Vietnam

PetroVietnam Transportation Corp

Riding on Vietnam's growing thirst for energy

ADD

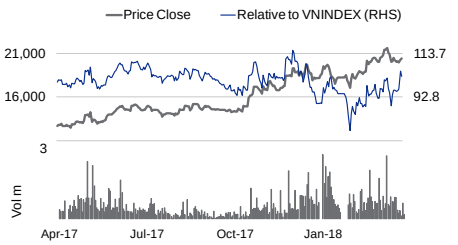
Consensus ratings*:	Buy 5	Hold 2	Sell 0

Current price:	VND20,400
Target price:	VND29,900
Previous target:	VND
Up/downside:	46.6%
CGS-CIMB / Consensus:	24.7%
Reuters:	PVT.HM
Bloomberg:	PVT VN
Market cap:	US$252.1m
	VND5,741,380m
Average daily turnover:	US$0.65m
	VND14,718m
Current shares o/s:	281.4m
Free float:	27.6%

*Source: Bloomberg

Key changes in this note

N/A



Source: Bloomberg

Price performance	1M	3M	12M
Absolute (%)	2	12.7	58.8
Relative (%)	5.4	7.3	1.7

Major shareholders	% held
PetroVIetnam	51.0
PVcomBank	6.5
Market Vector VN	5.0

- PVT has a chartering profile skewed towards fixed rates, which offers protection against the current low-rate environment, while providing potential upside for recovery.
- PVT has the largest tanker fleet and LPG fleet among Vietnam carriers, and is able to ride on growing demand for fossil fuels and LPG from the civil and industrial sectors.
- The company plans to upsize and rejuvenate its fleet over the next few years to respond to Vietnam's increasing refinery capacity and growing demand for LPG.
- In our view, PVT's current valuation is attractive at FY19F EV/EBITDA of 4.8x vs. global tanker operators' average (excluding PVT) of 7.2x.
- We initiate coverage on PVT with an Add rating and a target price of VND29,900.

Nghi Son Refinery Project to fuel sales growth in 2018-19F

While PetroVietnam Transportation Corp (PVT) has yet to sign a transport contract with Nghi Son Refinery Project (NSRP), we expect the deal to be profitable as: 1) the rate structure is likely to be similar to Dung Quat Refinery (DQR) which has fixed rates that ensures stable gross margin, periodically adjusted for fuel prices; and 2) PVT could run the tanker at optimal utilisation rate due to the longer voyage profile (crude oil transported from the Gulf). We expect PVT to transport 1m tonnes of crude oil for NSRP in 2018F.

Transport revenue for Dung Quat Refinery to bounce back in 2018F

In 2018F, we estimate PVT's crude transport volume for DQR could reach 7.2m tonnes (+18% yoy). We expect 2018F crude transport revenue from DQR to reach VND1,663bn (+23.6% yoy), thanks to an 18% yoy increase in volume and around 7.2% yoy increase in charter rates (linked to fuel prices) based on the assumption that average 2018F Brent crude oil prices will be around US$75/barrel (+36.6% yoy).

Recovery of the product tanker market in the next two years

We project a recovery in the product tanker market to lift charter rates for PVT's medium range (MR) fleet, which operates in international waters. There are several signals that a recovery could start by 2019F, including: 1) the declining number of tanker deliveries scheduled for 2018F onwards; 2) increasing refinery capacity of OPEC countries, leading to rising exports and demand for product tankers; and 3) two new International Maritime Organization (IMO) treaties that could speed up the demolition of MR tankers.

PVN's state divestment will make the company more efficient

Vietnam Oil and Gas Group (PetroVietnam, PVN, Unlisted) plans to reduce its stake in PVT to 36% over the next three years (by 2020F), from the current level of 51%. We believe this will help PVT speed up its decision-making process as the company will no longer have to obtain PVN's consent for large investment proposals post divestment.

We initiate coverage on PVT with an Add rating

We like PVT as it is a long-term play on Vietnam's growing energy demand, driven by the industrialisation and urbanisation mega-trends. Moreover, PVT is restructuring to become more efficient after a long period in PVN's shadow. We initiate coverage on PVT with Add and a VND29,900 TP, based on a blended valuation of DCF and FY19F EV/EBITDA. PVT's FY19F EV/EBITDA of 4.8x is at more than 30% discount to its peers', which we think is unwarranted given its superior growth prospects and oligopolistic market position.

Low oil prices and revenue dependence on DQR are main risks

Low oil prices would lead to low charter rates and lower gross profit for fixed-rate contracts, which are linked to fuel prices. Moreover, as 70% of PVT's transport revenue in FY17 came from DQR, any disruption in DQR's operation will force PVT's fleet to run international water trades, which yield lower gross margin.

Financial Summary	Dec-16A	Dec-17A	Dec-18F	Dec-19F	Dec-20F
Revenue (VNDb)	6,785	6,148	7,112	8,139	8,088
Operating EBITDA (VNDb)	993	1,181	1,369	1,660	1,637
Net Profit (VNDb)	421.0	450.1	546.7	670.2	668.1
Core EPS (VND)	1,496	1,599	1,943	2,381	2,374
Core EPS Growth		6.9%	21.5%	22.6%	(0.3%)
FD Core P/E (x)		12.76	10.50	8.57	8.59
DPS (VND)	800.0	1,000.0	1,000.0	1,000.0	1,000.0
Dividend Yield	3.92%	4.90%	4.90%	4.90%	4.90%
EV/EBITDA (x)	6.42	5.36	4.73	4.40	4.12
P/FCFE (x)		6.16	27.12	NA	9.41
Net Gearing	1.5%	(4.0%)	(2.0%)	12.0%	0.3%
P/BV (x)	1.61	1.56	1.44	1.31	1.21
ROE		12.4%	14.2%	16.0%	14.6%
% Change In Core EPS Estimates					
CIMB/consensus EPS (x)			1.16	1.19	

SOURCES: VND, COMPANY REPORTS

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Riding on Vietnam's growing thirst for energy

Investment thesis

Strong competitive moat

PetroVietnam Transportation Corp (PVT) is one of the largest tanker operators in Vietnam. PVT manages the largest dirty tanker (crude oil haulage) and liquefied petroleum gas (LPG) tanker fleets, accounting for 87% and 86% of nationwide tonnage of dirty tankers and LPG tankers, respectively, in 2017. Vietnamese law prohibits the use of foreign-flag ships on domestic routes, putting PVT in a highly-secure competitive position in the domestic crude oil and LPG transport markets. As a result, PVT has won the majority of crude and LPG transport contracts in recent years, related to PVN's mid-stream and downstream projects such as Dung Quat Refinery (DQR), Dai Hung Queen Floating Storage and Offloading unit (FSO), and Ca Mau Gas Processing Plant (GPP). We expect the competitive position of PVT to remain strong for the next few years, given its strong market position and formidable track record built up over the past decade, making it harder for new entrants to catch up. Specific barriers to entry into Vietnam's crude and LPG transport markets include:

- **Huge capex is required for a dirty tanker fleet that is large enough to be competitive:** To compete on equal terms with PVT, a new entrant must have at least two Aframax dirty tankers (80,000-119,999 DWT); a five-year-old model costs at least US$60m (VND1,362bn), based on our estimates. While a new entrant could compete with just one Aframax, the operating risk would be very high. DQR requires steady and timely flow of crude oil. As a result, the transport company must always have a back-up plan in case any of its tankers must undergo dry dock maintenance or any technical issues threaten to delay deliveries. As a result, two of PVT's three dirty tankers serve DQR, while another Aframax occasionally operates on international routes as a back-up vessel.
- **Considerable know-how is necessary:** PVT has extensive experience in the global market dating back to 2009. Currently, the company operates two MR tankers on the Arabian Gulf–Southeast Asia route and four small tankers of below 10,000 DWT periodically on the Arabian Gulf/India–Southeast Asia route. The company has gained the approval of several oil majors, which implies that PVT's fleet has met the stringent safety and technical standards imposed by the oil majors multiple times. This includes some of the largest oil and gas companies including BP (BP/:LN, Not Rated), Chevron (CVX US, Not Rated), ExxonMobil (XOM US, Not Rated), Shell (RDSA NA, Not Rated), Total (FP FP, Not Rated) and Eni (ENI IM, Not Rated). Approval would be gained after a vetting (inspecting) process conducted by an oil major to make sure the vessel is suitable for transportation of a specific cargo on a particular voyage. The vetting process must take place every six months for the approval to stay valid. The approval is critical as it ensures the risk of cargo damage or environmental catastrophe is kept to a minimum. A rejected approval application could shut potential charterers out of the market for extended periods of time. We believe that the high level of experience and track record required to obtain such approvals would ward off a number of potential domestic entrants.

Figure 1: General vetting criteria by the oil majors

The inspection criteria vary among the oil majors. Typically, a ship must meet the following criteria to be accepted by an oil major:

- There must be an up-to-date (no more than six months old) Ship Inspection Report Program (SIRE) report displaying minimal defects with the ship and its on-board systems and maintenance;
- The ship must have a good safety record;
- The 'crew matrix' and shore-based management systems must be adequate;
- Any other ships within the same managed fleet should have good safety records.

SOURCES: CGS-CIMB RESEARCH, STANDARD CLUB

DQR's return to full-time production, coupled with higher fuel prices, to support 2018 revenue growth

Hybrid charter rate structure for crude transport to DQR provides buffer against low prevailing charter rate environment and rising oil prices

More than 70% of PVT's transport revenue in FY17, including crude oil, refined products and LPG, stems from DQR. Given that the buyers – PetroVietnam Oil Corporation (PV Oil, UPCoM: OIL, Not Rated) and PetroVietnam Gas JSC (HOSE: GAS, Not Rated) – are responsible for the offtake of these products. As a result, DQR, PV Oil, and GAS are the largest charterers of PVT's fleet. These transport contracts have similar rate structure that the charterers basically pay PVT an agreed-upon freight lump sum that covers:

- Nominal/assumed fuel costs (bunker costs), which are calculated based on: 1) reference fuel prices published by the Ministry of Finance (MoF); 2) expected deadweight of cargoes; 3) expected cruising speed and arrival window; etc.
- Nominal crew costs and other administration costs.
- Nominal port-service costs and other related costs such as piloting and tug boat costs.
- Nominal maintenance and depreciation expenses.
- Nominal gross margin based on the above-mentioned operating costs.

We believe that the rate structure is a hybrid between fixed-time charter and spot charter, based on the following considerations:

- During the journey, PVT is subjected to increasing/decreasing bunker costs and other unexpected overheads. If there is any unpredicted event, such as bad weather or mechanical failure, PVT will bear extra costs related to prolonged journeys. However, PVT could optimise its fleet's operations to minimise the actual bunker costs. This is similar to spot charter. For voyage charters (or spot charters), the charterer (the entity that hires the ship) pays the charter (the owner of the ship) a freight lump sum to carry a specific cargo on a specific voyage. The charter is usually responsible for all operating costs of the vessel.
- Charter rates are renewed to maintain the nominal gross margin and based on reference fuel prices published periodically by the MoF. For DQR, rates are increased/decreased immediately in response to reference fuel prices. For other charterers such as PV Oil and Gas, rates are adjusted when reference fuel prices venture out of a certain band. These rates could lag reference fuel prices for a few weeks to several months. This is similar to fixed-time charters. For time charters, the charter rate per day covers all the operating costs of the vessel. Even though PVT does not disclose its average nominal gross margins, we estimate that it is around 20%, which is the typical gross margin for small domestic tanker operators.

DQR's return to full production this year will directly benefit PVT in terms of both crude oil transport and product transport

PVT transports almost 100% of DQR's demand for crude oil. Even when time charter equivalent (TCE) rates reached a low in the global market in 2017, PVT's crude oil transport activity still generated gross margin of above 20% in FY17. TCE rates are spot rates converted to per day basis for better comparison among different vessels.

The typical journey for PVT's crude fleet is fairly short, as its tankers carry 90% crude oil input from Bach Ho Basin, 1,000km away from DQR, and other domestic sources. The remaining 10% is imported from the Middle East. In 2017, PVT's transport volume of crude oil fell by 12.9% yoy to 6.1m tonnes, as DQR halted production for two months to undergo scheduled maintenance. We expect PVT's 2018F crude oil transport revenue for DQR to increase to VND1,663bn (+23.6% yoy) as we estimate charter rates could increase by 7.2% yoy, following a possible 36.6% yoy increase in average Brent oil prices in 2018F to US$75/barrel. As DQR has returned to full-time operations this year, we estimate its crude oil transport volume could reach 7.2m tonnes (+18.0% yoy) in 2018F, which would require 90 trips compared to 78 trips in 2017. Over a 5-year horizon, we project that DQR will expand its production capacity by 20.8% to 8.7m tonnes of crude oil per year and could refine both sweet and sour crude oil.

