

Vietnam

ADD (no change)

Consensus ratings*: Buy 6 Hold 2 Sell 1

Current price:	VND11,800
Target price:	VND16,500
Previous target:	VND24,100
Up/downside:	39.8%
CGS-CIMB / Consensus:	-4.8%
Reuters:	PVS.HM
Bloomberg:	PVS VN
Market cap:	US\$240.7m
	VND5,640,002m
Average daily turnover:	US\$1.78m
	VND42,512m
Current shares o/s:	478.0m
Free float:	34.0%

*Source: Bloomberg

Key changes in this note

- FY20F EPS decreased by 33.4%.
- FY21F EPS decreased by 43.7%.
- FY22F EPS introduced.



Source: Bloomberg

Price performance	1M	3M	12M
Absolute (%)	7.3	-33.7	-49.4
Relative (%)	5.3	-14	-28.5

Major shareholders

	% held
PetroVietnam Group	51.4
Acadian Frontier Markets Equity	3.3
Vietnam Invstmt. Property Holdings	3.2

Analyst(s)



Mai PHAM

T (84) 94 328 0850

E mai.phamle@vndirect.com.vn

PetroVietnam Technical Services

Weak oil price already priced in

- We reduce our FY20-21F net profit forecasts by 33-43% to reflect the lower oil prices which could affect the demand for oil and gas support services.
- A resilient mechanics & construction (M&C) segment could provide some earnings support for PVS in the medium term. Reiterate Add.

FY19 net profit boosted by earnings from affiliates

PVS reported a 15.9% yoy increase in net revenue in FY19 on top of an upward revision in the day rate for FPSO Lam Son, and the revenue contribution from ongoing M&C projects. However, FY19 gross margin narrowed by 2.4% pts and largely undershot our forecast as the company booked c.VND543bn of maintenance provision instead of final revenue for some projects like in 2018. The miss in net profit was not as wide as in gross profit, with FY19 net profit at 92.4% of our forecast (-18.9% yoy), thanks to better-than-expected results from its two affiliates FPSO Ruby and FPSO Lam Son.

FY20-21F forecasts reduced to reflect lower oil price environment

Oil prices are now stuck in a lower-for-longer environment, no thanks to the Covid-19 outbreak and oil price war, leading to O&G capex cut and project sanction delays globally. In Mar, Jadestone announced a delay on the development of Nam Du U Minh fields in Southwest Vietnam, which is a potential project for PVS (est. value: US\$150m). We expect lower demand for O&G support services in Vietnam, and hence reduce our net revenue forecasts by 14-19% for FY20-21F and cut gross margin by 2.4-2.6% pts. We now expect net profit to grow 6.0% in FY20F before jumping 14.3% yoy in FY21F.

High M&C backlog to be the key growth driver in FY20-21F

We keep our FY20F revenue forecast for PVS's M&C segment largely unchanged, as we believe ongoing projects Sao Vang Dai Nguyet and Gallaf Qatar would stay on track to meet their respective first gas target in 4Q20F and 1Q21F. Given that an M&C contract usually lasts multiple years instead of one year, a high backlog of est. VND16.9tr (as at end-FY19) could provide earnings support for PVS in FY20-21F.

Reiterate Add at lower target price of VND16,500

We reduce our TP to VND16,500 to reflect lower FY20-21F EPS forecasts and an upward revision in risk premium from 10.1% to 11%. Our TP is based on a 50:50 combination of DCF and target P/E of 6.8x (-0.5 s.d. from 5-year mean). We reiterate our Add rating as we think the current stock price has priced in the negative effects of the recent oil price crash. We highlight that PVS has a large net cash position (148% of current market cap) which could help it weather the market headwinds. The recovery in oil prices following the containment of the Covid-19 outbreak is a potential re-rating catalyst. Downside risk includes delays in the progress of global oil and gas projects.

Financial Summary	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
Revenue (VNDb)	14,638	16,968	16,105	20,438	20,971
Operating EBITDA (VNDb)	939.9	618.6	763.6	849.9	917.6
Net Profit (VNDb)	1,047	849	901	1,030	1,144
Core EPS (VND)	2,191	1,777	1,884	2,154	2,393
Core EPS Growth	4.0%	(18.9%)	6.0%	14.3%	11.1%
FD Core P/E (x)	5.39	6.64	6.26	5.48	4.93
DPS (VND)	1,064	830	700	700	700
Dividend Yield	9.02%	7.03%	5.93%	5.93%	5.93%
EV/EBITDA (x)	(5.91)	(11.62)	(8.16)	(5.60)	(4.41)
P/FCFE (x)	5.58	5.38	NA	NA	NA
Net Gearing	(56.1%)	(65.2%)	(60.5%)	(55.7%)	(53.0%)
P/BV (x)	0.48	0.47	0.49	0.57	0.61
ROE	8.9%	7.1%	7.6%	9.6%	11.9%
% Change In Core EPS Estimates			(33.4%)	(43.7%)	
CGS-CIMB/Consensus EPS (x)			0.95	1.08	1.00

