Sector note

16 Dec 2022

OIL & GAS: UNDEMANDING VALUATION

- We expect Brent oil price to stay on the high base, averaging around US$90/bbl in 2023F due to lingering Russia – Ukraine crisis.
- The companies possessing strong financial health, dominating in their business fields and being able to ride on high oil price environment will be the good selection in this current market turbulence.
- Our top picks are GAS, PVS and PLX.

We expect average Brent oil price to stay around US$90/bbl in 2023F

Though macroeconomic uncertainty rising due to stronger US$, China's zero-Covid policy and Russia – Ukraine crisis could negatively affect crude oil consumption, we believe oil price to remain on high base in 2023F as: (1) EU embargo should cause Russian oil production to drop in 2023F, and (2) OPEC+ signaled that the group would be always ready to intervene to support oil prices. Thus, we expect Brent oil price to average around US$90/bbl in 2023F.

More growth opportunities for O&G service providers in coming year

As oil prices are expected to remain high, we think demand for O&G services to gradually increase in coming years. Besides, the new Petroleum Law promises to attract new investment in Vietnam's upstream segment. Generally, we expect some E&P projects like Block B, Nam Du – U Minh and Kinh Ngu Trang to be likely kickoff within the next two years, firstly providing more job opportunities for O&G service providers (EPC, drilling) in coming years.

Potential bounce back for petroleum distribution sector in 2023F

2022 is a tough year for petroleum distributors due to the instability of market coming from Nghi Son problem in 1H22 and related costs surging globally. For 2023F, we believe in the potential bounce back of giant distributors on the back of: (1) domestic supply re-stabilization, (2) adjustments on costs constituting fuel base prices, and (3) the growing petroleum demand in Vietnam.

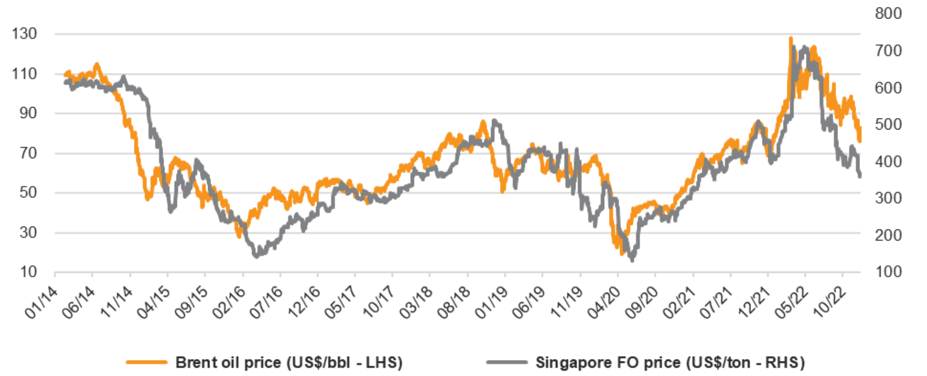
Strong financial position to be the pedestal during market turbulence

Amid macroeconomic uncertainty rising, the companies with strong financial position and minimal risk against stronger US$ will not only sail through the rough water, but also gain benefits from rising interest rates. We see some O&G companies (GAS and PVS) have accumulated a huge amount of cash during many years thanks to strong business model, underpinning the companies' position in this tough market.

Stock picks: We prefer GAS, PVS and PLX

In this market turbulence, we prefer the companies possessing strong financial health, dominating in their business fields and being able to ride on high oil price environment like GAS and PVS. Additionally, we also believe a petroleum distributor like PLX to strongly rebound in 2023F. The downside risks include: (1) lower-than-expected oil price, and (2) further delays in major projects.

Figure 1: Oil price movements from 2014 to date



Source: BLOOMBERG, VNDIRECT RESEARCH

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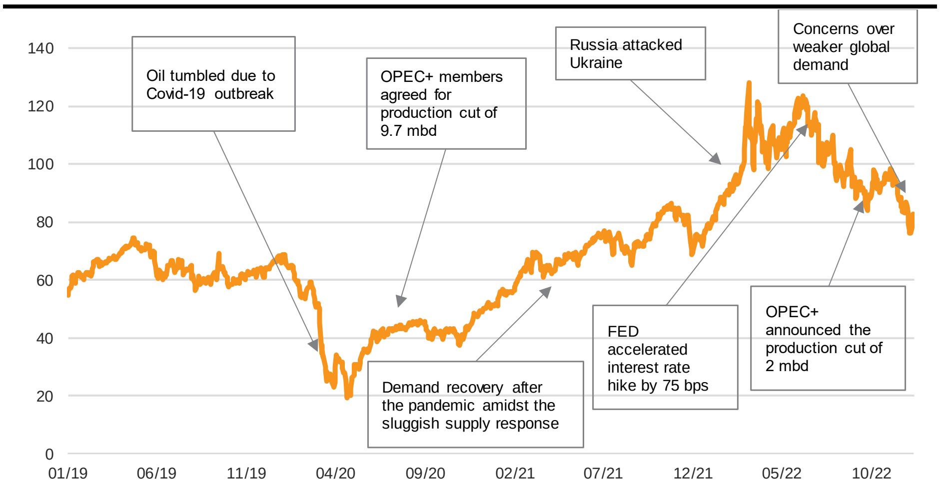
We expect Brent oil price to average around US$90/bbl (-10% yoy) in 2023F

Figure 2: Brent oil price movements (up to 15 Dec). Brent oil price has remained at the high base after Russia – Ukraine crisis (Unit: US$/bbl)



Source: BLOOMBERG, VNDIRECT RESEARCH

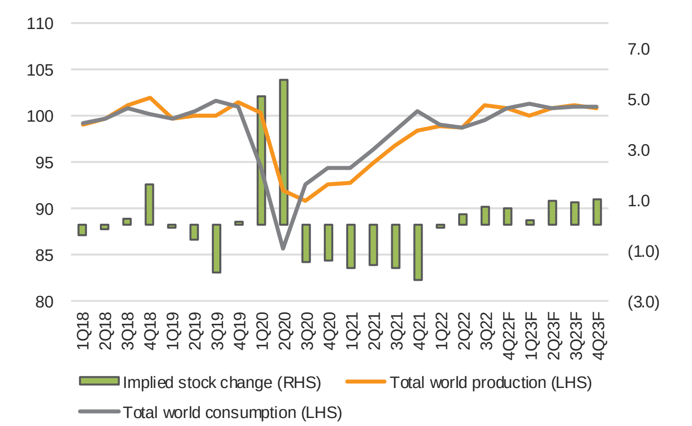
Figure 3: FY23F Brent crude oil price forecasts by some large institutions (Unit: US$/bbl)

No.	Agency	2023F	Time of report
1	Energy Information Administration (EIA)	95.3	Nov-22
2	World Bank	92.0	Oct-22
3	Reuter survey	95.7	Oct-22
4	Bloomberg consensus	98.0	Oct-22
5	Goldman Sachs	110.0	Oct-22

Source: VNDIRECT RESEARCH, BLOOMBERG

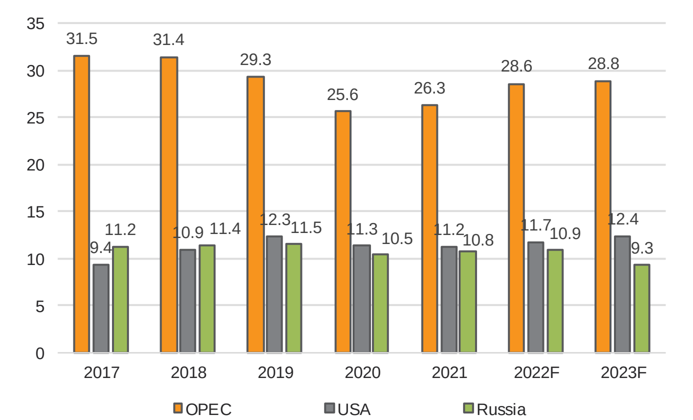
Amidst the global crude oil market tightness, the tension between Russia and Ukraine exacerbated this situation, boosting Brent oil price to touch the record price since 2008 at US$139.13/bbl in March. After that, Brent oil price has gradually cooled down towards the end-2022 but remain at the 8-year high level (over US$90/bbl). We expect Brent oil price to stay around this level for the rest of this year, translating to 2022F average price of US$100/bbl.

