PetroVietnam Technical Services

Finding momentum in domestic projects

- We expect domestic projects such as Block B-O Mon and Su Tu Trang Phase 2 (est. total value: US$1.3bn) could support PVS's FY21-23F bottomline.
- Reiterate Add, at a lower TP of VND15,900.

Vietnam

ADD *(no change)*

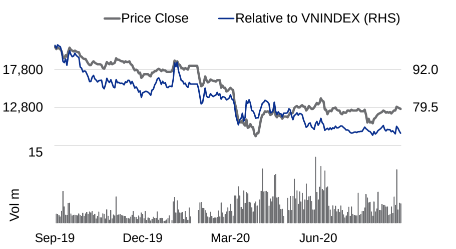
Consensus ratings*:	Buy 7	Hold 1	Sell 0

Current price:	VND12,600
Target price:	VND15,900
Previous target:	VND16,500
Up/downside:	26.2%
CGS-CIMB / Consensus:	9.7%
Reuters:	PVS.HM
Bloomberg:	PVS VN
Market cap:	US$260.0m
	VND6,022,376m
Average daily turnover:	US$2.16m
	VND50,098m
Current shares o/s:	478.0m
Free float:	34.0%

Source: Bloomberg

Key changes in this note

- FY20-22F EPS forecasts decreased by 6.7-9.6%



Source: Bloomberg

Price performance	*1M*	*3M*	*12M*
Absolute (%)	17.8	0	-39.4
Relative (%)	7.4	-2	-29

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

2Q20 net profit supported by O&M segment and provision reversal

PetroVietnam Technical Services (PVS) reported a 14.3% increase in net revenue and a 22.1% increase in net profit in 2Q20. The yoy growth was thanks to: 1) revenue recognition of near-completion projects, such as Sao Vang Dai Nguyet and Gallaf Qatar, accompanied by a 3.9%-pt gross margin expansion in the Operation and Maintenance (O&M) segment (from 9.0% to 12.9%) — this helped offset the weak performance of port base and FPSO segments; and 2) a strong dip of 57.1% yoy in G&A expense in 2Q, as the company made VND22bn of provision reversal on bad debt collection (vs. VND95bn provision expense in 2Q19).

1H20 net profit slightly behind expectation

Due to a sluggish 1Q, 1H20 net profit dropped 35.7% yoy on the back of: 1) a 4.0%-pt contraction in blended GPM, as a result of higher operating costs from implementing Covid-19 restrictions; 2) a 60.2% slump in income from affiliates, as Rong Doi MV12 JV needed to make provisions after encountering unexpected technical issues; and 3) positive 1H20 minority interest of VND35bn, due to lower loss from the CGGV JV (vs. negative minority interest of VND33bn in 1H19). Net profit met only 41.9% of our full-year forecast as we had anticipated higher income from affiliates and lower minority interest.

Domestic demand could be the key earnings driver in FY21F

PVS has yet to confirm any big contracts to add to its FY21F backlog, but we think that most of its potential contracts would be domestic, due to: 1) rising global competition, in light of capex cuts on O&G activities; and (2) Vietnam's gas shortage leading to the need to either develop new gas fields or build infrastructure to import LNG. In addition, Vietnam's success in containing the Covid-19 pandemic is also a supporting factor for the execution of new projects. We expect PVS could win the Block B-O Mon pipeline and Su Tu Trang Phase 2 contracts, adding an est. US$1.25bn to its FY21-23F backlog.

Reiterate Add, at a lower TP of VND15,900

We cut our FY20-22F EPS forecasts by 6.7-9.6% to reflect weaker-than-expected income from affiliates and better subsidiary performance (higher minority interest). This results in a lower TP of VND15,900, based on an equal weighting of DCF and target FY20-22F P/E of 6.8x. Re-rating catalyst is new contract awards, such as Block B-O Mon and Su Tu Trang Phase 2. Downside risks include geopolitical issues that could affect the progress of domestic E&P projects and higher-than-expected cost incurred at FSO MV12.

