securities and Exchange Commission. Information on non-U.S. securities or related financial instruments may be limited. Foreign companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in the United States. The financial instruments discussed in this report may not be suitable for all investors. Transactions in foreign markets may be subject to regulations that differ from or offer less protection than those in the United States.

## DISCLOSURE OF CONFLICTS OF INTEREST

RHB Investment Bank Berhad, its subsidiaries (including its regional offices) and associated companies, ("RHBIB Group") form a diversified financial group, undertaking various investment banking activities which include, amongst others, underwriting, securities trading, market making and corporate finance advisory.

As a result of the same, in the ordinary course of its business, any member of the RHBIB Group, may, from time to time, have business relationships with or hold positions in the securities (including capital market products) or perform and/or solicit investment, advisory or other services from any of the subject company(ies) covered in this research report.

While the RHBIB Group will ensure that there are sufficient information barriers and internal controls in place where necessary, to prevent/manage any conflicts of interest to ensure the independence of this report, investors should also be aware that such conflict of interest may exist in view of the investment banking activities undertaken by the RHBIB Group as mentioned above and should exercise their own judgement before making any investment decisions.

## Malaysia

Save as disclosed in the following link ([RHB Research conflict disclosures – Apr 2020](#)) and to the best of our knowledge, RHBIB hereby declares that:

1. RHBIB does not have a financial interest in the securities or other capital market products of the subject company(ies) covered in this report.
2. RHBIB is not a market maker in the securities or capital market products of the subject company(ies) covered in this report.
3. None of RHBIB's staff or associated person serve as a director or board member\* of the subject company(ies) covered in this report

\*For the avoidance of doubt, the confirmation is only limited to the staff of research department

4. RHBIB did not receive compensation for investment banking or corporate finance services from the subject company in the past 12 months.
5. RHBIB did not receive compensation or benefit (including gift and special cost arrangement e.g. company/issuer-sponsored and paid trip) in relation to the production of this report.

## Thailand

Save as disclosed in the following link ([RHB Research conflict disclosures – Apr 2020](#)) and to the best of our knowledge, RHB Securities (Thailand) PCL hereby declares that:

1. RHB Securities (Thailand) PCL does not have a financial interest in the securities or other capital market products of the subject company(ies) covered in this report.
2. RHB Securities (Thailand) PCL is not a market maker in the securities or capital market products of the subject company(ies) covered in this report.
3. None of RHB Securities (Thailand) PCL's staff or associated person serve as a director or board member\* of the subject company(ies) covered in this report

\*For the avoidance of doubt, the confirmation is only limited to the staff of research department

4. RHB Securities (Thailand) PCL did not receive compensation for investment banking or corporate finance services from the subject company in the past 12 months.
5. RHB Securities (Thailand) PCL did not receive compensation or benefit (including gift and special cost arrangement e.g. company/issuer-sponsored and paid trip) in relation to the production of this report.

## Indonesia

Save as disclosed in the following link ([RHB Research conflict disclosures – Apr 2020](#)) and to the best of our knowledge, PT RHB Sekuritas Indonesia hereby declares that:

1. PT RHB Sekuritas Indonesia and its investment analysts, does not have any interest in the securities of the subject company(ies) covered in this report.

For the avoidance of doubt, interest in securities include the following:

- a) Holding directly or indirectly, individually or jointly own/hold securities or entitled for dividends, interest or proceeds from the sale or exercise of the subject company's securities covered in this report\*;
- b) Being bound by an agreement to purchase securities or has the right to transfer the securities or has the right to pre subscribe the securities\*.
- c) Being bound or required to buy the remaining securities that are not subscribed/placed out pursuant to an Initial Public Offering\*.
- d) Managing or jointly with other parties managing such parties as referred to in (a), (b) or (c) above.

2. PT RHB Sekuritas Indonesia is not a market maker in the securities or capital market products of the subject company(ies) covered in this report.

3. None of PT RHB Sekuritas Indonesia's staff\*\* or associated person serve as a director or board member\* of the subject company(ies) covered in this report.