Figure 4: EIA forecasts global demand to increase by 1.5% yoy in 2023 (compared to 2.2% yoy increase in 2022 (Unit: mbd)



Source: EIA, VNDIRECT RESEARCH

Figure 5: The EU embargo should cause Russian oil production to drop by over 1.5 mbd in 2023F (Unit: mbd)



Source: EIA, VNDIRECT RESEARCH

For 2023F, global demand is likely to decelerate due to the economic headwinds (stronger US$, China's zero-Covid policy and Russia – Ukraine crisis). The US Energy Information Administration (EIA) forecasts global demand to increase by 1.5% yoy to averaging 101.04 million barrels per day (mbd) for all of 2023F (compared to 2.2% yoy increase in 2022). However, we see there is minimal ability of an oversupplied oil market as the concerns over demand slowdown to be allayed by the obstacles in supply side (particularly from OPEC+), supporting oil price to remain high next year. Fundamentally, we expect Brent oil price to average around US$90/bbl in 2023F.

Figure 6: List of global events should affect oil price in 2023F. We believe supply-side obstacles (due to Russia – Ukraine crisis and OPEC+ intervention) will keep oil price to remain high next year

Side	Event	Impact on oil price	Comments
Demand	China's zero-Covid policy		China is currently the second largest oil consumer, accounting for ~15% of total world oil consumption. Any China's new lockdowns will threaten hopes for a gradual economic reopening and rebound in energy demand
	FED raising interest rate		The tightening monetary policy could push the global economy into recession, hampering crude oil consumption. Besides, stronger USD also negatively affects on commodity prices included oil prices
Suppy	The revival of Iran nuclear deal / Easing sanctions against Venezuela		Iran nuclear deal may be the most feasible solution to cool down oil prices in the short term as it could lead to the return of Iranian exporter with the additional capacity up to 1 mbd
	The increasing shale oil production in US		EIA projects that the nation's unconventional oil and gas production will reach record levels in November, but there are indications that inflation could limit growth moving forward
	Lingering Russia - Ukraine crisis		EU embargo on Russia coming into effect later this year should cause Russian oil production to drop by over 1.5 mbd in 2023F (Source: EIA)
	OPEC+ intervention to address market developments		OPEC+ announcement of a massive production cut of 2 mbd in October has signaled that the group would closely monitor the market balance and be always ready to intervene to support oil prices

NOTE: Positive; Negative

Source: VNDIRECT RESEARCH

Upstream: Still awaiting major gas field projects kickoff, some smaller O&G fields development projects insight

The amended Petroleum Law creates a new legal framework to attract new investment in upstream segment

The new petroleum law promulgated this November will be a general framework for O&G industry, reducing the overlap between laws in O&G activities. We see some highlights in this revised version as below:

Figure 7: Some highlights from the amended Petroleum Law

	Content	New points
1	For investment incentives	Supplementing classification and policy for blocks eligible investment incentives (compared to the current policy for all projects: the corporate income tax rate of 32-50%, export duty of 10% on crude oil, and cost of recovery rate of 50-70% of annual production) • Classification criteria: based on locations, exploitation conditions… • For investment incentive projects: these rates would be 32%, 10%, and 70%, respectively • For special incentive projects: these rates would be 25%, 5%, and 80%, respectively
2	Regarding oil and gas contract	• Increase contract term from 25 to 30 years (and 35 years for blocks eligible investment incentives).
3	Regulations for state-owned enterprises	• Supplementing and clarifying regulations for state-owned enterprises (PVN) and wholly-owned subsidiaries of PVN (PVPEP)

Source: THE AMENDED PETROLEUM LAW, VNDIRECT RESEARCH

Though it needs more detail terms and instructions, we believe that this revised version is crucial to creating a smooth legal corridor for investors and increasing the attractiveness of the investment environment in the field of O&G.

While still awaiting major oil & gas projects movements, we see some smaller O&G fields development projects insight

Despite favorable condition triggered by oil price hike in 2022, we see little significant progress in major gas field projects due to delays in different stages regarding to capital funding and commercial negotiations. For the long-awaited Block B – O Mon project, O Mon III power plant is still awaiting the ODA funding plan approval. As gas price from Block B has been approved since 2016, the protracted delays negative affected the efficiency of the original plan for downstream plants due to inflationary and US$ climbing. Hence, it takes times to revise the plan and seek the Government's approval. Notably, according to industry's sources, this project is facing another interruption as the operator is preparing to re-tender the major offshore production facility. However, we suppose that this interruption may open the opportunities for local EPC contractors like PVS to participate further in Block B project. Overall, we expect Block B – O Mon project to be awarded final investment decision (FID) in 2023F.

Figure 8: With a project period of 20 years, we believe Block B – O Mon project to be great growth motivation for many listed companies in Vietnam's oil and gas value chain in coming times

	Est. Capex (US$m)	Investors	Workload scope	Activities	Potential beneficiaries	Potential impact
Upstream: Block B field development project	6,700	• PVN (42.9%) • PVEP (26.8%) • MOECO (22.6%) • PTTEP (7.7%)	This project will include one central processing platform, 46 wellhead platforms, one housing platform, one condensate vessel and drilling of 750 production wells	EPCI contract	• PVS • PVX, PXS	
				FSO	PVS	
				Drilling / Well services	PVD	
				Drilling fluids	PVC	
Midstream: Block B - O Mon pipeline	1,300	• PVGAS (51%) • PVN (28.7%) • MOECO & PTTEP (20.3%)	The pipelines have total length of 431km with design capacity of 20.3m cbm per day, including: • The offshore pipeline has the length of approximately 295km, diameter of 28 inches. • The onshore pipeline has the length of 102km, supplying gas to power plants at O Mon Power Center in Can Tho. • There will be landfall station and gas distribution centers (GDC) along the pipelines.	Gas distribution	GAS	
				Pipe coating	PVB	
				EPCI contract	• PVS, POS • PVX, PXT	
Downstream: Gas-fired power plants	NA	• Marubeni • EVN	Three new thermal power plants in O Mon power center (O Mon II, III and IV)	EPC contract	-	
				Power generation	-	