Financial Summary	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
Revenue (VNDb)	14,638	16,968	16,243	20,451	20,985
Operating EBITDA (VNDb)	939.9	618.6	788.2	820.5	922.9
Net Profit (VNDb)	1,047	849	840	931	1,057
Core EPS (VND)	2,191	1,777	1,758	1,948	2,212
Core EPS Growth	4.0%	(18.9%)	(1.1%)	10.8%	13.6%
FD Core P/E (x)	5.75	7.09	7.17	6.47	5.70
DPS (VND)	1,064	830	700	700	700
Dividend Yield	8.45%	6.59%	5.56%	5.56%	5.56%
EV/EBITDA (x)	(5.50)	(11.00)	(7.50)	(5.49)	(4.21)
P/FCFE (x)	5.96	5.75	NA	NA	NA
Net Gearing	(56.1%)	(65.2%)	(60.6%)	(55.6%)	(52.9%)
P/BV (x)	0.51	0.50	0.52	0.60	0.64
ROE	8.9%	7.1%	7.1%	8.6%	10.8%
% Change In Core EPS Estimates			(6.72%)	(9.59%)	(7.56%)
CGS-CIMB/Consensus EPS (x)			1.13	1.16	1.00

SOURCES: VND RESEARCH, COMPANY REPORTS

Analyst(s)

Mai PHAM
T (84) 94 328 0850
E mai.phamle@vndirect.com.vn

Finding momentum in domestic projects

2Q and 1H20 results overview

Figure 1: 2Q20 and 1H20 business results overview

FYE Dec (VNDbn)	2Q20	2Q19	% yoy	1H20	1H19	% yoy	vs. FY20 forecast	Comments
Net revenue	**5,518**	**4,826**	**14.3%**	**8,759**	**8,921**	**-1.8%**	**54.4%**	
Offshore support vessel	458	491	-6.8%	979	882	11.0%		
FSO/FPSO	1,363	429	217.5%	1,912	814	135.0%		
Seismic survey & ROV	76	297	-74.4%	152	351	-56.5%		
Port base	412	349	18.0%	784	737	6.4%		
Mechanics & construction (M&C)	2,756	2,720	1.3%	4,173	5,383	-22.5%		
Operation and maintenance (O&M)	299	367	-18.5%	494	481	2.6%		
Other services	155	173	-10.8%	264	273	-3.2%		
Gross profit	**245**	**376**	**-34.8%**	**437**	**800**	**-45.4%**	**44.4%**	
Offshore support vessel	26	42	-39.2%	56	84	-33.7%		
FSO/FPSO	40	45	-11.0%	63	91	-30.6%		
Seismic survey & ROV	13	48	-72.4%	8	35	-77.2%		
Port base	49	90	-45.4%	119	174	-31.8%		
Mechanics & construction (M&C)	64	96	-33.6%	125	336	-62.9%		
Operation and maintenance (O&M)	39	33	17.4%	50	39	27.5%		
Other services	15	23	-33.3%	17	41	-58.6%		
Gross profit margin	**4.4%**	**7.8%**	**-3.3% pts**	**5.0%**	**9.0%**	**-4.0% pts**		
Offshore support vessel	5.6%	8.6%	-3.0% pts	5.7%	9.6%	-3.9% pts		
FSO/FPSO	2.9%	10.4%	-7.5% pts	3.3%	11.1%	-7.9% pts		
Seismic survey & ROV	NA	9.9%	+1.2% pts	5.2%	9.9%	-4.7% pts		
Port base	11.9%	25.8%	-13.8% pts	15.1%	23.6%	-8.5% pts		
Mechanics & construction (M&C)	2.3%	3.5%	-1.2% pts	3.0%	6.2%	-3.3% pts		
Operation and maintenance (O&M)	12.9%	9.0%	+4.0% pts	10.1%	8.1%	+2.0% pts		
Other services	10.0%	13.4%	-3.4% pts	6.4%	15.1%	-8.6% pts		
SG&A expenses	(132)	(307)	-57.1%	(280)	(464)	-35.1%	40.1%	Due to provision reversal following bad debt collection from PVEP
Net financial income (expenses)	33	74	-55.8%	109	110	-0.9%	64.1%	Higher interest income and FX gain
Gain/loss from investment in JVs	129	225	-42.7%	161	404	-60.2%	32.1%	Provision expense booked at Rong Doi MV12 JV due to unexpected technical issues
Pre-tax profit	**429**	**235**	**83.1%**	**606**	**716**	**-15.3%**	**56.2%**	
Profit after tax	292	169	72.9%	412	554	-25.5%	48.1%	
Minority interest	25	(50)	-150.8%	(35)	33	NA	NA	
Net profit	**266**	**218**	**22.1%**	**378**	**587**	**-35.7%**	**41.9%**	

