

VIETNAM OIL & GAS INDUSTRY

Block B - O Mon project shows significant progress

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Location of major O&G projects in Vietnam

NAME
Block B & 48 - 95
MAJOR EXPLOITING COMPANY
PetroVietnam (PVN)
TYPE OF RESOURCE
GAS
SHAREHOLDERS
 •Vietnam Oil and Gas Group (PVN)
 •Moeco Vietnam Petroleum Co (Subsidiary of Mitsui Oil Exploration Co., Ltd.)
 •PetroVietnam Exploration Production Corporation Limited- PVEP
INFORMATION
 Block B of the O Mon gas project is about 246km from the coast of An Minh, to the southwest of Kien Giang province. The project's current investor is PVN, after it acquired shares from Chevron in 2018. Reserve volume is expected to reach 3.78bn cubic feet (about 107bn m³) and 12.65mn condensate barrels.

Oil and gas fields:
Black Lion, Gold Lion, Brown Lion, White Lion

Block PM3-CAA & 46CN gas fields

White Tiger Oilfield

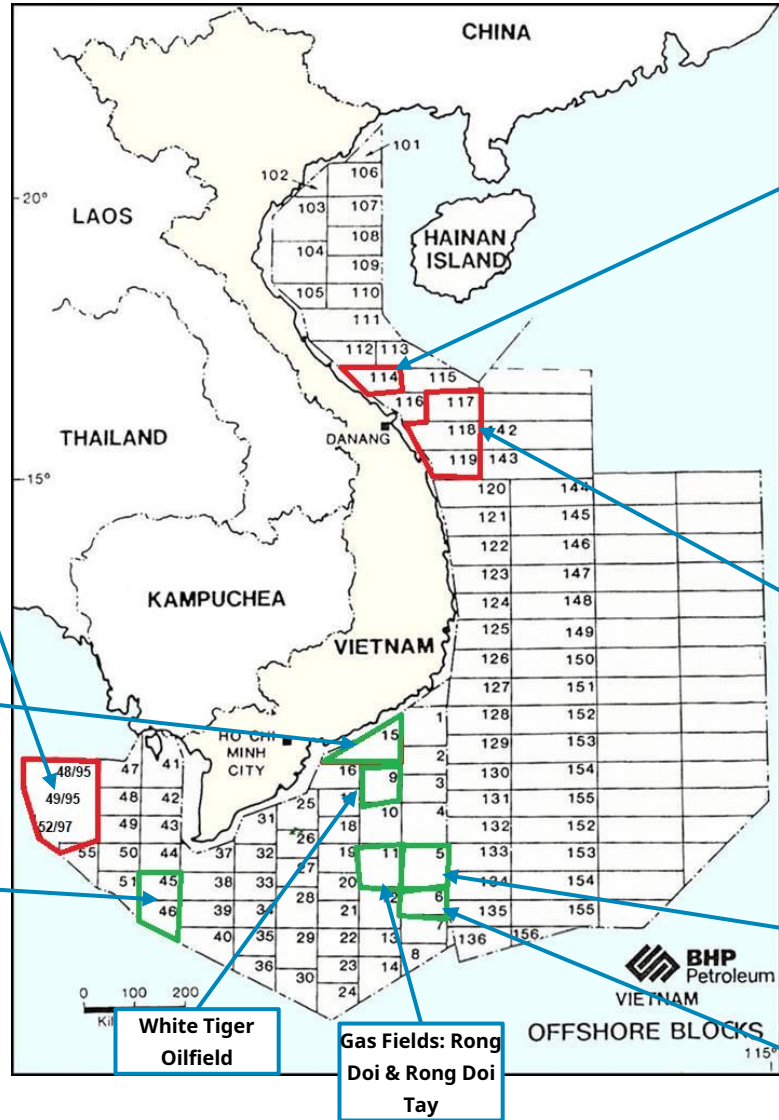
Gas Fields: Rong Doi & Rong Doi Tay

NAME
Block 114/ Ken Bau
MAJOR EXPLOITING COMPANY
Eni Vietnam B.V
TYPE OF RESOURCE
Gas
INFORMATION
 The Ken Bau mine is located near the Song Hong River, 65km from the nearest mainland in Quang Tri Province and about 86 km from Da Nang. The estimated gas reserves could reach 200–250bn m³ and 450mn barrels of condensate.