PVT is also in charge of transporting around 30-40% of the petroleum products and 100% of the LPG produced by DQR. The remaining 60% of petroleum product output is split between Vietnam Petroleum Transport JSC (HOSE: VIP, Not Rated) and Vietnam Tanker JSC (HOSE: VTO, Not Rated), two subsidiaries of Viet Nam National Petroleum Group (Petrolimex, HOSE: PLX, Not Rated), which is the largest gasoline distributor in Vietnam, with a 50% market share in 2017, according to PLX's 2017 prospectus. We expect PVT's 2018F product transport revenue for DQR to reach VND343bn (+47.2% yoy), driven by an 33.9% yoy increase in transport volume and 9.9% yoy increase in charter rates as we estimate Brent crude oil prices will increase by 36.6% yoy from the 2017 average of US$54.9/barrel to US$75/barrel, on average, for 2018F.

Figure 2: PVT's current fleet

Name	Size DWT	Build	Main route
Dirty tanker	**303,250**		
Hercules M	96,174	1996	Domestic
PVT Athena	105,177	2000	Domestic
PVT Mercury	101,899	2012	Domestic
Clean tanker	**26,513**		
PVT Dolphin	45,888	2004	Arabian Gulf - Southeast Asia
PVT Eagle	33,425	1998	Arabian Gulf - Southeast Asia
PVT Sealion	16,187	1995	Arabian Gulf - Southeast Asia
PVT Saturn	13,159	2016	Arabian Gulf - NSRP
PV Oil Venus	9,202	1997	Domestic
PVT Dragon	8,710	1996	Domestic
Phương Đông Star	9,045	2007	Domestic
PV Oil Jupiter	8,758	1996	Domestic
FSO	**105,000**		
Dai Hung Queen	105,000	2015	
LPG Tanker	**18,922**		
Cửu Long Gas	2,999	1996	Domestic
Sài Gòn Gas	2,999	1996	Domestic
Hồng Hà Gas	1,600	1993	Domestic
Việt Gas	1,601	1992	Domestic
Oceanus 9	5,054	na	Southeast Asia
Aquamarine Gas	1,670	na	Southeast Asia
Apollo Pacific	2,999	na	Southeast Asia

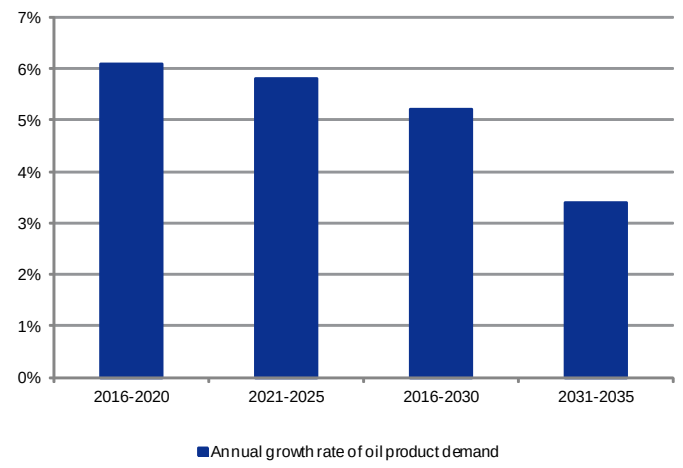
SOURCE: PVT

NSRP to fuel PVT's revenue growth for the next two years

In Feb 2018, the new Nghi Son Refinery Project (NSRP) has received the Ready For Start Up (RFSU) certificate which mean the refinery is mechanically completed and ready for introduce feedstock. According to PVT, NSRP could complete another pilot run within April before the commercial run with 70% capacity. The refinery could reach 100% capacity in 4Q2018. The engineering, procurement and construction (EPC) contractor for NSRP is the JGCS Consortium consisting of JGC Corporation (1963 JP, Not Rated), the leader of the consortium), Chiyoda Corp (6366 JP, Not Rated), GS Engineering & Construction Corp (006360 KS, Not Rated), SK E&C (Korea, Unlisted), Technip France (FTI FP, Not Rated) and Technip Geoproduction (Malaysia, Unlisted).

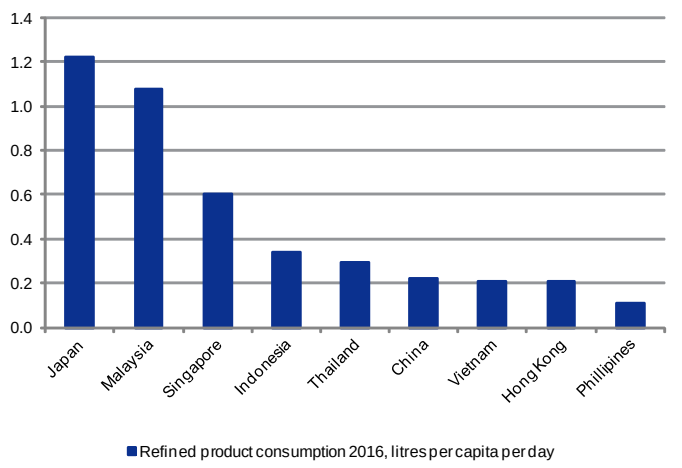
Vietnam's oil industry still has ample room to grow as the country has a very low per capita consumption of refined products. Currently, more than 50% of demand for refined products is met through imports from other countries in the region such as South Korea, Singapore and Malaysia. As Vietnam's demand for refined products continues to grow by around 6% per year for the next several years (based on our estimates), the country is likely to continue expanding its refinery capacity.

Figure 3: Annual growth rate of Vietnam's oil products demand



SOURCES: MINISTRY OF INDUSTRY AND TRADE (MOIT)

Figure 4: Refined products consumption by country in 2016 (litres per capita per day)



SOURCES: GLOBALPETROLPRICES

In Aug 2017, NSRP refined 270,000 tonnes of crude oil as part of its pilot phase. We expect the complex to refined around 4m tonnes of crude oil in 2018F and 10m tonnes in 2019F. As PVN owns 25% of the complex, we expect PVT to be in charge of at least 25% of NSRP's crude oil transport demand, equivalent to a maximum capacity of 2.5m tonnes per year. PVT will expect to capitalise on this advantage and plans to purchase and deploy one very large crude carrier (VLCC, 200,000–320,000 DWT) to transport crude oil from Kuwait Petroleum Corporation (Unlisted) in Kuwait to NSRP in Thanh Hoa province. Moreover, according to PVT the company could haul around 3m tonnes of refined product per years. We expect PVT will make three round trips in 2018F and eight round trips in 2019F, translating into total transport volumes of 1m tonnes and 2.5m tonnes, respectively. As a result, we project PVT's total crude oil transport volume could reach 8.2m tonnes (+34.4% yoy) in 2018F and 9.7m tonnes (+18.2% yoy) in 2019F.

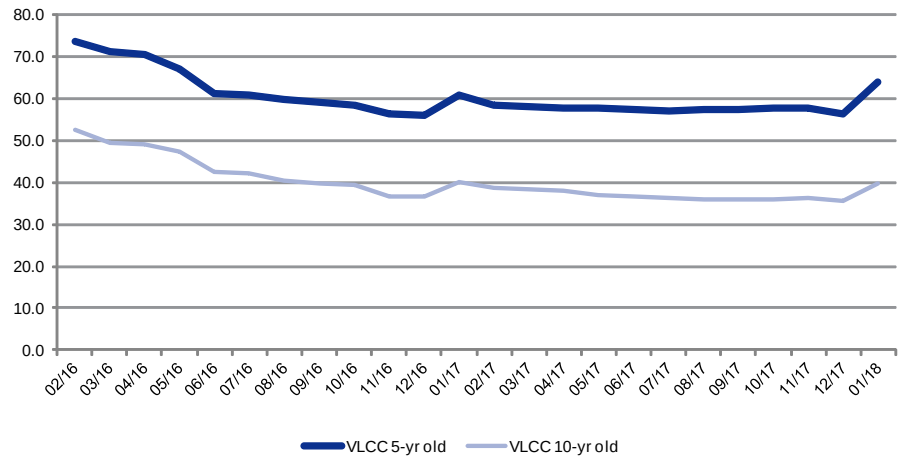
We believe NSRP's crude oil transport contract could be profitable due to several supporting factors:

- Charter rate structure likely to be similar to DQR's crude oil transport contracts. We are not certain about PVT's exact charter rates for NSRP, as there is no information on the transport contracts at the moment. However, PVT has the right to withdraw from the project if the expected contract terms are not promising. Moreover, we think the transport contract terms must be stable for a very long time (10-15 years) to justify PVT's investment in a 5-year old VLCC, which could cost up to US$64m at current rates, in order for

the capital investment to pay off. We assume a nominal gross margin of around 20%.

- The purchase price of the VLCC is likely to be very favourable, in our view, as prices have dropped significantly in the past two years. We estimate that a 5-year old VLCC currently only costs US$64m (VND1,452bn), 17% lower than the US$76m price tag at the beginning of 2016. Given the inherent cyclicality in the global tanker industry, a low acquisition cost is key to ensuring good long-term economic viability. Based on our estimates, PVT would comfortably finance the VLCC purchase as its cash and equivalents plus short-term investments stood at VND2,941bn at the end of 2017, more than sufficient to purchase a 5-year-old VLCC. Moreover, the company is generating annual operating cash flow of VND900bn-1,000bn in FY18-20 and has annual debt repayment obligations of only around VND300bn-400bn. However, we assume that 30% of the VLCC purchase cost will be financed through borrowings.

Figure 5: VLCC prices (US$ m)



SOURCES: BLOOMBERG

Based on our analysis, we expect that the VLCC could realize revenue of VND453bn and a gross profit of VND91bn per year, equivalent to the assumed nominal gross margin of 20.0% when NSRP reaches 100% capacity. Moreover, we expect the VLCC investment could have an IRR of 10.4%, which is acceptable, over 25-year of investment horizon.

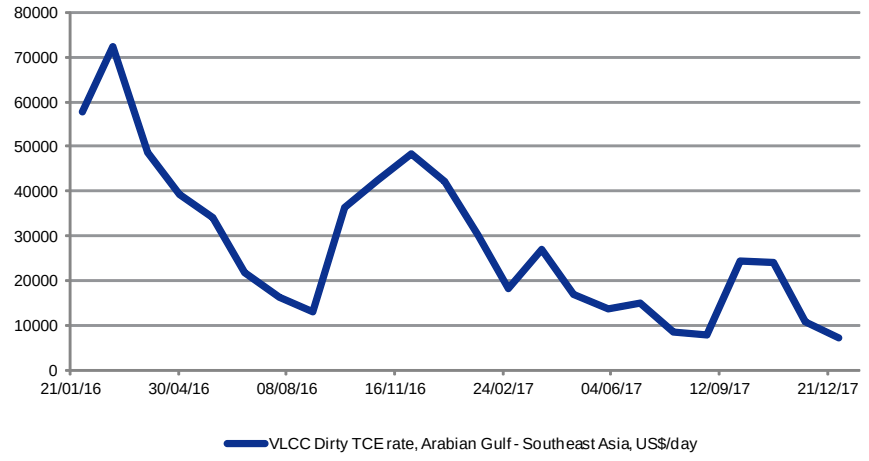
For FY18F, we expect crude oil transport revenue for NSRP to be VND181bn (1m tonnes of crude oil) and refined products transport revenue to be VND98bn (0.8m tonne of refined products).

Figure 6: VLCC's operating assumption

VLCC's specifications	Unit	Value	Notes
Laden deadweight	tonne	317,441	Deadweight when fully loaded
Laden speed at NCR	knot	13.5	Optimum cruising speed when fully loaded
Fuel consumption per day	tonne	105.8	Base case fuel consumption for heavy fuel oil at NCR
Round trip's assumptions			
Duration of round trip	day	30	A typical tanker round trip from Ras Tanura to Singapore
Port time	day	4	would take 30 days, including 4 port days.
Rountrip per year		8	
Profitability	per year		
Revenue	VND bn	453	
TCE rate	US$/day	39,415	
Gross margin		20.0%	
Costs		362	
Fuel cost	VND bn	222	Fuel type is heavy fuel oil
Crew cost	VND bn	48	
Port and other costs	VND bn	11	
Drydock	VND bn	16	
Others	VND bn	8	
Depreciation	VND bn	57	
Gross profit	VND bn	91	
Expected IRR		10.4%	25-year investment horizon for the VLCC

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 7: TCE rate for VLCC dirty tanker, Arabian Gulf–Southeast Asia route



SOURCES: CGS-CIMB RESEARCH BLOOMBERG

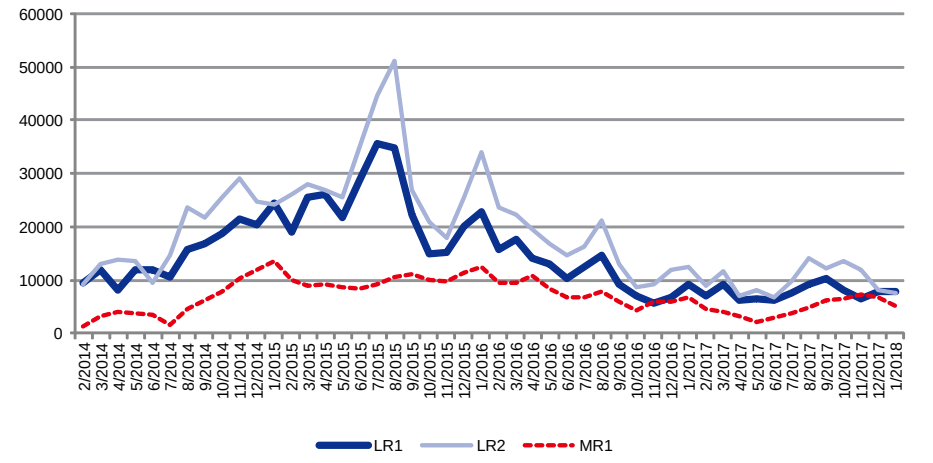
A recovery in the product tanker market is imminent, in our view, and could lift charter rates ›

Supply side to remain stable: new environmental regulations could increase incentives for demolition and keep a lid on tanker fleet growth

The product tanker market has seen weak charter rates for the last three years. However, we expect several positive macro factors to come into play, which would result in steady recovery in product tanker charter rates over the next few years. In our view, the recovery would have a significant impact on charter rates for the Arabian Gulf–Southeast Asia and intra-Asia route, which are the busiest trading routes for product tankers. Specifically, the recovery would have significant impact on the MR and below-MR segments. These segments are the workhorses of the product tanker industry for two reasons: 1) these tankers can dock at a wide range of port facilities, while the Long Range (LR, 50,000-159,999 DWT) tankers are restricted to larger ports; 2) a typical product deal is much smaller (5,000-10,000 barrels) than a crude deal (500,000-1,000,000 barrels) because unlike refiners, most wholesale distributors do not have access to massive storage facilities. We believe PVT would benefit from the recovery in the product tanker market as the company has two MR tankers and several below-MR tankers operating on the Arabian Gulf–Southeast Asia route.

