

#BUY #LPG #VLGC #equities ahead of the imminent seasonal and cyclical upside. We see shares +94% on average in one year

LPG Carriers

BUY

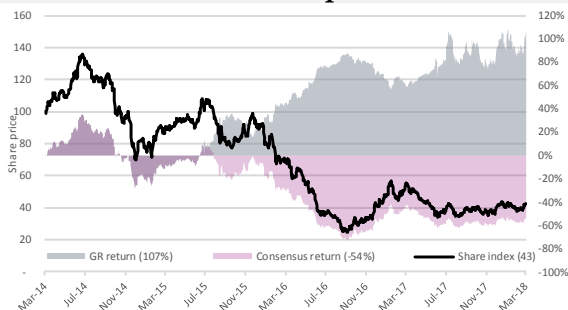
Imminent Seasonal & Cyclical Upside

We see the cycle turning to expansion in 2018 as supply growth turn negative and annualized demand growth continues around 10%. We also see signs of seasonal factors materializing, including more US LPG available for export, a rising price differential between Naphtha and LPG and stock building ahead of next winter. Thus, we expect an imminent upswing in spot rates from 2Q18 and forecast shares on average 94% higher in one year.

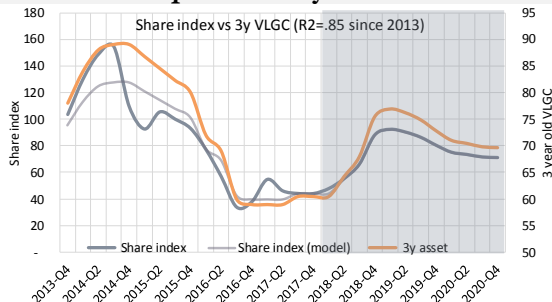
Market: We believe negative supply growth and imminent seasonal demand improvements will lead to significantly higher earnings from 2Q18. Add annualized demand growth of ~10% and a transparent low orderbook until 2020, the foundation is laid for the next cyclical expansion. Second hand LPG vessels are currently at trough levels and prices not seen since early 2004. When adjusting for inflation, second-hand prices are hovering around their lowest on record going back to 2000. Given current share pricing, investors are thus able to buy modern vessels at a 13-24% discount to all-time-low levels getting the operational organization for free.

Investments: [AVANCE](#) (BUY, 56) is our #1 pick trading at a P/NAV of 0.59 (peers 0.62) and 1y fwd NAV of 0.38 (0.48) even after applying a China-discount to its applicable fleet. Add high operational leverage and we see EV/EBITDA in '19E of 4.3 (4.6) and potential dividend yield of 41% (26%). [LPG](#) (BUY, 14) is ticking all the same boxes as Avance, but it ranks #2 as the discount is slightly lower across the board. [BWLPG](#) (BUY, 69) also has significant upside in our view, but the historically lower operational leverage from its industrial approach means it is not the best bet in the cyclical expansion.

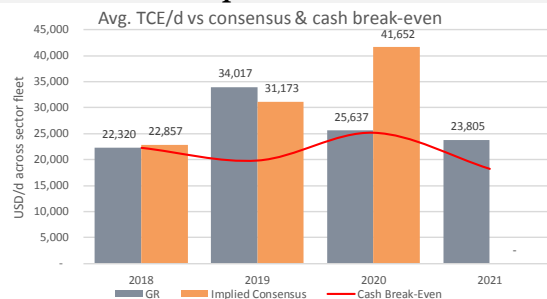
Sector share prices



Share prices vs 3y old VLGC



TCE/d across peers: GR vs consensus



Gersemi Research / Analysts

Joakim Hannisdahl

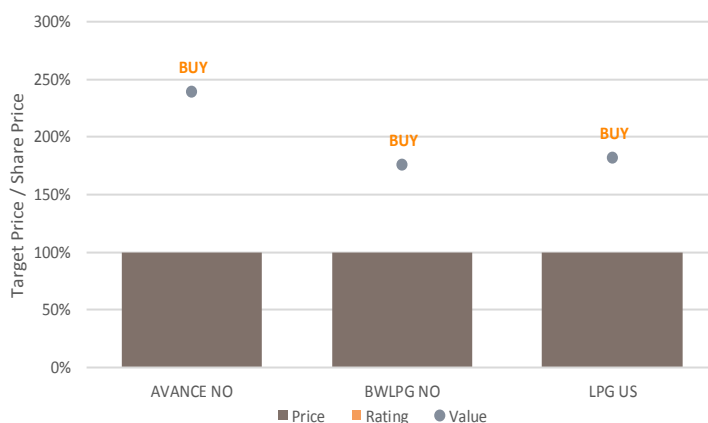
Head of Research

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Sector overview

USDm	Mcap	Turnover	Recommendations & upside				Valuation		
			Rec.	TP	P	+/-	NAV	P/NAV	€
AVANCE NO	1,514	2.0	BUY	56	23.5	139%	40.0	0.59	0.23
BWLPG NO	5,533	5.3	BUY	69	39.0	77%	54.0	0.72	0.21
LPG US	438	0.4	BUY	14	7.9	76%	14.3	0.55	0.18
Average	2,495	2.6	BUY			97%	0.62	0.21	
Median	1,514	2.0	BUY			77%	0.59	0.21	

Sector overview



Source: Gersemi Research, Bloomberg, company data

Disclaimer: The publisher currently has investments in some of the companies covered in this report. More disclaimers at the end of this document



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Company details toward the end of this document:

Avance Gas

BW LPG

Dorian LPG



Market Outlook

Demand

The Middle East was historically the main exporter of seaborne LPG cargoes, stemming from oil/gas production and refining. The LPG industry was primarily supply driven, as prices were set as to clear available LPG in order to avoid expensive storage or environmentally unfriendly (and sometimes prohibited) flaring.

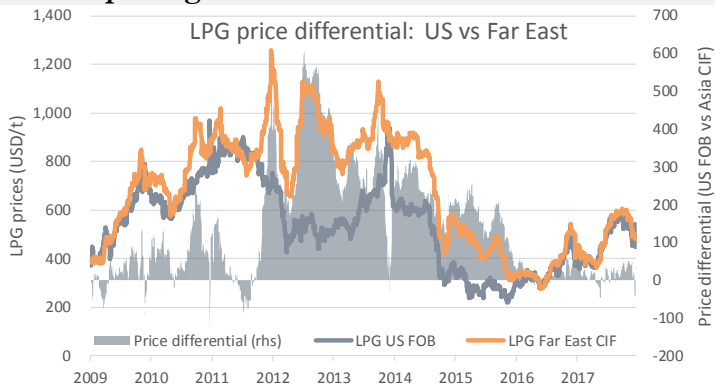
The US shale revolution from the mid-2000s and onwards has transformed the industry. LPG (mainly propane) is a by-product of US shale production and huge amounts were left stranded in the grid. In Canada, propane prices actually turned negative for a short period in 2015 as supplier scrambled to offload volumes in order to avoid cost of carry.

During this period, waterborne LPG export capacity was a bottleneck, and the VLGCs and LGCs on the water were able to capture close to 100% of the huge price differential between export markets such as US/Middle East and the import region in the Far East. Since then, a massive increase in US export facilities has taken place, and it is now running below full utilization. Also, the VLGC fleet has nearly doubled. Thus, regional markets are now much more interconnected than before and the economics for the oversupplied VLGC fleet have deteriorated.

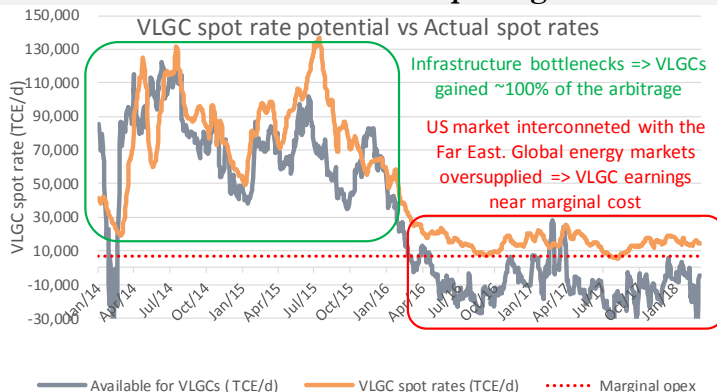
BotE* VLGC shipping economics: USG to FE	
Bunkers price, HFO (USD/t)	390 Aa
Bunkers price, MGO (USD/t)	417 Ab
Bunkers consumption at sea (t/d)	46 B
Aux. bunkers consumption (t/d)	7 C
Voyage cost (USD/d)	20,655 D
Opex (USD/d)	9,000 E
Houston-Chiba (NM)	15,784 F
Vessel speed (kn)	15 G
Sea margin	3%
Roundtrip (days)	90 H=2(C/D/24)
Port days	5 I
Port cost (USD)	150,000 J
VLGC shipment cost per cargo	2,890,457 K
Cbm per VLGC cargo	84,000 L
LPG, t/cbm	0.54 M
Tonnes LPG per VLGC cargo	45,360 N
VLGC shipment cost per tonne LPG	64
Current LPG price differential	35
Available for VLGCs (USD/d)	-4,785

*Back-of-the-Envelope

LPG pricing differential between US & Far East



VLGC rates vs theoretical from pricing differential

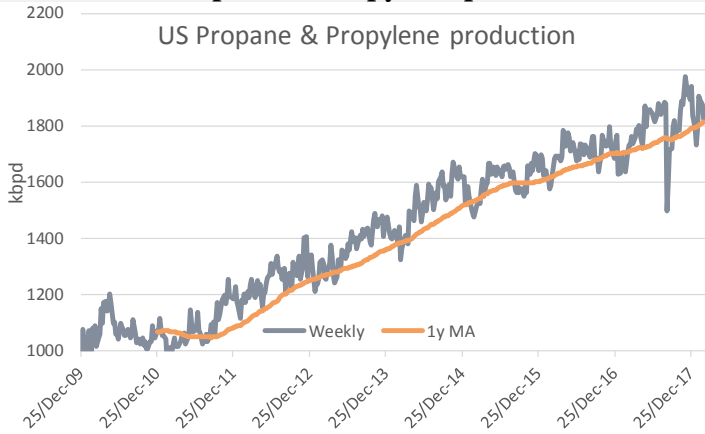


So, what is driving demand for LPG shipping going forward? We see positive developments in both LPG supply and demand dynamics, positively impacted by higher global energy prices.

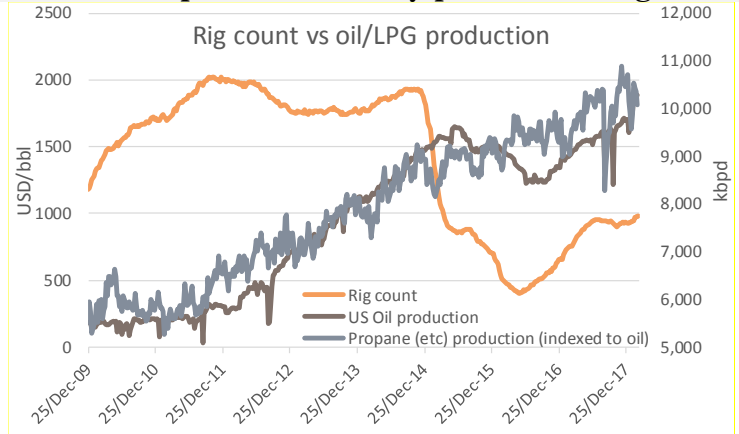
US propane production has risen continuously since 2011 at a CAGR of ~9%. Being a by-product of the oil and gas production, we look to the onshore US E&P industry's outlook for guidance on LPG supply ahead.



US Propane & Propylene production

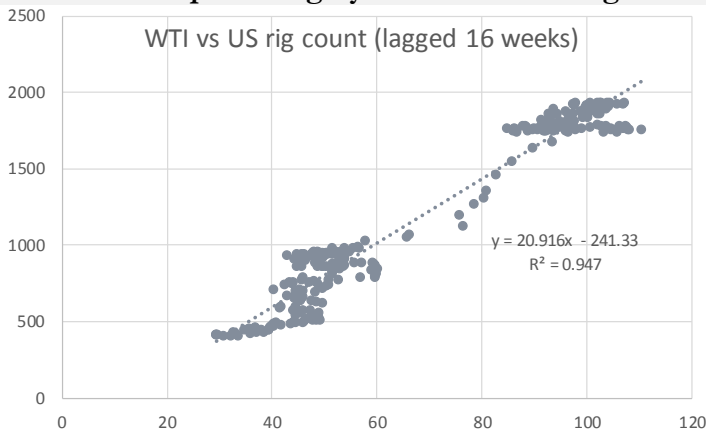


US LPG production is a by-product of oil/gas

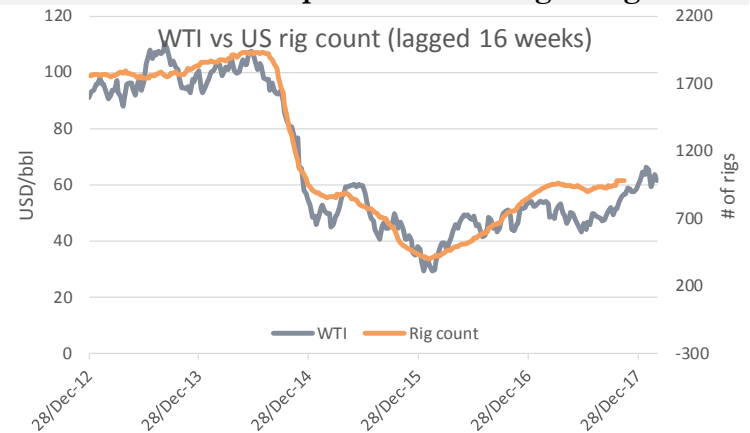


The US rig count has risen significantly since the trough in 2016, and we see strong support in the current WTI oil price above \$60/bbl. Over the past five years, there has been a strong correlation between the WTI and the lagged US rig count, which is as expected given E&Ps are incentivised by higher earnings given constant cost. We find the best fit applying a 16-week lag ($R^2=0.95$), which implies that producers on average uses around four months to respond to higher earnings with increased rig activity. This is short in a global perspective and exemplifies the operational efficiency of the US shale production and its role as a responsive swing supplier.