SOURCES: VND RESEARCH, COMPANY REPORTS

Weak oil price already priced in

Figure 1: FY19 results overview

FYE Dec (VNDbn)	FY18	FY19	% yoy	Comments
Net revenue	14,638	16,968	15.9%	
Offshore support vessel	1,876	1,765	-5.9%	
FSO/FPSO	1,671	2,627	57.2%	On 16 Mar 2020, PVS finalised the contract for FPSO Lam Son for the Jul 2017 - Jun 2021 period, retrospectively replacing the interim contract which has been extended multiple times since Jul 2017. Given that the final day rate is higher than that in the interim contract, PVS and its affiliate PTSC AP (the legal entity for FPSO Lam Son) reported a strong segment revenue growth in FY19. This also explains the VND127.6bn increase in FY19 net profit post-auditing vs. unaudited number.
Seismic survey & ROV	818	762	-6.9%	
Port base	1,592	1,505	-5.4%	
Mechanics & construction (M&C)	7,343	8,619	17.4%	High growth mainly thanks to revenue recognition of Sao Vang Dai Nguyet and Gallaf project
Operation and maintenance (O&M)	977	790	-19.2%	
Other services	362	901	149.2%	
Gross profit	1,119	898	-19.8%	
Offshore support vessel	209	120	-42.4%	
FSO/FPSO	121	153	26.7%	
Seismic survey & ROV	(397)	66	NA	
Port base	348	252	-27.6%	
Mechanics & construction (M&C)	737	178	-75.9%	
Operation and maintenance (O&M)	84	100	19.4%	
Other services	18	29	58.0%	
Gross profit margin	7.6%	5.3%	-2.4% pts	
Offshore support vessel	11.1%	6.8%	-4.4% pts	
FSO/FPSO	7.2%	5.8%	-1.4% pts	
Seismic survey & ROV	NA	9.9%	NA	Higher gross profit in seismic survey segment after the dissolution of CGGV JV. PVS also carried out survey work for Blue Whale project in 1H19.
Port base	21.8%	16.7%	-5.1% pts	
Mechanics & construction (M&C)	10.0%	2.1%	-8.0% pts	Gross profit margin contracted as the company booked an est. VND543bn project maintenance provision in FY19, without the final revenue recognition of several projects like in FY18.
Operation and maintenance (O&M)	8.6%	12.6%	+4.1% pts	
Other services	5.1%	3.2%	-1.9% pts	
SG&A expenses	(746)	(757)	1.5%	
Net financial income (expenses)	440	253	-42.5%	
Gain/loss from investment in JVs	723	581	-19.6%	The yoy decline results from the absence of one-off profit (PVS booked c.VND189bn one-off profit from FSO Orkid in FY18).
Pre-tax profit	976	1,103	13.0%	
Profit after tax	573	808	41.0%	Lower deferred tax expenses yoy
Minority interest	(474)	(41)	-91.3%	Lower loss in the seismic survey JV
Net profit	1,047	849	-18.9%	

SOURCES: VND RESEARCH, COMPANY REPORTS

Figure 2: PVS's key projects in M&C segment

Project	Est. contract value* (US\$m)	Est. revenue in FY20F	Expected project span	Status
Incorporated				
Gallaf Qatar	320	144	2019 - 1Q21F	Under development. Purchasing and execution work expected from Nov 2018 to Jun 2020F.
Sao Vang Dai Nguyet (SVDN)	500	60	2018 - 2021F	Under development. First gas expected in 4Q20F.
SVDN intrafield and pipeline connecting to Nam Con Son 2	96	67	3Q19 - 2021F	Contract signed in Oct 2019. Should progress in line with the development of SVDN fields.
Nam Con Son 2 Phase 2	26	20	3Q19 - 1Q21F	Major EPC contractors selected in 3Q19. PTSC was chosen as the sub-contractor for the c.US\$130m subsea pipeline EPC contract (TechnipFMC as main contractor). We estimate that PVS could record US\$26m of revenue during FY20-21F for this contract.
LNG Thi Vai terminal	78	27	3Q19 - 4Q22F	EPC contract awarded in Jun 2019. Site cleared. Construction started in Oct 2019. PVS has a 39% stake in the project.
Su Tu Trang Phase 2	250	-	2021 - 2023F	EPC tender could start in 2020F for first-gas by mid- to end-2023F. Phase 2A involves the development of new wells to be used as inputs for the current ST-PIP platform. Phase 2B involves the construction of a central gas facility (CGF) with 16 wells, connecting to ST-PIP platform. First gas of Phase 2A/2B are expected from Dec 2020F/4Q23F.
Block B - O Mon pipeline	1,000	-	2021 - 2023F	EPC tender started in Feb 2020 and would end by Jul 2020F. First gas expected in 2023F.
Nam Du - U Minh	150	-	2021 - 2023F	In Mar 2020, Jadestone announced to delay the development of Nam Du - U Minh gas fields in the absence of government approval in 1Q20. Earlier in the year, Jadestone said that all related major contracts and other commercial arrangements were ready for execution upon project sanction.
Unincorporated				
Block B - O Mon field	6,700	-	2021 - 2023F	FEED contract completed. Tender packages would be opened in line with the progress of downstream gas-fired power plant projects.
Blue Whale	NA	-	2021 - 2024F	FEED contract awarded to Saipem in Feb 2019. EPC contracts expected to be awarded in 2020F. First gas expected in 4Q23F.
Lac Da Vang	NA	-	2021 - 2023F	ODP was approved in Sep 2019. Murphy (the field operator) expected FID to be approved in 2020F but we think this project could be delayed further in light of the recent collapse in oil price.
Red Emperor				In suspension

Abbreviations: Engineering, Procurement and Construction (EPC), Front End Engineering and Design (FEED), Outline Development Plan (ODP), Final Investment Decision (FID)
*VND's estimates of PVS's share in the contracts
SOURCES: VND RESEARCH

Figure 3: Forecast revision

VNDbn	2020F			2021F			2022F
	Old	New	% change	Old	New	% change	New
Net revenue	19,766	16,105	-18.5%	23,680	20,438	-13.7%	20,971
Gross profit	1,718	984	-42.7%	2,416	1,282	-47.0%	1,313
Pre-tax profit	1,674	1,078	-35.6%	2,266	1,233	-45.6%	1,369
Net profit	1,352	901	-33.4%	1,830	1,030	-43.7%	1,144
EPS (VND)	2,829	1,884	-33.4%	3,830	2,154	-43.7%	2,393