Source: VNDIRECT RESEARCH, COMPANY REPORTS

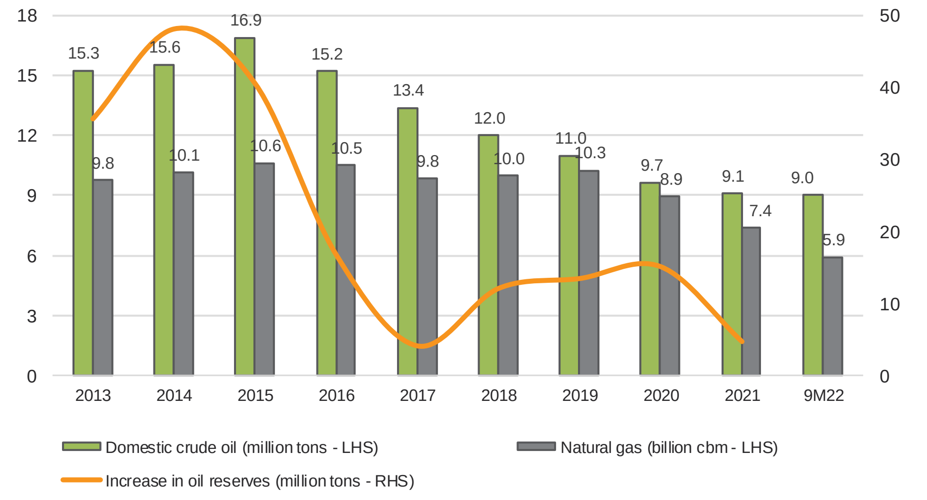
Figure 9: Potential gas exploration projects in pipeline

Project	PSC owners	Expected Implementation	Expected commission	Est. Capex (US$m)	Estimated reserves	Status
Su Tu Trang Phase 2B	PVEP (50%), Perenco Cuu Long (23.25%), KNOC (14.25%), SK (9%), Geopetrol VN (3.5%)	2023F	2025F	2,000	2P reserves of 317 bcf and 435m bbl of condensate	Phase 2B involves the construction of a central gas facility (CGF) with 16 wells, connecting to ST-PIP platform, with expected capacity of 52bcf annually. First gas of Phase 2B are expected from 2025
Nam Du - U Minh	Jadestone (100%)	2023F	2025F	NA	2C reserves: 171 bcf (+31 bcf)	Jadestone remains committed to commercialising its offshore Vietnam gas resources and continues to collaborate with the government regarding the proposed Nam Du/U Minh field development. The expected first gas date for the project will be in 2025
Lac Da Vang	Murphy Oil (40%), PVEP (35%), SK Innovation (25%)	NA	2026F	700	63m bbl of oil recoverable reserves, and associated petroleum gas	ODP was approved in Sep 2019. Well campaigned is targeted for 2023F. Murphy is also carrying out exploration work at adjacent fields (Lac Da Trang, Lac Da Nau, etc) and Block 15-2/17
Block B - O Mon	PVN (42.38%), MOECO (25.62%), PVEP (23.5%), PTTEP (8.5%)	2023F	2026F	6,700	3.7 tcf (trillion cubic feet) of gas	FEED contract completed. We expect O Mon III to soon be approved the plan of ODA using, setting the stage for Block B multi-projects to kick off in 2023F. First gas is expected in 2026F
Blue Whale	Exxonmobil (64%)	NA	2028-2029F	10,000	5.3 tcf of gas	FEED contract was completed in Apr 2020. In Jul 2020, PVN and EVN said they were working with ExxonMobil to finalise gas sale and electricity agreements. First gas is expected no earlier than 2028F
Ken Bau	ENI (50%), ESSAR (50%)	NA	NA	NA	7-9 tcf of raw gas and 400-500m bbl of condensate	This field is under exploration process. The first two exploration wells drilled in Jul 2019 and Jul 2020 confirmed a significant hydrocarbon accumulation on Ken Bau discovery, potentially ranging between 7 and 9 tcf of raw gas and 400-500m bbl of condensate

Source: VNDIRECT RESEARCH, COMPANY REPORTS

In contrast to above major gas field projects, other projects related to the development of existing fields such as Bach Ho oilfield expansion, Kinh Ngu Trang (Block 09-2/09) oil field were given the green light in the past few months. These projects will partially offset to the mature fields' depletion. Thanks to the high oil price base and some existing offshore facilities, we believe these projects to be soon implemented, providing some buffer for local O&G service providers, firstly for drilling services providers and EPC contractors.

Figure 10: Domestic crude oil and natural gas production

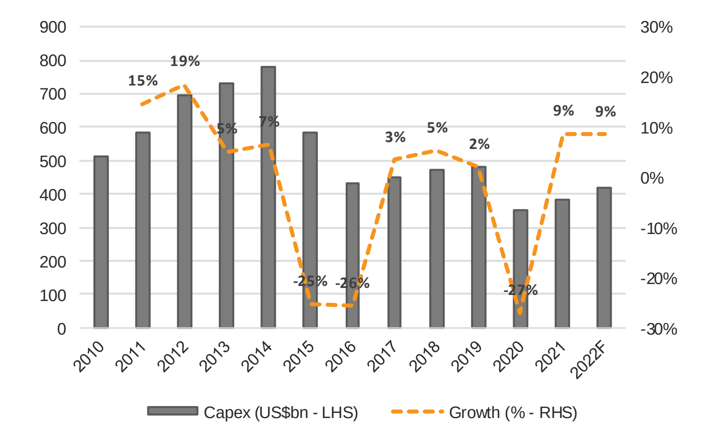


Source: PVN, MOIT, VNDIRECT RESEARCH

Southeast Asia (SEA) drilling market recovery is underway, boding well for drilling service providers in 2023

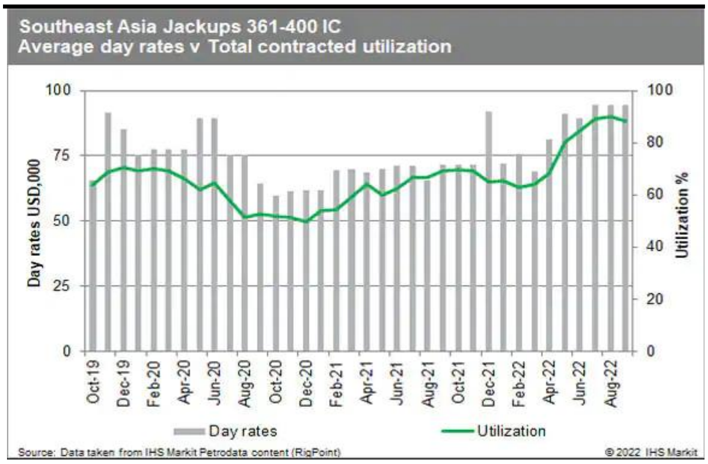
The International Energy Agency (IEA) estimates an 9% increase in global upstream investments in 2022, but the level remains well below pre-Covid levels. Despite huge profit in 2022, major O&G producers modestly spent on fossil fuels as they were prioritizing to pay down their debt. IEA also forecasts that around US$470bn annual upstream investment is spent on average to 2030F to ensure that supply and demand stay in balance, which is 50% more of that has been invested in recent years (based on the Stated Policies Scenario). This will be the pedestal for drilling market to keep accelerating in coming times.