4. PT RHB Sekuritas Indonesia did not receive compensation for investment banking or corporate finance services from the subject company in the past 12 months.

5. PT RHB Sekuritas Indonesia\*\* did not receive compensation or benefit (including gift and special cost arrangement e.g. company/issuer-sponsored and paid trip) in relation to the production of this report:

Notes:

\*The overall disclosure is limited to information pertaining to PT RHB Sekuritas Indonesia only.

\*\*The disclosure is limited to Research staff of PT RHB Sekuritas Indonesia only.

## Singapore

Save as disclosed in the following link ([RHB Research conflict disclosures – Apr 2020](#)) and to the best of our knowledge, RHB Securities Singapore Pte Ltd hereby declares that:

1. RHB Securities Singapore Pte Ltd, its subsidiaries and/or associated companies do not make a market in any issuer covered in this report.
2. RHB Securities Singapore Pte Ltd, its subsidiaries and/or its associated companies and its analysts do not have a financial interest (including a shareholding of 1% or more) in the issuer covered in this report.
3. RHB Securities, its staff or connected persons do not serve on the board or trustee positions of the issuer covered in this report.
4. RHB Securities Singapore Pte Ltd, its subsidiaries and/or its associated companies do not have and have not within the last 12 months had any corporate finance advisory relationship with the issuer covered in this report or any other relationship that may create a potential conflict of interest.
5. RHB Securities Singapore Pte Ltd, or person associated or connected to it do not have any interest in the acquisition or disposal of, the securities, specified

securities based derivatives contracts or units in a collective investment scheme covered in this report.

6. RHB Securities Singapore Pte Ltd and its analysts do not receive any compensation or benefit in connection with the production of this research report or recommendation.

#### Analyst Certification

The analyst(s) who prepared this report, and their associates hereby, certify that:

(1) they do not have any financial interest in the securities or other capital market products of the subject companies mentioned in this report, except for:

Analyst	Company
-	-

(2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.



#### KUALA LUMPUR

##### RHB Investment Bank Bhd

Level 3A, Tower One, RHB Centre  
Jalan Tun Razak  
Kuala Lumpur 50400  
Malaysia  
Tel : +603 9280 8888  
Fax : +603 9200 2216

#### JAKARTA

##### PT RHB Sekuritas Indonesia

Revenue Tower, 11th Floor, District 8  
- SCBD  
Jl. Jendral Sudirman Kav 52-53  
Jakarta 12190  
Indonesia  
Tel : +6221 509 39 888  
Fax : +6221 509 39 777

#### HONG KONG

##### RHB Securities Hong Kong Ltd.

12<sup>th</sup> Floor, World-Wide House  
19 Des Voeux Road  
Central  
Hong Kong  
Tel : +852 2525 1118  
Fax : +852 2810 0908

#### BANGKOK

##### RHB Securities (Thailand) PCL

10th Floor, Sathorn Square Office  
Tower  
98, North Sathorn Road, Silom  
Bangrak, Bangkok 10500  
Thailand  
Tel: +66 2088 9999  
Fax :+66 2088 9799

#### SINGAPORE

##### RHB Securities Singapore Pte Ltd.

10 Collyer Quay  
#09-08 Ocean Financial Centre  
Singapore 049315  
Tel : +65 6533 1818  
Fax : +65 6532 6211





ช่วงคะแนน Score	สัญลักษณ์ Rang Number of Logo	ความหมาย	Description
90 - 100		ดีเลิศ	Excellent
80 - 89		ดีมาก	Very Good
70 - 79		ดี	Good
60 - 69		ดีพอใช้	Satisfactory
50 - 59		ผ่าน	Pass
ต่ำกว่า 50	No logo give	N/A	N/A

Website: [www.thai-iod.com](http://www.thai-iod.com)