SOURCES: VND RESEARCH

Valuation

Figure 4: Cost of equity assumption

Cost of equity	
Risk Free Rate	4.0%
Beta	1.7
Risk Premium	11.0%
Cost of Equity	22.7%

SOURCES: VND RESEARCH

Figure 5: WACC and terminal growth

VNDbn	
Equity Value	9,798
Debt	1,356
Cost of Debt	3.0%
Tax Rate	20.5%
WACC	20.2%
Perpetual Growth Rate	1.0%

SOURCES: VND RESEARCH

Figure 6: Summary of DCF valuation

VNDbn	Dec-18A	Dec-19F	Dec-20F	Dec-21F	Dec-22F	Dec-25F	Dec-30F	Dec-35F	CAGR 20-35F
Total revenue	14,638	16,968	16,105	20,438	20,971	21,509	21,978	22,260	2.2%
% yoy	-13.5%	15.9%	-5.1%	26.9%	2.6%	0.6%	0.3%	0.2%	
COGS & OPEX	(14,265)	(16,828)	(15,820)	(20,104)	(20,630)	(21,159)	(21,621)	(21,899)	
Unlevered profit / EBIT	373	140	285	334	341	349	357	361	1.6%
Operating margin	2.5%	0.8%	1.8%	1.6%	1.6%	1.6%	1.6%	1.6%	
Effective tax rate	-41.3%	-26.7%	-20.5%	-20.5%	-20.5%	-20.5%	-20.5%	-20.5%	
EBIT * (1-Tax) or NOPAT	219	103	227	266	271	278	284	287	1.6%
+ Depreciation and amortisation	567	478	478	516	577	586	596	604	
% of revenue	3.9%	2.8%	3.0%	2.5%	2.8%	2.7%	2.7%	2.7%	
- Capex	(355)	(766)	(727)	(923)	(566)	(740)	(792)	(803)	
% of revenue	-2.4%	-4.5%	-4.5%	-4.5%	-2.7%	-3.4%	-3.6%	-3.6%	
+ Change in working capital	(710)	1,367	(65)	(473)	(104)	(205)	(239)	(242)	
% of revenue	-4.9%	8.1%	-0.4%	-2.3%	-0.5%	-1.0%	-1.1%	-1.1%	
Interest and other financial activities, net	604	963	793	898	1,029	1,027	1,041	1,055	
% of revenue	4.1%	5.7%	4.9%	4.4%	4.9%	4.8%	4.7%	4.7%	
Unlevered free cash flow (UFCF)	325	2,145	706	284	1,207	946	889	901	
% yoy	-82.7%	560.7%	-67.1%	-59.8%	324.7%	21.4%	0.9%	0.1%	

SOURCES: VND RESEARCH, COMPANY REPORTS

We lower our blended TP to VND16,500 on the back of (1) lower FY20-21F EPS forecasts, and (2) higher risk premium of 11% (vs. 10.1% earlier) to reflect increasing risk in the Vietnamese market.

Figure 7: Blended target price

Method	Implied share price (VND)	Weight (%)	Weighted share price (VND)
DCF	18,473	50%	9,236
FY20-22F target P/E of 6.8x	14,578	50%	7,289
Blended value			16,526
Target price			16,500

SOURCES: VND RESEARCH

PVS's stock price is highly correlated to oil price movements, despite the lagged effect of oil price on the company's results announcement. We reiterate our Add rating as we think its current stock price has priced in the negative effects of the recent oil price crash, while the company's contracted M&C projects will still provide cash inflows going forward. It is notable that PVS is among the top five companies with the highest net cash to market cap ratio in Vietnam's stock market (147.8% at current price, data excluding Banking and Insurance stocks), implying lower downside risk and better resources to weather the market headwinds.

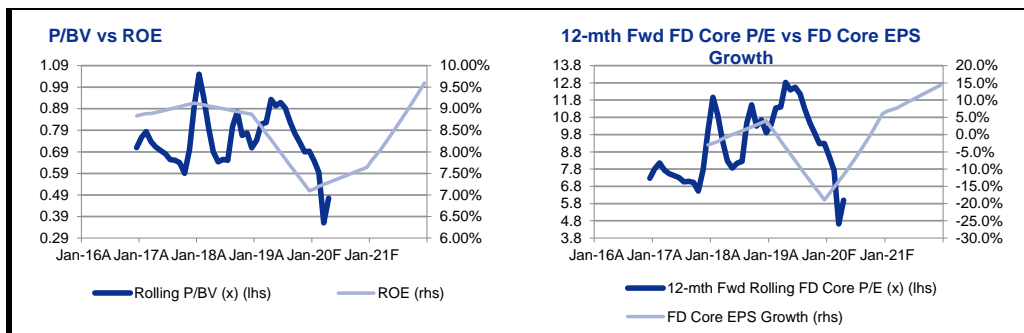
We expect the company to maintain its cash dividend policy of VND700/share in FY20-22F, translating to a dividend yield of 5.9% at current price.