SOURCES: VND RESEARCH, COMPANY REPORTS

Update on PVS's current and potential projects

According to PVS, the five potential projects that could be added to its backlog in the next few years include: 1) Block B-O Mon, 2) Blue Whale, 3) Nhon Trach 3-4 power plants, 4) LNG terminals, and 5) small projects such as Su Tu Trang Phase 2 development, fuel warehouses, etc. The small-project segment already includes the business cooperation contract (BCC) that PVS signed in early-Aug with PV Gas (GAS VN, Hold, TP: VND70,000) and PVPower (POW VN, Add, TP: VND13,600). According to a company representative, this contract is still at a preliminary stage, and PVS would be mainly involved in providing services and operating the gas-electricity-port supply chain.

In our view, the most likely contract in FY21F would be Block B-O Mon pipeline, the EPC bidding of which would end in Sep 2020. PVS said the quality of the company's work has been proved through the Sao Vang Dai Nguyet project, which would support its bid for the Block B-O Mon project.

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. PVS has successfully transported around 1,000 staff to Qatar for the final stage (T&I, hook-up to existing platform) of the project.
Sao Vang Dai Nguyet (SVDN)	500	60	2018 - 2021F	Under development. The schedule for first gas remained 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. Project started in Oct 2019. PVS has a 39% stake in the project.
Su Tu Trang Phase 2	250	-	2021 - 2023F	First gas of Phase 2A/2B are expected from Dec 2020F/4Q23F.
Block B - O Mon pipeline	1,000	-	2021 - 2023F	EPC tender opened in Feb 2020 and extended from Jul to Sep 2020. First gas expected in 2023F.
Nam Du - U Minh	150	-	2021 - 2023F	According to Jadestone, the company is under ongoing discussions with the Vietnamese government relating to a gas sales and purchase agreement. Jadestone anticipates completing the gas sales and purchase agreement alongside the eventual field development plan approval. Discussions are progressing, with a view to reaching an agreement later this year.
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. In Jul 2020, PVN and EVN said they were working with ExxonMobil to finalise gas sale and eletricity agreements. 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.

SOURCES: VND RESEARCH, COMPANY REPORTS

In addition, while there has not been any operating LNG-based power plants in Vietnam to date, our rough calculation results in a total of 25 LNG projects with an estimated capacity of 50GW (almost equal to Vietnam's installed capacity of 55GW as at end-2019) at different stages of development. This calls for the need to build infrastructure for such plants, specifically LNG terminals to import the material, thereby creating huge opportunities for service providers such as PVS. Although we do not incorporate any LNG terminal contracts into PVS's valuation model, except for LNG Thi Vai, we see these contracts as an upside to our valuation.