Figure 11: Global investments in oil & gas upstream



Source: IEA

Figure 12: SEA average Jack-up day rate and utilisation rate are picking up



Source: IHS MARKIT

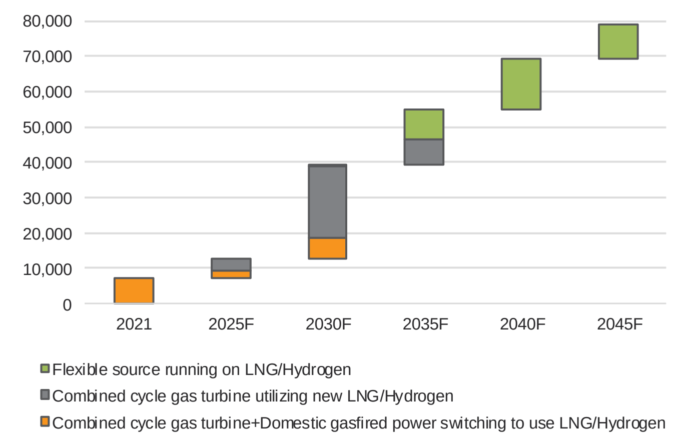
For SEA drilling market, IHS Markit estimates average demand for jack-up rigs is set to average 35.1 units in 2023F, up a bit from 33.4 rigs in 2022. The two main drivers are Indonesia and Malaysia, which show 2023 demand of 10.3 and 8.5 units, respectively. The screws continue to tighten on the supply of jack-up rigs in SEA as more units are being earmarked for relocation to the Middle East. This will bring more job opportunities for drilling service providers like PVD.

Midstream: O&G transporters to sail on the rising tanker freight rates

LNG distribution: Global headwinds to slow down LNG-to-power transition

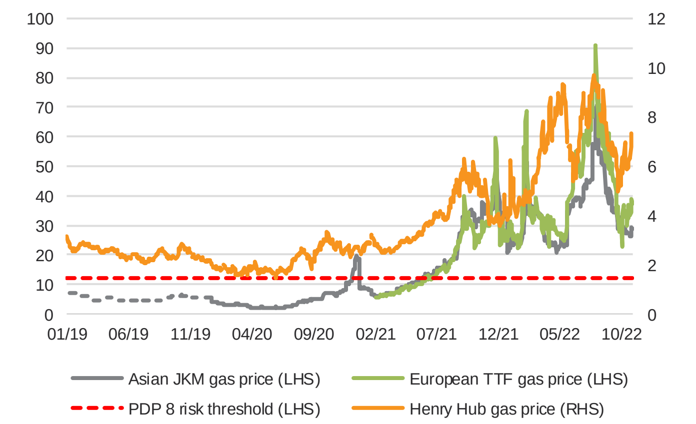
According to Draft of Power Development Plan 8 (PDP8), LNG-to-power will be one of the most important sources thanks to its stability in power generation and the ability to easily increase capacity through import with upcoming projects like Nhon Trach 3&4, Son My or Bac Lieu. However, as global LNG price has skyrocketed due to the lingering Russia – Ukraine crisis, we suppose LNG transition trend to be delayed in short-term as high prices affect the competitive ability of LNG and the progress of related power plants. Among the mentioned projects, LNG Thi Vai terminal is expected to completely construct later this year and operate in 2023F, marking the first LNG project coming online in Vietnam.

Figure 13: Vietnam gas-fired power capacity will increase 10.5% CAGR to reach 79,330MW in 2045F (Unit: MW)



Source: Draft of PDP8, VNDIRECT RESEARCH

Figure 14: But high global LNG price base should affect the progress of LNG projects in Vietnam (Unit: US$/mmbtu)

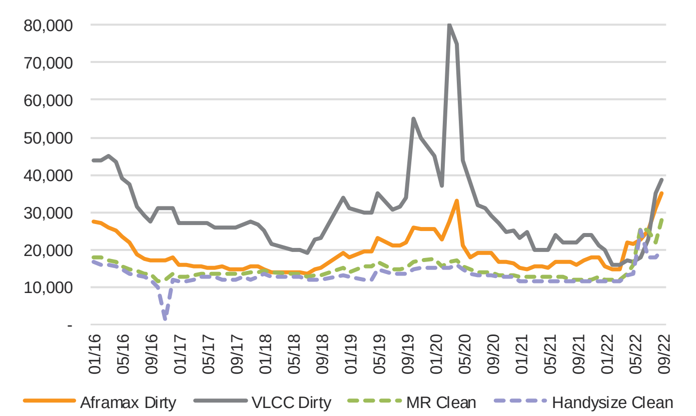


Source: BLOOMBERG, VNDIRECT RESEARCH

O&G transportation: Sailing on the rising tanker freight rates

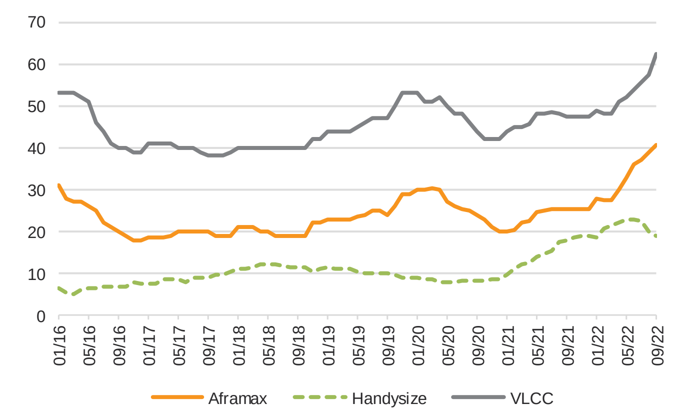
We see potential upside catalysts for global tanker freight rates as Russia – Ukraine crisis is reshaping global oil trade flows. Demand for tankers (in form of both dirty and clean tankers) has been climbing since the EU imposed sanctions on Russia, and we expect this trend to keep increasing in coming times as the EU embargo comes into effect later this year. Notably, as a feasible alternative source for gas in electricity generation, European diesel demand is expected to accelerate in coming months, lifting demand for clean tankers. Furthermore, the diversion of Russian oil and fuels has changed the shipping routes, making the voyages longer and putting pressure on global tanker shipping market.

Figure 15: Tanker freight rates are rising due to the reconfiguration of global energy trade flow (Unit: US$/day)



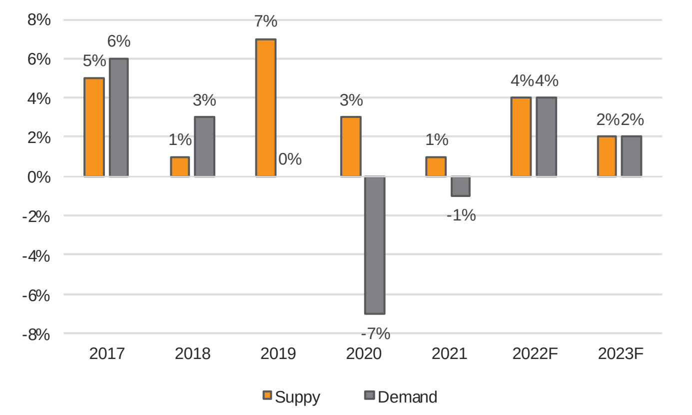
Source: BLOOMBERG, VNDIRECT RESEARCH

Figure 16: Average prices of 10-year-old vessels significantly increased this year (Unit: US$m)