Figure 8: Peer comparison

Company	Bloomberg Ticker	Recom.	Share Price (local curr)	Target Price (local curr)	Market Cap (US\$ m)	P/E (x)				3-yr fw CAGR EPS (%)	P/BV (x)			ROE (%)			ROA (%)		
						TTM	FY20F	FY21F			TTM	FY20F	FY21F	TTM	FY20F	FY21F	TTM	FY20F	FY21F
PV Technical Services	PVS VN	ADD	11,800	16,500	241	6.6	6.2	5.5	10.4%	0.4	0.5	0.6	7.1%	7.7%	9.6%	3.5%	3.6%	4.2%	
Malaysia Marine Eng	MMHE MK	NOT RATED	0.42	NA	153	NA	24.4	14.3	NA	0.3	0.3	0.3	-1.4%	1.5%	2.3%	-1.1%	0.7%	1.3%	
Yinson Holdings	YNS MK	ADD	5.28	9.29	1,297	27.7	26.5	10.2	36.0%	1.7	1.6	1.5	6.2%	2.6%	11.3%	2.4%	2.5%	5.0%	
Hyundai Engineering	000720 KS	HOLD	32,900	45,000	3,010	8.8	7.1	6.7	NA	0.5	0.5	0.4	6.3%	6.7%	6.7%	2.2%	2.4%	2.4%	
Keppel Corp	KEP SP	ADD	5.59	7.76	7,138	14.4	12.0	11.5	7.4%	0.9	0.8	0.8	6.3%	7.0%	7.0%	2.4%	2.5%	2.6%	
Average (all)					2,368	14.4	15.2	9.6	17.9%	0.8	0.7	0.7	4.9%	5.1%	7.4%	1.9%	2.3%	3.1%	
Average (excluding PVS)					2,899	16.9	17.5	10.7	21.7%	0.9	0.8	0.7	4.3%	4.4%	6.8%	1.5%	2.0%	2.8%	

SOURCES: CGS-CIMB RESEARCH, VND RESEARCH, BLOOMBERG (DATA AS AT 16 APR)

BY THE NUMBERS



Profit & Loss

(VNDb)	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
Total Net Revenues	14,638	16,968	16,105	20,438	20,971
Gross Profit	1,119	898	984	1,282	1,313
Operating EBITDA	940	619	764	850	918
Depreciation And Amortisation	(567)	(478)	(478)	(516)	(577)
Operating EBIT	373	140	285	334	341
Financial Income/(Expense)	440	253	169	121	87
Pretax Income/(Loss) from Assoc.	723	581	501	622	782
Non-Operating Income/(Expense)	(559)	129	123	156	160
Profit Before Tax (pre-EI)	976	1,103	1,078	1,233	1,369
Exceptional Items					
Pre-tax Profit	976	1,103	1,078	1,233	1,369
Taxation	(403)	(295)	(221)	(253)	(281)
Exceptional Income - post-tax					
Profit After Tax	573	808	857	980	1,089
Minority Interests	474	41	43	50	55
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
Net Profit	1,047	849	901	1,030	1,144
Recurring Net Profit	1,047	849	901	1,030	1,144
Fully Diluted Recurring Net Profit	1,047	849	901	1,030	1,144

Cash Flow

(VNDb)	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
EBITDA	940	619	764	850	918
Cash Flow from Inv. & Assoc.	(997)	(855)	(741)	(809)	(935)
Change In Working Capital	(710)	1,367	(65)	(473)	(104)
(Incr)/Decr in Total Provisions	90	154	0	0	0
Other Non-Cash (Income)/Expense	36	485	315	383	452
Other Operating Cashflow	1,055	495	688	723	784
Net Interest (Paid)/Received	(36)	(39)	(41)	(38)	(38)
Tax Paid	(187)	(320)	(232)	(265)	(294)
Cashflow From Operations	192	1,906	688	371	783
Capex	(355)	(766)	(727)	(923)	(566)
Disposals Of FAs/subsidiaries	2	5	5	5	5
Acq. Of Subsidiaries/investments					
Other Investing Cashflow	1,428	(545)	(545)	(545)	(545)
Cash Flow From Investing	1,075	(1,306)	(1,267)	(1,462)	(1,106)
Debt Raised/(repaid)	(256)	448	(321)	149	(154)
Proceeds From Issue Of Shares					
Shares Repurchased					
Dividends Paid	(509)	(397)	(335)	(335)	(335)
Preferred Dividends					
Other Financing Cashflow	0	0	0	0	0
Cash Flow From Financing	(765)	52	(655)	(186)	(488)
Total Cash Generated	502	651	(1,235)	(1,278)	(811)
Free Cashflow To Equity	1,011	1,048	(900)	(943)	(477)
Free Cashflow To Firm	1,303	639	(538)	(1,054)	(285)

SOURCES: VND RESEARCH, COMPANY REPORTS

BY THE NUMBERS... cont'd

Balance Sheet

(VNDb)	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
Total Cash And Equivalents	8,037	9,692	8,457	7,179	6,368
Total Debtors	5,006	4,627	4,572	5,802	5,953
Inventories	494	1,269	786	995	1,021
Total Other Current Assets	591	396	376	477	490
Total Current Assets	14,129	15,984	14,190	14,453	13,832
Fixed Assets	2,634	3,177	3,426	3,833	3,822
Total Investments	4,937	5,372	5,256	5,269	5,271
Intangible Assets	0	0	0	0	0
Total Other Non-Current Assets	1,390	1,471	1,471	1,471	1,471
Total Non-current Assets	8,961	10,020	10,153	10,573	10,563
Short-term Debt	721	771	335	417	323
Current Portion of Long-Term Debt					
Total Creditors	3,277	4,356	3,736	4,784	4,868
Other Current Liabilities	2,827	3,867	3,670	4,658	4,779
Total Current Liabilities	6,825	8,995	7,742	9,859	9,971
Total Long-term Debt	193	584	700	767	707
Hybrid Debt - Debt Component					
Total Other Non-Current Liabilities	3,366	3,641	3,641	3,641	3,641
Total Non-current Liabilities	3,559	4,225	4,341	4,407	4,347
Total Provisions	0	0	0	0	0
Total Liabilities	10,384	13,220	12,082	14,266	14,318
Shareholders' Equity	11,872	12,070	11,503	9,952	9,214
Minority Interests	833	714	758	808	863
Total Equity	12,705	12,784	12,261	10,759	10,077