Forecast revision

Figure 3: Earnings revision

	2020F			2021F			2022F			Comment
VNDbn	**Old**	**New**	**% Δ**	**Old**	**New**	**% Δ**	**Old**	**New**	**% Δ**	
Net revenue	16,105	16,243	0.9%	20,438	20,451	0.1%	20,971	20,985	0.1%	
Gross profit	984	933	-5.1%	1,282	1,216	-5.1%	1,313	1,281	-2.4%	
Selling expenses	(102)	(103)	0.9%	(130)	(130)	0.1%	(133)	(133)	0.1%	
G&A expenses	(596)	(520)	-12.8%	(818)	(783)	-4.3%	(839)	(803)	-4.3%	We cut FY20-22F G&A expense from 4.0% of revenue to 3.8% of revenue to reflect the company's efforts to cut costs. In addition, we take into account the provision reversal in 1H20 thanks to bad debt collection.
Operating profit	285	310	8.6%	334	304	-9.1%	341	345	1.3%	
Gain/loss from investment in associates	501	423	-15.6%	622	550	-11.5%	782	703	-10.1%	We lower the forecast for income from affiliates, assuming a US$20m provision at Rong Doi MV12 JV, which PVS would bear 33% of the burden. In addition, we reduce FPSO Ruby's charter rate from FY21F by 9% on average, as the customer is asking for a lower day rate upon contract renegotiation at end-FY20F.
Pre-tax profit	1,078	1,085	0.6%	1,233	1,202	-2.5%	1,369	1,366	-0.3%	
Net profit	901	840	-6.7%	1,030	931	-9.6%	1,144	1,057	-7.6%	
EPS (VND)	1,884	1,758	-6.7%	2,154	1,948	-9.6%	2,393	2,212	-7.6%	

SOURCES: VND RESEARCH

The key changes in our FY20-22F assumptions include provision reversal following PVEP's debt repayment, and increased provisions for the technical issues at Rong Doi MV12 JV (Modec is the operator and owns 42%, PTSC owns 33%, and Mitsui owns the remaining 25%) in FY20F.

To be specific, in Dec 2019, the FSO MV12, which belongs to Rong Doi MV12 JV, encountered unexpected technical issues regarding its anchoring and subsea systems. The FSO had to stop operations in 1H20, leading to a loss of VND125bn for the JV (vs. VND4bn profit generated in 1H19). By Aug 2020, the FSO has been temporarily repaired to resume oil drilling at Rong Doi field. For the full year, we forecast FSO MV12's total loss at VND162bn, given an estimated total repair expense of US$15m-20m (fully provisioned for in FY20F).

Reiterate Add at a lower TP of VND15,900

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%**

SOURCE: 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%**

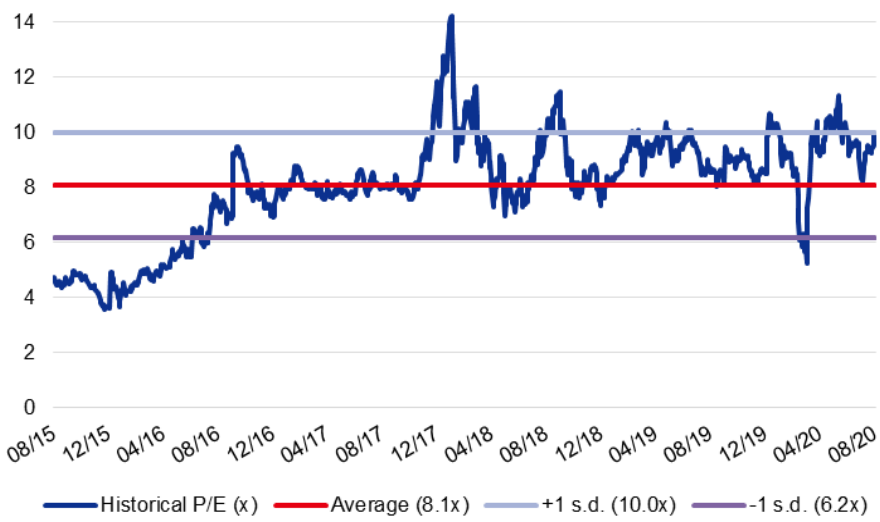
SOURCE: VND RESEARCH

Figure 6: Blended target price

Method	Implied share price (VND)	Weight (%)	Weighted share price (VND)
DCF	18,381	50%	9,190
FY20-22F target P/E of 6.8x	13,413	50%	6,707
Blended value			**15,897**
Target price			**15,900**