In 2015, refined product supply growth outstripped growth in product demand, leading to a build-up in stocks. Rising product stocks were a double-edged sword because: 1) higher-than-normal stock levels helped to support charter rates of product tankers by partially absorbing the surge in new tanker deliveries in 2015 resulting from increasing sales efforts and the growing need for offshore storage; 2) when product stocks peaked in mid-2016, there was no additional demand to absorb the influx of new vessels, leading to depressed charter rates. Moreover, high product stocks diminished arbitrage opportunities, meaning less work for the global product tanker fleet. TCE rates for MR1 product tankers for Arabian Gulf–Southeast Asia route at the end of 2017 (US$6,744/day) were around 50% of the peak level (US$13,535/day) in Jan 2015.

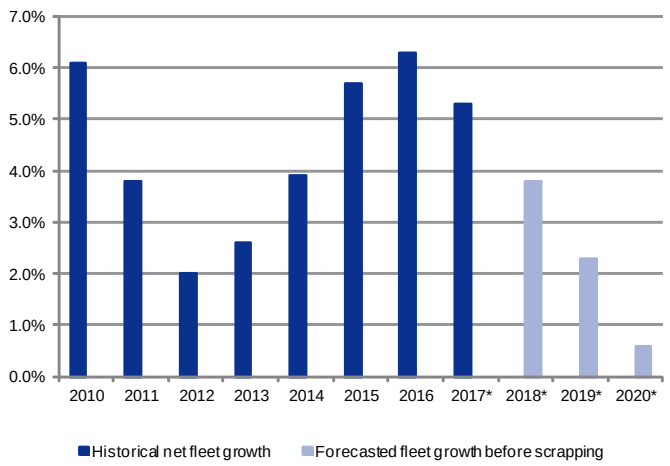
Figure 8: TCE rates (US$/day) for Arabian Gulf–Far East (LR1 and LR2) and for Arabian Gulf–Southeast Asia (MR1)



SOURCES: BLOOMBERG

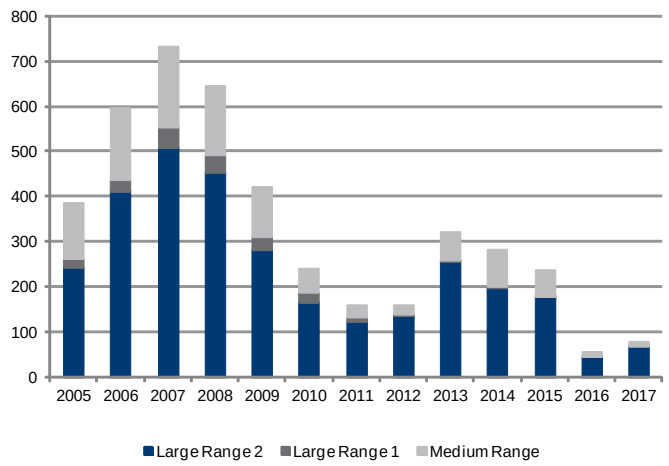
According to Clarkson Research, the number of newbuild tanker deliveries has declined YTD, after a period of significant fleet expansion between 2014 and 2017. Note that Figure 11 does not take scrapping or slippage into account. Thus, any strengthening of scrapping or slippage activities could reduce or increase these numbers. Slippage is the act of delaying the delivery of a ship due to a weak rate environment, as the cancellation of an order is very costly. At the same time, the 2017 order book is near the lowest levels seen in the last eight years. The global order book for MR1 tankers is very low: with just nine unfulfilled orders compared to 65 in the LR1 segment. Moreover, 13 MR1 tankers were sent for demolition in 2017, which is higher than the order backlog.

Figure 9: Global product tanker fleet growth



SOURCES: CLARKSON RESEARCH

Figure 10: Global product tanker new orders



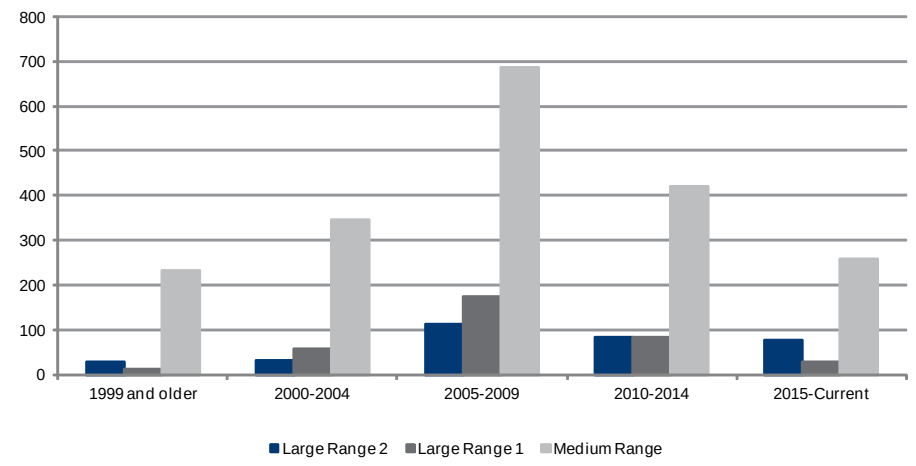
SOURCES: CLARKSON RESEARCH

The decelerating order book growth is due to the gloomy state of the charter market, in our view. A long period of losses has caused capital to dry up and has made banks reluctant to provide loans backed by vessels with deteriorating value. However, we believe the general gloom should lift as rates rise and stabilise enough for ship owners who have suffered losses for more than 5 years, to become optimistic again and begin to order more vessels; we expect this to start taking shape in 2019-2020F.

In addition, we expect the MR segment to see accelerating demolition in the next few years as 1) it has a significantly higher portion of vessels that are close to 20-years old, compared to the LR segment and 2) the two new International Maritime Organization (IMO) mandates, coming into effect in 2017 and 2020, will increase the operating costs of these vessels. The 18-year-and-older MR tankers account for more than 12% of the global MR fleet. It should be noted that beyond 20 years, a vessel must go through a costly special survey every

2.5 years, instead of every 5 years. This special survey, coupled with the extra costs due the two new mandates, could force a lot of old tankers to stop operating, in our view.

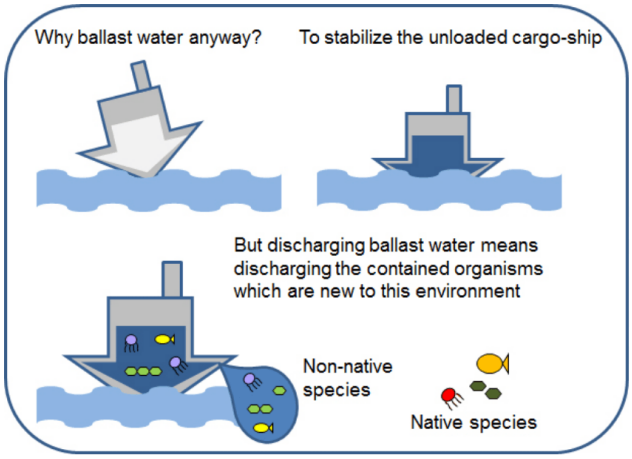
Figure 11: Fleet size by year built (number of vessels)



SOURCES: CLARKSON RESEARCH

We believe the recent Ballast Water Treatment Convention (BWMC), applicable since 2017, and the sulphur cap treaty, applicable from 2020, could accelerate the demolition speed. These two IMO mandates could have a significant impact on the scrapping speed, especially when the rates are low, in our view. When a vessel approaches the end of its useful life, which is around 25-30 years, the owner will have to decide whether to keep or scrap the vessel. The decision will be based on expected future operating cash flow vs. scrapping cash flow. When rates are low, owners are more likely to scrap their vessels earlier than when rates are high. According to Scorpio Tankers, the BWMC and the sulphur cap mandates will force owners to spend several million US dollars to be allowed to continue operating in international waters. This could force a lot of owners to scrap their vessels earlier than they otherwise would.

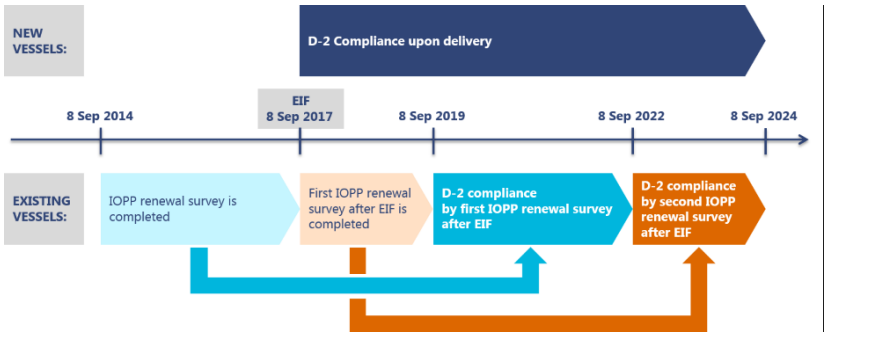
Figure 12: What is ballast water?



SOURCE: THE GREEN OPTIMISTIC

The BWMC's entry into force (EIF) was on 8 Sep 2017, applicable to ships of 400 gross tonnes and above participating in international trade, excluding floating platforms, FSUs & FPSOs. Basically, a ship must have type-approval ballast water treatment systems (BWTS) installed by the first renewal of the International Oil Pollution Prevention (IOPP) following the EIF date, according to the new regulation. The BWTS will kill and/or inactivate organisms' metabolic processes in the ballast water prior to discharge. According to Scorpio Tankers, the cost for this system could be between US$0.5m and US$1.5m, depending on the type and size of vessel. For older vessels, the installation could be more challenging or even impossible due to the narrow space in the engine room. We estimate PVT's capex for BWTS installation would be around VND204bn.

Figure 13: BWMC implementation schedule



SOURCE: GARD AS

Figure 14: BWTS filtering unit

SOURCE: SCORPIO TANKERS

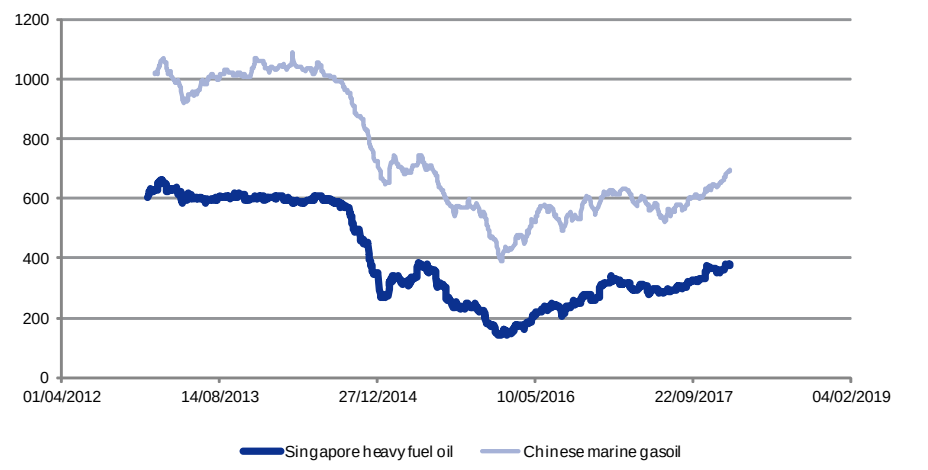
Figure 15: BWTS piping in engine room

SOURCE: SCORPIO TANKERS

The new sulphur cap mandate reduces sulphur emissions by a factor of seven from the current level of 3.5% mass/mass (m/m) to 0.5% m/m. The new sulphur cap will be applicable from 1 Jan 2020. The new decision means ships will have to use low-sulphur oil, which is 50% more expensive and not readily available compared to heavy fuel oil, which is cheap and abundant. The current heavy fuel oil is abundant because it is a byproduct of the refinery process, which refiners did not intend to produce. The low-sulphur oil, or the marine gas oil (MGO), is more expensive, as it is not the main product of the refinery process. The second option is to install scrubbers on vessels which could cost US$3m-10m depending on the size of the ship. Even though the sulphur cap will only be effective in two years, the expected additional cost could pose new barriers for industry entrants.