NAME
Block 118/ Blue Whale
MAJOR EXPLOITING COMPANY
Exxon Mobil Corp
TYPE OF RESOURCE
GAS
SHAREHOLDERS
 •Exxon Mobil Corp
 •Vietnam Oil and Gas Group (PVN)
 •PetroVietnam Exploration Production Corporation Limited- PVEP
INFORMATION
 The Blue Whale gas mine is located about 100km from the central coast, with US-based Exxon Mobil Corporation as the operator. This gas mine has an on-site recovery volume estimated at 150bn m³.

Oil fields: Great Bear, Hai Thach - Moc Tinh

Oil and gas Fields: Red Orchid & Orchid West



Source: Mirae Asset Securities (Vietnam) Research compilation

Significant progress in the block B - O Mon project

Investment decision for Block B - O Mon project expected in 2022, with first gas flow in 4Q25

Since 2016, Vietnam Oil and Gas Group (PVN) has been the official operator of the Block B - O Mon Gas Pipeline Project. Petrovietnam Southwest Pipeline Operating Co (SW POC), a subsidiary of PetroVietnam (PVN), manages and operates the project on behalf of the investors. The project is implemented via a business cooperation contract (BCC), with the participation of PVN, Vietnam Mechanical Corporation, MOECO (Japan), and TPTEP (Thai Lan).

The project is behind schedule, due to a number of issues, including: 1) the continued high price of wellhead gas prices, which has pushed energy conversion to over 10 US cents/kWh; and 2) delays to the downstream O Mon energy cluster (including power plants 2, 3, 4) project, due to problems in the bidding stage and ODA grants.

At the moment, the LNG price has increased sharply to US\$13-15/mmBtu. Thus, the deployment of the project plays a crucial role in controlling the domestic gas source.

In a meeting between PVN and the Can Tho authority in May, it was reported that the Block B - O Mon gas power plant is expected to be granted a final investment decision in July 2022, which would be the legal basis for construction to begin on the project in the second half of the year. In addition, the operator of the Block B gas field (Phu Quoc POC) is preparing the procedures required to open EPCI bidding packages (including contracts related to gas field development, such as EPCI, and FSO) after the FID is granted for the Block B project.

Project progress

- **Downstream:** The Government issued Decree 144/2021/ND-CP on December 16, 2021, on the management and use of official development assistance (ODA) and concessional loans from foreign donors, creating an important legal basis for approval of the investment policy for the O Mon III power plant in 4Q22 and EPC bidding in 1Q23. In addition, the O Mon 2 and O Mon 4 projects are also in the preparatory stage for the bidding process this year. According to the schedule, the three plants are expected to become operational in late-2025 (O Mon 4) and early-2026 (O Mon 2).
- **Midstream:** The project has made significant progress. Earlier this year, PV GAS (GAS) announced that it would contribute capital of 51% to the Gas Pipeline project, with a total investment of nearly VND29,000bn. The Can Tho provincial People's Committee is accelerating the land clearance and handover process to ensure the project's deployment in July 2022.
- **Upstream:** The operator of the Phu Quoc Petroleum Operating Company (PQPOC) has completed the technical evaluation of the domestic and international EPCI bidding packages, including design, procurement, processing, manufacturing, and installation. As the investment decision is expected to be granted in July 2022, PQPOC will open the bidding to implement EPCI from late-2022 to 2025.

Companies take part in the deployment process

Upstream

- The upstream segment of the O&G industry carries out exploration activities, including onshore and offshore drilling, and construction and installation of rigs.
- Upstream beneficiaries: PVD, PVS, and PVC

Midstream

- O&G pipeline construction: Pipe wrapping, coating, and laying. The project has estimated capital of VND29,000bn (US\$1.3bn).
- Midstream beneficiaries: PVS and PVB