SOURCE: VND RESEARCH

Figure 7: PVS's historical P/E from Aug 2015 to date



SOURCE: BLOOMBERG, VND RESEARCH

Figure 8: Peer comparison

			Share Price	Target Price	Market Cap	P/E (x)			3-yr fw CAGR EPS	P/BV (x)			ROE (%)			ROA (%)		
Company	Bloomberg Ticker	Recom.	(local curr)	(local curr)	(US$ m)	TTM	FY20F	FY21F	(%)	TTM	FY20F	FY21F	TTM	FY20F	FY21F	TTM	FY20F	FY21F
PV Technical Services	**PVS VN**	**ADD**	**12,600**	**15,900**	**262**	**9.7**	**7.3**	**6.6**	**7.6%**	**0.5**	**0.5**	**0.6**	**5.0%**	**7.2%**	**8.6%**	**2.3%**	**3.4%**	**3.8%**
Malaysia Marine Eng	MMHE MK	NOT RATED	0.37	NA	142	NA	NA	37.0	NA	0.3	0.3	0.3	-17.7%	-3.6%	1.0%	-12.6%	-2.8%	0.9%
Yinson Holdings	YNS MK	ADD	6.32	6.94	1,619	33.6	33.2	15.6	35.9%	1.9	2.0	1.9	5.8%	2.5%	8.6%	2.1%	2.4%	4.1%
Sembcorp Marine	SMM SP	HOLD	0.21	0.46	323	NA	NA	NA	-59.5%	0.3	0.2	0.2	-6.1%	-13.1%	-4.1%	-1.6%	-3.3%	-1.0%
Hyundai Engineering	000720 KS	HOLD	32,650	45,000	3,070	10.7	7.2	6.9	NA	0.5	0.5	0.4	5.0%	6.7%	6.7%	1.8%	2.4%	2.4%
Keppel Corp	KEP SP	ADD	4.63	6.46	6,195	NA	NA	11.9	5.3%	0.8	0.8	0.8	-1.7%	-2.2%	6.5%	-0.6%	-0.8%	2.4%
Average (all)					**1,935**	**18.0**	**15.9**	**15.6**	**-2.7%**	**0.7**	**0.7**	**0.7**	**-1.6%**	**-0.4%**	**4.5%**	**-1.4%**	**0.2%**	**2.1%**
Average (excluding PVS)					**2,270**	**22.1**	**20.2**	**17.8**	**-6.1%**	**0.8**	**0.7**	**0.7**	**-3.0%**	**-1.9%**	**3.7%**	**-2.2%**	**-0.4%**	**1.8%**

SOURCES: VND RESEARCH, CGS-CIMB RESEARCH, BLOOMBERG (DATA AS AT 31 AUG)

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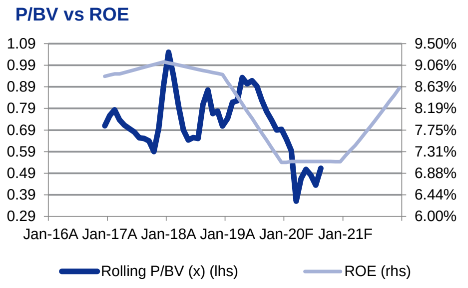