We believe that PVT would be able to pass on incremental MGO costs to charterers for domestic trades, as these charterers would pass on those costs to domestic customers. For international trades, it could be more difficult to transfer additional fuel costs to charterers due to the oversupply situation in the global dirty tanker market. We believe that, in the worst-case scenario, profitable domestic contracts would help PVT's fleet to remain active in international waters until vessel demolition reduces the oversupply situation for dirty tankers, leading to higher TCE rates.

Figure 16: Heavy fuel oil vs. marine gas oil prices (US$/barrel)

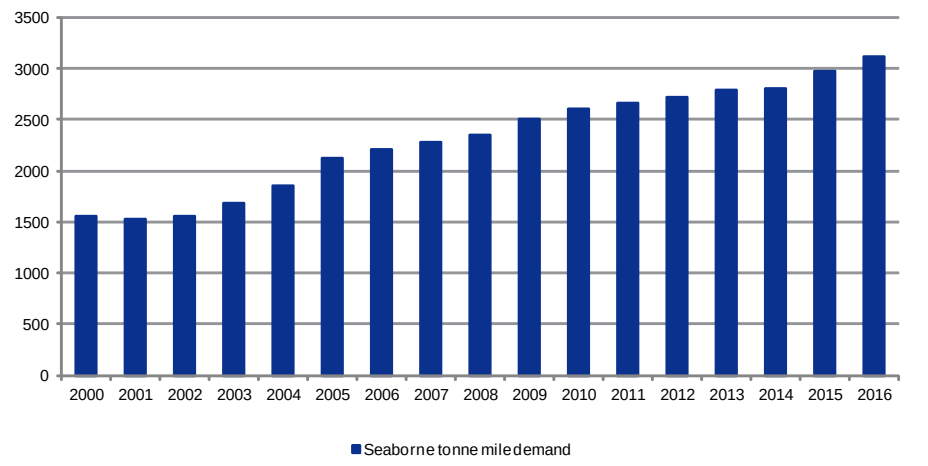


SOURCES: BLOOMBERG

Demand for product (clean) tanker transportation should stay robust

The seaborne tonne mile demand for transportation of petroleum products has been growing steadily at a CAGR of 4.4% over the last 16 years due to: 1) increasing demand for fuel in Western Europe and APAC countries; and 2) increasing refinery capacity in the Middle East countries, while refinery capacity in Western Europe and Asia has stagnated, creating an imbalance in regional supply/demand. If the tonne mile demand growth continues at its current pace, it could outstrip supply growth which is expected to come in at 3.8% in 2018F and 2.3% in 2019F in terms of fleet size, according to Clarkson Research. PVT has 6-7 product tankers running the Arabian Gulf – Southeast Asia route and a hike in demand means more work load and possibly better rates.

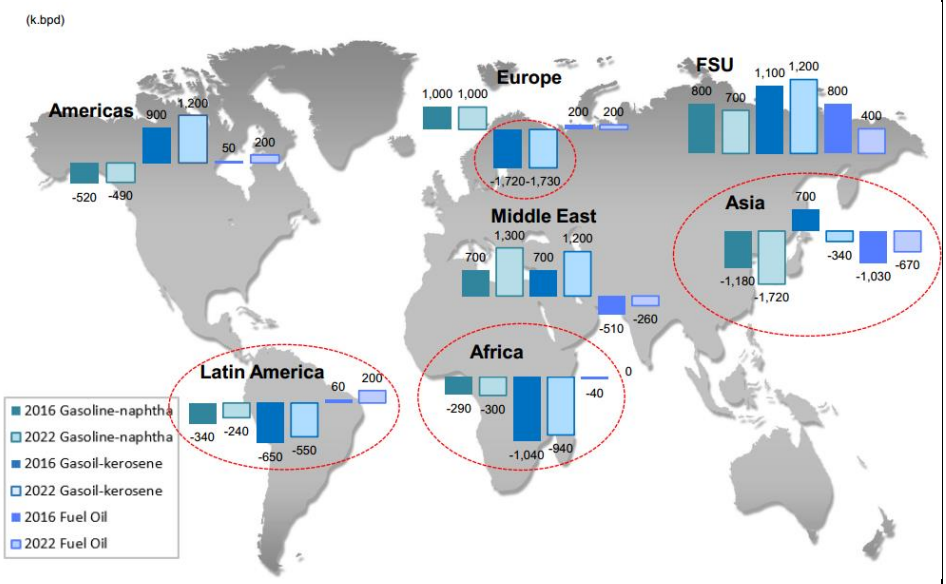
Figure 17: Seaborne tonne mile demand (bn)



SOURCES: CLARKSON RESEARCH, BP, INTERNATIONAL ENERGY AGENCY (IEA)

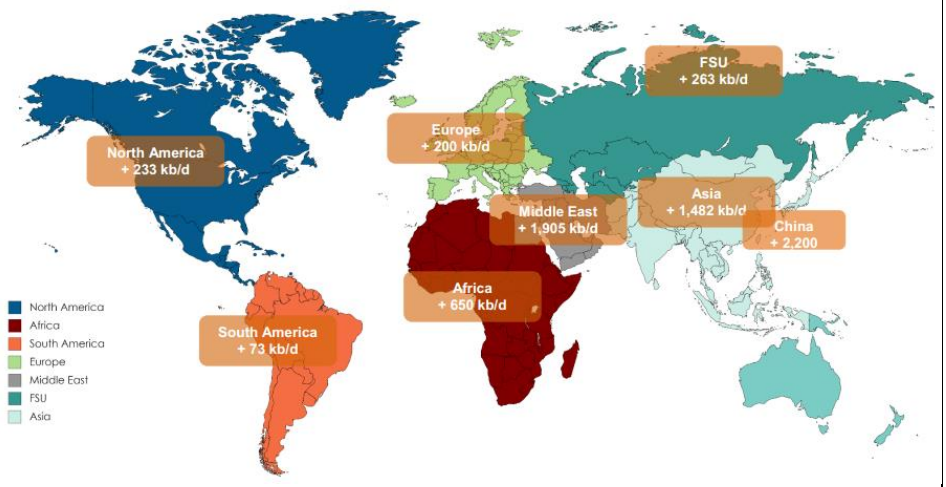
Moreover, for the next several years, we expect additional refinery capacity, which is mainly from the Middle East and Asia Pacific, to encourage global tonne mile demand growth by strengthening supply/demand imbalances. We believe additional capacity of diesel oil and heating oil from the Middle East will mostly be shipped to Western Europe as Western Europe is the main consumer of the Middle East's distillates as at 2017. Meanwhile, we think additional capacity of high quality products will be absorbed by Asia Pacific from 2020F. We believe Asia Pacific will have increasing net imports despite increasing capacity given that the additional capacity will not likely satisfy increasing demand for high quality products such as gasoline and naphtha by 2020F. These products will still be shipped from complex refineries in the Middle East. We expect Asia Pacific countries to remain the largest consumers of Arabian Gulf's distillates. At the end of 2016, Asia Pacific countries purchased 47% of the refined product exports from the Middle East.

Figure 18: Net exports of refined products (thousand barrels/day), according to IEA and Scorpio Tankers (US STNG, Not Rated)



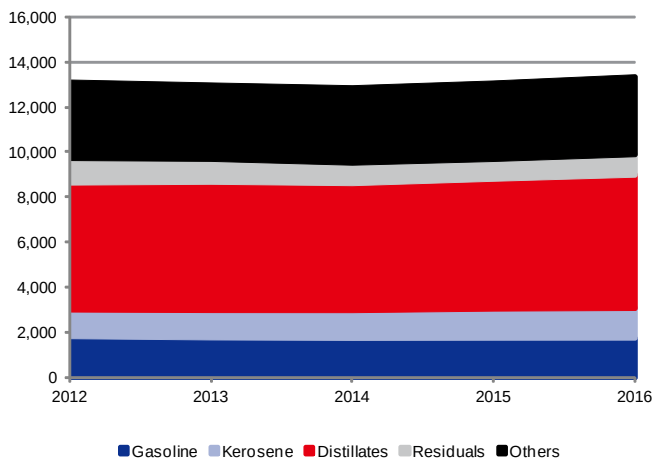
SOURCES: IEA, SCORPIO TANKERS

Figure 19: Refinery capacity expansions, 2017 – 2020F (thousand barrels/day), according to IEA and Scorpio Tankers



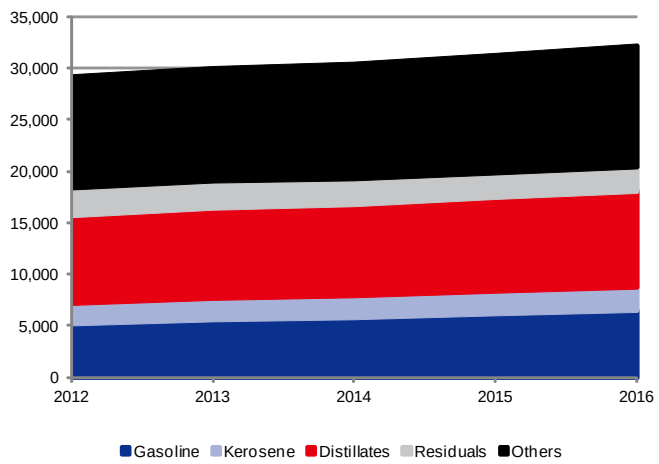
SOURCE: IEA, SCORPIO TANKERS

Figure 20: Oil demand of Western Europe (thousand barrels/day)



SOURCES: ORGANIZATION OF THE PETROLEUM EXPORTING COUNTRIES (OPEC)

Figure 21: Oil demand of Asia Pacific (thousand barrels/day)



SOURCES: OPEC

Figure 22: Refined products' net trade flows 2016 (thousand barrels/day)

From/To	United States	Canada	Mexico	Other Latin America	Europe	Russia	Other CIS	Middle East	Africa	Australia	China	India	Japan	Singapore
United States	0.0	521.3	668.1	1,286.0	1,446.3	0.0	0.0	44.4	108.1	10.0	117.9	109.7	171.1	89.1
Canada	542.6	0.0	1.9	5.8	90.4	0.0	0.0	0.0	3.9	0.0	3.3	1.6	8.9	0.0
Mexico	87.7	0.0	0.0	29.0	8.6	0.0	0.0	0.0	1.9	0.0	3.3	0.0	0.0	51.8
Other Latin America	200.4	1.9	21.2	0.0	206.6	0.0	0.0	3.9	34.8	2.0	52.4	0.0	4.4	163.7
Europe	446.6	77.2	32.8	135.2	0.0	9.7	54.1	297.4	884.4	2.0	78.6	9.8	13.3	449.7
Russia	394.5	0.0	0.0	42.5	3,843.9	0.0	175.7	81.1	52.1	0.0	37.7	8.2	35.6	215.5
Other CIS	14.6	0.0	0.0	1.9	245.4	13.5	0.0	0.0	1.9	0.0	4.9	0.0	0.0	4.1
Iraq	4.2	0.0	0.0	0.0	4.3	0.0	0.0	3.9	0.0	0.0	0.0	1.6	0.0	10.4
Kuwait	0.0	0.0	0.0	11.6	99.0	0.0	0.0	21.2	57.9	0.0	22.9	14.7	64.4	41.4
Saudi Arabia	6.3	0.0	0.0	9.7	542.4	0.0	0.0	25.1	123.6	0.0	36.0	126.1	51.1	105.7
United Arab Emirates	2.1	0.0	0.0	13.5	292.7	0.0	0.0	42.5	137.1	2.0	134.3	83.5	117.8	114.0
Other Middle East	14.6	0.0	0.0	5.8	271.2	0.0	3.9	181.5	69.5	2.0	52.4	65.5	131.1	64.2
North Africa	137.7	0.0	1.9	71.4	460.6	0.0	0.0	11.6	5.8	0.0	14.7	3.3	11.1	0.0
West Africa	45.9	0.0	0.0	9.7	103.3	0.0	0.0	0.0	3.9	6.0	9.8	0.0	2.2	0.0
East & South Africa	0.0	0.0	0.0	1.9	8.6	0.0	0.0	15.4	11.6	0.0	0.0	0.0	0.0	4.1
Australasia	0.0	0.0	0.0	0.0	51.7	0.0	0.0	0.0	0.0	0.0	6.6	0.0	20.0	10.4
China	20.9	7.7	1.9	73.4	103.3	5.8	0.0	34.8	30.9	36.1	0.0	14.7	8.9	178.2
India	89.7	0.0	0.0	9.7	598.3	0.0	0.0	268.4	137.1	50.1	6.6	0.0	42.2	155.4
Japan	23.0	0.0	1.9	11.6	8.6	0.0	0.0	1.9	0.0	84.2	45.9	0.0	0.0	56.0
Singapore	18.8	0.0	3.9	7.7	86.1	0.0	0.0	13.5	46.3	140.4	114.7	22.9	26.7	0.0