Key Ratios

	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
Revenue Growth	(13.5%)	15.9%	(5.1%)	26.9%	2.6%
Operating EBITDA Growth	(3.0%)	(34.2%)	23.4%	11.3%	8.0%
Operating EBITDA Margin	6.42%	3.65%	4.74%	4.16%	4.38%
Net Cash Per Share (VND)	14,903	17,441	15,529	12,545	11,169
BVPS (VND)	24,839	25,253	24,067	20,821	19,278
Gross Interest Cover	13.91	4.15	8.02	10.12	10.34
Effective Tax Rate	41.3%	26.7%	20.5%	20.5%	20.5%
Net Dividend Payout Ratio	48.6%	46.7%	37.1%	32.5%	29.3%
Accounts Receivables Days	132.1	103.6	104.5	92.6	102.3
Inventory Days	12.96	20.02	24.87	16.97	18.72
Accounts Payables Days	84.69	81.93	90.39	74.62	82.37
ROIC (%)	6.27%	2.80%	8.40%	8.29%	8.69%
ROCE (%)	6.30%	3.32%	3.83%	4.13%	4.28%
Return On Average Assets	0.92%	2.47%	2.87%	3.58%	4.12%

Key Drivers

	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
Outstanding Orderbook (VNDb)	13,070	16,991	42,072	31,871	20,305
Order Book Wins (VNDb)	N/A	N/A	N/A	N/A	N/A
Order Book Depletion (VNDb)	N/A	N/A	N/A	N/A	N/A
Average Day Rate Per Ship (US\$)	N/A	N/A	N/A	N/A	N/A
No. Of Ships (unit)	N/A	N/A	N/A	N/A	N/A
Average Utilisation Rate (%)	N/A	N/A	N/A	N/A	N/A
Oil Price (US\$/bbl)	71.1	64.2	45.0	55.0	57.0
Energy Production Volume (mmbobe)	N/A	N/A	N/A	N/A	N/A
Average Day Rate - Drilling Rigs (US\$)	N/A	N/A	N/A	N/A	N/A
Average Util. Rate - Drilling Rigs (%)	N/A	N/A	N/A	N/A	N/A
Average Day Rate - FPU's (US\$)	N/A	N/A	N/A	N/A	N/A
Average Util. Rate - FPU's (%)	N/A	N/A	N/A	N/A	N/A
Total Oil Storage Capacity (000 cbm)	N/A	N/A	N/A	N/A	N/A
Equity Share Of Oil Storage Capacity (000 cbm)	N/A	N/A	N/A	N/A	N/A
Assumed Util. Rate Of Oil Storage Capacity (%)	N/A	N/A	N/A	N/A	N/A

SOURCES: VND RESEARCH, COMPANY REPORTS

DISCLAIMER

The content of this report (including the views and opinions expressed therein, and the information comprised therein) has been prepared by and belongs to VNDIRECT Securities Corporation, and is distributed by CGS-CIMB pursuant to an arrangement between VNDIRECT Securities Corporation and CGS-CIMB. VNDIRECT Securities Corporation is not an affiliate of CGS-CIMB.

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

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

The information contained in this research report is prepared from data believed to be correct and reliable at the time of issue of this report.

VNDIRECT Securities Corporation may or may not issue regular reports on the subject matter of this report at any frequency and may cease to do so or change the periodicity of reports at any time. Neither VNDIRECT Securities Corporation nor CGS-CIMB is under any obligation to update this report in the event of a material change to the information contained in this report. Neither VNDIRECT Securities Corporation nor CGS-CIMB has any and will accept any, obligation to (i) check or ensure that the contents of this report remain current, reliable or relevant, (ii) ensure that the content of this report constitutes all the information a prospective investor may require, (iii) ensure the adequacy, accuracy, completeness, reliability or fairness of any views, opinions and information, and accordingly, VNDIRECT Securities Corporation, CGS-CIMB and their respective affiliates and related persons including China Galaxy International Financial Holdings Limited ("CGIFHL") and CIMB Group Sdn. Bhd. ("CIMBG") and their respective related corporations (and their respective directors, associates, connected persons and/or employees) shall not be liable in any manner whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance thereon or usage thereof. In particular, VNDIRECT Securities Corporation and CGS-CIMB disclaim all responsibility and liability for the views and opinions set out in this report.

Unless otherwise specified, this report is based upon reasonable sources. Such sources will, unless otherwise specified, for market data, be market data and prices available from the main stock exchange or market where the relevant security is listed, or, where appropriate, any other market. Information on the accounts and business of company(ies) will generally be based on published statements of the company(ies), information disseminated by regulatory information services, other publicly available information and information resulting from our research. Whilst every effort is made to ensure that statements of facts made in this report are accurate, all estimates, projections, forecasts, expressions of opinion and other subjective judgments contained in this report are based on assumptions considered to be reasonable as of the date of the document in which they are contained and must not be construed as a representation that the matters referred to therein will occur. Past performance is not a reliable indicator of future performance. The value of investments may go down as well as up and those investing may, depending on the investments in question, lose more than the initial investment. No report shall constitute an offer or an invitation by or on behalf of CGS-CIMB or VNDIRECT Securities Corporation, or their respective affiliates (including CGIFHL, CIMBG and their respective related corporations) to any person to buy or sell any investments.

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

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

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

The term "VNDIRECT Securities Corporation" shall, unless the context otherwise requires, mean VNDIRECT Securities Corporation and its affiliates, subsidiaries and related companies. The term "CGS-CIMB" shall denote, where appropriate, the relevant entity distributing or disseminating the report in the particular jurisdiction referenced below, or, in every other case except as otherwise stated herein, CGS-CIMB Securities International Pte. Ltd. and its affiliates, subsidiaries and related corporations.