US crude oil prices highly correlated with rig count



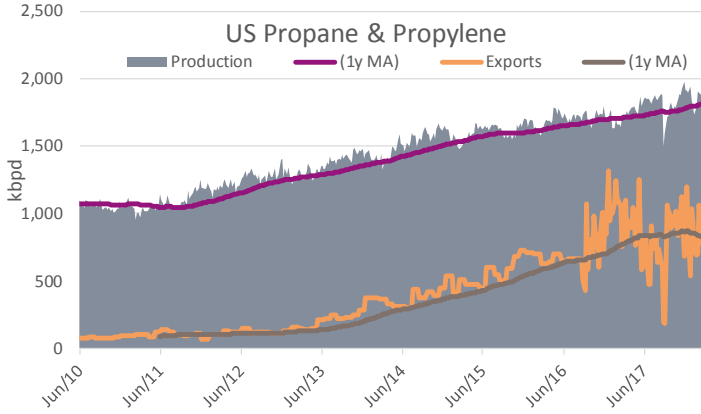
Current US crude oil prices indicate higher rig count



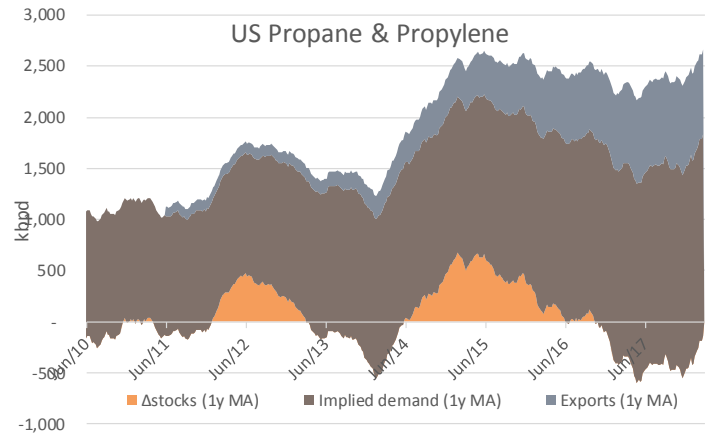
After rising eight-fold from 2012 to 2016, US LPG exports have more or less stagnated. The massive increase happened broadly in two steps, the first with rise in LPG production and the second with increases in export and shipping capacity. However, the 2014 collapse in global energy prices and the subsequent interconnection with global markets have stalled export growth. We believe this could be about to change as energy prices have risen significantly, driving the US rig count and oil production in concert with increased demand for energy in the Far East. Thus, paving the way for the next wave of increased US LPG exports.



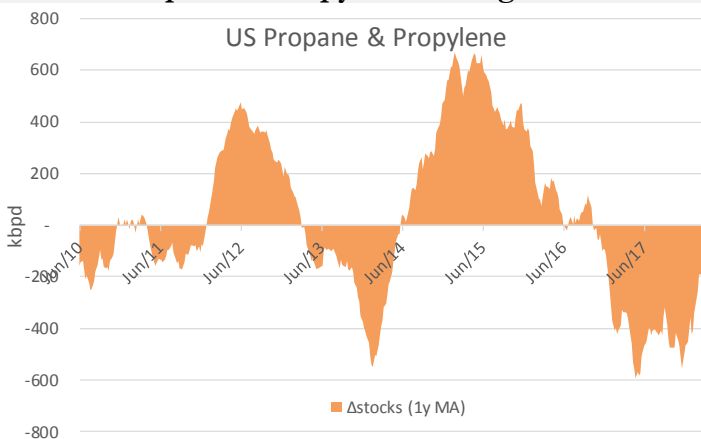
US Propane & Propylene production/exports



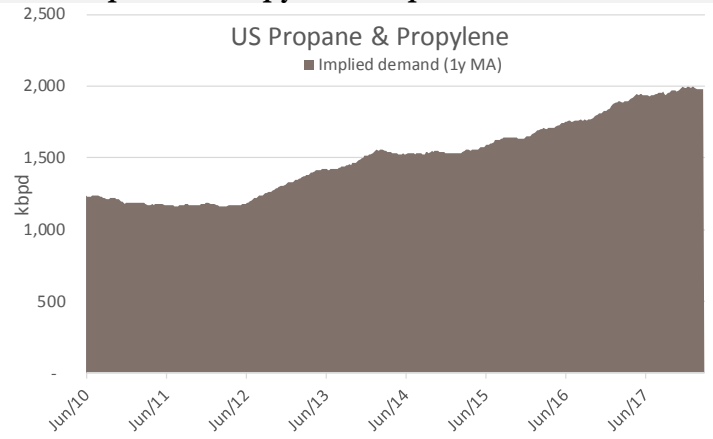
US Propane & Propylene demand balance



US Propane & Propylene: Change in stocks

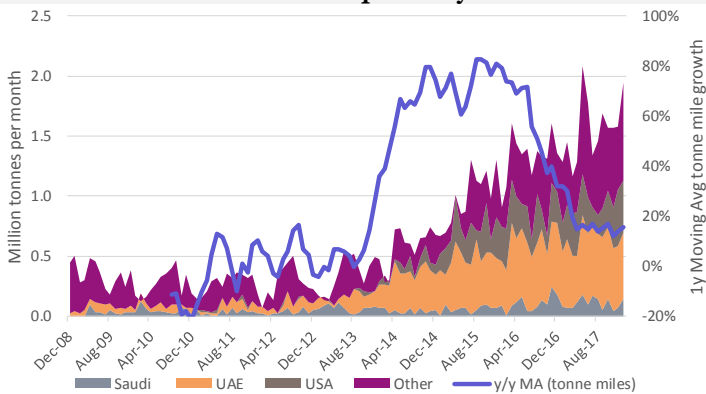


US Propane & Propylene: Implied domestic demand

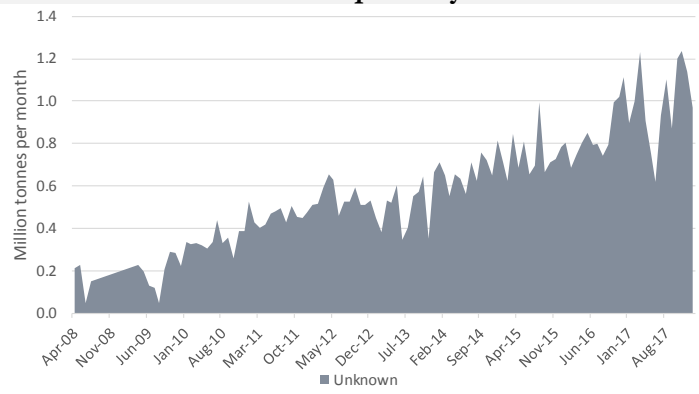


On the LPG demand side, we believe in a general increase in demand for energy in addition to a preference of LPG and LNG over coal and crude oil. The latter is evident in the massive increase in imports into China and India, which again can be viewed as proxies for a wider movement in developing economies at present and in the future.

Chinese LPG imports by source



Indian LPG imports by source

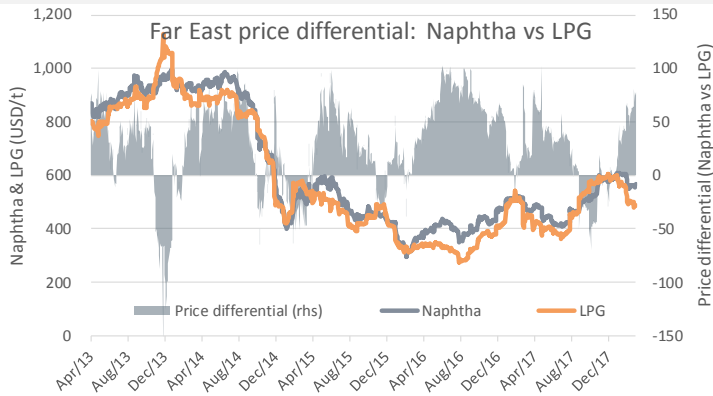


In addition to a general move towards LPG as a cleaner and energy rich fuel for the retail market, another important driver for LPG demand is the relative pricing towards other energy sources and especially naphtha which many crackers can use interchangeably to a certain degree. This effect is even more important when analysing short term demand fluctuations and potential arbitrage opportunities for LPG shipping.

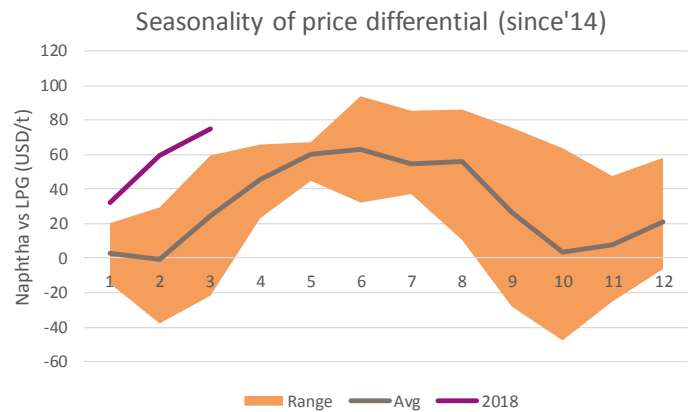


In our analysis, we find that a switch from naphtha to LPG in the Far East occurs at around \$50-100 price differential. At the moment, the price differential is rising and currently stands at \$78/t. Looking to history for guidance, the price differential tends to rise in April and stay elevated throughout August. This fits well with the seasonal spike in demand and shipping earnings we have observed historically. Please see the section on [Seasonality](#) below for further details.

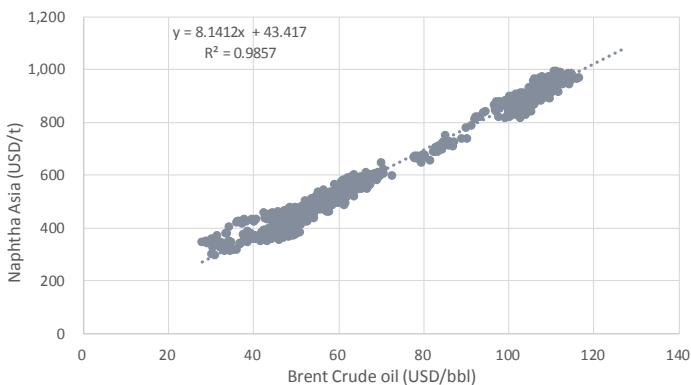
Far Eastern feedstock switch occurs around \$50-100



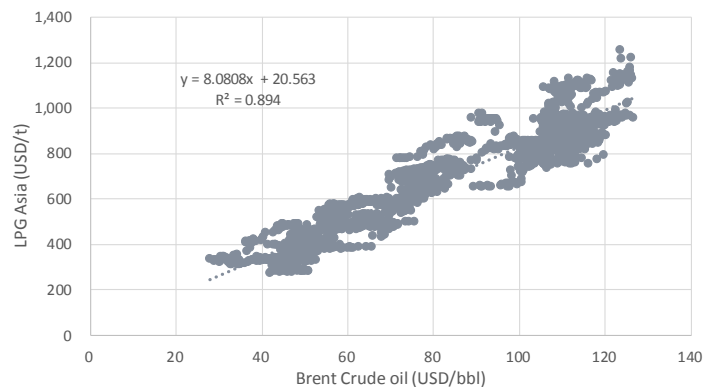
Seasonality of Far Eastern price differential