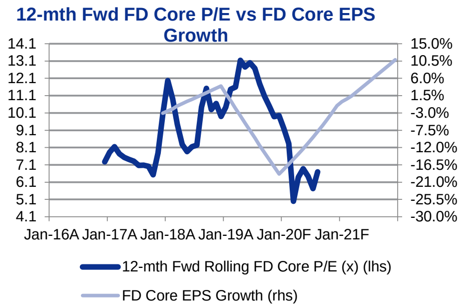

Profit & Loss

(VNDb)	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
Total Net Revenues	**14,638**	**16,968**	**16,243**	**20,451**	**20,985**
Gross Profit	**1,119**	**898**	**933**	**1,216**	**1,281**
Operating EBITDA	**940**	**619**	**788**	**821**	**923**
Depreciation And Amortisation	(567)	(478)	(478)	(517)	(578)
Operating EBIT	**373**	**140**	**310**	**304**	**345**
Financial Income/(Expense)	440	253	229	192	158
Pretax Income/(Loss) from Assoc.	723	581	423	550	703
Non-Operating Income/(Expense)	(559)	129	124	156	160
Profit Before Tax (pre-EI)	**976**	**1,103**	**1,085**	**1,202**	**1,366**
Exceptional Items					
Pre-tax Profit	**976**	**1,103**	**1,085**	**1,202**	**1,366**
Taxation	(403)	(295)	(222)	(246)	(280)
Exceptional Income - post-tax					
Profit After Tax	**573**	**808**	**863**	**956**	**1,086**
Minority Interests	474	41	(22)	(25)	(28)
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
Net Profit	**1,047**	**849**	**840**	**931**	**1,057**
Recurring Net Profit	1,047	849	840	931	1,057
Fully Diluted Recurring Net Profit	**1,047**	**849**	**840**	**931**	**1,057**

Cash Flow

(VNDb)	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
EBITDA	940	619	788	821	923
Cash Flow from Invt. & Assoc.	(997)	(855)	(722)	(809)	(926)
Change In Working Capital	(710)	1,367	(84)	(459)	(102)
(Incr)/Decr in Total Provisions	90	154	0	0	0
Other Non-Cash (Income)/Expense	36	485	297	382	443
Other Operating Cashflow	1,055	495	688	724	785
Net Interest (Paid)/Received	(36)	(39)	(41)	(38)	(38)
Tax Paid	(187)	(320)	(233)	(258)	(293)
Cashflow From Operations	**192**	**1,906**	**692**	**362**	**790**
Capex	(355)	(766)	(733)	(923)	(567)
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)**	**(1,273)**	**(1,463)**	**(1,106)**
Debt Raised/(repaid)	(256)	448	(316)	147	(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**	**(651)**	**(188)**	**(489)**
Total Cash Generated	502	651	(1,232)	(1,288)	(805)
Free Cashflow To Equity	**1,011**	**1,048**	**(897)**	**(954)**	**(470)**
Free Cashflow To Firm	**1,303**	**639**	**(540)**	**(1,062)**	**(278)**

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	8,460	7,171	6,366
Total Debtors	5,006	4,627	4,611	5,805	5,957
Inventories	494	1,269	795	999	1,024
Total Other Current Assets	591	396	379	477	490
Total Current Assets	**14,129**	**15,984**	**14,245**	**14,453**	**13,837**
Fixed Assets	2,634	3,177	3,432	3,838	3,827
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**	**10,159**	**10,579**	**10,569**
Short-term Debt	721	771	337	417	324
Current Portion of Long-Term Debt					
Total Creditors	3,277	4,356	3,768	4,787	4,872
Other Current Liabilities	2,827	3,867	3,702	4,661	4,783
Total Current Liabilities	**6,825**	**8,995**	**7,807**	**9,866**	**9,978**
Total Long-term Debt	193	584	702	769	708
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**	**4,343**	**4,409**	**4,349**
Total Provisions	0	0	0	0	0
Total Liabilities	**10,384**	**13,220**	**12,150**	**14,275**	**14,327**
Shareholders' Equity	11,872	12,070	11,563	10,090	9,440
Minority Interests	833	714	692	667	639
Total Equity	**12,705**	**12,784**	**12,254**	**10,757**	**10,079**