CGS-CIMB

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

--	--	--

(i) As of March 31, 2020 VNDIRECT Securities Corporation has a proprietary position in the securities (which may include but not limited to shares, warrants, call warrants and/or any other derivatives) in the following company or companies covered or recommended in this report:

(a) -

(ii) As of April 16, 2020, the analyst(s) who prepared this report, and the associate(s), has / have an interest in the securities (which may include but not limited to shares, warrants, call warrants and/or any other derivatives) in the following company or companies covered or recommended in this report:

(a) -

This report does not purport to contain all the information that a prospective investor may require. CGS-CIMB, VNDIRECT Securities Corporation and their respective affiliates (including CGIFHL, CIMBG and their related corporations) do not make any guarantee, representation or warranty, express or implied, as to the adequacy, accuracy, completeness, reliability or fairness of any such information and opinion contained in this report. None of CGS-CIMB, VNDIRECT Securities Corporation and their respective affiliates and related persons (including CGIFHL, CIMBG and their related corporations) shall be liable in any manner whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance thereon or usage thereof.

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

Investors are advised to make their own independent evaluation of the information contained in this research report, consider their own individual investment objectives, financial situation and particular needs and consult their own professional and financial advisers as to the legal, business, financial, tax and other aspects before participating in any transaction in respect of the securities of company(ies) covered in this research report. The securities of such company(ies) may not be eligible for sale in all jurisdictions or to all categories of investors.

Restrictions on Distributions

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

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

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

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

Germany: This report is only directed at persons who are professional investors as defined in sec 31a(2) of the German Securities Trading Act

(WpHG). This publication constitutes research of a non-binding nature on the market situation and the investment instruments cited here at the time of the publication of the information.

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

Hong Kong: This report is issued by VNDIRECT Securities Corporation and distributed in Hong Kong by CGS-CIMB Securities (Hong Kong) Limited ("CHK") which is licensed in Hong Kong by the Securities and Futures Commission for Type 1 (dealing in securities), Type 4 (advising on securities) and Type 6 (advising on corporate finance) activities. Any investors wishing to purchase or otherwise deal in the securities covered in this report should contact the Head of Sales at CGS-CIMB Securities (Hong Kong) Limited. The views and opinions in this research report are of VNDIRECT Securities Corporation as of the date hereof and are subject to change. If the Financial Services and Markets Act of the United Kingdom or the rules of the Financial Conduct Authority apply to a recipient, our obligations owed to such recipient therein are unaffected. CHK has no obligation to update the opinion or the information in this research report.

CHK does not make a market on other securities mentioned in the report.

India:

This report is issued by VNDIRECT Securities Corporation and distributed in India by CGS-CIMB Securities (India) Private Limited ("CGS-CIMB India"). CGS-CIMB India is a subsidiary of CGS-CIMB Securities International Pte. Ltd. which in turn is a 50:50 joint venture company of CGIFHL and CIMBG. The details of the members of the group of companies of CGS-CIMB can be found at www.cgs-cimb.com, CGIFHL at www.chinastock.com.hk/en/ACG/ContactUs/index.aspx and CIMBG at www.cimb.com/en/who-we-are.html. CGS-CIMB India is registered with the National Stock Exchange of India Limited and BSE Limited as a trading and clearing member (Merchant Banking Number: INM000012037) under the Securities and Exchange Board of India (Stock Brokers and Sub-Brokers) Regulations, 1992. In accordance with the provisions of Regulation 4(g) of the Securities and Exchange Board of India (Investment Advisers) Regulations, 2013, CGS-CIMB India is not required to seek registration with the Securities and Exchange Board of India ("SEBI") as an Investment Adviser. CGS-CIMB India is registered with SEBI (SEBI Registration Number: INZ000157134) as a Research Analyst (INH000000669) pursuant to the SEBI (Research Analysts) Regulations, 2014 ("Regulations").

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

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

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

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

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

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

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

Indonesia: This report is issued by VNDIRECT Securities Corporation and distributed by PT CGS-CIMB Sekuritas Indonesia ("CGS-CIMB Indonesia"). The views and opinions in this research report are not our own but of VNDIRECT Securities Corporation as of the date hereof and are subject to change. CGS-CIMB Indonesia has no obligation to update the opinion or the information in this research report. This report is for private circulation only to clients of CGS-CIMB Indonesia. Neither this report nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable Indonesian capital market laws and regulations.

This research report is not an offer of securities in Indonesia. The securities referred to in this research report have not been registered with the Financial Services Authority (Otoritas Jasa Keuangan) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market law and regulations.

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

Malaysia: This report is issued by VNDIRECT Securities Corporation and distributed in Malaysia by CGS-CIMB Securities Sdn. Bhd. (formerly

known as Jupiter Securities Sdn. Bhd.) (“CGS-CIMB Malaysia”) solely for the benefit of and for the exclusive use of our clients. Recipients of this report are to contact CGS-CIMB Malaysia, at 29th Floor Menara CIMB No. 1 Jalan Stesen Sentral 2, Kuala Lumpur Sentral 50470 Kuala Lumpur, Malaysia, in respect of any matters arising from or in connection with this report. CGS-CIMB Malaysia has no obligation to update, revise or reaffirm the opinion or the information in this research report after the date of this report.

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

Singapore: This report is issued by VNDIRECT Securities Corporation and distributed by CGS-CIMB Research Pte Ltd (“CGS-CIMBR”). CGS-CIMBR is a financial adviser licensed under the Financial Advisers Act, Cap 110 (“FAA”) for advising on investment products, by issuing or promulgating research analyses or research reports, whether in electronic, print or other form. Accordingly CGS-CIMBR is a subject to the applicable rules under the FAA unless it is able to avail itself to any prescribed exemptions.

Recipients of this report are to contact CGS-CIMB Research Pte Ltd, 50 Raffles Place, #16-02 Singapore Land Tower, Singapore in respect of any matters arising from, or in connection with this report. CGS-CIMBR has no obligation to update the opinion or the information in this research report. This publication is strictly confidential and is for private circulation only. If you have not been sent this report by CGS-CIMBR directly, you may not rely, use or disclose to anyone else this report or its contents.