Correlation: Far East naphtha vs Brent Crude

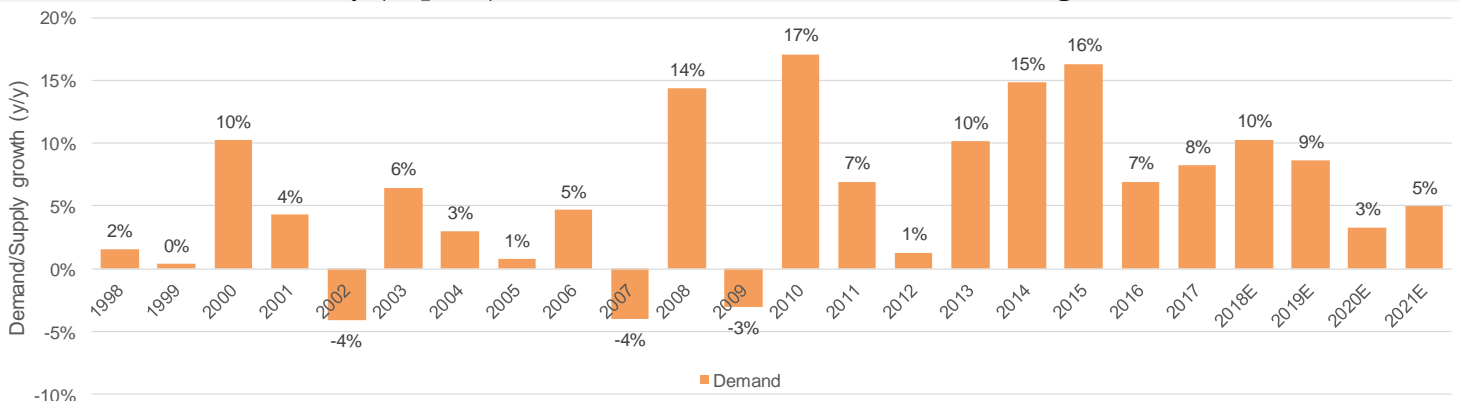


Correlation: Far East LPG vs Brent Crude



In sum, we believe the increase in energy prices seen since early 2016 is laying the foundations for both increased supply and demand for LPG, and higher demand for shipping. Our base case is for 10% demand growth for VLGCs in 2018, up from 8% implied demand growth in 2017. Further ahead, we see continued strong growth in 2019 at 9% y/y, and a normalisation in 2020/21 at 3-5%.

Historically (implied) and Gersemi Research's VLGC demand growth forecast



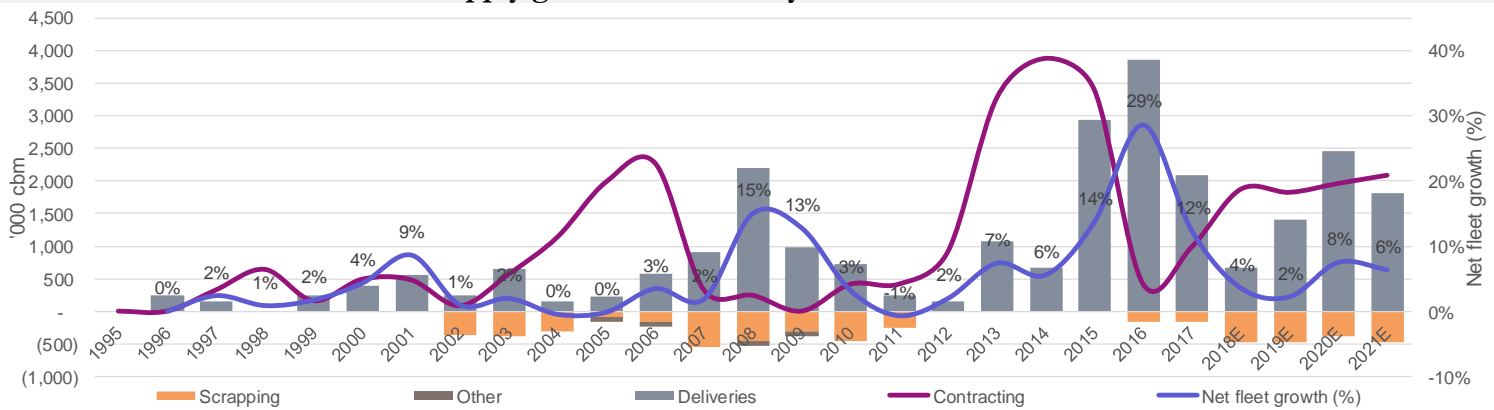


Supply

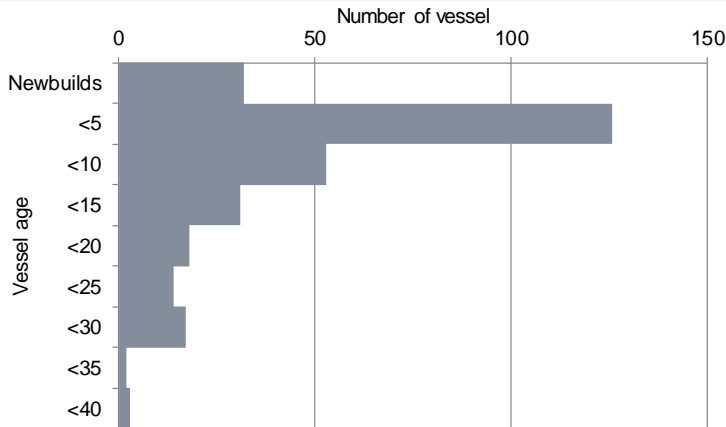
After the VLGC fleet almost doubled from end-2012 and until today, we can now finally see the light at the end of the tunnel. With five VLGCs delivered YTD, there are only three left scheduled for delivery for the rest of the year. We forecast five more vessels to be scrapped this year and net supply growth to turn negative in 2Q18-4Q18. The orderbook for 2019 is more or less closed for new vessels, and we therefore feel very optimistic in terms of transparency and improving market balance ahead.

Our net supply growth forecast is 4% in 2018 and 2% in 2019, vs 12% in 2017 and 29% in 2016. However, our main concern is potential supply growth in 2020/21 throwing the business cycle into recession. As of now, 11 VLGC newbuildings are ordered for 2020 delivery (34% of the orderbook), eight of which have been ordered just since late December. Our 2018 forecast is for 23 new VLGCs orders, and a net supply growth of 8% in 2020.

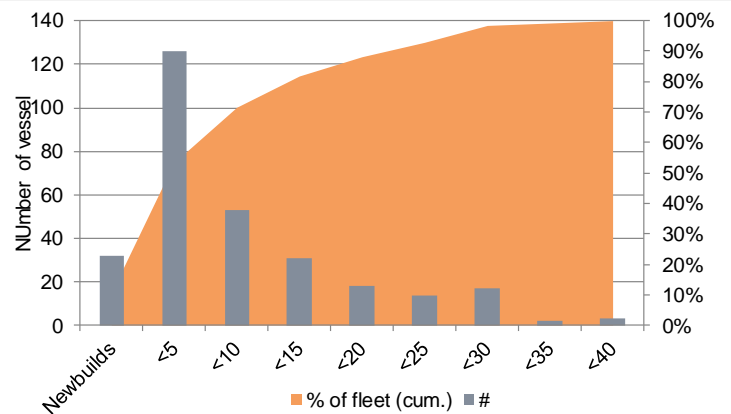
Breakdown of supply growth: Historically and Gersemi Research's forecast



VLGC fleet distribution by age



VLGC distribution by age

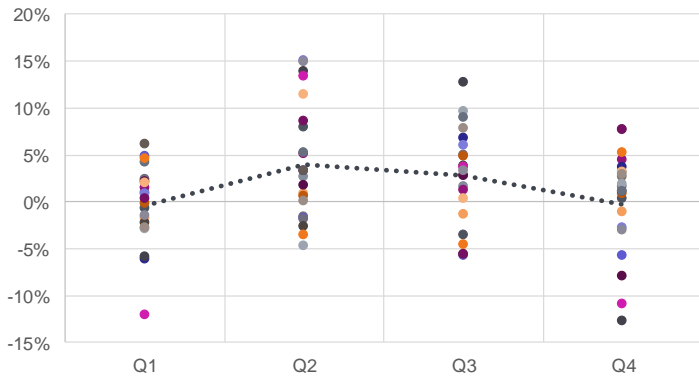


Seasonality

Looking at the history, demand for LPG shipping has exhibited strong seasonal properties. Since 1997, demand has on average grown by 3.9% q/q in 2Q and 2.9% in 3Q, vs -0.4% in 1Q and -0.3% in 4Q. This has partly been driven by seasonal refinery runs and stock building in the northern hemisphere ahead of the winter season. The increase in US LPG exports have led to some debate over whether the historical seasonality will be smoothed, and looking at the data from the past years, the answer is ambiguous.

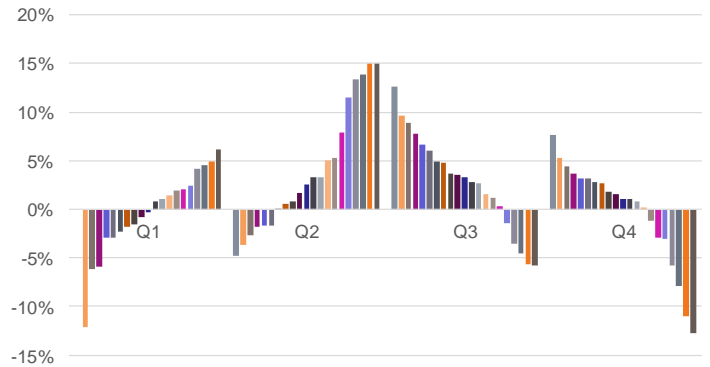
Historically strong demand growth in 2Q/3Q

Implied q/q demand growth since 1997



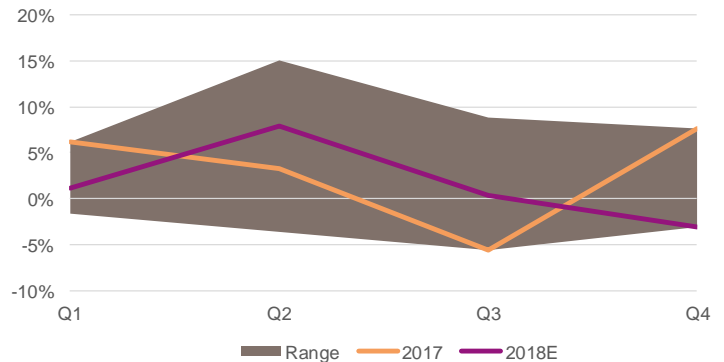
Historically strong demand growth in 2Q/3Q

Implied q/q demand growth since 1997



Demand growth last 5y vs 2018E

Implied demand growth q/q, last 5y

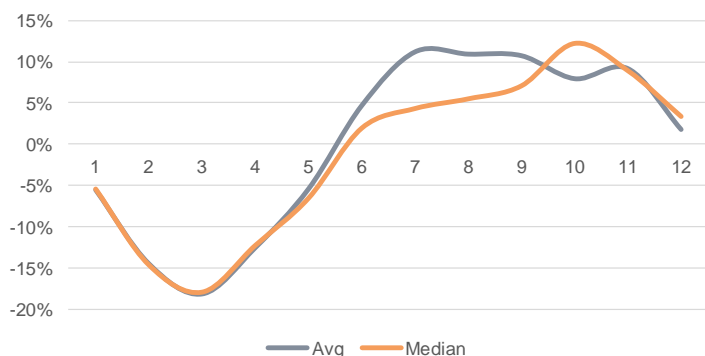


Unsurprisingly, we can find a similar seasonal pattern in historical VLGC spot earnings. Since 1992, spot rates have averaged 10-20% below the yearly average in February to April, and 0-15% above in June to December. One significant difference to the demand seasonality is the bigger decline in 1Q and higher trend in 4Q. This can be explained by supply growth which across shipping tends to be higher in 1Q than in 4Q as owners push delivery into the new year to get a better “timestamp” on their asset.



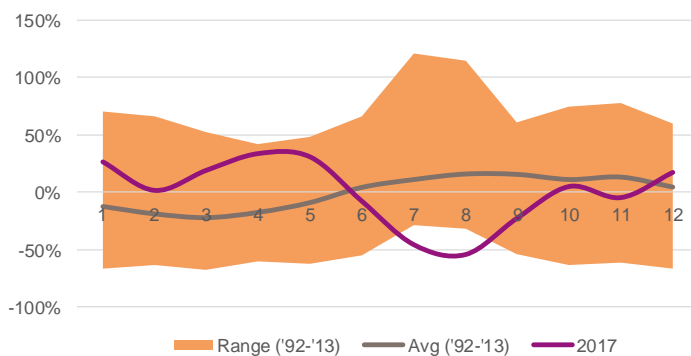
Historical VLGC spot rate seasonality

Spot rate seasonality since '92 (% vs Y avg)



Historical VLGC spot rate seasonality

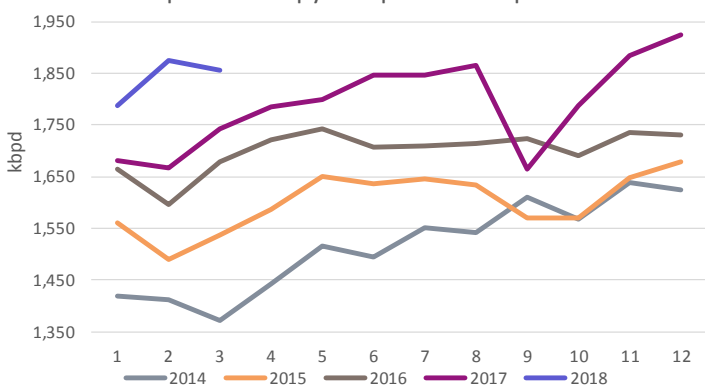
Spot rate seasonality since '92 (% vs Y avg)



US propane and propylene production is up 9% y/y YTD, representing the seventh consecutive year of increasing production. Comparing with implied US domestic demand which is unchanged YTD and heading towards the seasonal low in mid-year, it bodes very well for US LPG exports in the coming months.