Downstream

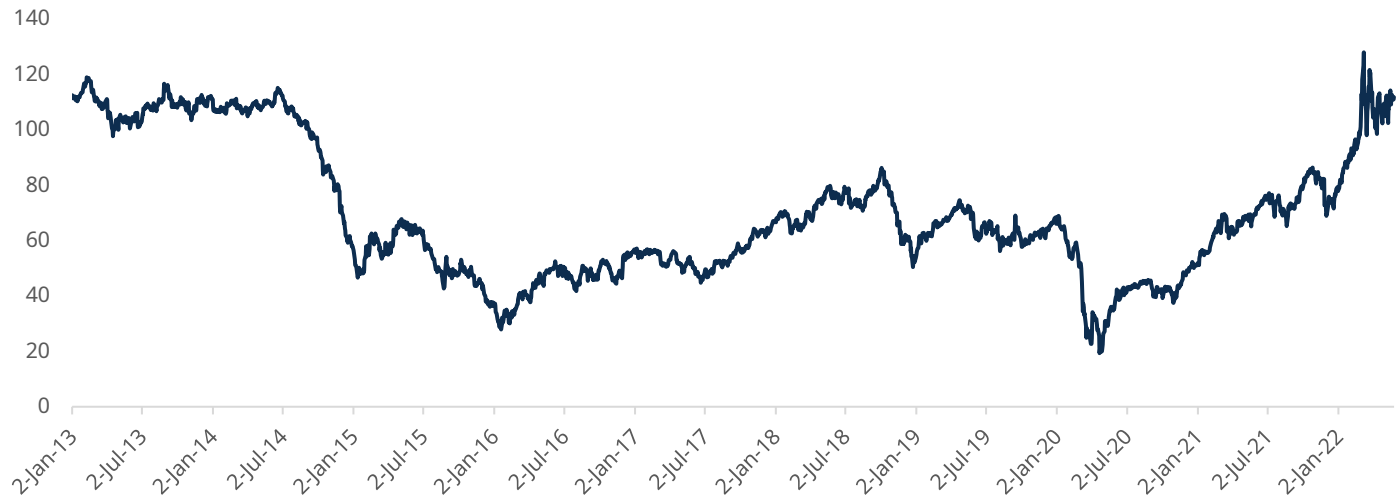
- Conducting coal-to-gas plant conversions for the O Mon 1 project and construction of three new power plants (estimated investment of US\$4.5bn)
- Downstream beneficiaries: PVS

Crude price's impact on O&G industry

Oil led gains in major commodities

- Since early-2022, the price of fossil fuels has remained on an upward trend. Oil and natural gas have gained by 57.4% YTD and 135% YTD, respectively. Oil prices spiked to a 5-year high, hovering around US\$100/barrel.
- Bullish factors:
 - Russia's war on Ukraine caused a short-term oil price shock. In the long term, US and EU sanctions against Russia could limit the Russian supply of oil and natural gas.
 - The US and China reached an agreement at COP26, resulting in a cut in fossil fuel use.
- Bearish factors:
 - Weaker oil demand, as signs of economic slowdown emerge in the US, EU, and China.
 - OPEC+ agrees on oil-output hikes to 648,000 barrels/day in July and August 2022, compared with the previous production level of 432,000 barrels/day.
 - OPEC+ also expressed concern that high energy prices could pressure economic recovery, suggesting further production acceleration in the next meetings.

Brent Crude oil price from 2013 to 2022



Source: Bloomberg

O&G Industry – Excellent performance across the group

O&G companies are hoarding excess cash

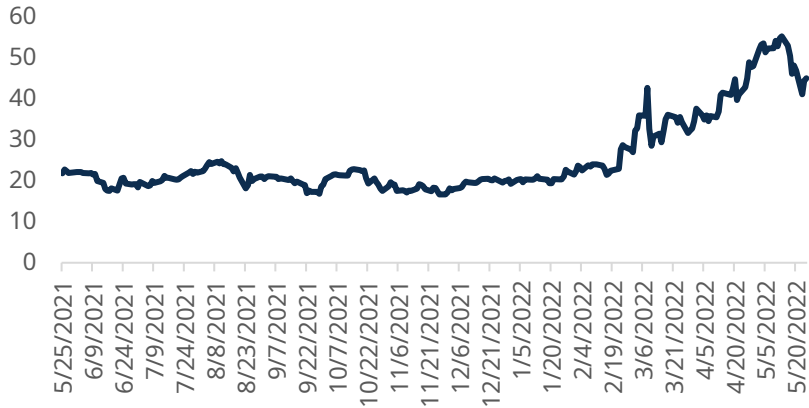
- O&G companies enjoyed a strong performance in the first quarter of 2022. Market leaders such as GAS and PVS recorded significant growth rates, specifically GAS with the growth of 52% in revenue and 69% in NPAT. PVS also posted great earnings with a jump of 44% in revenue and 50% in NPAT.
- On average, the O&G industry recorded a 46% gain in revenue and 74% in NPAT.
- O&G companies are also the group that holds the highest cash balance on Vietnam Stock Exchange. Compared to the current capitalization (as of May 25, 2022), the Cash to Market Cap ratio of some companies such as PGD, PVB, PVS, and PVG reached above 50%. Notably, PVG's net cash balance exceeded its capitalization by 84%.