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

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

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

As of April 16, 2020,, CGS-CIMBR does not have a proprietary position in the recommended securities in this report.

CGS-CIMBR does not make a market on the securities mentioned in the report.

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

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

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

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

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

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

CGS-CIMB Thailand may act or acts as Market Maker, and issuer and offerer of Derivative Warrants and Structured Note which may have the following securities as its underlying securities. Investors should carefully read and study the details of the derivative warrants in the prospectus before making investment decisions.

AAV, ADVANC, AEONTS, AMATA, AOT, AWC, BANPU, BBL, BCH, BCP, BCPG, BDMS, BEC, BEM, BGC, BGRIM, BH, BJC, BPP, BTS, CBG,

CENTEL, CHG, CK, CKP, COM7, CPALL, CPF, CPN, DELTA, DTAC, EA, EGCO, EPG, ERW, ESSO, GFPT, GLOBAL, GPSC, GULF, GUNKUL, HANA, HMPRO, INTUCH, IRPC, IVL, JAS, JMT, KBANK, KCE, KKP, KTB, KTC, LH, MAJOR, MBK, MEGA, MINT, MTC, ORI, OSP, PLANB, PRM, PSH, PSL, PTG, PTT, PTTEP, PTTGC, QH, RATCH, RS, SAWAD, SCB, SCC, SGP, SPALI, SPRC, STA, STEC, STPI, SUPER, TASCO, TCAP, THAI, THANI, THG, TISCO, TKN, TMB, TOA, TOP, TPIPP, TQM, TRUE, TTW, TU, VGI, WHA, BEAUTY, JMART, LPN, SISB, WORK.

Corporate Governance Report:

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

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

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

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

United Kingdom and European Economic Area (EEA): In the United Kingdom and European Economic Area, this material is also being distributed by CGS-CIMB Securities (UK) Limited (“CGS-CIMB UK”). CGS-CIMB UK is authorized and regulated by the Financial Conduct Authority and its registered office is at 27 Knightsbridge, London, SW1X7YB. The material distributed by CGS-CIMB UK has been prepared in accordance with CGS-CIMB’s policies for managing conflicts of interest arising as a result of publication and distribution of this material. This material is for distribution only to, and is solely directed at, selected persons on the basis that those persons: (a) are eligible counterparties and professional clients of CGS-CIMB UK; (b) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the “Order”), (c) fall within Article 49(2)(a) to (d) (“high net worth companies, unincorporated associations etc”) of the Order; (d) are outside the United Kingdom subject to relevant regulation in each jurisdiction, material(all such persons together being referred to as “relevant persons”). This material is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this material relates is available only to relevant persons and will be engaged in only with relevant persons.

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

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

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

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

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

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

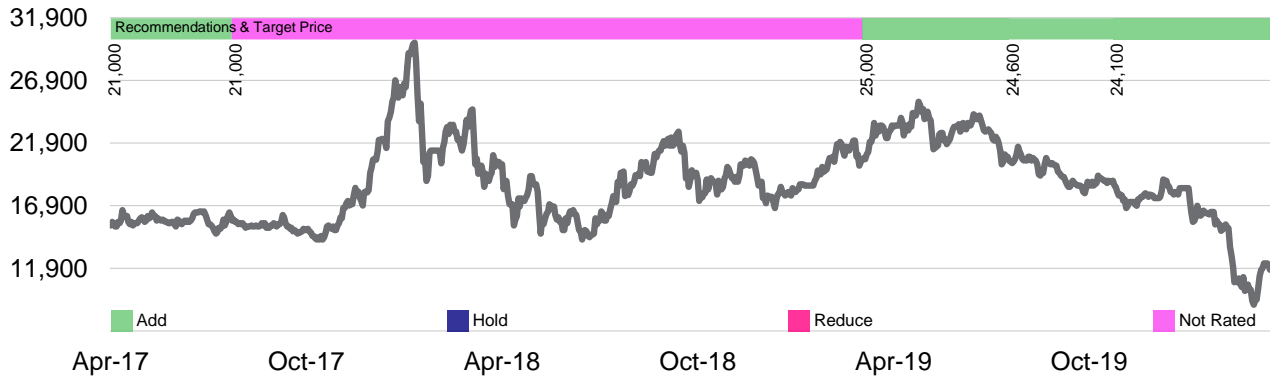
Other jurisdictions: In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is only for distribution to professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions.

Distribution of stock ratings and investment banking clients for quarter ended on 31 March 2020		
811 companies under coverage for quarter ended on 31 March 2020		
	Rating Distribution (%)	Investment Banking clients (%)
Add	60.8%	0.1%
Hold	27.6%	0.0%
Reduce	11.6%	0.0%

Spitzer Chart for stock being researched (2 year data)

PetroVietnam Technical Services (PVS VN)

— Price Close



Corporate Governance Report of Thai Listed Companies (CGR). CG Rating by the Thai Institute of Directors Association (Thai IOD) in 2019, Anti-Corruption 2019