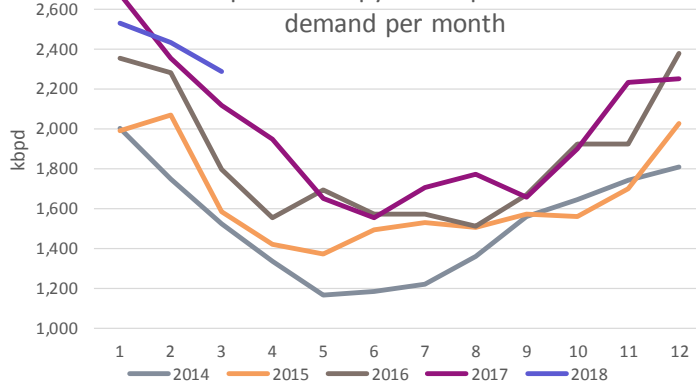
US propane production off to a strong start

US Propane & Propylene production per month



US domestic demand approaching seasonal low

US Propane & Propylene implied domestic demand per month



In sum, we are heading into the historically high season for VLGC demand in 2Q and 3Q, with spot rates usually rising from April/May. Given that there are only three newbuildings remaining for delivery in 2018, spread across the year, we believe the seasonality could be even stronger in 2018. Looking to the current situation in US LPG production vs implied demand leaves us even more confident in the upcoming seasonality. This is further supported by the Baltic LPG futures curve, trading significantly up from TCE of \$13k/d at present to \$15k/d in April, \$19k/d in May, \$21k/d in July and \$22k/d in 4Q18.

Baltic LPG/VLGC futures curve: 8/Mar vs T-0.5y vs T-1y





Conclusion

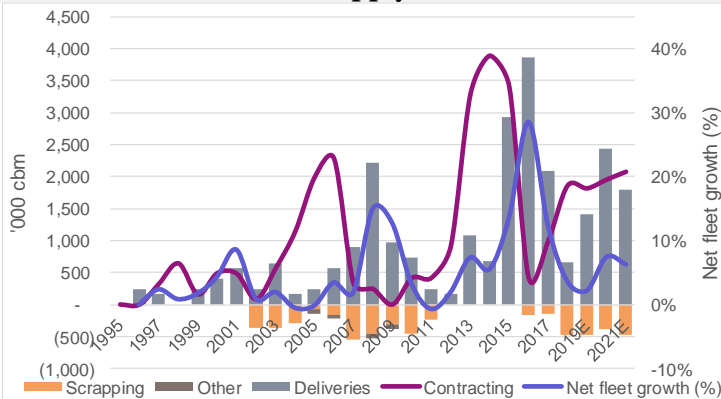
We are very optimistic toward improving markets in both the short and long term due to the low net supply growth, high demand growth and imminent seasonality. We forecast TCE rates to average \$28k/d in 2Q-4Q18 (vs \$15k/d QTD), close to the historical average of \$30k/d since 1997. We expect VLGC fleet utilization of 83% in 2018 and 89% in 2019, up from 78% in 2017.

Delta table: VLGC Carrier forecast summary									
Δ y/y	2018E	2019E	2020E	2021E	Avg spot	2018E	2019E	2020E	2021E
Supply	3.6%	2.2%	7.5%	6.3%	VLGC spot	24,819	39,744	28,705	25,993
Supply, old	2.2%	2.5%	6.7%	6.6%	old	25,695	40,522	31,017	27,401
Δ	1.4%	-0.2%	0.8%	-0.3%	Δ	(876)	(777)	(2,311)	(1,407)
Demand	10.3%	8.6%	3.3%	5.0%	VLGC 3y	67	75	70	70
Demand, old	9.9%	8.6%	3.3%	5.0%	old	70	76	71	70
Δ	0.4%	0.0%	0.0%	0.0%	Δ	(3)	(1)	(1)	(0)
Utilization	83.4%	88.6%	85.1%	84.1%					
Utilization, old	83.6%	88.6%	85.8%	84.5%					
Δ	-0.2%	0.0%	-0.6%	-0.4%					

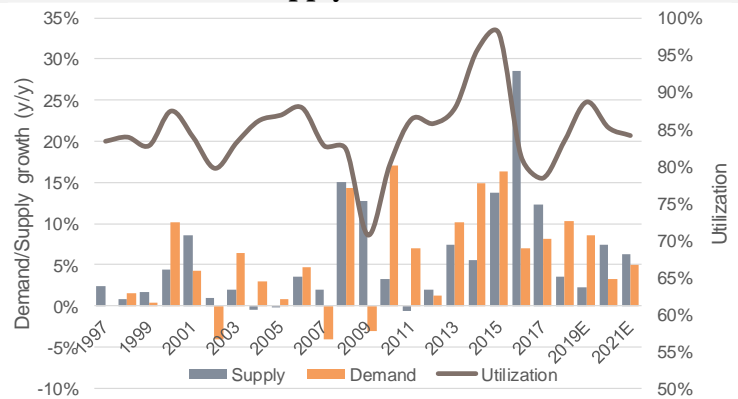
Looking further ahead, there are great uncertainties regarding both supply and demand growth developments, and we fear the inflection point in this peak cycle could occur in 2019/20. However, share prices tends to look 12-18 months ahead, and thus the scene is nevertheless set for significant share price appreciation for VLGC shipping companies ahead. We see a potential 94% upside from current levels and to 1Q19 on average in the segment.

$$P_{shares} = f[P_{3y\ VLGC}] = f[1y\ TC_{3y\ VLGC}] = f[E(1y\ fwd\ spot\ revenue_{3y\ VLGC})], R^2 = 0.85\ since\ 2013$$

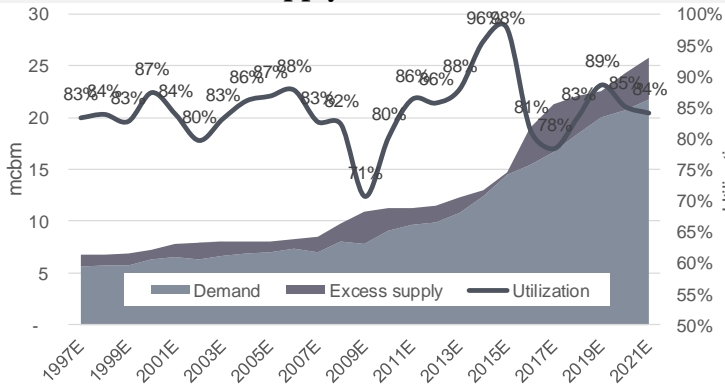
Supply



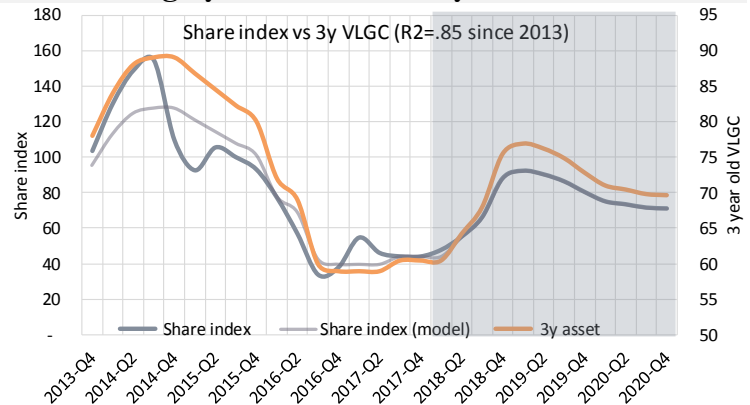
Supply/Demand



Supply/Demand

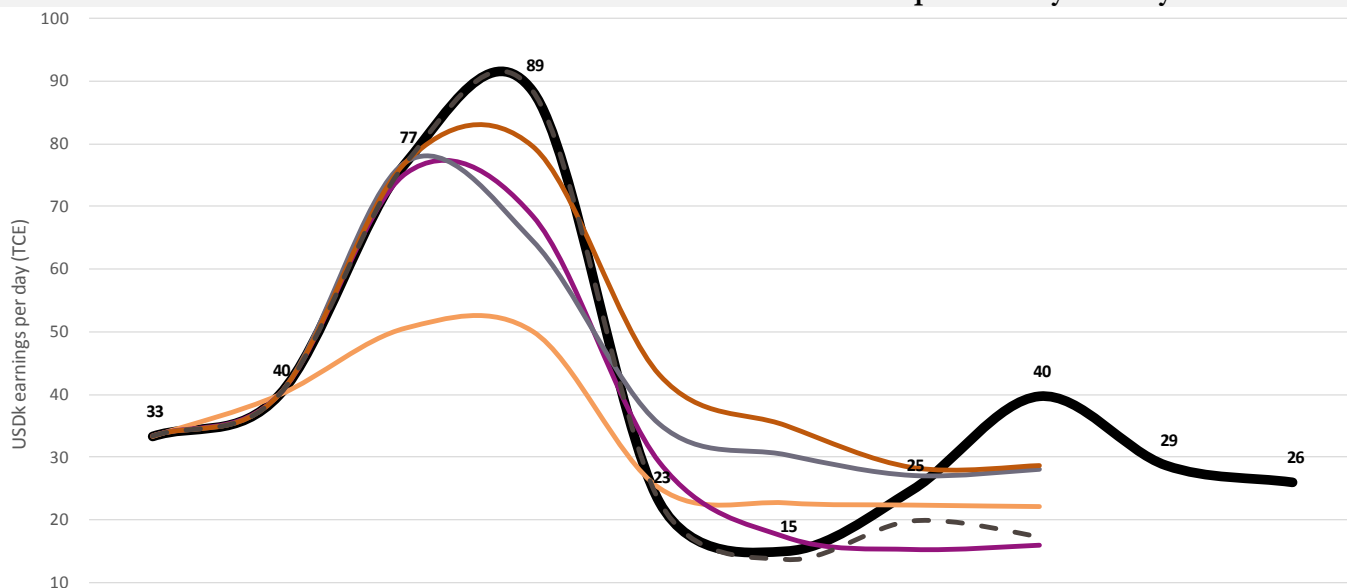


Shares highly correlated with 3y old vessel values





Gersemi Research historical forecasts: We foresaw the 2016 rate collapse already in early 2014

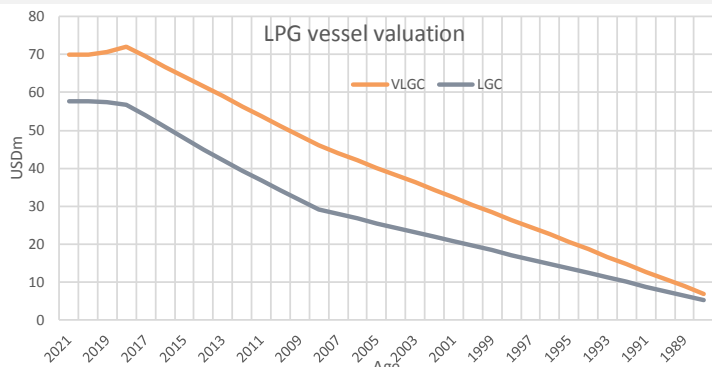


	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Actuals/Forecast	33,329	39,963	77,070	88,508	22,859	14,990	24,819	39,744	28,705	25,993
Mar/14	33,329	39,963	50,647	50,107	25,086	22,720	22,370	22,132		
Aug/14	33,329	39,963	75,300	68,475	29,081	17,095	15,137	15,823		
Jan/15	33,329	39,963	77,070	64,463	35,206	30,292	26,995	27,983		
Jun/15	33,329	39,963	77,070	79,557	43,082	34,967	28,264	28,590		
Feb/17	33,329	39,963	77,070	88,508	22,859	13,572	19,737	17,221		

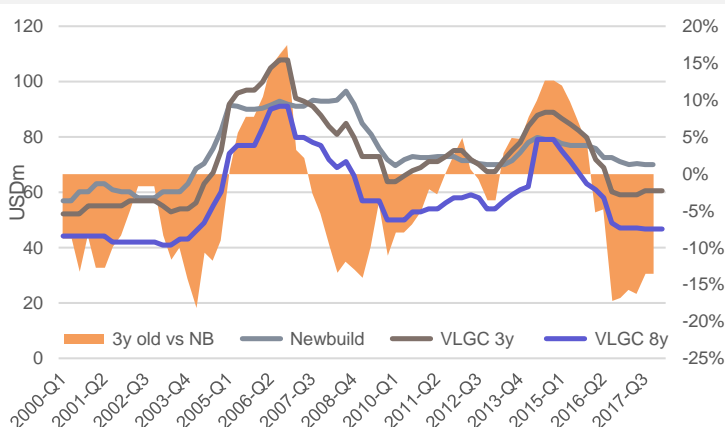
Asset Valuation

Second hand LPG vessels are currently at trough levels and prices not seen since early 2004. When adjusting for inflation, second-hand prices are hovering around their lowest on record going back to 2000.