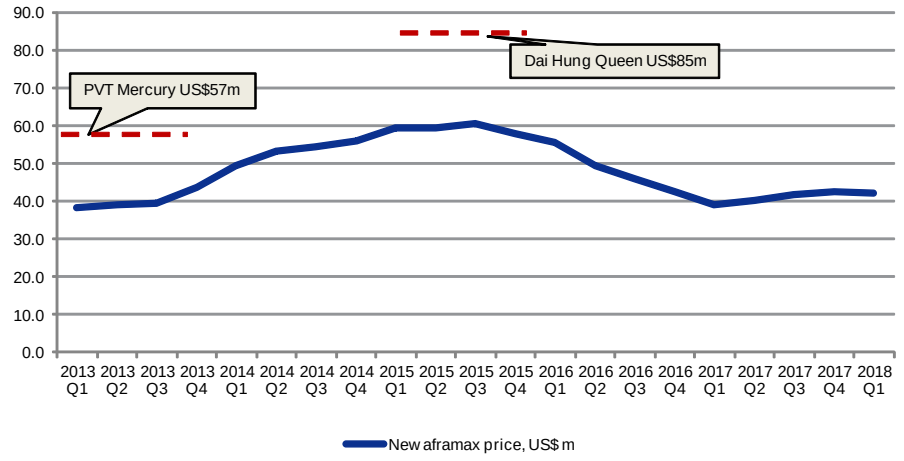
Colors which are more into red indicate very relatively small net flow.
Colors which are yellowish indicate relatively decent net flow.
Colors which are more into green indicate relatively large net flow.
SOURCE: BP STATISTICAL REVIEW 2017

PVN's planned divestment will unleash PVT's potential »

According to PVT's management, PVN will reduce its ownership in PVT from the current level of 51% to 36% by 2020F. We believe that the decrease of state ownership will have a significant impact on PVT's operating efficiency, as it will untie the company from the rigid control of PVN. The most eminent improvement could be that PVT can freely decide which vessel to buy and when to buy to get the lowest price, instead of waiting for months for PVN's consent.

It must be acknowledged that the ownership by PVN has had some important benefits, such as enabling PVT to gain most of their transport contracts for crude oil and LPG. These contracts have helped PVT to grow strong enough to step out of PVN's shadow. However, such ownership has created some drawbacks for the company as well. Some of the most notable drawbacks are the extremely high purchasing costs of PVT Mercury and Dai Hung Quen FSO, the two largest vessels in the fleet. In 2007, PVT signed with Dung Quat Shipyard (DQS) to build three Aframax of 105,000 DWT. At that moment, DQS was still the subsidiary of Vinashin, the notorious state-owned company that faced several allegations of mismanagement of the state's assets in 2014. As DQS had almost no profile in building ships, these contracts were delayed several times and it had to reduce to two vessels. In 2010, DQS almost went bankrupt and PVN had to come to their rescue by buying back the company at more than VND5,000bn. PVT Mercury was completed in 2012 with total construction costs of US$57m; in contrast, a 5-year old equivalent sold for only around US$38m in 2013. The costs of Dai Hung Queen FSO reached as high as US$85m, while a new Aframax was selling for US$60m in 2015, the highest level in the last five years.

Figure 23: PVT Mercury and Dai Hung Queen acquisition costs vs market



SOURCE: Bloomberg

Figure 24: Ship costs

Vessel cost	Size DWT	Cost VND bn	Cost-to-DWT VND	Built	Acquired	Shipyard
PVT Athena	105,177	1,009	9,593,352	2000	2000	Huynhdai Heavy Indistries
PVT Mercury	101,899	1,195	11,727,299	2012	2012	DQS
PVT Eagle	33,425	396	11,847,420	1998	2009	Kherson Shipyard
PVT Sealion	16,187	62	3,830,234	1995	2010	Hiroshima Dockyard
Đại Hùng Queen	105,000	1,875	17,857,143	2015	2015	DQS

SOURCES: PVT, CGS-CIMB RESEARCH

2018F to be a good year for PVT »

We expect that PVT's FY18F revenue to reach VND7,112bn (+15.7% yoy) and that its net profit after minority interest will be VND547bn (+21.6% yoy). We project that the company's 2018F transport revenue could grow by 25.5% yoy to VND4,184bn due to the following:

- An 18% yoy increase in crude oil transport volume for DQR as the refinery has returned to full-time operations. Freight rates for DQR could increase by 7.2% yoy.
- We expect Brent crude oil prices to average around US$75/barrel in 2018F, compared to 2017's average of US$54.9/barrel due to the competing effects of 1) OPEC production cut, 2) the United States' increasing production, and 3) recent airstrike in Syria could lead to increasing tension into mid-2018. 2018F crude oil prices could be 13.6% higher than 2017's average level, which we believe would lead to a rise in blended domestic rates of 8-9% for PVT (we assume flat blended international charter rates in 2018F).
- VND181bn transport revenue from NSRP, equivalent to transport volume of 1m tonnes.
- A full year's worth of contribution of LPG transport revenue from Ca Mau GPP's contract which started in mid-2017; we believe this contract could yield around VND174bn of revenue per year given stable fuel prices.

Moreover, PVT could take advantage of low ship prices to rejuvenate its fleet. We estimate PVT's FY18F capex will be around VND1,300bn, including the purchase of: 1) an Aframax dirty tanker worth US$20m (62.5% from borrowings) to replace Hercules M (22 years old); 2) two dry bulk vessels (50,000-80,000 DWT) worth US$36m (62.2% from borrowings) to prepare for several upcoming thermal power plants in 2019F; 3) two clean tankers to serve NSRP; and 4) five LPG tankers of 4,000-7,500cbm. PVT plans to purchase the VLCC once the company signs a long-term contract with NSRP. We expect the purchasing time will be in early 2019F. Before the purchase, PVT will lease a VLCC for inward deliveries for NSRP in 2018F.

Figure 25: Future contracts, based on our estimates

Project	Capacity	Cargo	Start	Investor	Description	2018F Expected revenue VND bn
NSRP	10mn tonnes of crude oil/year	Crude oil Refined products	3Q2018	PVN, Kuwait Petroleum Idemitsu Kosan Mitsui Chemicals	Up to 2.5m tons of crude oil/year from Kuwait Carry products for domestic market	181
Ca Mau GPP	219,000 tonnes of LPG/year	LPG	3Q2017	PVN	Up to 219,000 tonnes of LPG/year	174
Thai Binh 1 power plants	600 mW	Thermal coal	4Q2017	EVN	Up to 1.8m coal/year	71
Thai Binh 2 power plant	1200 mW	Thermal coal	na	PVN	Up to 1.5m coal/year	na
Long Phu 1 power plant	1200 mW	Thermal coal	4Q2019	PVN	Up to 1.5m coal/year	0
Song Hau 1 power plant	1200 mW	Thermal coal	4Q2019	PVN	Up to 1.5m coal/year	0

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Valuation and recommendation

PVT's current valuation is very attractive, in our view

We use a blended valuation method of DCF (weight of 70%) and FY19F EV/EBITDA (weight of 30%) for the following reasons:

- DCF valuation methodology gives more insight on the operating cash flow PVT's fleet could generate over their useful lives. Moreover, DCF valuation incorporates important maintenance and growth capex over the next several years. We model PVT's FCFE over 50 years or two capex cycles, assuming that PVT's fleet will be replaced when the vessels reach the end of their useful lives of 25 years.
- EV/EBITDA valuation methodology that allows for direct comparison of PVT's value to those of its global peers. We acknowledge that EV/EBITDA valuation is not very suitable for PVT as the company's fleet is old and is due to be replaced over the next several years but we believe the valuation is still worth looking at as: 1) PVT's FY19F EV/EBITDA is 4.8x, significantly lower than global peers' average of 7.2x; 2) PVT is still in growth phrase, while most of its global peers are in mature phase. We assign the EV/EBITDA valuation a weight of only 30% in determining PVT's target price. For PVT, we use a target FY19F EV/EBITDA of 7.2x (global peers' average excluding PVT), which translates into a target price of VND47,185.

Figure 26: DCF model - key assumptions and inputs, based on our estimates

General assumptions	2016A	2017A	2018F	2019F	2020F	2021F	2022F	Terminal
Risk free rate (10-year VGB yield)	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Equity risk premium	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%
Beta (source: BB, adj. beta)	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
ROE (%)								19.5%
(in VND bn)								
PV of FCFE (50 years)	6,339							
No. of o/s shares (mn shares)	281							
Implied value per share (VND)	22,524							

SOURCES: CGS-CIMB RESEARCH, BLOOMBERG

Figure 27: Blended target price, based on our estimates

Method	Implied value per share (VND)	Weight (%)	Weighted price (VND)
DCF	22,524	70%	15,767
EV/EBITDA	47,185	30%	14,156
Target price (VND)			29,922

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 28: Global sector comparison

Company	Bloomberg Ticker	Recom.	Share Price (local curr)	Target Price (local curr)	Market Cap (US$ m)	P/E (x)		3-year EPS CAGR (%)	P/BV (x)		Recurring ROE (%)		EV/EBITDA (x)		Dividend Yield (%)	
						CY18F	CY19F		CY18F	CY19F	CY18F	CY19F	CY18F	CY19F	CY18F	CY19F
PVTrans	PVT VN	ADD	20,400	29,900	252	9.6	9.7	3.7%	1.44	1.34	12.3%	14.4%	5.2	4.8	5.0%	6.2%
MISC Bhd	MISC MK	HOLD	7.13	6.87	8,180	15.8	15.9	-15.1%	0.91	0.89	5.6%	5.7%	9.6	8.9	3.6%	3.6%
PTT Pcl*	PTT TB	NOT RATED	560.0	N/A	51,175	12.0	11.7	27.4%	N/A	N/A	14.7%	13.5%	6.1	5.9	6.1%	5.9%
Ship Finance*	SFL US	NOT RATED	14.20	N/A	1,471	16.4	13.4	4.6%	N/A	N/A	8.4%	9.9%	9.7	9.3	9.7%	9.3%
Capital Product*	CPLP US	NOT RATED	3.14	N/A	400	11.3	7.9	-6.5%	N/A	N/A	5.0%	7.9%	6.3	5.7	6.3%	5.7%
Tsakos Energy*	TNP US	NOT RATED	3.39	N/A	288	N/A	5.9	N/A	N/A	N/A	-2.1%	3.5%	8.1	6.5	8.1%	6.5%
Teekay Corp*	TK US	NOT RATED	8.09	N/A	811	29.0	88.4	3697.3%	N/A	N/A	-1.3%	0.4%	8.4	9.3	8.4%	9.3%
Ardmore Shipping*	ASC US	NOT RATED	7.80	N/A	251	421.1	8.7	N/A	N/A	N/A	1.2%	4.8%	10.8	7.5	10.8%	7.5%
Nordic American Tnk.*	NAT US	NOT RATED	1.93	N/A	274	N/A	83.5	N/A	N/A	N/A	-12.3%	-10.4%	9.9	4.7	9.9%	4.7%
Average (all)					7,011	73.6	27.2	618.6%	1.18	1.12	3.5%	5.5%	8.2	6.9	7.5%	6.5%
Average (excluding PVTrans)					7,856	84.3	29.4	741.6%	0.91	0.89	2.4%	4.4%	8.6	7.2	7.9%	6.5%

NOTE: AS OF 20 APR 2018

SOURCES: CGS-CIMB RESEARCH, BLOOMBERG

We initiate coverage on PVT with an Add rating and a target price of VND29,900, based on a blended valuation of DCF and target FY19F EV/EBITDA of 7.2x. (global peers' average excluding PVT). In terms of valuation, At FY19F EV/EBITDA of 4.8x, PVT is clearly trading at the lower end of its global peers' trading range of 4.7-9.3x. However, PVT's recurring CY18F ROE of 12.3% is higher than its global peers' average (excluding PVT) of 2.4%. We like PVT because we believe it will secure solid contracts from DQR and NSRP in the future, while having exposure to the likely imminent recovery of the product tanker industry. Moreover, the company is restructuring itself as PVN reduces its controlling and ownership stake in PVT. PVT plans to reduce, or even stop, some of its low-margin business activities, such as trading. We believe that the divestment of PVN would have no negative impact on PVT's future contracts due to the fact that PVT has strong competitive advantages in the domestic market. Although PVN helped PVT to secure contracts in the past, PVN does not have influence in the bidding process for several upcoming major contracts, in our view. In fact, the act of assigning contracts to its own transport subsidiary, by circumventing the normal bidding process, is questionable, in our view. We believe the conglomerate will try to stay clear of this, especially in light of the multiple allegations brought against it for misuse of State assets recently.