No	Ticker	Name	Listed	Net cash (cash equivalents - total debt) (VNDmn)	Market cap	Net cash/ market cap	Revenue Q12021	Revenue Q12022	+/-	NPATIM Q12021	NPATIM Q12022	+/-
1	ASP	Alpha Petro	HOSE	-554,131	306,558	-181%	800,689	1,159,399	45%	6,403	1,106	-83%
2	CNG	CNG Vietnam	HOSE	250,522	915,289	27%	642,935	999,202	55%	14,913	36,093	142%
3	GAS	PV Gas	HOSE	25,082,738	202,495,910	12%	17,570,498	26,689,145	52%	2,029,678	3,428,679	69%
4	PGC	Gas Petrolimex	HOSE	40,582	1,206,786	3%	835,453	980,135	17%	33,372	30,694	-8%
5	PGD	PV GAS D	HOSE	1,622,078	2,834,939	57%	2,047,381	2,662,359	30%	42,699	87,595	105%
6	PVD	PVDrilling	HOSE	-1,590,841	10,410,227	-15%	549,851	1,145,884	108%	-103,762	-56,177	-46%
7	PCG	Đầu tư PT Gas Đô thị	HNX	30,947	116,994	26%	85,448	112,742	32%	1,205	-1,122	-193%
8	PGS	PV Gas South	HNX	369,629	1,224,970	30%	1,361,905	1,827,237	34%	13,411	33,944	153%
9	PVB	PV Coating	HNX	194,975	332,640	59%	10,956	3,969	-64%	-10,141	4,178	-141%
10	PVC	PV chemical and services Corp	HNX	37,529	1,125,000	3%	302,306	478,238	58%	48	-3,152	NA
11	PVG	PV LPG JSC	HNX	692,752	375,950	184%	1,237,454	1,214,115	-2%	4,965	3,007	-39%
12	PVS	PTSC	HNX	7,957,811	13,287,463	60%	2,613,675	3,769,373	44%	144,609	216,247	50%
Total							28,058,553	41,041,799	46%	2,177,399	3,781,092	74%