Asset valuation overview



Historical asset values





Econometrics

Demand/Supply ('000 cbm)																
Base case	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Deliveries ¹	575	904	2,206	975	733	244	162	1,073	669	2,935	3,863	2,081	664	1,410	2,436	1,796
Scrapping ¹	(157)	(546)	(453)	(304)	(461)	(241)	-	-	-	-	(161)	(154)	(468)	(468)	(386)	(468)
Other ¹	(71)	(0)	(76)	(80)	0	(0)	(0)	0	-	-	-	-	-	-	-	-
Contracting ¹	2,271	325	242	-	413	415	913	3,271	3,879	3,398	416	987	1,854	1,810	1,946	2,069
Supply²	8,279	8,438	9,705	10,945	11,297	11,223	11,447	12,292	12,979	14,760	18,977	21,316	22,083	22,579	24,272	25,806
Δ y/y	3%	2%	15%	13%	3%	-1%	2%	7%	6%	14%	29%	12%	4%	2%	7%	6%
Demand²	7,270	6,978	7,980	7,736	9,058	9,686	9,810	10,806	12,410	14,433	15,433	16,702	18,423	20,007	20,668	21,701
Δ y/y	5%	-4%	14%	-3%	17%	7%	1%	10%	15%	16%	7%	8%	10%	9%	3%	5%
Utilization²	88%	83%	82%	71%	80%	86%	86%	88%	96%	98%	81%	78%	83%	89%	85%	84%
Spot rate ² (USD/day)	37,845	23,338	25,127	6,569	18,577	33,376	33,329	39,963	77,070	88,508	22,859	14,990	24,819	39,744	28,705	25,993
Vessel value, 3y ² (USDm)	105	92	83	71	67	73	71	73	88	83	65	60	67	75	70	70
OB ²	4,361	4,724	3,123	1,492	807	1,006	1,454	2,490	6,773	7,302	5,272	2,773	3,268	4,057	3,836	3,892

Low case																
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Deliveries ¹	575	904	2,206	975	733	244	162	1,073	669	2,935	3,863	2,081	664	1,410	1,501	458
Scrapping ¹	(157)	(546)	(453)	(304)	(461)	(241)	-	-	-	-	(161)	(154)	(468)	(468)	(386)	(468)
Other ¹	(71)	(0)	(76)	(80)	0	(0)	(0)	0	-	-	-	-	-	-	-	-
Contracting ¹	2,271	325	242	-	413	415	913	3,271	3,879	3,398	416	987	682	440	423	510
Supply²	8,279	8,438	9,705	10,945	11,297	11,223	11,447	12,292	12,979	14,760	18,977	21,316	22,229	22,959	24,198	24,516
Δ y/y	3%	2%	15%	13%	3%	-1%	2%	7%	6%	14%	29%	12%	4%	3%	5%	1%
Demand²	7,270	6,978	7,980	7,736	9,058	9,686	9,810	10,806	12,410	14,433	15,433	16,702	17,036	17,377	17,725	18,079
Δ y/y	5%	-4%	14%	-3%	17%	7%	1%	10%	15%	16%	7%	8%	2%	2%	2%	2%
Utilization²	88%	83%	82%	71%	80%	86%	86%	88%	96%	98%	81%	78%	77%	76%	73%	74%
Spot rate ² (USD /day)	37,845	23,338	25,127	6,569	18,577	33,376	33,329	39,963	77,070	88,508	22,859	14,990	12,409	11,193	8,624	9,099
Vessel value, 3y ² (USDm)	105	92	83	71	67	73	71	73	88	83	65	60	61	61	60	61

High case																
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Deliveries ¹	575	904	2,206	975	733	244	162	1,073	669	2,935	3,863	2,081	664	1,410	2,917	2,924
Scrapping ¹	(157)	(546)	(453)	(304)	(461)	(241)	-	-	-	-	(161)	(154)	(468)	(468)	(386)	(468)
Other ¹	(71)	(0)	(76)	(80)	0	(0)	(0)	0	-	-	-	-	-	-	-	-
Contracting ¹	2,271	325	242	-	413	415	913	3,271	3,879	3,398	416	987	2,481	3,016	3,185	3,523
Supply²	8,279	8,438	9,705	10,945	11,297	11,223	11,447	12,292	12,979	14,760	18,977	21,316	21,766	21,755	23,528	25,935
Δ y/y	3%	2%	15%	13%	3%	-1%	2%	7%	6%	14%	29%	12%	2%	0%	8%	10%
Demand²	7,270	6,978	7,980	7,736	9,058	9,686	9,810	10,806	12,410	14,433	15,433	16,702	18,372	20,210	22,231	24,454
Δ y/y	5%	-4%	14%	-3%	17%	7%	1%	10%	15%	16%	7%	8%	10%	10%	10%	10%
Utilization²	88%	83%	82%	71%	80%	86%	86%	88%	96%	98%	81%	78%	84%	93%	94%	94%
Spot rate ² (USD /day)	37,845	23,338	25,127	6,569	18,577	33,376	33,329	39,963	77,070	88,508	22,859	14,990	27,390	58,664	68,599	66,949
Vessel value, 3y ² (USDm)	105	92	83	71	67	73	71	73	88	83	65	60	70	91	92	91
OB ²	4,361	4,724	3,123	1,492	807	1,006	1,454	2,490	6,773	7,302	5,272	2,773	3,645	5,426	6,161	6,703
OB/Fleet ²	53%	56%	32%	14%	7%	9%	13%	20%	52%	49%	28%	13%	17%	25%	26%	26%

¹Sum during period ²Average during period



Peer Group

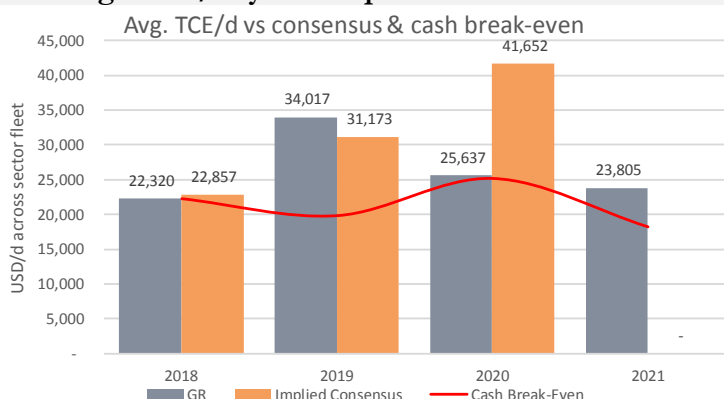
Valuation matrix I

USDm	Mcap	Turnover	P/sh	Value	+/-	P/NAV					EV/EBITDA				P/E (adj.)			
						NAV	Now	1y fwd	+25%	€	2018	2019	2020	2021	2018	2019	2020	2021
AVANCE NO	1,514	2.0	23	56	139%	40.0	0.59	0.38	0.38	0.23	9.2	4.3	6.5	7.2	-	2.8	9.0	17.2
BWLPG NO	5,533	5.3	39	69	76%	54.0	0.72	0.50	0.47	0.21	9.6	4.5	6.0	5.9	23.0	3.4	7.2	8.6
LPG US	438	0.4	8	14	82%	14.3	0.55	0.41	0.38	0.18	9.8	4.8	6.8	7.8	38.7	3.7	8.9	16.3
Average	2,495	2.6			99%	0.62	0.43	0.41	0.21		9.5	4.6	6.4	6.9	20.6	3.3	8.4	14.0
Median	1,514	2.0			82%	0.59	0.41	0.38	0.21		9.6	4.5	6.5	7.2	23.0	3.4	8.9	16.3

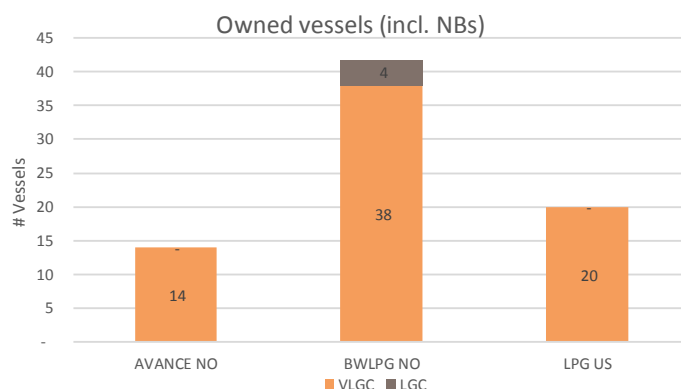
Valuation matrix II

USDm	Mcap	Turnover	P/sh	Value	+/-	Liquidity/(GIBD + eq. capex)				FCF yield				Dividend yield			
						2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
AVANCE NO	1,514	2.0	23	56	139%	13%	11%	12%	12%	15%	55%	29%	26%	6%	41%	11%	11%
BWLPG NO	5,533	5.3	39	69	76%	8%	18%	24%	33%	23%	43%	28%	28%	4%	15%	7%	6%
LPG US	438	0.4	8	14	82%	2%	6%	8%	11%	17%	41%	25%	22%	2%	21%	10%	9%
Average	2,495	2.6			99%	8%	12%	15%	19%	18%	46%	27%	25%	4%	26%	10%	9%
Median	1,514	2.0			82%	8%	11%	12%	12%	17%	43%	28%	26%	4%	21%	10%	9%

Avg. TCE/day across peer fleet vs consensus



Fleet overview



AVANCE

BUY/TP 56

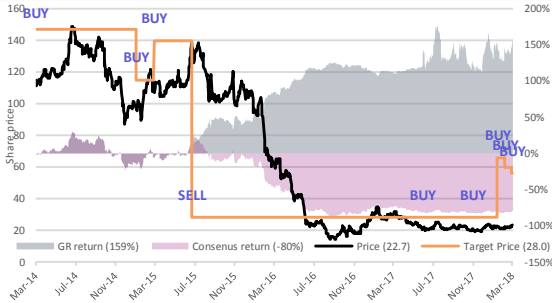
Top Pick in Soon to Boom Segment

Being our top pick in the VLGC segment, investors are in a rare position to buy modern VLGCs at a 18% discount to already record-low asset prices ahead of the cyclical expansion. As we enter the seasonally strong period from April to August, we simultaneously expect supply growth to turn negative. Add annualized demand growth of ~10% and we remain highly optimistic on the share price development over both the short- and long-term horizon. We reiterate our BUY rating and see a massive 139% upside to our NOK 56 target price.

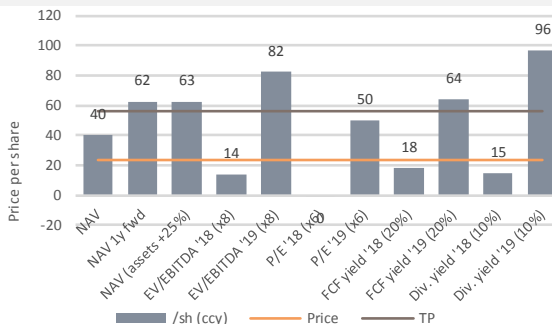
Company overview: Avance Gas was originally a Stolt-Nielsen venture set up in 2007. After a transformational phase, John Fredriksen entered and made it his VLGC investment vehicle alongside Stolt-Nielsen and Sungas. The company ordered eight VLGCs in China during the expansionary phase of the last cycle which were delivered in 2015. The company has a fleet of 14 VLGCs built from 2003 to 2015.

Investment case: Three-year-old VLGCs are valued at record-lows, and Avance Gas' fleet of mainly modern VLGCs are trading at an additional 18% discount even after applying a Chinese-built discount to applicable vessels. Given the high operational leverage, we see EV/EBITDA in '19E of 4.3x (vs peers at 4.5) and potential dividend yield of 41% (26%). We have generated a 159% return on our recommendations since Mar/14 (vs consensus' -80%) and forecast a 139% upside potential ahead as the VLGC segment is repriced in concert with the cyclical upturn.