### IOD (IOD Disclaimer)

ผลสำรวจการกำกับดูแลกิจการบริษัทจดทะเบียนที่แสดงไว้นี้ เป็นผลที่ได้จากการสำรวจและประเมินข้อมูลของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทย และตลาดหลักทรัพย์ เอ็ม เอ ไอ (“บริษัทจดทะเบียน”) เปิดเผยต่อสาธารณะและเป็นข้อมูลให้ผู้ลงทุนทั่วไปสามารถเข้าถึงได้ ผลสำรวจดังกล่าวจึงเป็นการนำเสนอข้อมูลในมุมมองของบุคคลภายนอกต่อมาตรฐานการกำกับดูแลกิจการของบริษัทจดทะเบียน โดยไม่ได้เป็นการประเมินผลการปฏิบัติงานหรือการดำเนินการของบริษัทจดทะเบียนอื่นทั้งมิได้ใช้ข้อมูลภายในของบริษัทจดทะเบียนในการประเมิน ดังนั้นผลสำรวจที่แสดงนี้จึงไม่ได้เป็นการรับรองถึงผลการปฏิบัติงานหรือการดำเนินการของบริษัทจดทะเบียนและไม่ถือเป็นการให้คำแนะนำในการลงทุนในหลักทรัพย์ของบริษัทจดทะเบียนหรือคำแนะนำใดๆ ผู้ใช้ข้อมูลจึงควรใช้วิจารณญาณของตนเองในการวิเคราะห์และตัดสินใจในการใช้ข้อมูลใดๆ ที่เกี่ยวกับบริษัทจดทะเบียนที่แสดงในผลสำรวจนี้

ทั้งนี้บริษัทหลักทรัพย์ อาร์เอชบี (ประเทศไทย) จำกัด (มหาชน) มิได้ยืนยันหรือรับรองถึงความครบถ้วนและถูกต้องของผลสำรวจดังกล่าวแต่อย่างใด

ข้อมูล Anti-Corruption Progress Indicator 2560

ประกาศเจตนาธรรม CAC

A	ASK	CHG	FC	GREEN	JUTHA	MATCH	NINE	PIMO	RWI	SPPT	TFI	TU	VNT
AI	AU	CHOTI	FER	GSTEL	KASET	MATI	NMG	PK	SANKO	SPRC	THE	TVD	WAVE
AIE	BCH	CHOW	FPI	GUNKUL	KBS	MBAX	NNCL	PL	SAUCE	SR	TICON	TVO	WHA
AIRA	BJC	CIG	FSMART	HARN	KCAR	MC	NTV	PLANB	SC	SRICHA	TIP	TVT	WICE
AJ	BJCHI	COL	GEL	IFS	KTECH	MFEC	NUSA	POST	SCCC	SST	TKN	TWPC	WIJK
ALUCON	BLAND	COM7	GFPT	ILINK	KWC	MIDA	NWR	PRINC	SCN	STA	TLUXE	U	TRUE
AMATAV	BR	CPALL	GGC	INET	KYE	MILL	OGC	PRO	SEAOIL	SUPER	TMILL	UPA	
AOT	BROCK	CPF	GIFT	IRC	L&E	ML	PACE	PSTC	SE-ED	SUSCO	TMT	UREKA	
APCO	BRR	CPR	GJS	J	LEE	MTLS	PAF	PYLON	SENA	SWC	TNP	UWC	
AQUA	CEN	CSC	GLOBAL	JMART	LIT	NBC	PAP	QTC	SIRI	SYMC	TPA	VGI	
ARROW	CGH	EKH	GOLD	JMT	LVT	NCL	PATO	ROH	SMART	TAKUNI	TSE	VIBHA	
ASIA	CHEWA	EPCO	GPSC	JUBILE	MAKRO	NEP	PCSGH	ROJNA	SPACK	TBSP	TTI	VIH	