Risks

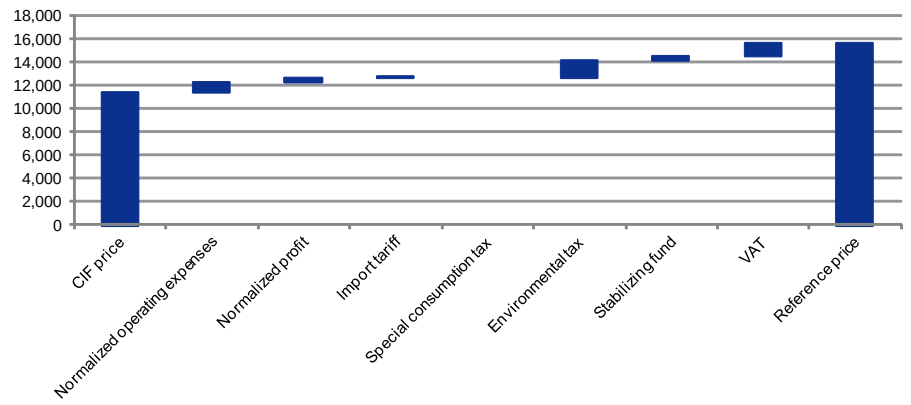
As more than 70% of the core revenue, including shipping and FSO leases, comes from domestic clients, with whom PVT has a good relationship and past track record, the company's business is far less exposed to market risks compared to tanker operators that have to compete in the cut-throat international market, in our view. However, even though PVT is less exposed to the cyclicality of the global tanker market, the company could still suffer from low oil prices, disruption in operation of DQR, and unfavourable geopolitical events that would impact both its fuel-linked crude transport charter rates, as well as its production and transport volumes.

Lower oil prices could lead to lower gross profit for domestic trades, but this is unlikely in the near term ➤

There are two types of fuel prices: retail prices incurred by consumers and reference prices used by the State to control the retail prices. While reference prices follow the global gasoline and crude oil prices with negligible delay, retail prices are controlled by the State to smooth out any abrupt shocks from global price swings. Any increase in the reference fuel prices caused by movements of global crude oil prices will translate to higher charter rates thanks to the unique rate structure of domestic contracts. Moreover, we believe retail prices are likely to lag behind reference prices given that: 1) two consecutive adjustments of retail prices must be at least 15 days apart, and 2) if reference prices increase or decrease by more than 3%, distributors must inform, or even seek consensus of, the Ministry of Industry and Trade (MoIT) and the MoF to adjust retail prices. However, decreasing oil prices also pose a threat to profitability: while gross margin could barely change, lower oil prices will lead to lower gross profit in term of absolute value.

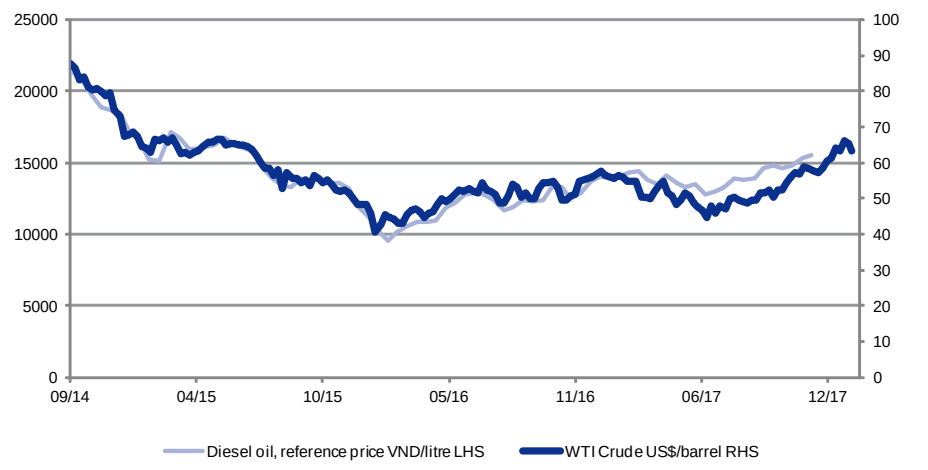
In our opinion, a low oil price scenario over the next few years is unlikely due to steady output cuts by OPEC and increasing demand from additional refinery capacity. In Nov 2017, OPEC production decreased by 133.5 thousand barrels/day mom to reach 32.5 million barrels/day. OPEC is committing to maintaining output cuts throughout 2018. We therefore believe that PVT has very limited risks stemming from low rates over the next several years. We expect global crude oil prices to hover around US$60-65/barrel in 2018F.

Figure 29: Diesel oil reference price (VND/litre)



SOURCES: CGS-CIMB RESEARCH, MOIT

Figure 30: Vietnam's diesel oil reference price vs global crude oil price



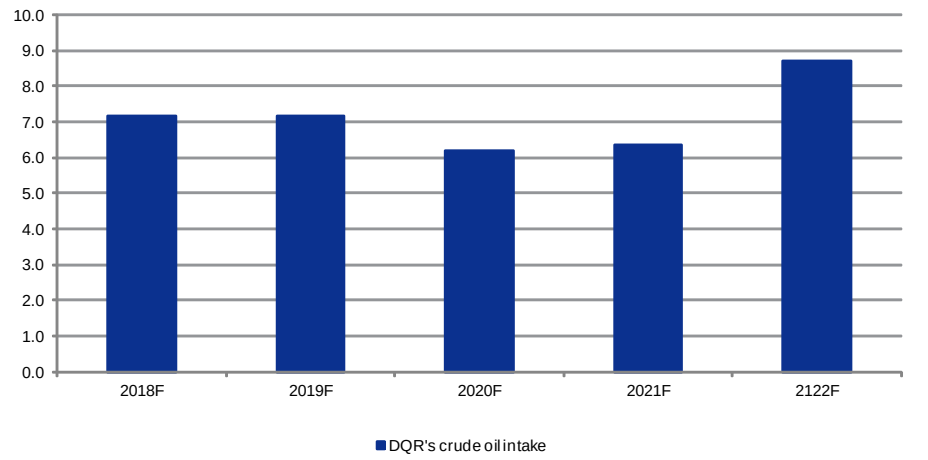
SOURCES: MOIT, BLOOMBERG

Dependence on DQR could hurt PVT's earnings if DQR's operations are halted

We think PVT's dependence on DQR is a major risk, as more than 50% of PVT's transport revenue in FY19F is linked to DQR's operations. During DQR's scheduled maintenance, PVT's dirty tanker fleet will have to run international trades, which generate lower gross margins. Over the next five years, we view the following events as risks to PVT's earnings:

- The Back Ho Basin, the main source of sweet crude oil for DQR, is expected to run dry in the next five years according to PVN. PVT could face more competition in terms of inward deliveries as crude oil will be hauled from sources located further away such as the Arabian Gulf.
- DQR will undergo capacity upgrade in 2020-21F, which will lead to lower utilisation rate of around 85%. We expect PVT's crude oil transport revenue in FY20-21F from DQR to decrease by around 10% compared to FY19F. After the upgrade, DQR would be able to refine both sweet and sour crude oil.

Figure 31: DQR's expected crude oil intake (m tonnes)

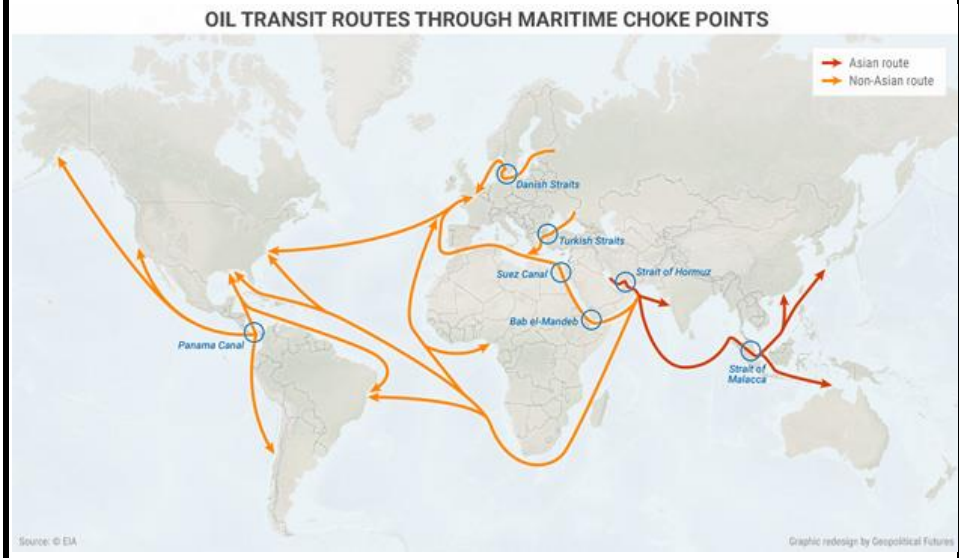


SOURCES: BINH SON REFINERY

Worsening geopolitical climate in the Middle East and Southeast Asia could disrupt oil flow from the Arabian Gulf »

The Arabian Gulf – Asia trade route is one of the most vital routes for crude oil trades as it accounts for 1) 35% of global seaborne oil exports as at 2016, equivalent to 17m barrels/day according to IEA; and 2) around 70% of Asia's oil imports as at 2016. The trade route must pass through two critical choke points: Strait of Hormuz and Strait of Malacca. Any geopolitical incident that happens along this trade route could interrupt refinery activities in Asia, as the route is the shortest route to ship oil from the Middle East to Asia.

Figure 32: Major oil trade routes



SOURCE: MAULDIN ECONOMICS

The Strait of Hormuz is the primary trade route through which Persian Gulf countries, namely Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates, export their oil. Only Iran and Saudi Arabia have alternative routes to maritime shipping lanes. The strait is 21 miles wide at its narrowest point, bordered by Iran and Oman. Persian Gulf countries depend heavily on revenue from these exports, as this accounts for 70-80% of their public revenue as at 2015. Disruptions in the strait would interrupt the supply chain of oil: exporters risk losing significant revenue and importers could face supply shortages and higher costs.

Smoldering political tensions between Sunni and Shiite countries, especially between Iran and Saudi Arabia, is always a threat to the opening of the strait. In Dec 2011, Iranian Vice President Mohammad-Reza Rahimi threatened to close the Strait of Hormuz over growing threats from the US to scrap the Iran nuclear deal. At that same time, Iran conducted a 10-day military exercise in international waters near the Strait of Hormuz. The US, responded to the exercise by increasing the presence of their military assets in the region. Other countries, such as the United Kingdom, followed the US and sent their military assets to the disputed area. Fortunately, oil flow has thus far not been disrupted thanks to the naval presence of the US which ensures freedom of navigation.

Persian Gulf countries have tried to minimise the risks related to the strait. This has included establishing alternative channels for exports. Saudi Arabia built a pipeline in 1950 to carry oil from fields in the east to refineries in the west, where it is later exported through the Red Sea. The United Arab Emirates built the Abu Dhabi Crude Oil Pipeline in 2011 to export directly from Fujairah Port. However, the pipeline capacity is not enough to significantly reduce dependence on the Strait of Hormuz.

Figure 33: Strait of Hormuz

SOURCE: CGS-CIMB RESEARCH, GOOGLE MAPS

The Strait of Malacca is the second largest oil trade choke point after the Strait of Hormuz. Around 20% of total global petroleum and other liquid products are moved through the strait every year. The strait is 890 km long and 2.4 km wide at its narrowest point, making vessels more susceptible to blockades. If the strait is blocked, vessels have to go through the Sunda Strait or the Lombok Strait, which results in higher oil prices as the travel distance is 30-50% longer. China and Japan currently have the greatest interest in keeping the strait open. Around 80% of China's seaborne oil imports and 60% of Japan's total oil imports pass through the strait. Even though the geopolitical climate in the region is far less tense, in our view, compared to the Strait of Hormuz, the strait is more vulnerable to environmental catastrophes such as oil spills.

If a closure occurs in one of these choke points, we believe PVT's crude oil transport and refined product transport activity will be badly hit as such an event would 1) disrupt the incoming oil inflow for NSRP, the refinery will have to close down and it could incur additional costs to restart production; it will be very costly to develop alternative sources of crude oil from Russia or from the US; 2) interrupt the production of refined products. The affects will be more severe than the closure for maintenance as the choke points' closure will disrupt all oil trades in the Middle East and Asia Pacific region. As a result, PVT may not be able to deploy its vessels effectively in such a scenario.

Figure 34: Strait of Malacca

SOURCE: CGS-CIMB RESEARCH, GOOGLE MAPS

Appendices

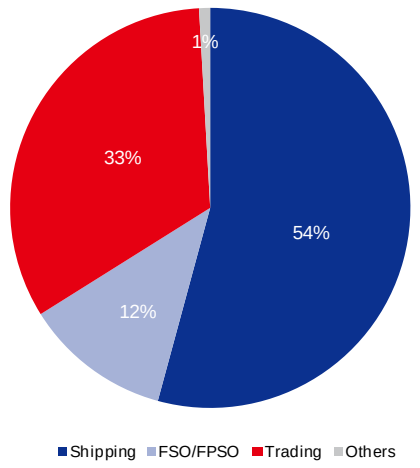
Company overview

Before 2007, PVT was a division of PetroVietnam (Unlisted, Not Rated). The company purchased its first Aframax tanker, Poseidon M, in 2003, followed by the second Aframax tanker, Hercules M, in 2006. Although PVT was privatised in 2007, it can still be considered as a state-owned company in our view, as PVN still holds controlling interest until today. However, PVN will gradually withdraw its control over PVT over the next few years in line with its partial divestment plans. We believe the transition will allow PVT to restructure itself to become more dynamic and agile. At the moment, around 7-8 liquid tankers of the company mainly run domestic routes, specifically from DQR to its clients. Around 4-5 liquid tankers are more active on international routes, mainly the Arabian Gulf – Southeast Asia and intra-Asia routes and benefit PVT in 2 major ways: a) they help diversify PVT's client base to reduce dependence on just domestic customers and 2) having to obtain Oil Major Approvals for ships operating on international routes helps stay in touch with best practices and maintain high operating standards across the fleet.