Key Ratios

	Dec-18A	Dec-19A	Dec-20F	Dec-21F	Dec-22F
Revenue Growth	(13.5%)	15.9%	(4.3%)	25.9%	2.6%
Operating EBITDA Growth	(3.0%)	(34.2%)	27.4%	4.1%	12.5%
Operating EBITDA Margin	6.42%	3.65%	4.85%	4.01%	4.40%
Net Cash Per Share (VND)	14,903	17,441	15,525	12,522	11,161
BVPS (VND)	24,839	25,253	24,191	21,110	19,751
Gross Interest Cover	13.91	4.15	8.70	9.17	10.45
Effective Tax Rate	41.3%	26.7%	20.5%	20.5%	20.5%
Net Dividend Payout Ratio	48.6%	46.7%	39.8%	35.9%	31.6%
Accounts Receivables Days	132.1	103.6	104.1	93.0	102.3
Inventory Days	12.96	20.02	24.68	17.03	18.74
Accounts Payables Days	84.69	81.93	89.63	74.62	82.23
ROIC (%)	6.27%	2.80%	9.12%	7.55%	8.78%
ROCE (%)	6.30%	3.32%	4.45%	4.45%	4.93%
Return On Average Assets	0.92%	2.47%	2.70%	3.24%	3.88%

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 (mmboe)	N/A	N/A	N/A	N/A	N/A
Average Day Rate - Drilling Rigs (US$)	N/A	N/A	N/A	N/A	N/A
Average Util. Rate - Drilling Rigs (%)	N/A	N/A	N/A	N/A	N/A
Average Day Rate - FPUs (US$)	N/A	N/A	N/A	N/A	N/A
Average Util. Rate - FPUs (%)	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

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Description:	Excellent	Very Good	Good	N/A	

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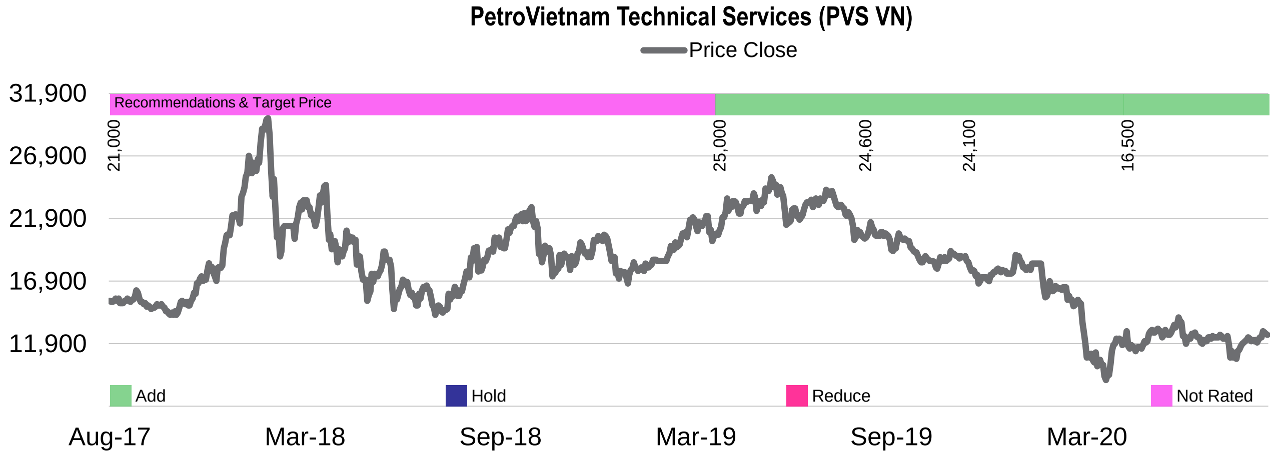
Distribution of stock ratings and investment banking clients for quarter ended on 30 June 2020 800 companies under coverage for quarter ended on 30 June 2020		
	Rating Distribution (%)	Investment Banking clients (%)
Add	60.1%	0.4%
Hold	25.9%	0.1%
Reduce	14.0%	0.3%

Spitzer Chart for stock being researched (2 year data)



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, **BCP** - Excellent, Certified, **BCPG** – 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, **CENTEL** – 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