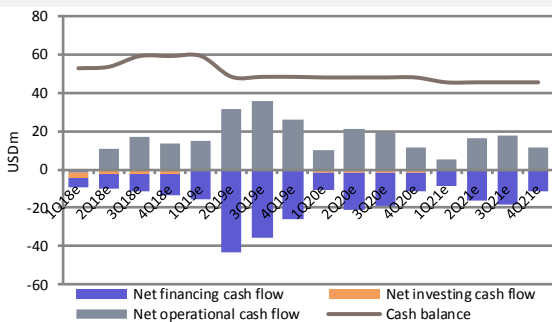
Share price vs target price



Valuation matrix



Cash & cash flows



Gersemi Research / Analysts

Joakim Hannisdahl

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Key numbers

USDm	2018	2019	2020	2021
Net sales	110	178	128	116
EBITDA	65	133	84	72
EBIT	25	93	44	32
PTP	-0	69	22	11
Net earnings	-0	69	22	11
EPS	-0.01	1.07	0.34	0.18
DPS	0.19	1.24	0.34	0.34
USDm	2018	2019	2020	2021
Fwd NAV	520	560	551	565
Adj. equity ratio	52%	56%	57%	60%
FCF yield	15%	55%	29%	26%
Dividend yield	6%	41%	11%	11%
EV/EBITDA	9.2	4.3	6.5	7.2
P/E (adj.)		2.8	9.0	17.2

Key numbers

USDm	2018	2019	2020	2021
Net operational cash flow	40	109	62	51
Free cash flow	30	107	56	51
Net cash flow	-3	-11	-0	-3
TCE/day	22,337	35,770	25,835	23,394
Cash break-even	17,746	20,779	19,797	18,908
Liquidity	59	48	48	45
Property & Equip. (incl. NBs)	793	755	721	681
Total equity	391	380	380	369
Interest bearing debt	467	429	395	363
Net interest bearing debt	408	381	347	317
Market Cap.	195	195	195	195
Enterprise value	603	576	542	513
Capex	10	2	5	-

Source: Gersemi Research, Bloomberg, company data

Disclaimer: The publisher currently owns shares in the company. More disclaimers at the end of this document



Estimate Changes

Profit & Loss

Estimate changes USDm	New				Old				Change				
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	
Net sales	110	178	128	116	116	185	144	116	-6	-7	-15	-	
EBITDA	65	133	84	72	72	140	99	72	-6	-7	-15	-	
EBIT	25	93	44	32	32	100	59	32	-6	-7	-15	-	
PTP	-0	69	22	11	6	76	37	11	-7	-7	-15	-	
Net earnings	-0	69	22	11	6	76	37	11	-7	-7	-15	-	
EPS	-0.01	1.07	0.34	0.18	0.09	1.18	0.57	0.18	-0.10	-0.11	-0.23	-	
DPS	0.19	1.24	0.34	0.34	0.34	1.35	0.61	0.34	-0.15	-0.11	-0.28	-	
									2018	2019	2020	2021	
									TCE revenue	-6	-7	-15	-
									Opex & G&A	-	-	-	-
									Depreciation	-	-	-	-
									Net finance	0	-0	-0	-
									Taxes & Minorities	0	-	-	-

Cash Flows & Balance Sheet

Estimate changes USDm	New				Old				Change			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Net operational cash flow	40	109	62	51	46	116	77	51	-7	-7	-15	-
Free cash flow	30	107	56	51	37	114	74	51	-7	-7	-18	-
Net cash flow	-3	-11	-0	-3	-6	-11	-0	-3	3	-	0	-
TCE/day	22,337	35,770	25,835	23,394	23,658	37,220	28,930	23,394	-1,321	-1,450	-3,095	-
Cash break-even	17,746	20,779	19,797	18,908	17,738	20,814	19,830	18,908	9	-35	-33	-
Liquidity	59	48	48	45	56	45	45	45	3	3	3	-
Property & Equip. (incl. NBs)	793	755	721	681	793	755	718	681	-	-0	2	-
Total equity	391	380	380	369	388	377	374	369	3	3	5	-
Interest bearing debt	467	429	395	363	467	429	395	363	-	-	-	-
Net interest bearing debt	408	381	347	317	411	384	350	317	-3	-3	-3	-
Market Cap.	195	195	195	195	180	180	180	187	15	15	15	9
Enterprise value	603	576	542	513	590	564	529	504	13	13	12	9
Capex	10	2	5	-	10	2	3	-	-	-0	3	-

Valuation

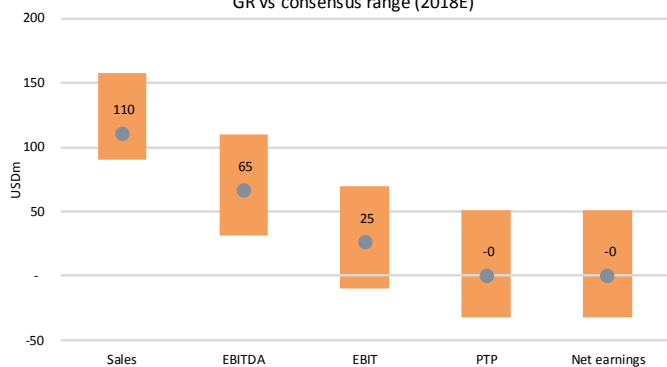
Estimate changes USDm	New				Old				Change			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Fwd NAV	520	560	551	565	526	601	600	565	-6	-41	-49	-
Adj. equity ratio	52%	56%	57%	60%	52%	57%	59%	60%	0%	-2%	-2%	0%
FCF yield	15%	55%	29%	26%	20%	63%	41%	27%	-5%	-9%	-12%	-1%
Dividend yield	6%	41%	11%	11%	12%	48%	22%	12%	-6%	-7%	-11%	-1%
EV/EBITDA	9.2	4.3	6.5	7.2	8.2	4.0	5.3	7.0	1.0	0.3	1.1	0.1
P/E (adj.)		2.8	9.0	17.2	29.4	2.4	4.9	16.5	#VALUE!	0	4	1



Our Estimates vs Consensus

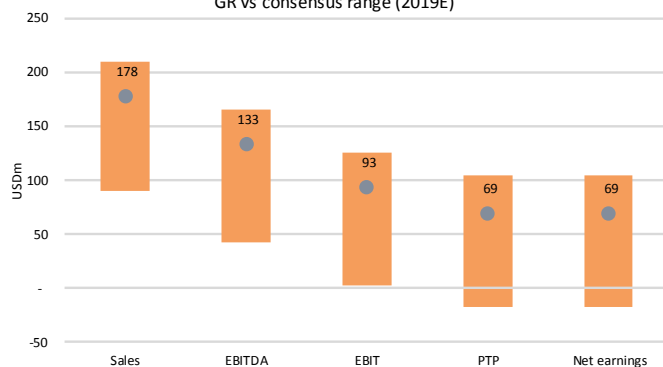
Profit & Loss, year I

GR vs consensus range (2018E)

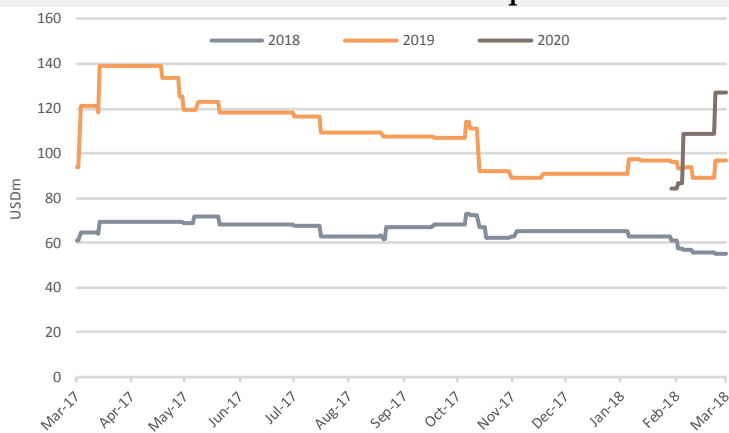


Profit & Loss, year II

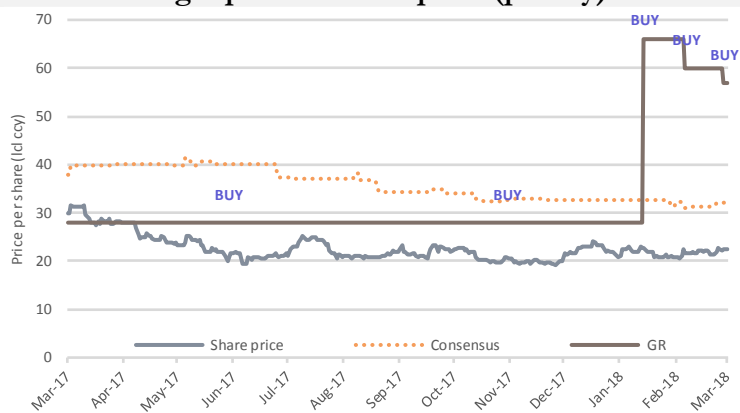
GR vs consensus range (2019E)



Consensus EBITDA development



Target price vs share price (past 1y)

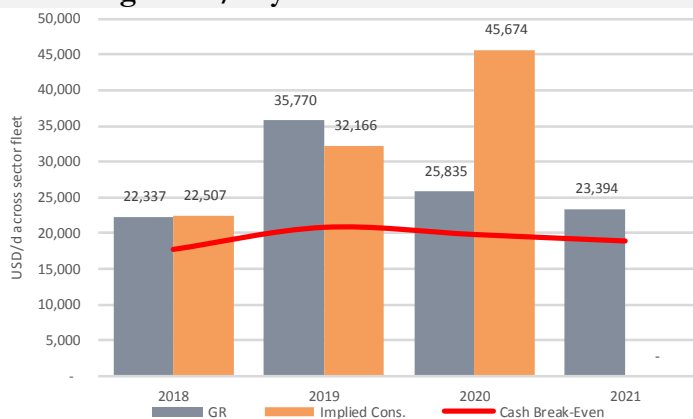


GR vs consensus: P&L break-down

	2018	GR	Consensus	Diff.	Diff.
TCE revenue	110	111	111	-1	-1%
Opex + G&A	44	44	55	-11	-20%
Depreciation	40	40	38	2	4%
Net finance	26	26	23	3	14%
Taxes & Minorities	0	0	1	-1	-91%

	2019	GR	Consensus	Diff.	Diff.
TCE revenue	178	178	160	18	11%
Opex + G&A	44	44	63	-18	-29%
Depreciation	40	40	35	5	13%
Net finance	24	24	21	4	17%
Taxes & Minorities	0	0	4	-4	-100%

Avg. TCE/day across fleet vs consensus



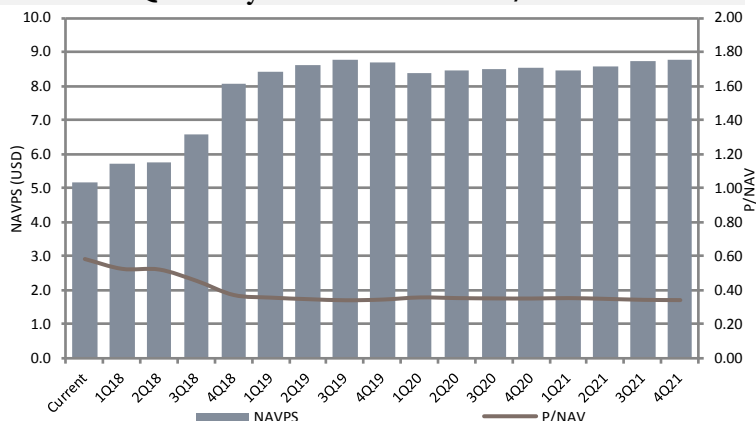


Valuation

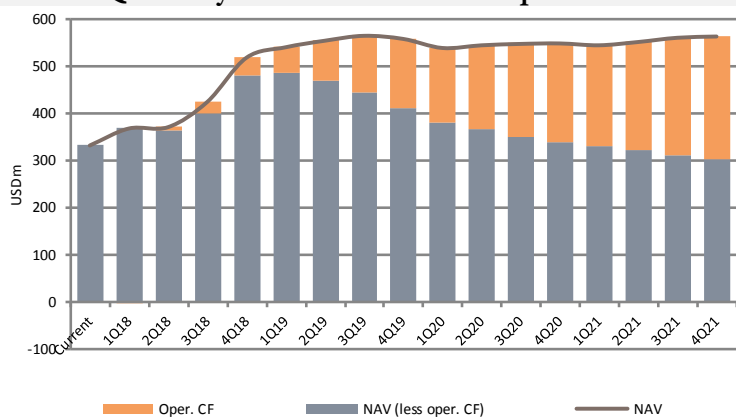
Valuation & target price

Net asset values			
USDm	4Q17	Fair value	Implied
Primary assets	823	753	618
Contract value	0	0	0
Other	14	14	12
GAV	838	767	630
Net debt	-425	-425	-425
Capex	0	0	0
Other	-9	-9	-9
NAV	404	333	195
Shares	65	65	65
NAVPS	6.26	5.16	3.03
Share price	48.5	40.0	23.5
P/NAV	0.48	0.59	1.00
EV/GAV	0.75	0.82	1.00
Adj. Total Assets	910	840	705
Adj. Equity Ratio	44%	40%	28%
Target price	NOK	56	139%