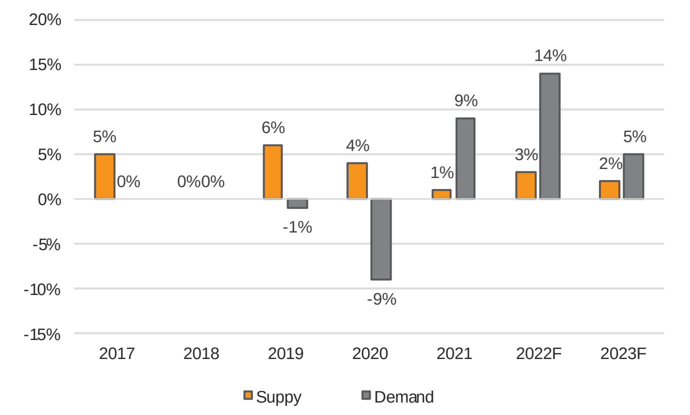
Source: BLOOMBERG, VNDIRECT RESEARCH

Figure 17: Supply - Demand balance of crude oil shipping market (Unit: % growth)



Source: CLARKSONS RESEARCH

Figure 18: Supply - Demand balance of refined products shipping market (Unit: % growth). We see clean tanker fleet growth is relatively low compared to the rising demand



Source: CLARKSONS RESEARCH

For domestic market, we see demand for O&G transportation to be gradually increase in the couple of years thanks to BSR and NSR to operate at full capacity (except for BSR in 2023 due to periodic maintenance) and the growing petroleum demand in Vietnam. Besides, the charter rates have recovered to the pre-Covid level from 2022, boding well for O&G transporters. Thus, we believe domestic market still be pedestal for Vietnam's O&G transporters with the stable contribution in the companies' results as current charter price structure ensures a stable gross margin level for the transporters.

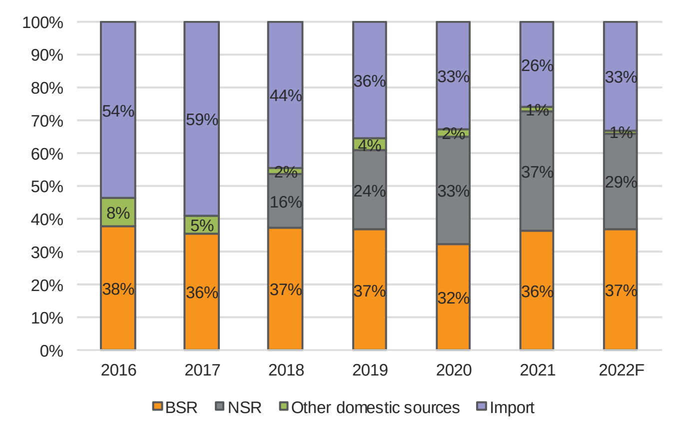
Riding on the global rising tanker rates, we believe the transportation company with high exposure on international market and possessing the leading position in domestic market like PVT will be a key beneficiary.

Downstream: Potential bounce back for petroleum distribution in 2023F

Petroleum distribution: Looking forward to a better year ahead

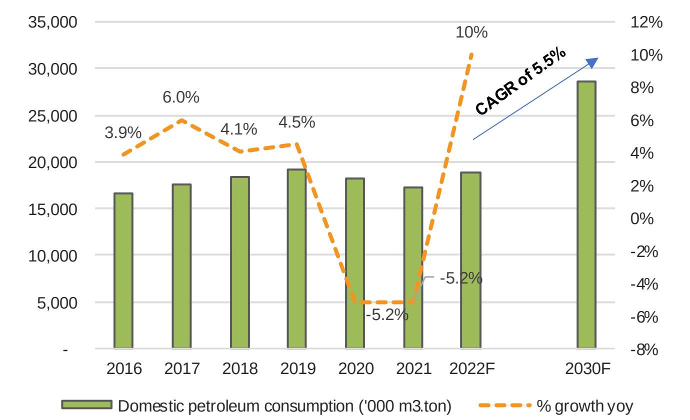
2022 is a difficult year for petroleum distributors due to the instability of domestic market. Nghi Son problem in 1H22 and the slow adjustment of costs constituting the base price put distributors to face headwinds, causing the domestic supply shortage. Hence, major distributors like PLX, OIL might raise imported sources to ensure petroleum for domestic market amidst the wild global oil market and high transportation costs, negatively impacting on the company's profitability.

Figure 19: Proportion of Vietnam's petroleum supply. Import proportion increases in 2022 due to Nghi Son problem in 1H22



Source: VNDIRECT RESEARCH, COMPANY REPORTS

Figure 20: Vietnamese petroleum consumption is projected to grow 5.5% annually in FY22-30F



Source: MOIT, VNDIRECT RESEARCH

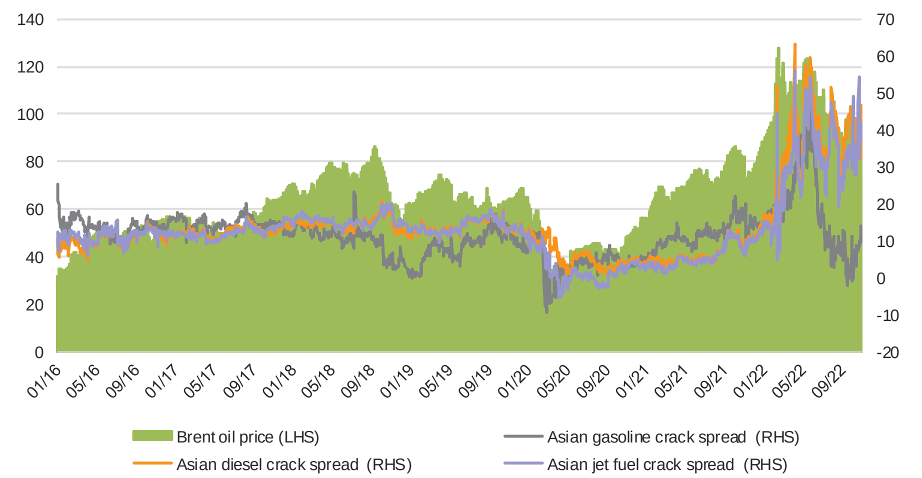
For 2023F, we believe in the potential bounce back of giant distributors from 2022 low base thanks to some following reasons:

- Global oil price is expected to be more stable than the wild 2022, which could reduce risks of inventories revaluation.
- Recently, the Government has issued the mechanism for PVN to handle the financial problem with Nghi Son Refinery (NSR). This will be a premise for NSR to stably operate in coming years, increasing domestic supply proportion, and reducing import costs for distributors.
- Costs constituting the base fuel price have been adjusted this November by the authority. We believe this adjustment will more closely reflect market movement, reducing pressure for petroleum distributors.
- Vietnam's petroleum demand is forecasted to attain a CAGR of 5.5% in 2022-30F, underpinning for distributors to grow in coming years. We also believe that giant distributors like PLX, OIL could gather more market share from other small players, which are likely to be removed from the market after the hard 2022.

Refinery: Crack spreads to be resilient on the high base will bode well for refineries, but earnings have likely peaked out in 2022

In 1H22, refined crack spreads especially diesel crack spread have surged globally since Russia attacker Ukraine in February due to: (1) fears of supply shortage in Europe as buyers avoid Russian supplies following numerous sanctions, (2) shutdowns in the U.S. and Europe, and lower refinery runs in China, and (3) an increase in trucking activities, stretching fuel demand. Though gasoline crack spread has significantly dropped since July, diesel crack spread remained strong thanks to its multiple usages such as a fuel for motor vehicles and as a source of power for diesel generators (to replace gas-fired power). This has brought a huge profit for refineries like BSR, which recognized a record earnings in 9M22.