Source: Fiinpro, Mirae Asset Vietnam Research

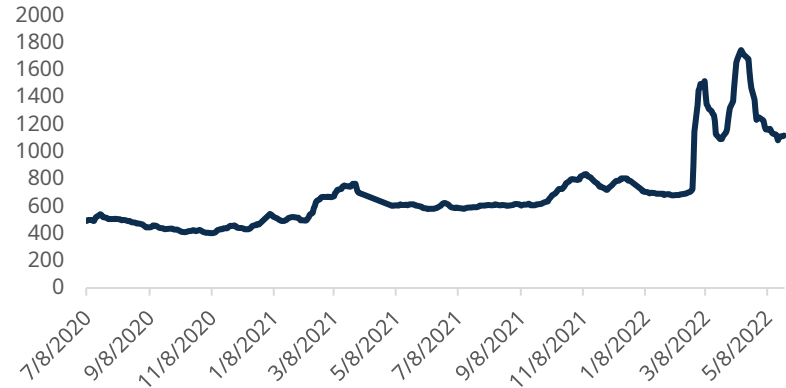
O&G Industry – Crude prices and impact

Crack spread, US\$/barrel



Source: Bloomberg

Tanker rates



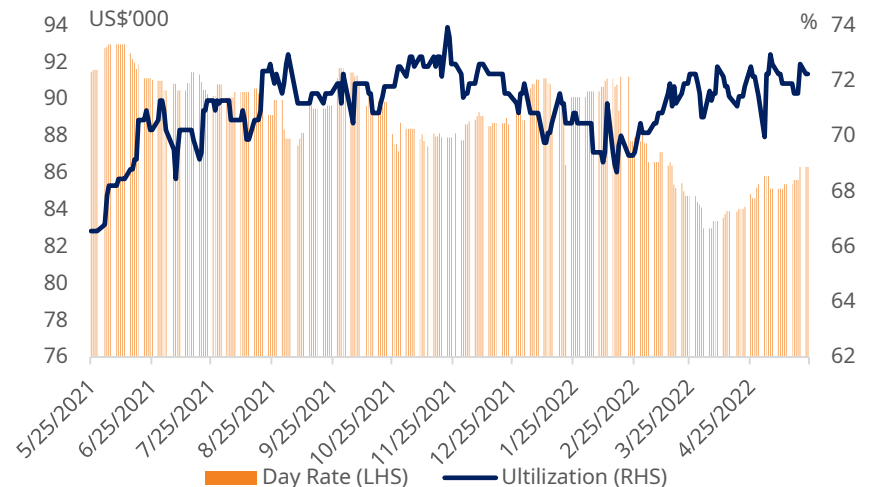
Source: Bloomberg

US LNG export price



Source: Bloomberg

Rig day rates and utilization



Source: Bloomberg

Binh Son Refining and Petrochemical (UPCOM: BSR)

Top pick

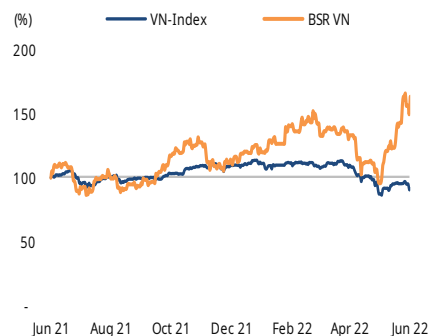
Pioneer of Vietnam's petrochemical industry

(Updated)	BUY
Target Price (VND, 12M)	40,500
Closing price (22/06/22)	26,000
Upside	55%

Investment highlights

- **Current crack spread supports BSR's operations:** Recently, Russia's invasion of Ukraine has pushed oil prices up sharply, with the crack spread sometimes hitting a peak of US\$50/barrel. The index is expected to be around US\$25/barrel in FY22, supporting BSR's oil refining and petrochemical producing operations.
- **Nghi Son factory reduced its production by 20%, forcing BSR to operate at 100% capacity:** Nghi Son Refining and Petrochemical Company Limited (NSRP) has reported a 20% cut in refinery output, due to financial issues. In order to make up for the supply shortage, BSR is operating at excess capacity.
- BSR delivered impressive earnings results for 5T21, with revenue of VND65.84tn, equivalent to 72% of the annual target. After-tax profit (ATP) surged to VND6,764bn, significantly surpassing the guidance (VND1,295bn). In 1Q22, the company recorded VND34,783bn in revenue, up by 66% YoY, with ATP up by 24% YoY to VND2,312bn. Thus, in April and May alone, BSR generated VND31,057bn in revenue and VND4,452bn in NPAT, indicating a multi-fold jump compared with 2Q21 earnings (revenue = VND27,860bn; NPAT = VND1,696bn).
- As BSR continued to see strong earnings in April and May, we have raised our forecast for 2022 revenue and after-tax profit to VND182,005bn (+20% YoY) and VND13,661bn (+32% YoY), respectively. With a forecast EPS of VND4,400 and 2018-2022 average P/E of 9.4x, BSR's fair value is estimated to be VND40,500/share.