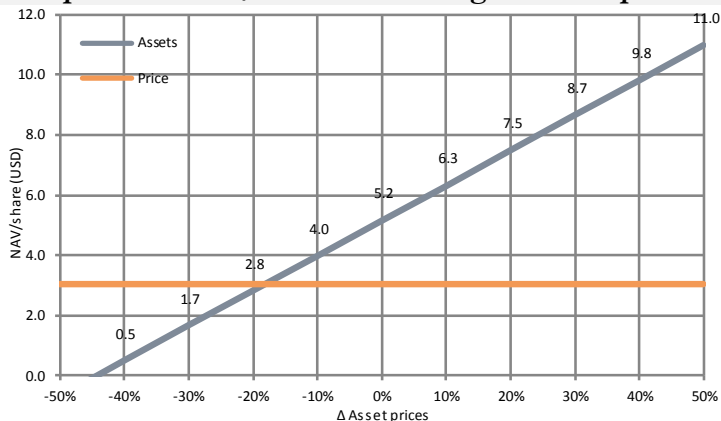
Quarterly forward NAV & P/NAV



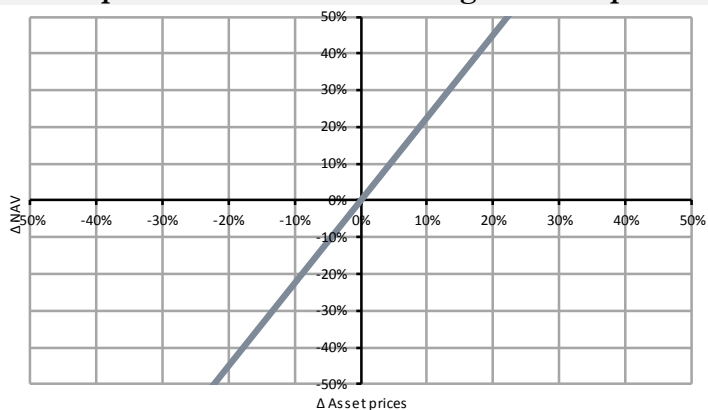
Quarterly forward NAV decomposition



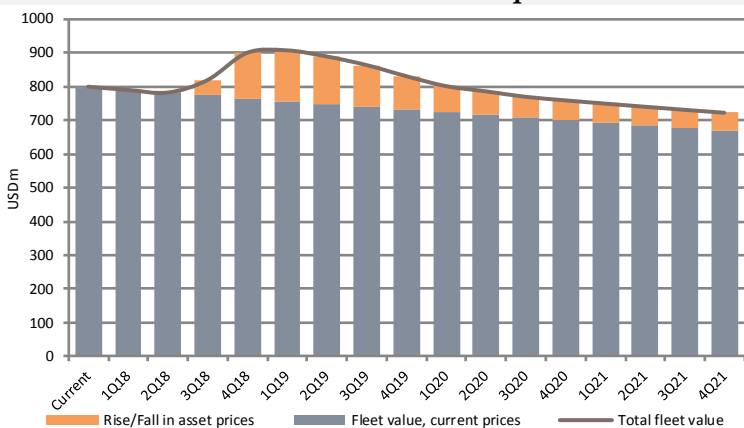
Impact on NAV/sh from % change in asset prices



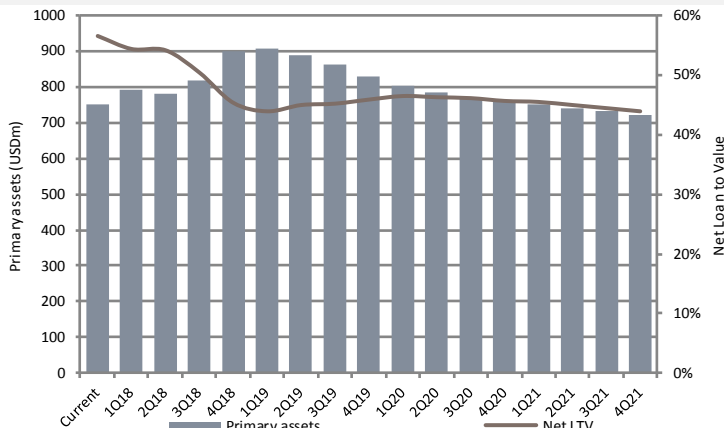
% Impact on NAV from % change in asset prices



Forward fleet valuation decomposition



Forward fleet value & net loan to value





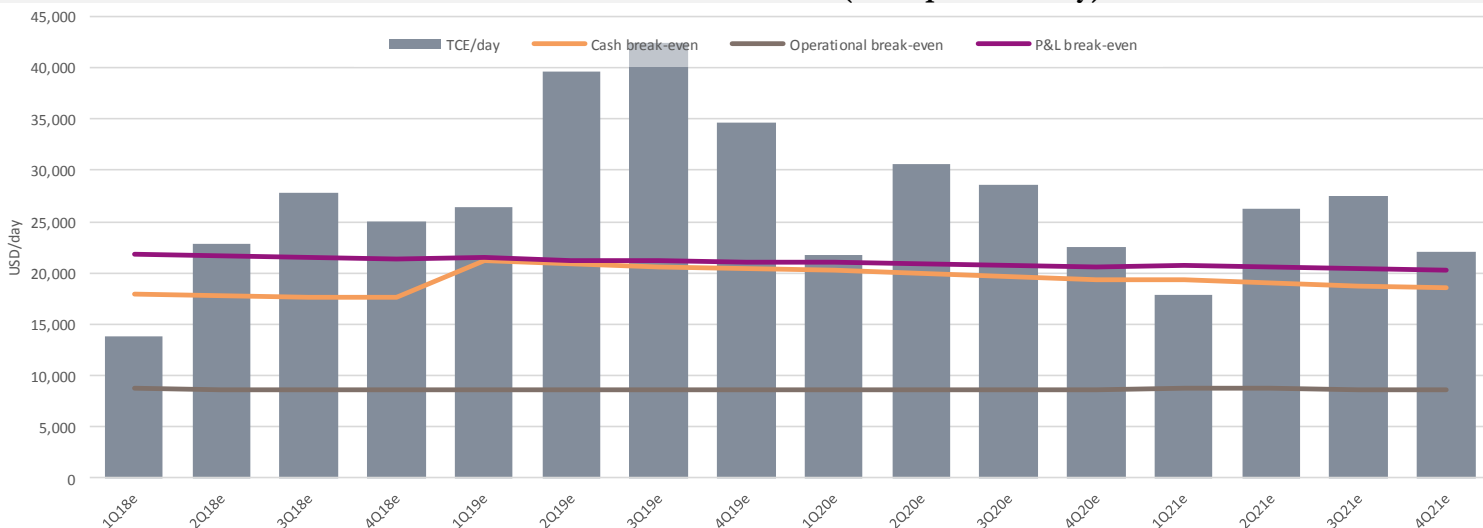
	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Profit & Loss (USDm)									
Net sales			265	93	54	110	178	128	116
Operational costs				-100	-44	-44	-44	-44	-44
EBITDA				-7	9	65	133	84	72
Depreciation/Amortization				-42	-40	-40	-40	-40	-40
EBIT	23	—	196	-48	-31	25	93	44	32
Net financials	-12		-13	-20	-24	-26	-24	-22	-20
PTP	12	—	183	-68	-55	0	69	22	11
Taxes/Minorities	0		0	0	0	0	0	0	0
Net earnings	12	—	183	-68	-55	0	69	22	11
Non-recurring items	0		0	0	0	0	0	0	0
Net earnings (adj.)	12	—	183	-68	-55	0	69	22	11
EPS			5.04	-1.07	-0.86	-0.01	1.07	0.34	0.18
EPS (adj.)			5.04	-1.07	-0.86	-0.01	1.07	0.34	0.18
DPS			4.74	0.51	0.00	0.19	1.24	0.34	0.34
Balance Sheet (USDm)									
Cash & short-term investments	200	—	70	149	62	59	48	48	45
Other current assets	24		81	23	24	24	24	24	24
Total current assets	224	—	151	172	87	84	73	72	70
Property & equip. (incl. NBs)	379	—	966	861	823	793	755	721	681
Other non-current assets	2		2	0	0	0	0	0	0
Total non-current assets	381	—	968	861	824	793	755	721	681
TOTAL ASSETS	605	—	1,119	1,033	910	877	828	793	751
Total equity	392	—	500	457	404	391	380	380	369
Short-term debt	69	—	93	21	21	45	45	33	36
Other current liabilities	9		10	11	14	14	14	14	14
Total current liabilities	79	—	103	32	35	59	59	47	50
Long-term debt	—	—	508	537	467	422	385	362	327
Other non-current liabilities			8	7	5	5	5	5	5
Total non-current liabilities	134	—	516	544	472	427	390	367	332
TOTAL EQUITY & LIABILITIES	605	—	1,119	1,033	910	877	828	793	751
Working capital, receivables			76	19	21	21	21	21	21
Working capital, payables	2	—	1	8	10	10	10	10	10
Net working capital			75	11	11	11	11	11	11
Interest bearing debt			601	558	488	467	429	395	363
Liquidity	211		70	149	62	59	48	48	45
Net interest bearing debt			531	409	425	408	381	347	317
Cash Flow (USDm)									
Net income	12	—	183	-68	-55	0	69	22	11
Depreciation				42	40	40	40	40	40
Other				54	2	0	0	0	0
Cash earnings				28	-12	40	109	62	51
Changes in working capital	—	—	—	57	1	0	0	0	0
Net operational cash flow	36	—	167	85	-12	40	109	62	51
Capex	-6	—	-492	-1	-3	-10	-2	-5	0
Other investments	0	0	0	0	0	0	0	0	0
Proceeds from sales	—	—	0	0	0	0	0	0	0
Other	133		0	13	0	0	0	0	0
Net investing cash flow	127	—	-492	12	-3	-10	-2	-5	0
Repayment of debt	-108	—	417	-44	-72	-21	-38	-35	-32
Proceeds from debt	—	—	—	0	0	0	0	0	0
Dividends paid	—	—	-172	-33	0	-12	-80	-22	-22
New equity	—	—	0	59	—	0	0	0	0
Other	116		-13	0	0	0	0	0	0
Net financing cash flow	7	—	232	-18	-72	-33	-118	-57	-54
Currency effect	—	—	—	0	0	0	0	0	0
Net cash flow				79	-87	-3	-11	0	-3
Cash balance	200		70	149	62	59	48	48	45
Free cash flow	162		-324	97	-15	30	107	56	51



Share Data & Valuation (USDm)	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Shares outstanding, end	—	—	36	64	64	65	65	65	65
Share price, avg (USD)	13	16	14	5	3	3	3	3	3
Share price, end (USD)	17	—	12	3	3	3	3	3	3
Market Cap.			445	196	182	195	195	195	195
NIBD			531	409	425	408	381	347	317
Minorities	0	—	0	0	0	0	0	0	0
Enterprise value			977	604	607	603	576	542	513
Key Figures & Ratios	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
P/E (reported)			2.4				2.8	9.0	17.2
P/E (adj.)			2.4				2.8	9.0	17.2
P/CE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P/Sales			1.7	2.1	3.4	1.8	1.1	1.5	1.7
EV/Sales			3.7	6.5	11.3	5.5	3.2	4.2	4.4
EV/EBITDA					65.3	9.2	4.3	6.5	7.2
EV/EBIT			5.0			23.7	6.2	12.3	16.2
P/B			0.9	0.4	0.5	0.5	0.5	0.5	0.5
FCF yield			-73%	50%	-8%	15%	55%	29%	26%
Dividend yield			38.7%	16.7%	0.0%	6.4%	41.0%	11.2%	11.3%
Return on equity (ROE)	2.9%		36.6%	-14.9%	-13.6%	-0.1%	18.2%	5.7%	3.1%
Return on capital employed (ROCE)	9.2%		19.0%	-5.6%	-3.7%	3.2%	12.3%	6.1%	4.6%
Return on assets (ROA)	1.9%		16.4%	-6.6%	-6.0%	0.0%	8.3%	2.7%	1.5%
Sales growth				-65%	-42%	104%	62%	-28%	-10%
EBITDA margin				-7%	17%	60%	75%	65%	62%
EBIT margin			74%	-52%	-57%	23%	53%	34%	27%
Net margin			69%	-73%	-102%	0%	39%	17%	10%
Net interest rate			0.0%	0.0%	0.0%	6.3%	6.3%	6.4%	6.4%
Tax rate	0.0%		0.0%	-0.2%	-0.1%	-15.0%	0.0%	0.0%	0.0%
Equity ratio	65%		45%	44%	44%	45%	46%	48%	49%
Leverage ratio	35%		55%	56%	56%	55%	54%	52%	51%
NIBD / EBITDA (past 1y)				-59.8	45.8	6.2	2.9	4.1	4.4
Operating cash flow/NIBD			0.3	0.2	0.0	0.1	0.3	0.2	0.2
Net interest coverage ratio (EBITDA)						2.5	5.5	3.8	3.5
Current ratio	2.8		1.5	5.4	2.5	1.4	1.2	1.6	1.4
Adj. equity ratio					40%	52%	56%	57%	60%
Operating assets	394		1,049	884	848	818	780	745	705
Operating liabilities	143		17	18	19	19	19	19	19
Net operating assets	251		1,031	866	829	799	761	726	686