Figure 21: Crack spreads have wildly increased since Russia attacked Ukraine (Unit: US$/bbl)



Source: BLOOMBERG, VNDIRECT RESEARCH

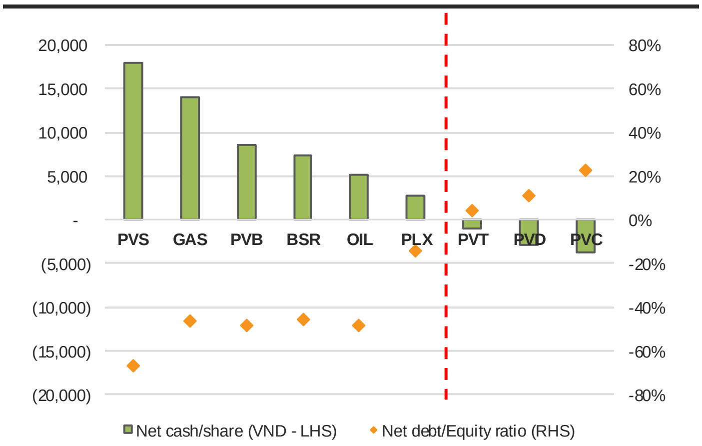
In general, we expect refining margin to ease in 2023F but remain high compared to pre-war level due to: (1) demand recovery after the pandemic, (2) tight oil and refined products market due to the lingering Russia – Ukraine crisis, particularly in Europe, and (3) the decarbonisation pathway to net zero limiting the increase in refining capacity in long-term. Though, this high base will still bode well for refineries in coming years, refineries earnings are likely to significantly slide in 2023F from the record 2022 level.

Mixed impact of rising interest rates and FX fluctuations on O&G listed companies

Higher interest rates will take significant effects on the whole economy as well as O&G industry in coming period. We see the mixed impact of rising interest rates environment into O&G listed companies regarding the companies' financial position:

- For companies with strong net cash position and low net debt/equity ratio, we believe the increasing interest rates environment is likely to bring benefits to these companies in short-term, supporting for the company's performance. The impact level of this issue will depend on the contribution of net interest income into the company's results. We see PVS and OIL to be the key beneficiaries.
- In contrast, some companies with high leverage ratio (PVD, PVT and PVC) will face headwinds from higher interest rates. Specially, PVD should be put under high pressure from rising interest rates amid its core business performance has recovered slowly.

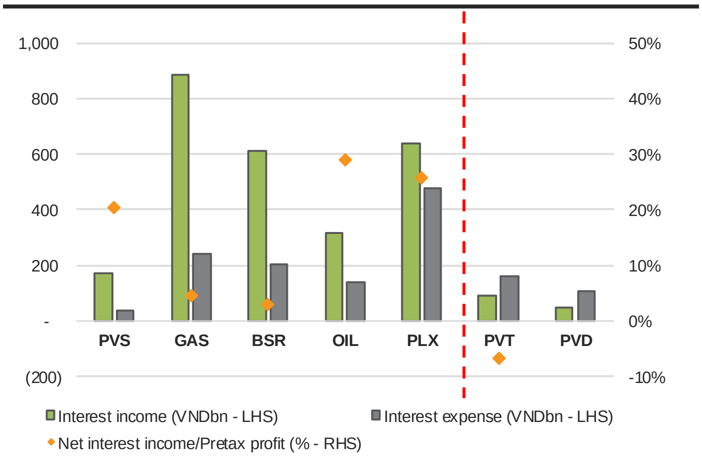
Figure 22: The companies with strong net cash position and low net debt/equity ratio will gain benefits from the rising interest rates



**Data as at end-3Q22*

Source: VNDIRECT RESEARCH, COMPANY REPORTS

Figure 23: Impact level of rising interest rates will depend on net interest income contribution into the companies' results



**Data of 9M22 (No data for PVD due to loss in 9M22)*

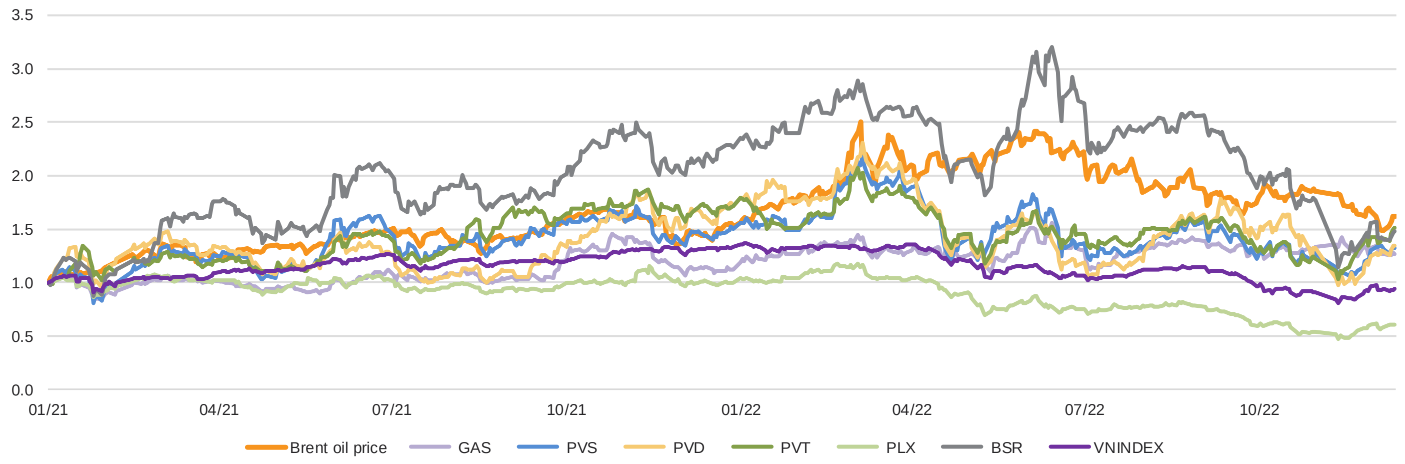
Source: VNDIRECT RESEARCH, COMPANY REPORTS

For FX risk, as most O&G companies' products are anchored in US$, these companies' revenue will rise along with higher US$. This could offset to FX loss from revaluation of US$-debt for working capital. Thus, we see minimal risk against US$ rising for these company such as GAS, PVS and BSR.

On the other hand, some downstream companies like PLX, OIL face headwinds from the stronger US$ as their input petroleum prices are anchored to US$ while selling prices are based on VND. Besides, the companies with high proportion of US$-based borrowing such as PVD and PVT will face higher risks from FX loss than others when US$ climbs.