NPAT (22F, VNDbn)	13,661		
Market consensus (22F, VNDbn)	NA		
EPS growth (22F, %)	103		
P/E (22F, x)	6.5		
Market Cap (VNDbn)	89,914		
Share outstanding (mn cp)	3,101		
Free float (%)	7.9		
Foreign ownership (%)	41.1		
52-week low (VND)	14,100		
52-week high (VND)	29,900		
(%)	1T	6T	12T
Absolute	71.4	43.4	56.2
Relative	66.6	59.6	65.2



FY (31/12)	12/18	12/19	12/20	12/21	12/22F	12/23F
Revenue (VNDbn)	111,952	102,824	57,959	101,079	182,005	163,805
OP (VNDbn)	3,950	2,869	(3,046)	6,943	17,006	15,574
OP margin (%)	3.5	2.8	(5.3)	6.9	9.3	9.5
NPAT (VNDbn)	3,606	2,914	(2,819)	6,705	13,661	12,456
EPS (VND)	1,163	898	(909)	2,162	4,406	4,017
ROE (%)	11.0	8.5	(8.7)	19.54	30.78	21.68
P/E (x)	13.82	8.73		11.88	7.10	7.79
P/B (x)	2.5	2.3	2.6	2.1	1.9	1.5

Source: Bloomberg, Mirae Asset Research Vietnam estimates

Block B O Mon to spark growth momentum

(Updated)	BUY
Target Price (VND, 12M)	133,600
Closing price (22/06/22)	111,200
Upside	20.1%

NPAT (22F, VNDbn)	14,445
Market consensus (22F, VNDbn)	11,221
EPS growth (22F, %)	63.7
P/E (22F, x)	14.1

Market Cap (VNDbn) 225,846

Share outstanding (mn cp) 1,914

Free float (%) 4.2

Foreign ownership (%) 2.9

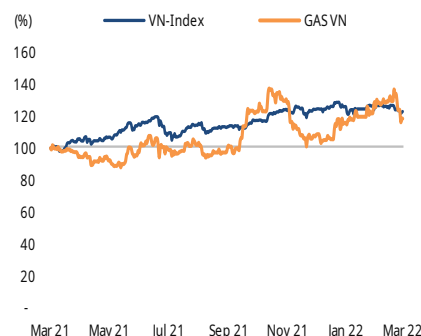
52-week low (VND) 79,800

52-week high (VND) 128,400

(%)	1M	6M	12M
Absolute	-7.0	17.4	19.5
Relative	-6.2	9.5	-4.2

Investment highlights

- **Gas hits 64.5% of annual earnings guidance after only four months:** PetroVietnam Gas JSC (GAS) reported 4M22 revenue of VND37,460bn and after-tax profit of VND4,544bn, equivalent to 28.3% of our FY22 estimates.
- **Development of LNG projects remain on track:** Gas is focusing on construction of the Thi Vai LNG storage tank facility, with total capacity of 1mn tons of LNG/year, and due to start LNG imports in 2023. In 1Q22, GAS established the Son My LNG terminal project company, preparing for implementation of the project in 2023.
- **GAS to make capital contribution of 51% to the Block B - O Mon project:** The contribution was announced by the company's BOD at the 2022 Annual General Meeting of Shareholders. With a total investment of VND28,788bn, a final investment decision on the Block B - O Mon gas pipeline project is expected to be made in July 2022, with operations to begin in 4Q25.
- **2022 earnings growth forecast raised:** On the ground of Gas solid performance in 4M22 and estimated Brent oil price of average US\$95/barrel, GAS's 2022 revenue is expected to reach VND112,169bn (up 17.8% compared with the previous forecast). Accordingly, net profit after tax is estimated at VND14,445bn (+9%), equivalent to an EPS of VND7,419.
- **Valuation:** We based GAS's valuation on its historical earnings multiple performance. Assessing the market risk, GAS's target PE is set to be 18.01x the five-year average of the stock's past performance. With a forecast EPS of VND7,419, GAS's fair value per share is determined to be VND133,600.