ADVANC – Excellent, Certified, **AEONTS** – Good, n/a, **AH** – Very Good, n/a, **AMATA** – Excellent, Declared, **ANAN** – Excellent, Declared, **AOT** – Excellent, n/a, **AP** – Excellent, Certified, **ASP** – Very Good, Certified, **BAM** – not available, n/a, **BANPU** – Excellent, Certified, **BAY** – Excellent, Certified, **BBL** – Very Good, Certified, **BCH** – Good, Certified, **BGP** – Excellent, Certified, **BPCG** – Excellent, Certified, **BDMS** – Very Good, n/a, **BEAUTY** – Good, n/a, **BEC** – Very Good, n/a, **BGRIM** – Very Good, Declared, **BH** - Good, n/a, **BJC** – Very Good, n/a, **BJCHI** – Very Good, Certified, **BLA** – Very Good, Certified, **BPP** – Very Good, Declared, **BR** - Good, n/a, **BTS** - Excellent, Certified, **CBG** – Very Good, n/a, **CCET** – Good, n/a, **CENDEL** – Very Good, Certified, **CHAYO** - Good, n/a, **CHG** – Very Good, Declared, **CK** – Excellent, n/a, **COL** – Excellent, Declared, **CPALL** – Excellent, Certified, **CPF** – Excellent, Certified, **CPN** - Excellent, Certified, **CPNREIT** – not available, n/a, **CRC** – not available, n/a, **DELTA** - Excellent, Declared, **DEMCO** – Excellent, Certified, **DDD** – Very Good, n/a, **DIF** – not available, n/a, **DREIT** – not available, n/a, **DTAC** – Excellent, Certified, **EA** – Excellent, n/a, **ECL** – Very Good, Certified, **EGCO** - Excellent, Certified, **EPG** – Very Good, n/a, **ERW** – Very Good, n/a, **GFPT** - Excellent, Certified, **GGC** – Excellent, Certified, **GLOBAL** – Very Good, n/a, **GLOW** – Very Good, Certified, **GPSC** – Excellent, Certified, **GULF** – Very Good, n/a, **GUNKUL** – Excellent, Certified, **HANA** - Excellent, Certified, **HMPRO** - Excellent, Certified, **HUMAN** – Good, n/a, **ICHI** – Excellent, Declared, **III** – Excellent, n/a, **INTUCH** - Excellent, Certified, **IRPC** – Excellent, Certified, **ITD** – Very Good, n/a, **IVL** - Excellent, Certified, **JASIF** – not available, n/a, **BJC** – Very Good, n/a, **JMT** – Very Good, n/a, **KBANK** - Excellent, Certified, **KCE** – Excellent, Certified, **KKP** – Excellent, Certified, **KSL** – Excellent, Certified, **KTB** - Excellent, Certified, **KTC** – Excellent, Certified, **LH** - Excellent, n/a, **LPN** – Excellent, Certified, **M** – Very Good, Certified, **MACO** – Very Good, n/a, **MAJOR** – Very Good, n/a, **MAKRO** – Excellent, Certified, **MALEE** – Excellent, Certified, **MC** – Excellent, Certified, **MCOT** – Excellent, Certified, **MEGA** – Very Good, n/a, **MINT** - Excellent, Certified, **MK** – Very Good, n/a, **MTC** – Excellent, n/a, **NETBAY** – Very Good, n/a, **OSP** – Very Good, n/a, **PLANB** – Excellent, Certified, **PLAT** – Very Good, Certified, **PR9** – Excellent, n/a, **PSH** – Excellent, Certified, **PSTC** – Very Good, Certified, **PTT** - Excellent, Certified, **PTTEP** - Excellent, Certified, **PTTGC** - Excellent, Certified, **QH** – Excellent, Certified, **RATCH** – Excellent, Certified, **ROBINS** – Excellent, Certified, **RS** – Excellent, n/a, **RSP** – not available, n/a, **S** – Excellent, n/a, **SAPPE** – Very Good, Declared, **SAT** – Excellent, Certified, **SAWAD** – Very Good, n/a, **SC** – Excellent, Certified, **SCB** - Excellent, Certified, **SCC** – Excellent, Certified, **SCN** – Excellent, Certified, **SF** – Good, n/a, **SHR** – not available, n/a, **SIRI** – Very Good, Certified, **SPA** - Good, n/a, **SPALI** - Excellent, n/a, **SPRC** – Excellent, Certified, **STA** – Very Good, Certified, **STEC** – Excellent, n/a, **SVI** – Excellent, Certified, **SYNEX** – Excellent, Certified, **TASCO** – Excellent, Certified, **TCAP** – Excellent, Certified, **THANI** – Excellent, Certified, **TIPCO** – Very Good, Certified, **TISCO** - Excellent, Certified, **TKN** – Very Good, n/a, **TMB** - Excellent, Certified, **TNR** – Very Good, Certified, **TOP** - Excellent, Certified, **TPCH** – Good, n/a, **TPIPP** – Good, n/a, **TRUE** – Excellent, Certified, **TU** – Excellent, Certified, **TVO** – Excellent, Declared, **UNIQ** – not available, n/a, **VGI** – Excellent, Certified, **WHA** – Excellent, Certified, **WHART** – not available, n/a, **WICE** – Excellent, Certified, **WORK** – Good, n/a.

1 CG Score 2019 from Thai Institute of Directors Association (IOD)

2 AGM Level 2018 from Thai Investors Association

3 Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of November 30, 2018) are categorised into:

companies that have declared their intention to join CAC, and companies certified by CAC.

4 The Stock Exchange of Thailand : the record of listed companies with corporate sustainable development "Thai sustainability Investment 2018" included:

SET and mai listed companies passed the assessment conducted by the Stock Exchange of Thailand: THSI (SET) and THSI (mai)

SET listed companies passed the assessment conducted by the Dow Jones Sustainability Indices (DJSI) .

RECOMMENDATION FRAMEWORK

Stock Ratings

Definition:

Add	The stock's total return is expected to reach 15% or higher over the next 12 months.
Hold	The stock's total return is expected to be between negative 10% and positive 15% over the next 12 months.
Reduce	The stock's total return is expected to fall below negative 10% over the next 12 months.

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

Sector Ratings

Definition:

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

Country Ratings

Definition:

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

Hien Tran Khanh – Deputy Head of Research

Email: hien.trankhanh@vndirect.com.vn

Mai PHAM – Senior Analyst

Email: mai.phamle@vndirect.com.vn

VNDIRECT Securities Corporation

1 Nguyen Thuong Hien Str – Hai Ba Trung Dist – Ha Noi | Tel: +84 2439724568

Email: research@vndirect.com.vn | Website: <https://vndirect.com.vn>