Stock picks: We prefer GAS, PVS and PLX

Figure 24: The movement of O&G share prices versus Brent oil price and VN-Index since 2021. Thanks to high correlation with oil price, most O&G share prices have outperformed VN-Index this year



Source: BLOOMBERG, VNDIRECT RESEARCH (DATA AS AT 15 DEC)

Figure 25: Investment ideas

No	Ticker	1-year TP (VND/share)	Rating	Investment thesis
1	STOCK PICK GAS	140,200	ADD	GAS is a good selection during turbulence thanks to: (1) Strong net cash position of ~VND27,000bn at end-3Q22 and minimal risk to stronger US$. (2) Its dominant position in a high entry barrier industry like wholesale gas distribution. (3) high level oil price environment (~above US$80/barrel) is expected to linger to 2024F which will support for GAS' gross margin to stay at around 19% in FY23-24F. Overall, we forecast GAS to post a record NP in FY22F with growth rate of 63.4% yoy. Earnings are expected to slightly retreat 1.1%/3.2% yoy in FY23-24F due to FY22F high base and oil price cooling down.
2	STOCK PICK PVS	31,700	ADD	We like PVS for both short and long term with net profit CAGR of 26.7% in FY22-24F, regarding to: (1) In short-term, FSO/FPSO affiliates will still be a solid contributor for PVS, accounting for 89%/77%/68% of PVS' NP in FY22-24F, in our estimates. (2) In long-term, we expect the leading firm in Vietnam providing technical services in O&G sector like PVS to gain benefits from the potential new investment cycle into energy industry, particularly major gas fields projects like Block B and offshore windfarm investments trend in Vietnam (3) Strong net cash position of over VND8,600bn (equivalent to VND18,000/share) at end-3Q22 will help the company gain benefits from the rising interest rates environment.
3	STOCK PICK PLX	45,600	ADD	We expect a giant petroleum distributor like PLX to strongly rebound in FY23F due to: (1) Domestic supply re-stabilization as Nghi Son problem is handled. (2) Adjustments on costs constituting fuel base prices which will reduce pressure for petroleum distributors. (3) The growing petroleum demand in Vietnam (+5.5% CAGR in FY22-30F) Overall, we forecast PLX to achieve a NP CAGR of 17.1% in FY22-24F.
4	PVT	26,300	ADD	We have a positive view on PVT in short-term and medium-term by: (1) Tanker freight rates is rising globally due to the reconfiguration of global energy trade flow triggered by Russia – Ukraine crisis, benefiting for O&G transporters. (2) PVT has actively rejuvenated its tanker fleets over the past few years, creating the favorable condition to sail on the rising tanker freight rates. Overall, we forecast PVT to attain a net profit (NP) CAGR of 13% in FY22-24F.

5	BSR	27,300	ADD	Though earnings have likely peaked out in FY22, we believe BSR is a good investment choice as: (1) Refining margin is expected to be resilient on the high base due to the lingering geopolitical crisis, boding well for refineries like BSR in the next couple of years. (2) BSR remains high operating utilization rate of above 100% for many years. (3) In long-term, we believe the upgrade and expansion project to be a key growth driver for BSR We forecast BSR's NP to decrease by 40.1% yoy in FY23F due to periodic maintenance and crack spreads cooling down (but still 37% higher than FY21 level), before back to growth trajectory in FY24F with a growth rate of 12.2% yoy.
6	PVD	21,700	ADD	Despite short-term headwinds from rising interest rates environment, we believe in the company brighter prospect in coming year as: (1) All PVD's rigs secure drilling contracts for 2023, leading to our 2023F jack-up utilization forecast of 95% (versus 86% in 2022F). Notably, some rigs have been signed long-term contracts, such as PVD III in Malaysia, and PVD II in Indonesia. (2) The company will earn higher day rate for drilling contracts next year (+23% yoy) thanks to the stronger drilling market in SEA. Overall, we forecast PVD's earnings to breakout from FY23F onwards thanks to strong recovery in drilling business.

Source: VNDIRECT RESEARCH

Figure 26: FY22-24F earnings forecasts

	GAS			BSR			PLX		
	2022F	2023F	2024F	2022F	2023F	2024F	2022F	2023F	2024F
Revenue (VNDbn)	99,857	105,448	105,494	156,311	125,681	133,470	291,254	285,971	277,340
% growth	*26.4%*	*5.6%*	*0.0%*	*54.6%*	*-19.6%*	*6.2%*	*72.3%*	*-1.8%*	*-3.0%*
Gross margin (%)	*20.6%*	*19.4%*	*18.8%*	*10.8%*	*8.4%*	*8.9%*	*3.8%*	*5.1%*	*5.6%*
EBITDA margin (%)	*21.3%*	*20.5%*	*20.4%*	*11.4%*	*9.3%*	*9.8%*	*1.0%*	*2.3%*	*2.8%*
Net profit (VNDbn)	14,168	14,009	13,561	15,338	9,192	10,316	1,009	3,875	4,564
% growth	*63.4%*	*-1.1%*	*-3.2%*	*128.4%*	*-40.1%*	*12.2%*	*-64.5%*	*284.2%*	*17.8%*
EPS (VND/share)	7,403	7,319	7,085	4947	2965	3,327	779	2995	3,527
BVPS (VND/share)	30,024	32,742	36,005	16,336	18,005	19,848	18,720	19,964	20,935
Net cash/share (VND/share)	14,022	15,462	17,439	7,320	8,826	7,384	1,846	1,831	2,715
D/E	0.15	0.15	0.14	0.06	0.11	0.20	0.55	0.56	0.51
Dividend yield (%)	3.7%	3.7%	3.7%	2.2%	5.0%	7.2%	4.6%	4.6%	9.5%
ROAE (%)	26.1%	23.3%	20.6%	34.8%	17.3%	17.6%	4.1%	15.5%	17.2%
ROAA (%)	17.5%	16.1%	14.6%	21.4%	11.5%	11.7%	1.5%	5.5%	6.3%

Source: VNDIRECT RESEARCH

Figure 27: FY22-24F earnings forecasts (continued)

	PVS			PVT			PVD		
	2022F	2023F	2024F	2022F	2023F	2024F	2022F	2023F	2024F
Revenue (VNDbn)	16,149	20,129	19,613	8,448	9,193	9,724	5,385	6,203	6,380
% growth	*13.7%*	*24.6%*	*-2.6%*	*13.2%*	*8.8%*	*5.8%*	*34.8%*	*15.2%*	*2.9%*
Gross margin (%)	*4.9%*	*5.7%*	*6.8%*	*16.9%*	*17.1%*	*17.5%*	*9.6%*	*17.5%*	*19.1%*
EBITDA margin (%)	*2.5%*	*3.7%*	*4.9%*	*25.2%*	*24.9%*	*24.9%*	*15.7%*	*23.5%*	*24.3%*
Net profit (VNDbn)	687	1,001	1,223	814	859	952	-11	479	616
% growth	*14.3%*	*45.6%*	*22.2%*	*23.4%*	*5.5%*	*10.7%*	*-156.4%*	*NA*	*28.7%*
EPS (VND/share)	1,438	2,093	2,559	2516	2655	2,940	-20	860	1,107
BVPS (VND/share)	26,970	27,364	26,829	16,031	16,566	17,577	24,233	24,780	25,371
Net cash/share (VND/share)	16,987	16,848	16,818	-2,261	-2,688	-1,015	-2,450	-1,779	-436
D/E	0.09	0.09	0.09	0.60	0.64	0.60	0.27	0.26	0.24
Dividend yield (%)	4.1%	5.2%	5.2%	3.0%	4.2%	6.0%	0.0%	0.0%	0.0%
ROAE (%)	5.6%	7.7%	9.4%	15.9%	17.1%	19.3%	-0.1%	3.5%	4.4%
ROAA (%)	2.8%	4.0%	4.9%	6.4%	6.4%	7.0%	-0.1%	2.3%	2.9%