ได้รับการรับรอง CAC

ADVANC	BKI	CPN	FE	INTUCH	LANNA	MSC	PLAT	PTT	SAT	SNP	TCMC	TMD	UOBKH
AKP	BLA	CSL	FNS	IRPC	LHBANK	MTI	PM	PTTEP	SCB	SORKON	TFG	TNITY	WACOAL
AMANAH	BROOK	DCC	FSS	IVL	LHK	NKI	PPP	PTTGC	SCC	SPC	TGCI	TNL	
AP	BTS	DEMCO	GBX	K	LPN	NSI	PPS	Q-CON	SCG	SPI	THANI	TOG	
ASP	BWG	DIMET	GCAP	KBANK	MBK	OCC	PRANDA	QH	SGP	SSF	THCOM	TOP	
AYUD	CENTEL	DRT	GLOW	KCE	MBKET	OCEAN	PREB	QLT	SINGER	SSI	THRE	TPCORP	
BAFS	CFRESH	DTAC	HANA	KGI	MCOT	PB	PRG	RATCH	SIS	SSSC	THREL	TRU	
BANPU	CIMBT	DTC	HMPRO	KKP	MFC	PDI	PSH	RML	SITHAI	SVI	TIPCO	TSC	
BAY	CM	EASTW	HTC	KSL	MINT	PE	PSL	ROBINS	SMIT	SYNTEC	TISCO	TSSTH	
BBL	CNS	ECL	ICC	KTB	MONO	PG	PT	S & J	SMPC	TAE	TKT	TTCL	
BCP	CPI	EGCO	IFEC	KTC	MOONG	PHOL	PTG	SABINA	SNC	TCAP	TMB	TVI	

N/A

2S	ARIP	BSM	CSS	FMT	INOX	LTX	NPK	RCL	SFP	SUC	TITLE	TSR	VPO
AAV	AS	BTC	CTW	FN	INSURE	M	NPP	RICH	SGF	SUN	TIW	TSTE	VTE
ABICO	ASAP	BTNC	CWT	FOCUS	IRCP	MACO	NVD	RICHY	SHANG	SUTHA	TK	TTA	WG
ACAP	ASEFA	BTW	D	FORTH	IT	MAJOR	NYT	RJH	SIAM	SVH	TKS	TTL	WHAUP
ACC	ASIAN	BUI	DCON	FTE	ITD	MALEE	OHTL	ROCK	SIMAT	SVOA	TM	TTTM	WIN
ADAM	ASIMAR	CBG	DCORP	FVC	ITEL	MANRIN	OISHI	RP	SKE	SYNEX	TMC	TTW	WINNER
ADB	ASN	CCET	DDD	GC	JAS	MAX	ORI	RPC	SKN	T	TMI	TUCC	WORK
AEC	ATP30	CCP	DELTA	GENCO	JCT	M-CHAI	OTO	RPH	SKR	TACC	TMW	TWP	WORLD
AEONTS	AUCT	CGD	DIGI	GL	JKN	MCS	PAE	RS	SKY	TAPAC	TNDT	TWZ	WP
AF	BA	CHARAN	DNA	GLAND	JSP	MDX	PDG	RSP	SLP	TASCO	TNH	TYCN	WPH
AFC	BAT-3K	CHO	DTCI	GPI	JTS	MEGA	PERM	S	SMK	TC	TNPC	UAC	WR
AGE	BCPG	CHUO	EA	GRAMMY	JWD	METCO	PF	S11	SMM	TCB	TNR	UBIS	XO
AH	BDMS	CI	EARTH	GRAND	KAMART	MGT	PICO	SAFARI	SMT	TCC	TOA	UEC	YCI
AHC	BEAUTY	CITY	EASON	GTB	KC	MJD	PJW	SALEE	SOLAR	TCCC	TOPP	UKEM	YNP
AIT	BEC	CK	ECF	GULF	KCM	MK	PLANET	SAM	SPA	TCJ	TPAC	UMI	YUASA
AJA	BEM	CKP	EE	GYT	KDH	MM	PLE	SAMART	SPALI	TCOAT	TPBI	UMS	ZIGA
AKR	BFIT	CMO	EFORL	HFT	KIAT	MODERN	PMTA	SAMCO	SPCG	TEAM	TPCH	UNIQU	ZMICO
ALLA	BGRIM	CMR	EIC	HOTPOT	KKC	MPG	POLAR	SAMTEL	SPG	TFD	TIPL	UP	
ALT	BGT	CNT	EMC	HPT	KOOL	MPIC	POMPUI	SAPPE	SPORT	TFMAMA	TIPIP	UPF	
AMA	BH	COLOR	EPG	HTECH	KTIS	NC	PORT	SAWAD	SPVI	TGPRO	TPOLY	UPOIC	
AMARIN	BIG	COMAN	ERW	HUMAN	KWG	NCH	PPM	SAWANG	SQ	TH	TPP	UT	
AMATA	BIZ	CPH	ESSO	HYDRO	LALIN	NDR	PRAKIT	SCI	SSC	THAI	TR	UTP	
AMC	BKD	CPL	ESTAR	ICHI	LDC	NETBAY	PRECHA	SCP	SSP	THANA	TRC	UV	
ANAN	BLISS	CPT	ETE	ICN	LH	NEW	PRIN	SDC	STANLY	THG	TRITN	UVAN	
APCS	BM	CRANE	EVER	IEC	LOXLEY	NEWS	PRM	SE	STAR	THIP	TRT	VARO	
APEX	BOL	CRD	F&D	IHL	LPH	NFC	PTL	SEAFCO	STEC	THL	TRUBB	VCOM	
APURE	BPP	CSP	FANCY	III	LRH	NOBLE	RAM	SELIC	STHAI	THMUI	TSF	VI	
AQ	BSBM	CSR	FLOYD	INGRS	LST	NOK	RCI	SF	STPI	TIC	TSI	VNG	