FY (31/12)	12/18	12/19	12/20	12/21	12/22F	12/23F
Revenue (VNDbn)	75,612	75,005	64,135	78,992	112,169	123,386
OP (VNDbn)	14,581	15,072	9,923	11,173	18,363	20,005
OP margin (%)	18.2	18.2	15.4	14.1	16.4	16.2
NPAT (VNDbn)	11,454	11,902	7,855	8,673	14,445	15,729
EPS (VND)	5,911	6,142	4,028	4,531	7,419	8,074
ROE (%)	26.1	25.1	15.9	16.6	25.21	23.03
P/E (x)	14.7	15.3	22.0	18.5	14.08	12.94
P/B (x)	3.7	3.7	3.5	3.4	3.2	2.7

Source: Bloomberg, Mirae Asset Research Vietnam estimates

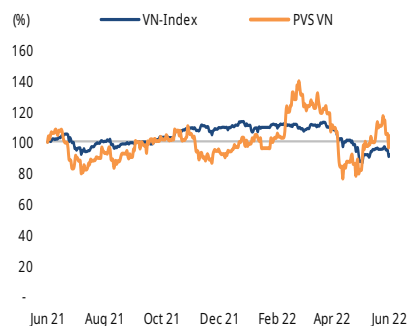
Bright prospects driven by strong cash flow

(Updated)	BUY
Target Price (VND, 12M)	31,700
Closing price (22/06/22)	22,500
Upside	40.8%

NPAT (22F, VNDbn)	1,072
Market consensus (22F, VNDbn)	NA
EPS growth (22F, %)	78%
P/E (22F, x)	13.6
Market Cap (VNDbn)	13,000
Share outstanding (mn cp)	478
Free float (%)	48.6
Foreign ownership (%)	9.0
52-week low (VND)	19,000
52-week high (VND)	41,200
(%)	1M 6M 12M
Absolute	26.8 12.7 0.0
Relative	22.1 28.8 9.0

Investment highlights

- PVS is a subsidiary of Vietnam Oil and Gas Group (PVN), specializing in three business segments: 1) Floating Storage Services (FSO/FPSO); 2) Mechanical & Construction; and 3) Supply Base Services. In addition, PVS conducts other activities, such as marine services, repair and maintenance services, and ROV.
- **Positive signals:** In 1Q22, revenue reached VND3,769bn (+44% YoY), profit after tax reached VND250bn (+53% YoY), and net profit was VND216bn (+50% YoY).
- **Improved cash flow and strong cash balance:** For 1Q22, PVS recorded an operating cash flow of VND667bn, a significant improvement over the loss of VND1,356bn in 1Q21. PVS has enjoyed plentiful cash reserves in recent years; in 1Q22, PVS's net cash (after deducting loans) reached VND7,957bn, amounting to roughly 60% of its market capitalization as of May 24, 2022. We highly value PVS's cash position and positive cash flow, as these financial strengths enable the company to maintain stability in the current market environment.
- **Positive outlook:** The current Brent oil price of over \$100 is fueling renewed growth in a number of sectors, such as floating warehouse leasing, and general contractors for offshore and onshore oil and gas projects. In addition, PVS has great potential in wind power construction and installation, with a number of projects, including the Binh Dai - Ben Tre wind power project, Thang Long and Hai Long 2 offshore wind power projects, as well as three projects in Taiwan.
- **Valuation:** We revised WACC upward to 10.89%, as 10-year government bond yields were increased from 2.5% to 3.3%. Accordingly, PVS's fair value per share is adjusted to VND31,700 (-11.7% compared with the previous target price).



FY (31/12)	12/18	12/19	12/20	12/21	12/22F	12/23F
Revenue (VNDbn)	14,638	16,789	20,180	14,237	14,651	21,976
OP (VNDbn)	1,535	1,206	310	601	1,027	1,931
OP margin (%)	10.4	7.2	1.5	4.2	15.1	14.7
NPAT (VNDbn)	1,047	1,033	624	602	1,072	1,844
EPS (VND)	2,028	1,699	1,046	1,250	1,998	3,458
ROE (%)	8.2	6.7	4.1	5.7	6.98	11.29
P/E (x)	8.7	10.3	17.0	23.43	12.41	7.17
P/B (x)	0.7	0.7	0.7	1.1	0.8	0.8

Source: Bloomberg, Mirae Asset Research Vietnam estimates

Bright long-term prospects for LNG project

(Updated)	BUY
Target Price (VND, 12M)	53,300
Closing price (22/06/22)	40,000
Upside	51.4