PVT's core operating activities include crude oil transport, refined products transport, FSO/FPSO leasing and O&M, and LPG transport »

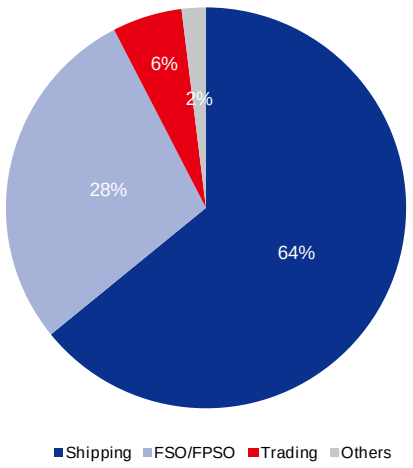
PVT has also begun carrying thermal coal for Vung Ang power plant since 2014, though the revenue is insignificant compared to other activities. The proportion of revenue from dry bulk transport will gradually increase, as several power plants will come online in 2018F and 2019F, with coal for these plants being imported primarily from Indonesia as domestic coal production has peaked.

Figure 35: Revenue components, 2017



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 36: Gross profit components, 2017



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

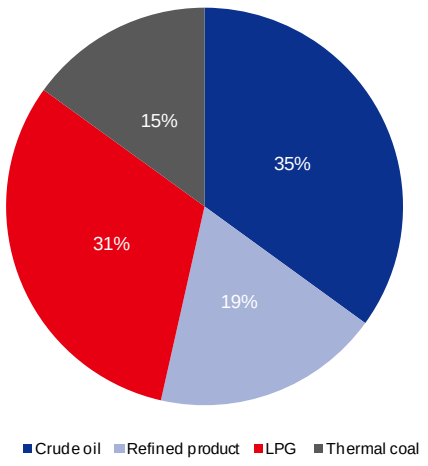
Transport revenue accounts for 54.2% of total FY17 revenue and 64.1% of total FY17 gross profit:

- Crude oil transport accounts for 40.3% of the company's total transport revenue as at FY17, and most of the revenue comes from DQR. A small percentage of its revenue comes from international trade, when vessels are not carrying DQR's cargo. PVT transports 100% of DQR's crude oil; 90% of this is from Bach Ho Basin and other domestic sources and the remaining 10% is imported from the Arabian Gulf. The choice of input for DQR is quite limited as the plant can only refine sweet crude oil due to technical constraints. According to PVN, the Bach Ho Basin, the only domestic sweet crude oil source for DQR, could run dry in the next 4 or 5 years, so the refinery will later have to import crude oil from the Middle East. Binh Son Refinery (BSR), the owner of DQR, will upgrade the plant from 7.2m tonnes/year to 8.7m tonnes/year by 2021F. The upgrade will allow DQR to also accept sour crude oil as feedstock. Charter rates for domestic crude transport are quite stable. For example, the rates have actually risen even

while the international Arabian Gulf – Southeast Asia TCE rate for Aframax has dropped by more than 50% to around US$10,000 a day since the end of 2016. As the diesel oil price has increased by around 10% since the beginning of 2017, the charter rate has increased by around 8% compared to the end of 2016. In 2018, we believe DQR rates could increase by 7.2% yoy with an increase in the average Brent crude oil price from US$54.9/barrel in 2017 to an average of more than US$75/barrel in 2018F.

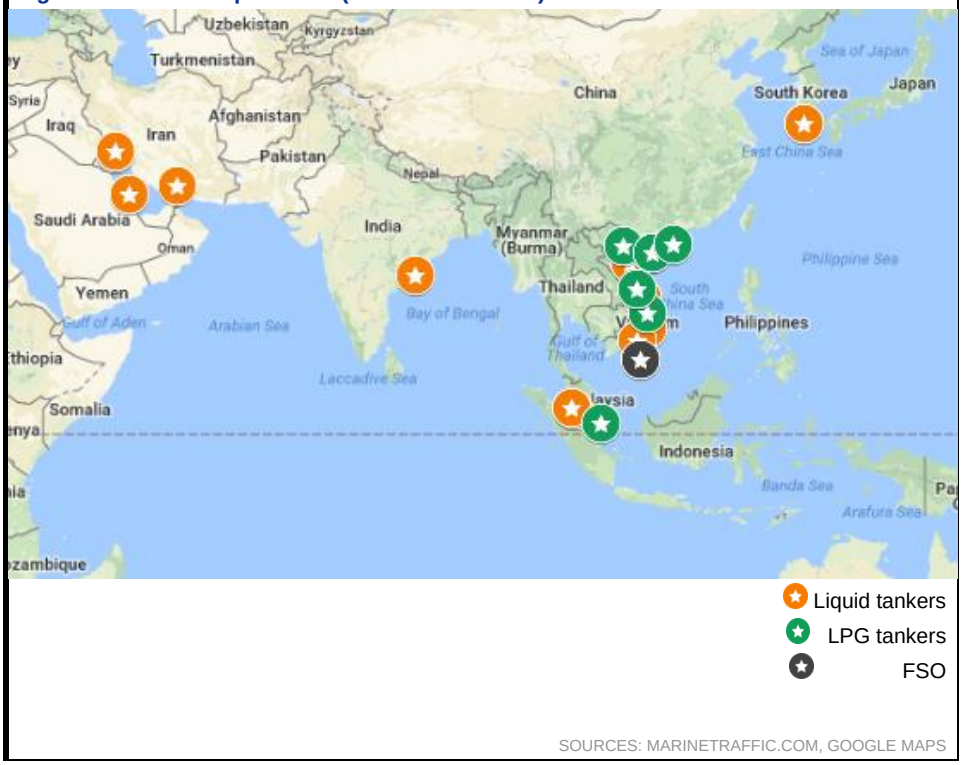
- LPG transport is the second most important activity of PVT as it accounts for 23% of its total FY17 transport revenue. Around 65-70% of revenue from this activity comes from domestic trades. PVT carries 100% of the LPG produced by DQR to distributors, and the company has a 90% share of the domestic LPG transportation seaborne market. While transporting LPG/LNG by a pipe system is more cost-efficient, LPG tankers are more flexible as they are able to easily connect supply with new demand, such as new industrial zones or new factories which typically do not have pipeline connectivity to source. Moreover, as pipe systems end at LPG storage points such as Dung Quat or Thi Vai, LPG transport from main storages to end-users must use ships or trucks. The LPG fleet also takes care of importing LPG from Asia Pacific sources, such as Shuidong, Ningbo (China), and Merak (India). The revenue growth prospects of the LPG segment are still attractive, as Vietnam is seeing increasing demand for LPG and LNG. PVT is planning to replace two of its old LPG tankers with new modern ones, in order to prepare for this demand in the future.
- Refined product transport accounts for 20% of its total transport revenue. As 70% of the product fleet's tonnage is focused on the Arabian Gulf/India – Southeast Asia routes, around 76% of total product transport revenue comes from international trades. The remaining 24% comes from shipping 30-40% of the refined output of DQR. Charter rates for DQR's output are usually higher than international rates. At the moment, domestic TCE rates are around US$7,000/day while the Arabian Gulf – Southeast Asian rate for MR tankers has fluctuated around the US$5,000/day mark during 2017.
- For thermal coal transport, PVT is expanding its dry bulk fleet to serve several new power plants coming online at the end of 2018 and in 2019. In 2017, PVT purchased two ferries of 2,000 DWT each and will acquire two dry bulk vessels of 50,000-80,000 DWT each at a total capex of VND813bn. These ferries will carry thermal coal from Southeast Asian sources such as Indonesia. We expect that the gross margin of thermal transport will be lower compared to other activities, as the domestic dry bulk market is very competitive due to oversupply.

Figure 37: Transport revenue components



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

Figure 38: PVT fleet positions (as of 23 Dec 2017)



SOURCES: MARINETRAFFIC.COM, GOOGLE MAPS

FSO/FPSO lease and O&M are the most profitable activities for PVT, accounting for 11.9% of total revenue and 29.1% of gross profit in FY17:

- PVT owns one tanker-converted FSO (Dai Hung Quen) with capacity of 105,000 DWT. The FSO is serving Dai Hung oilfield and its FY17 uptime was more than 99%. Charter rates for the FSO are also linked to reference fuel prices. FSO Dai Hung Queen generates around VND260bn of revenue per year and gross margin of more than 50% in FY15-17.
- PVT provides operating and management (O&M) services for FPSO Lewed Emas and FPSO Song Doc Prime, which generated FY17 revenue of around VND470bn and gross margin of more than 20%. The lower gross margin for O&M services compared to that of FSO lease activity is due to the nature of the O&M business that incurs steep labour costs for skilled crew (largest expense item).

Trading activities comprise PVT purchasing and delivering cargoes on behalf of customers. These cargoes include LPG, PP pellets and fertilisers that are products of PVN's subsidiaries. Basically, PVT bear minimal risk related to these trades and also earns minimal gross margin.

Industry overview

The domestic liquid tanker market is dominated by a few large players

Liquid tankers comprise both dirty tankers, which specifically haul crude oil, and clean tankers carrying refined products such as diesel/gasoil, kerosene and naphtha. These vessels have their tanks epoxy-coated at different levels to prevent cargo contamination, hull corrosion and also for ease of cleaning. Dirty tankers and clean tankers are not interchangeable because it is very difficult to completely clean a dirty tanker of residual crude oil and this residue will contaminate other refined products. Moreover, as crude oil is highly corrosive compared to refined products due to its high level of sulphur, the coating process for dirty tankers is also more complicated.

Vietnam's dirty tanker fleet is controlled by only three companies, namely PVT, Quoc Viet Marine (Unlisted, Not Rated), and VOSCO (HOSE: VOS, Not Rated). PVT's fleet accounts for 66.6% of the nationwide tonnage of 455,599 DWT and it has a 100% domestic market share in terms of DWT, according to our estimates; other tankers operate in international waters.

Figure 39: Vietnam's dirty tanker fleet (2017)

Company	Fleet size DWT	% total fleet	Aframax	Handymax	Average age
PVTrans	303,290	66.6%	3	0	15
Quoc Viet Marine	105,161	23.1%	1	0	20
VOSCO	47,148	10.3%	0	1	14
Total	**455,599**		**4**	**1**	**16**

SOURCES: CGS-CIMB RESEARCH, WORLD-SHIP.COM

The domestic clean tanker market is more diverse, with more than ten companies operating. However, the competitive situation is rather oligopolistic, with three players accounting for 85% of nationwide tonnage. Most of the trades are refined products imported from Asia Pacific suppliers such as South Korea and Singapore and are mainly taken care of by the fleet of PG Tankers, a subsidiary of Petrolimex (Unlisted, Not Rated). While large players dominate the upstream portion of the value chain, which includes transporting to wholesale storages, small players have a portion of the downstream value chain including transporting from wholesale storages to retail storages.

Figure 40: Vietnam's clean tanker fleet (2017)

Company	Fleet size DWT	% total fleet	LR2	LR1	MR2	MR1	Below MR1	Average age
PVTrans	144,374	13.6%	0	0	1	0	7	17
PG Tanker	498,088	46.9%	1	0	1	6	15	21
Vinalines	114,066	10.7%	0	0	2	0	1	10
Au Lac Corp	85,699	8.1%	0	0	0	0	6	10
Mekong Trans	13,065	1.2%	0	0	0	0	2	10
Anh Vu Marine	13,707	1.3%	0	0	0	0	1	11
Khai Hoan Marine	12,807	1.2%	0	0	0	0	1	10
Others	179,560	16.9%	0	0	0	0	46	18
Total	**1,061,366**		**1**	**0**	**4**	**6**	**79**	**13**

SOURCES: CGS-CIMB RESEARCH, WORLD-SHIP.COM

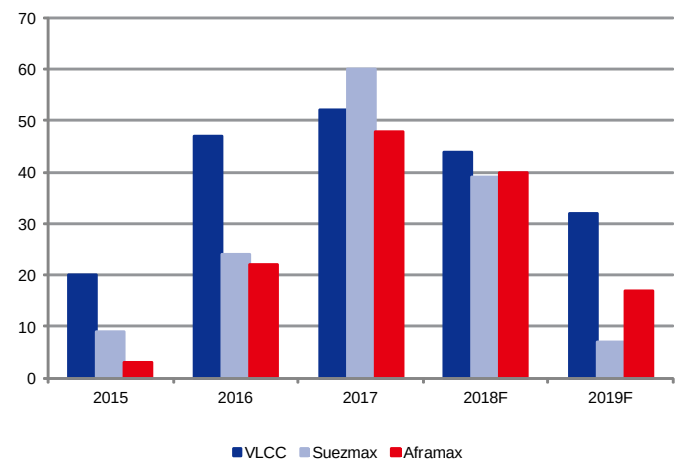
While the global product (clean) tanker market is seeing light at the end of the tunnel, the global dirty tanker market is still not out of the woods, in our view

While PVT's dirty tankers specifically serve DQR, sometimes one or two vessels do operate on international waters when DQR ceases operation for maintenance or when the vessels need to maintain Oil Major Approvals. The bearish global dirty tanker market has limited impact on the profitability of these vessels.