Source: Thai Institute of Directors

ข้อมูลบริษัทที่เข้าร่วมโครงการแนวร่วมปฏิบัติของภาคเอกชนไทยในการต่อต้านทุจริต (Thai CAC) ของสมาคมส่งเสริมสถาบันกรรมการบริษัทไทย (ข้อมูล ณ วันที่ 17 ต.ค.)

- ได้ประกาศเจตนาธรรมนี้เข้าร่วม CAC
- ได้รับการรับรอง CAC

การเปิดเผยการประเมินดัชนีชี้วัดความคืบหน้าการป้องกันกรมีส่วนเกี่ยวข้องกับการทุจริตคอร์รัปชัน (Anti-Corruption Progress Indicators) ของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทยที่จัดทำโดยสถาบันที่เกี่ยวข้องซึ่งมีการเปิดเผยโดยสำนักงานคณะกรรมการกำกับหลักทรัพย์และตลาดหลักทรัพย์นี้เป็นการดำเนินการตามนโยบายและตามแผนพัฒนาความยั่งยืนสำหรับบริษัทจดทะเบียนโดยผลการประเมินดังกล่าว สถาบันที่เกี่ยวข้องอาศัยข้อมูลที่ได้รับจากบริษัทจดทะเบียนตามที่บริษัทจดทะเบียนได้ระบุในแบบแสดงข้อมูลเพื่อการประเมิน Anti-Corruption ซึ่งอ้างอิงข้อมูลมาจากแบบแสดงรายงานข้อมูลประจำปี แบบ (56-1) รายงานประจำปีแบบ (56-2) หรือในเอกสารหรือรายงานอื่นที่เกี่ยวข้องซึ่งเป็นบุคคลภายนอก โดยมีได้เป็นการประเมินการปฏิบัติของบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทยและมิได้ใช้ข้อมูลภายในเพื่อการประเมิน เนื่องจากผลการประเมินดังกล่าวเป็นเพียงผลการประเมิน ณ วันที่ ปรากฏในผลการประเมินเท่านั้น ดังนั้นผลการประเมินจึงอาจเปลี่ยนแปลงได้ภายหลังวันดังกล่าว หรือรับรองความถูกต้องครบถ้วนของผลประเมินดังกล่าวได้อย่างใด