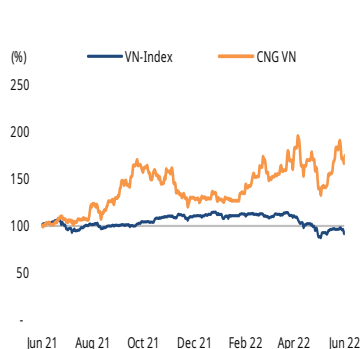
NPAT (22F, VNDbn)	152
Market consensus (22F, VNDbn)	NA
EPS growth (22F, %)	85.3
P/E (22F, x)	7.69

Market Cap (VNDbn)	1,053
Share outstanding (mn cp)	27
Free float (%)	44
Foreign ownership (%)	3.38
52-week low (VND)	45,900
52-week high (VND)	21,700

(%)	1M	6M	12M
Absolute	25.6	36.7	78.3
Relative	20.8	52.8	87.3

Investment highlights

- **Dominant market share in CNG distribution:** Established in 2007, CNG Vietnam Joint Stock Company is a subsidiary of GAS, and specializes in the transport, and distribution of compressed natural gas (CNG) to supply factories, apartment buildings, and the transportation industry, as an alternative fuel to petroleum. As of end-2021, the company held a 70% market share of CNG in Vietnam.
- **Strong first-quarter performance:** In 1Q22, CNG's revenue increased by 55% YoY to over VND999.2bn, profit after tax jump by 2.4 times to VND36.1bn. According to the company, the strong increase in 1Q22 NPAT is supported by the rise in output and surge in prices.
- For 2022, CNG Vietnam sets the guidance on output of 286mn m³ (+4% YoY), revenue of VND3,232.12bn (+7% YoY) and after-tax profit of VND88.03bn. This guidance is based on the assumption of Brent oil price of over US\$60/barrel. Observing the current market, CNG is expected to exceed the company's guidance, thanks to the surge in oil prices.
- **LNG project implementation plan:** In 2022, CNG Vietnam is expected to cooperate with the Vietnam Gas Corporation (PV GAS) and PV GAS LNG in the test run and commercial operation of the 1mn-ton LNG warehouse in Thi Vai. Based on the implementation plan of the LNG project, the company aims to double its revenue by 2025, equivalent to more than VND6,000bn.
- In 2022, we forecast that CNG will record VND3,822bn in revenue and VND152bn in after-tax profit, equivalent to an EPS of VND5,615. Compared to the earnings guidance, our forecast is 18% higher than the revenue target and 72% higher in NPAT.
- **Valuation:** With a target P/E of 9.5x, CNG's fair price is estimated at VND53,300/share.



	FY (31/12)	12/18	12/19	12/20	12/21	12/22F	12/23F
Revenue (VNDbn)		1,819	2,130	2,338	3,058	3,822	4,204
OP (VNDbn)		139	105	63	109	189	216
OP margin (%)		8	5	3	4	5.0	5.1
NPAT (VNDbn)		114	84	51	82	152	173
EPS (VND)		4,233	3,124	1,889	3,048	5,615	6,400
ROE (%)		22.9	15.8	9.7	16.0	27.07	26.78
P/E (x)		2.1	2.0	2.2	2.1	7.69	6.75
P/B (x)		5.8	10.0	7.4	6.6	1.9	1.7

Source: Bloomberg, Mirae Asset Research Vietnam estimates

APPENDIX 1

Stock Ratings		Industry Ratings	
Buy	: Relative performance of 20% or greater	Overweight	: Fundamentals are favorable or improving
Trading Buy	: Relative performance of 10% or greater, but with volatility	Neutral	: Fundamentals are steady without any material changes
Hold	: Relative performance of -10% and 10%	Underweight	: Fundamentals are unfavorable or worsening
Sell	: Relative performance of -10%		

Ratings and Target Price History (Share price (—), Target price (→), Not covered (■), Buy (▲), Trading Buy (■), Hold (●), Sell (◆))

* Our investment rating is a guide to the relative return of the stock versus the market over the next 12 months.

* Although it is not part of the official ratings at Mirae Asset Securities (Vietnam) JSC, we may call a trading opportunity in case there is a technical or short-term material development.

* The target price was determined by the research analyst through valuation methods discussed in this report, in part based on the analyst's estimate of future earnings.

* The achievement of the target price may be impeded by risks related to the subject securities and companies, as well as general market and economic conditions.

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