The global shipping industry, whether it be dry bulk shipping, container shipping or tankers, is highly cyclical and each cycle lasts from five to ten years, depending on the exact segment. The cycle is lengthy owing to long vessel delivery times and also because the industry is fragmented. Supply growth generally lags behind demand growth, given that it typically takes between one to two years to build a vessel. Also, vessel orders in an upcycle are difficult to cancel and hence, tend to be delivered when the cycle has already peaked or turned, only further exacerbating the oversupply.

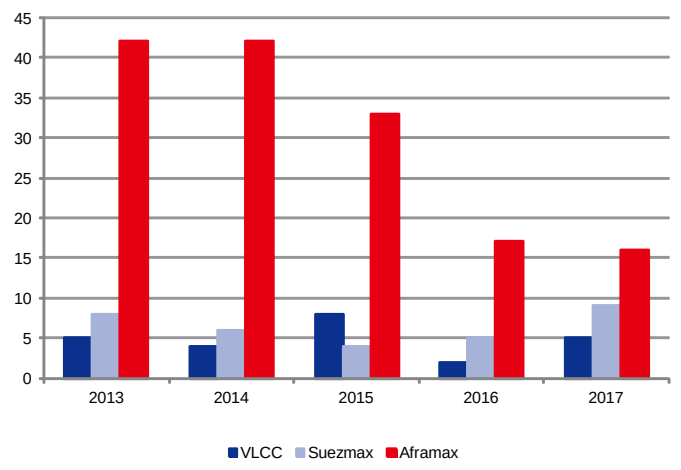
The current lacklustre situation of the global tanker market is due to the accumulated order book as far back as 2015 when declining oil prices led to a crude stockpiling and stimulated demand for dirty tankers, in our view. The substantial order book has begun to materialise into deliveries in 2017 and 2018, but rates have decreased to a tenth of that achieved during the peak in 2015. Even though expected deliveries have started to decline starting this year, the influx of new tonnage is still very high compared to demolition rates.

Figure 41: Recent and expected deliveries



SOURCES: CLARKSON RESEARCH

Figure 42: Number of demolished vessels

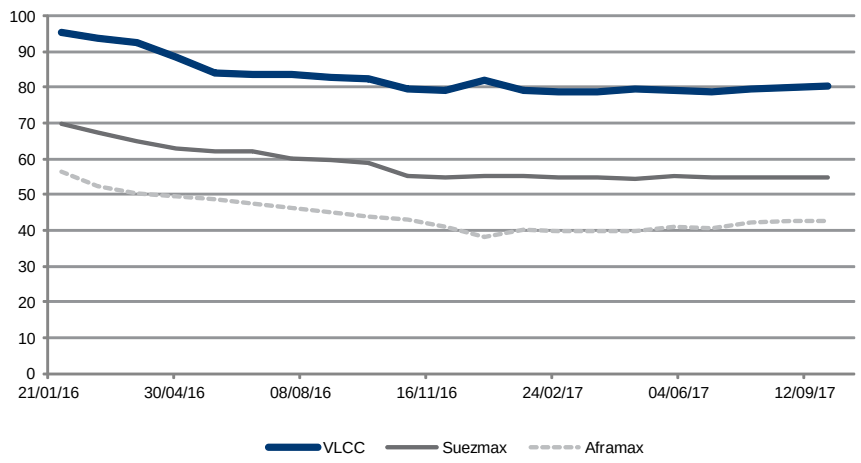


SOURCES: CLARKSON RESEARCH

Moreover, the order book has continued to increase in 2017, especially for the VLCC segment. According to BIMCO, the total new orders for VLCC reached 38 in 6M17, compared to 13 in 2016. Suezmax orders in 2017 were 16 compared to 18 in 2016. New Aframax orders reached 35 up from just 6 in the previous year.

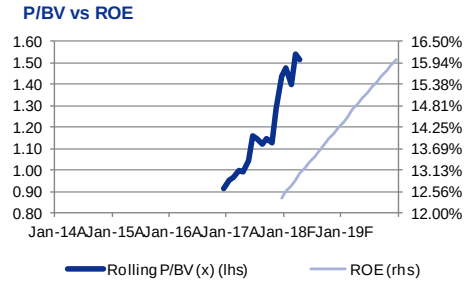
We expect the influx of new tonnage in the coming years to be so large that, in our opinion, it would far exceed any additional demolitions spurred by the two aforementioned new IMO mandates that will be fully enacted in 2019 and 2020. However, the gloomy market sentiment has pushed newbuild prices to a 5-year low. Therefore, it is really economical for PVT to build a new, or even buy, a 5-year old VLCC at the moment. We believe this puts PVT in a “sweet spot”: it can take advantage of the gloomy conditions in the global dirty tanker market to expand or rejuvenate its fleet in a capital efficient manner, while still being protected from the low charter rates that accompany the bearish market conditions through its contracts with DQR and the prospective contract with NSRP, both of which come with gross margin guarantees.

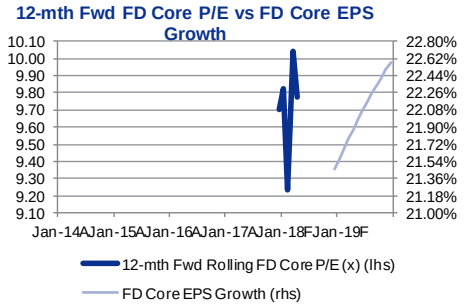
Figure 43: Tanker newbuild prices (US$ m)



SOURCES: BLOOMBERG

BY THE NUMBERS





Decreasing trading revenue, which is mostly purchases on behalf of clients. Revenue to increase again in FY18F due to DQR's return to operations and additional contracts.

Profit & Loss

(VNDb)	Dec-16A	Dec-17A	Dec-18F	Dec-19F	Dec-20F
Total Net Revenues	6,785	6,148	7,112	8,139	8,088
Gross Profit	**763**	**846**	**1,054**	**1,326**	**1,280**
Operating EBITDA	**993**	**1,181**	**1,369**	**1,660**	**1,637**
Depreciation And Amortisation	(466)	(578)	(595)	(655)	(677)
Operating EBIT	**528**	**603**	**774**	**1,005**	**961**
Financial Income/(Expense)	35	36	1	(60)	(22)
Pretax Income/(Loss) from Assoc.	32	27	30	34	34
Non-Operating Income/(Expense)	14	4	10	20	25
Profit Before Tax (pre-EI)	**608**	**671**	**815**	**1,000**	**997**
Exceptional Items					
Pre-tax Profit	**608**	**671**	**815**	**1,000**	**997**
Taxation	(119)	(137)	(167)	(205)	(205)
Exceptional Income - post-tax					
Profit After Tax	**489**	**534**	**648**	**795**	**792**
Minority Interests	(67)	(84)	(102)	(124)	(124)
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
Net Profit	**421**	**450**	**547**	**670**	**668**
Recurring Net Profit	421	450	547	670	668
Fully Diluted Recurring Net Profit	**421**	**450**	**547**	**670**	**668**

Purchase of two 2,000 DWT ferries for thermal coal transport and a new 13,000 DWT product tanker.

Purchase of a new Aframax and two dry bulk vessels.

Purchase of a new 250,000 DWT VLCC and installing BWTS for fleet.

Cash Flow

(VNDb)	Dec-16A	Dec-17A	Dec-18F	Dec-19F	Dec-20F
EBITDA	993	1,181	1,369	1,660	1,637
Cash Flow from Invt. & Assoc.	17	(9)	(27)	(15)	0
Change In Working Capital	12	74	6	66	0
(Incr)/Decr in Total Provisions	235	39	0	0	0
Other Non-Cash (Income)/Expense	(182)	(186)	(221)	(166)	(171)
Other Operating Cashflow	401	(87)	196	145	155
Net Interest (Paid)/Received	(123)	(152)	(155)	(151)	(118)
Tax Paid	(122)	(115)	(167)	(205)	(205)
Cashflow From Operations	**1,231**	**745**	**1,001**	**1,335**	**1,299**
Capex	(28)	(355)	(1,293)	(1,486)	(328)
Disposals Of FAs/subsidiaries					
Acq. Of Subsidiaries/investments					
Other Investing Cashflow	(901)	791	181	(343)	175
Cash Flow From Investing	**(929)**	**436**	**(1,112)**	**(1,829)**	**(153)**
Debt Raised/(repaid)	(696)	(249)	323	(540)	(535)
Proceeds From Issue Of Shares	7	49	0	0	0
Shares Repurchased	0	0	0	0	0
Dividends Paid	(232)	(304)	(281)	(345)	(344)
Preferred Dividends					
Other Financing Cashflow					
Cash Flow From Financing	**(921)**	**(504)**	**41**	**(885)**	**(879)**
Total Cash Generated	(619)	677	(69)	(1,379)	267
Free Cashflow To Equity	**(395)**	**932**	**212**	**(1,035)**	**610**
Free Cashflow To Firm	**424**	**1,333**	**44**	**(344)**	**1,264**

SOURCES: VND, COMPANY REPORTS

BY THE NUMBERS… cont'd

Gradually reducing debt by repaying VND300bn-400bn p.a.

Balance Sheet

(VNDb)	Dec-16A	Dec-17A	Dec-18F	Dec-19F	Dec-20F
Total Cash And Equivalents	2,898	2,875	3,114	1,813	1,917
Total Debtors	646	728	933	1,067	1,060
Inventories	86	95	122	137	137
Total Other Current Assets	96	197	181	194	193
Total Current Assets	**3,727**	**3,895**	**4,349**	**3,211**	**3,308**
Fixed Assets	5,057	4,961	5,477	6,308	6,117
Total Investments	235	239	239	239	239
Intangible Assets	5	6	6	6	6
Total Other Non-Current Assets	39	103	142	651	647
Total Non-current Assets	**5,337**	**5,308**	**5,864**	**7,204**	**7,008**
Short-term Debt	530	537	483	435	391
Current Portion of Long-Term Debt					
Total Creditors	844	867	1,062	1,193	1,191
Other Current Liabilities	364	569	569	652	648
Total Current Liabilities	**1,738**	**1,973**	**2,115**	**2,280**	**2,230**
Total Long-term Debt	2,435	2,153	2,529	2,037	1,546
Hybrid Debt - Debt Component					
Total Other Non-Current Liabilities	561	416	541	619	615
Total Non-current Liabilities	**2,996**	**2,569**	**3,070**	**2,656**	**2,160**
Total Provisions	0	0	0	0	0
Total Liabilities	**4,734**	**4,542**	**5,185**	**4,936**	**4,390**
Shareholders' Equity	3,574	3,687	3,997	4,376	4,754
Minority Interests	760	974	1,032	1,102	1,172
Total Equity	**4,333**	**4,662**	**5,029**	**5,478**	**5,926**

Decreasing revenue due to DQR's scheduled maintenance and upgrade.

Increasing net cash per share due to stable free cash flow and decreasing debts.

Key Ratios

	Dec-16A	Dec-17A	Dec-18F	Dec-19F	Dec-20F
Revenue Growth	17.8%	(9.4%)	15.7%	14.4%	(0.6%)
Operating EBITDA Growth	(1.1%)	18.9%	15.9%	21.3%	(1.4%)
Operating EBITDA Margin	14.6%	19.2%	19.2%	20.4%	20.2%
Net Cash Per Share (VND)	(239)	659	360	(2,344)	(70)
BVPS (VND)	12,698	13,102	14,201	15,549	16,892
Gross Interest Cover	4.29	3.98	5.01	6.67	8.12
Effective Tax Rate	19.6%	20.5%	20.5%	20.5%	20.6%
Net Dividend Payout Ratio	55.1%	67.6%	51.5%	51.5%	51.5%
Accounts Receivables Days	35.98	40.17	41.56	43.40	46.59
Inventory Days	5.73	6.25	6.55	6.94	7.37
Accounts Payables Days	45.22	46.03	44.11	44.44	47.09
ROIC (%)	12.2%	10.0%	13.0%	15.0%	11.5%
ROCE (%)	9.0%	10.8%	12.1%	13.7%	13.4%
Return On Average Assets	5.05%	5.53%	6.67%	8.16%	7.81%

Key Drivers

	Dec-16A	Dec-17A	Dec-18F	Dec-19F	Dec-20F
Petroleum TCE rate (yoy chg %)	12.4%	14.8%	7.2%	0.0%	2.3%
Chemical TCE rate (yoy chg %)	N/A	N/A	N/A	N/A	N/A
Fleet Size (no. Of Vessels)	22.0	22.0	23.0	25.0	25.0
No. Of LNG Tankers	10	10	15	15	15
No. Of Petroleum Tankers	11	12	15	16	16
No. Of Chemical Tankers	N/A	N/A	N/A	N/A	N/A

SOURCES: VND, COMPANY REPORTS

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