Source: VNDIRECT RESEARCH

Figure 28: Oil & Gas sector comparison

Company	Ticker	Price	Target Price	Recom.	Mkt Cap	P/E (x)		P/B (x)		3-yr EPS	ROE (%)		ROA (%)	
		LC$	LC$		US$ m	FY22F	FY23F	FY22F	FY23F	CAGR (%)	FY22F	FY23F	FY22F	FY23F
Gas distribution companies														
PV GAS	**GAS VN**	**106,300**	**140,200**	**ADD**	**8,649**	**14.4**	**14.5**	**3.5**	**3.2**	**16.1%**	**26.1%**	**23.3%**	**17.5%**	**16.1%**
Indraprastha Gas	IGL IN	442.7	NA	NR	3,746	20.6	18.2	3.6	3.2		22.0%	21.6%	NA	NA
Toho Gas Ltd	9533 JP	2,636	NA	NR	2,029	16.6	15.9	0.7	0.7		3.6%	4.2%	2.1%	2.5%
Petronas Gas Bhd	PTG MK	16.9	NA	NR	7,556	18.7	17.7	2.5	2.4		13.3%	14.1%	9.5%	10.0%
China Gas Holdings	384 HK	11.1	NA	NR	7,737	8.3	7.4	0.9	0.8		10.9%	11.3%	4.4%	4.7%
PTT Plc	PTT TB	31.5	NA	NR	25,738	8.2	8.0	0.9	0.8		9.9%	9.9%	3.7%	3.9%
Average						*14.5*	*13.6*	*2.0*	*1.9*		*14.3%*	*14.1%*	*7.4%*	*7.5%*
Median						*15.5*	*15.2*	*1.7*	*1.6*		*12.1%*	*12.7%*	*4.4%*	*4.7%*
Oil services companies														
PTSC	**PVS VN**	**23,300**	**31,700**	**ADD**	**473**	**16.2**	**11.1**	**0.9**	**0.9**	**26.7%**	**5.6%**	**7.7%**	**2.8%**	**4.0%**
Malaysia Marine Eng	MMHE MK	0.61	NA	NR	221	NA	16.9	0.6	0.6		1.3%	3.1%	1.1%	1.7%
Yinson Holdings	YNS MK	2.48	NA	NR	1,626	19.1	9.2	1.2	1.0		10.5%	12.9%	3.2%	4.2%
Sembcorp Marine	SMM SP	0.14	NA	NR	3,242	NA	NA	1.2	1.2		-6.5%	-0.4%	-2.3%	-0.2%
Hyundai Engineering	000720 KS	36,200	NA	NR	3,072	6.7	7.9	0.5	0.5		8.0%	6.6%	3.4%	3.0%
Average						*14.0*	*11.3*	*0.9*	*0.8*		*3.8%*	*6.0%*	*1.7%*	*2.6%*
Median						*16.2*	*10.2*	*0.9*	*0.9*		*5.6%*	*6.6%*	*2.8%*	*3.0%*
Offshore drilling companies														
PV Drilling	**PVD VN**	**17,700**	**21,700**	**ADD**	**418**	**NA**	**20.6**	**0.7**	**0.7**	**215.8%**	**-0.5%**	**3.5%**	**-0.3%**	**2.3%**
Borr Drilling Ltd	BORR NO	43.2	NA	NR	1,012	10.6	4.0	0.9	1.0		-26.4%	8.1%	-17.2%	33.7%
Velesto Energy Bhd	VEB MK	0.17	NA	NR	307	16.5	15.0	0.6	0.6		-1.2%	3.4%	-1.2%	2.8%
Valaris Ltd	VAL US	61.5	NA	NR	4,623	15.1	6.5	3.7	2.9		17.1%	26.5%	NA	NA
Transocean	RIG US	4.4	NA	NR	3,155	NA	12.9	0.3	0.3		-3.9%	-2.2%	0.4%	2.5%
Average						*14.1*	*11.8*	*1.2*	*1.1*		*-3.0%*	*7.9%*	*-4.6%*	*10.3%*
Median						*15.1*	*12.9*	*0.7*	*0.7*		*-1.2%*	*3.5%*	*-0.8%*	*2.7%*
Transportation companies														
PVTrans	**PVT VN**	**21,200**	**26,300**	**ADD**	**292**	**8.4**	**8.0**	**1.3**	**1.3**	**13.0%**	**15.9%**	**17.1%**	**6.4%**	**6.4%**
Vietnam Tanker JSC	VTO VN	7,520	NA	NR	26	NA	NA	NA	NA		NA	NA	NA	NA
Great Eastern Shipping	GESCO IN	686	NA	NR	1,183	5.4	8.4	NA	NA		20.4%	11.6%	NA	NA
Thoresen Thai Agencies PCl	TTA TB	8.2	NA	NR	427	5.1	6.5	0.6	0.5		12.0%	8.3%	9.2%	6.0%
MISC Bhd	MISC MK	7.2	NA	NR	7,269	18.1	16.6	0.9	0.9		5.0%	5.6%	3.0%	3.3%
Average						*9.2*	*9.9*	*0.9*	*0.9*		*13.3%*	*10.6%*	*6.2%*	*5.2%*
Median						*6.9*	*8.2*	*0.9*	*0.9*		*14.0%*	*10.0%*	*6.4%*	*6.0%*
Oil refinery companies														
Binh Son Refining	**BSR VN**	**14,900**	**27,300**	**ADD**	**1,964**	**3.0**	**5.0**	**0.9**	**0.8**	**15.4%**	**34.8%**	**17.3%**	**21.4%**	**11.5%**
IRPC	IRPC TB	3.0	NA	NR	1,730	16.1	12.1	0.7	0.7		4.7%	6.2%	2.2%	2.9%
Star Petroleum Refining	SPRC TB	11.6	NA	NR	1,439	4.4	7.5	1.3	1.1		27.6%	15.3%	15.2%	8.6%
PTT Global Chemical	PTTGC TB	47.0	NA	NR	6,062	18.5	9.7	0.7	0.7		1.9%	6.6%	1.5%	2.9%
Hindustan Petroleum	HPCL IN	247	NA	NR	4,228	6.5	5.4	0.9	0.9		-11.0%	16.6%	NA	NA
Average						*9.7*	*8.0*	*0.9*	*0.8*		*11.6%*	*12.4%*	*10.1%*	*6.5%*
Median						*6.5*	*7.5*	*0.9*	*0.8*		*4.7%*	*15.3%*	*8.7%*	*5.8%*
Petroleum distribution companies														
Petrolimex	**PLX VN**	**31,250**	**45,600**	**ADD**	**1,688**	**40.1**	**10.4**	**1.7**	**1.6**	**17.1%**	**4.1%**	**15.5%**	**1.5%**	**5.5%**
PVOil	OIL VN	8,200	NA	NR	361	9.0	12.3	1.5	0.8		8.9%	6.6%	4.1%	NA
PTT Oil & Retail	OR TB	24.1	NA	NR	8,273	21.0	21.3	2.7	2.4		13.0%	11.6%	6.1%	5.7%
Petronas Dagangan Bhd	PETD MK	21.9	NA	NR	4,932	29.4	27.2	3.9	3.9		12.8%	14.0%	6.2%	7.0%
Thai Oil PCL	TOP TB	54.8	NA	NR	3,499	3.2	9.4	0.8	0.7		24.3%	7.7%	8.7%	3.2%
Average						*20.5*	*16.1*	*2.1*	*1.9*		*12.6%*	*11.1%*	*5.3%*	*5.4%*
Median						*21.0*	*12.3*	*1.7*	*1.6*		*12.8%*	*11.6%*	*6.1%*	*5.6%*

Source: BLOOMBERG, VNDIRECT RESEARCH (DATA AS AT 15 DEC)

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Add	The stock's total return is expected to reach 15% or higher over the next 12 months.
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Neutral	A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
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