Source for financial items: Historical numbers primarily gathered from Bloomberg and company data. Forecast from Gersemi Research

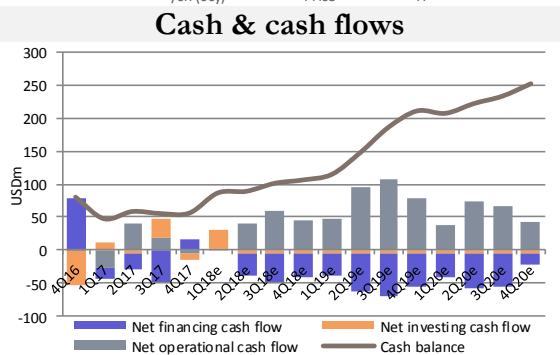
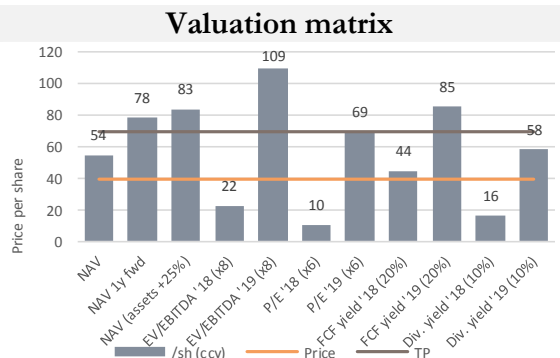
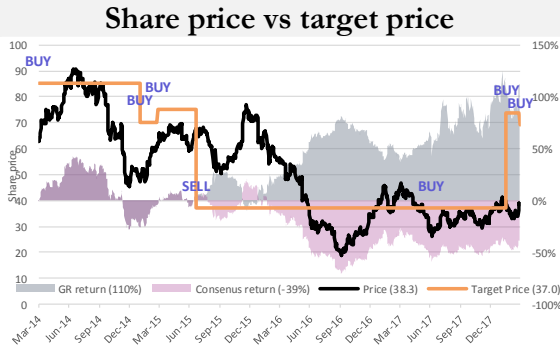
Break-even levels vs TCE revenue (USD per fleet day)



\$BWLPG (#BUY,69): The industrial approach creates shareholder values through the cycle, but we prefer leveraged peers at the trough

BWLPG-NO BUY/TP 69

Strong Foundation & Upside Ahead



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BW LPG is focused on long term shareholder value creation though the cycles, but this sound strategy unfortunately exhibits less upside than peers ahead of cyclical expansion. The dividend policy of 50% of net profits should deliver a transparent yield of 5-15% in the next few years, and we would not rule out further fleet growth (M&A) during 2018. We reiterate our BUY with a NOK 69/sh target price.

Company overview: BW LPG is the behemoth within the VLGC space and has an active strategy of consolidating the industry and maintaining its position, lastly through the acquisition of Aurora LPG. The company has historically had an industrial approach to LPG shipping, committing a relatively large part of future fleet days to COAs and TCs. However, we note that this has changed somewhat in the past few years, leaving some more upside ahead of the imminent cyclical expansion.

Investment case: Although three-year-old VLGCs are trading at all-time-lows, BW LPG is priced at a 13% discount to these below trough values. EV/EBITDA of 4.5x in 2019 looks very attractive combined with a FCF yield of 44% and expected dividend yield of 15%. The company just announced a share-buy-back program worth \$0.1056/sh, which could equate to an implicit dividend yield of 6% in 2018. Given the company's industrial approach to LPG shipping, we would expect less volatility in the share price trough the cycle than peers. Thus, we prefer the more operationally leveraged peers [AVANCE](#) (BUY/56) and [LPG](#) (BUY/14).

Key numbers

USDm	2018	2019	2020	2021
Net sales	392	551	445	423
EBITDA	194	368	250	229
EBIT	74	248	130	109
PTP	32	210	99	83
Net earnings	31	210	99	83
EPS	0.22	1.48	0.70	0.59
DPS	0.20	0.74	0.35	0.31
USDm	2018	2019	2020	2021
Fwd NAV	1,420	1,563	1,590	1,694
Adj. equity ratio	52%	57%	59%	63%
FCF yield	23%	44%	28%	29%
Dividend yield	4%	15%	7%	6%
EV/EBITDA	9.6	4.5	6.0	5.9
P/E (adj.)	22.7	3.4	7.1	8.5

Key numbers

USDm	2018	2019	2020	2021
Net operational cash flow	151	330	219	203
Free cash flow	162	309	201	203
Net cash flow	50	104	41	74
TCE/day	22,302	32,263	25,439	24,216
Cash break-even	26,756	18,815	30,565	17,454
Liquidity	107	211	252	326
Property & Equip. (incl. NBs)	2,005	1,906	1,805	1,685
Total equity	1,076	1,181	1,230	1,269
Interest bearing debt	1,259	1,159	1,049	964
Net interest bearing debt	1,152	948	797	638
Market Cap.	705	705	705	705
Enterprise value	1,854	1,650	1,498	1,340
Capex	22	21	19	-

Source: Gersemi Research, Bloomberg, company data

Disclaimer: The publisher currently owns shares in the company. More disclaimers at the end of this document



Estimate Changes

Profit & Loss

Estimate changes USDm	New				Old				Change				
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	
Net sales	392	551	445	423	410	583	491	423	-18	-32	-46	-	
EBITDA	194	368	250	229	208	396	294	229	-14	-28	-43	-	
EBIT	74	248	130	109	77	263	161	109	-2	-16	-30	-	
PTP	32	210	99	83	32	222	123	83	-0	-11	-24	-	
Net earnings	31	210	99	83	32	222	123	83	-1	-11	-24	-	
EPS	0.22	1.48	0.70	0.59	0.22	1.56	0.87	0.59	-0.00	-0.08	-0.17	-	
DPS	0.20	0.74	0.35	0.31	0.33	1.50	1.08	0.31	-0.13	-0.76	-0.73	-	
									2018	2019	2020	2021	
									TCE revenue	-18	-32	-46	-
									Opex & G&A	-3	-3	-3	-
									Depreciation	-12	-13	-13	-
									Net finance	-2	-4	-6	-
									Taxes & Minorities	0	-	-	-

Cash Flows & Balance Sheet

Estimate changes USDm									Change			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Net operational cash flow	151	330	219	203	164	354	256	203	-13	-24	-37	-
Free cash flow	162	309	201	203	123	332	256	203	38	-23	-55	-
Net cash flow	50	104	41	74	4	19	11	74	47	85	31	-
TCE/day	22,302	32,263	25,439	24,216	22,856	33,408	27,533	24,216	-554	-1,145	-2,094	-
Cash break-even	26,756	18,815	30,565	17,454	26,046	18,851	18,321	17,454	709	-36	12,244	-
Liquidity	107	211	252	326	58	78	88	326	48	133	164	-
Property & Equip. (incl. NBs)	2,005	1,906	1,805	1,685	2,110	1,999	1,866	1,685	-105	-93	-62	-
Total equity	1,076	1,181	1,230	1,269	1,057	1,066	1,036	1,269	18	114	194	-
Interest bearing debt	1,259	1,159	1,049	964	1,239	1,139	1,047	964	20	20	2	-
Net interest bearing debt	1,152	948	797	638	1,181	1,061	959	638	-29	-113	-162	-
Market Cap.	705	705	705	705	716	716	716	705	-11	-11	-11	-
Enterprise value	1,854	1,649	1,498	1,339	1,894	1,774	1,672	1,339	-40	-125	-173	-
Capex	22	21	19	-	40	22	-	-	-18	-1	19	-

Valuation

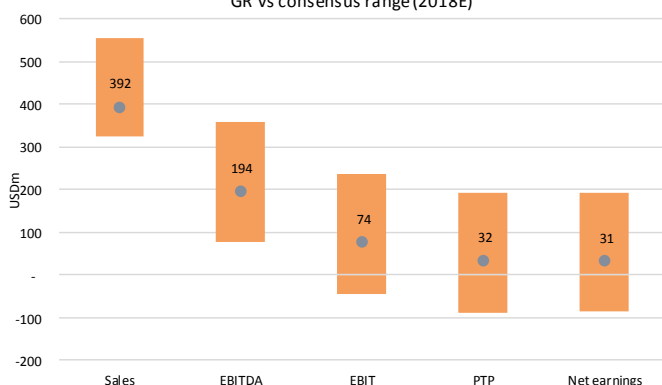
Estimate changes USDm									Change			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2019	2021
Fwd NAV	1,421	1,563	1,590	1,694	1,480	1,718	1,748	1,694	-59	-155	-159	-
Adj. equity ratio	52%	57%	59%	63%	54%	59%	62%	63%	-1%	-3%	-2%	0%
FCF yield	23%	44%	28%	29%	17%	46%	36%	29%	6%	-2%	-7%	0%
Dividend yield	4%	15%	7%	6%	7%	30%	21%	6%	-2%	-15%	-14%	0%
EV/EBITDA	9.5	4.5	6.0	5.9	9.1	4.5	5.7	5.9	0.5	0.0	0.3	-
P/E (adj.)	22.7	3.4	7.1	8.5	22.6	3.2	5.8	8.5	0	0	1	-



Our Estimates vs Consensus

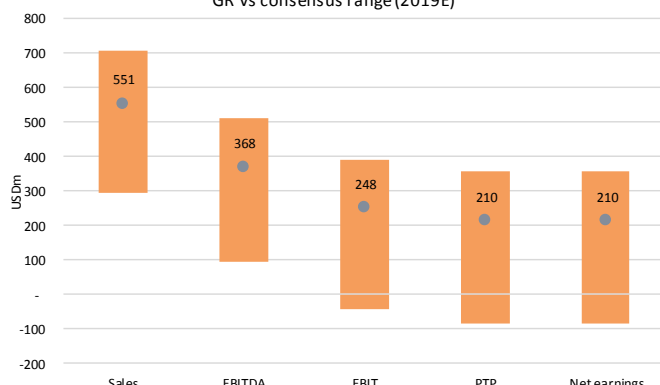
Profit & Loss, year I

GR vs consensus range (2018E)

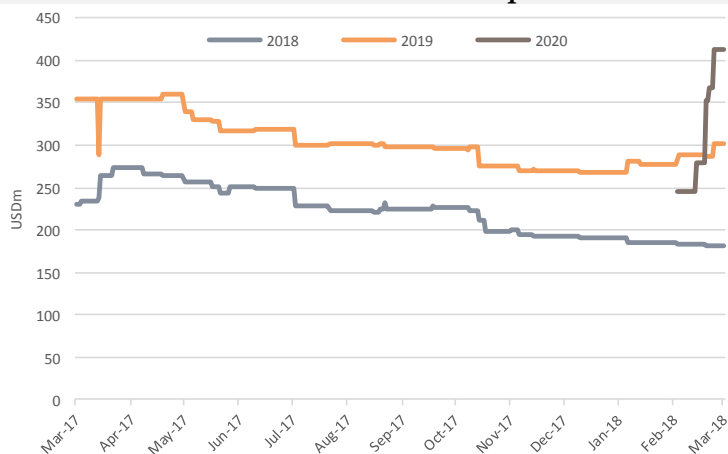


Profit & Loss, year II

GR vs consensus range (2019E)



Consensus EBITDA development



Target price vs share price (past 1y)

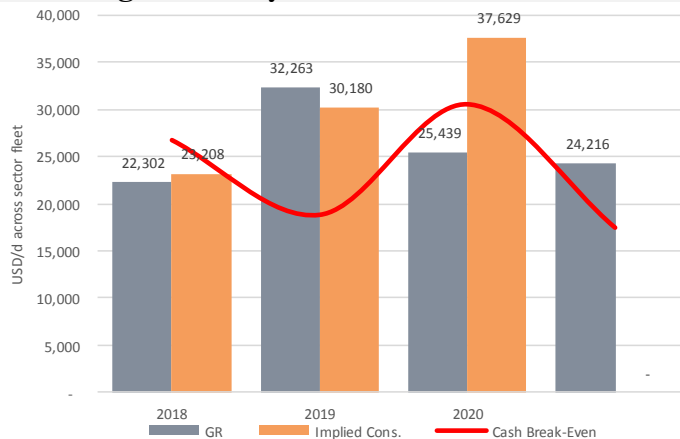


GR vs consensus: P&L break-down

	2018	GR	Consensus	Diff.	Diff.
TCE revenue	392	408	-16	-4%	
Opex + G&A	198	228	-29	-13%	
Depreciation	120	125	-5	-4%	
Net finance	43	40	3	9%	
Taxes & Minorities	1	3	-3	-85%	

	2019	GR	Consensus	Diff.	Diff.
TCE revenue	551	516	36	7%	
Opex + G&A	184	214	-30	-14%	
Depreciation	120	125	-5	-4%	
Net finance	38	32	5	17%	
Taxes & Minorities	0	12	-12	-100%	

Avg. TCE/day across fleet vs consensus



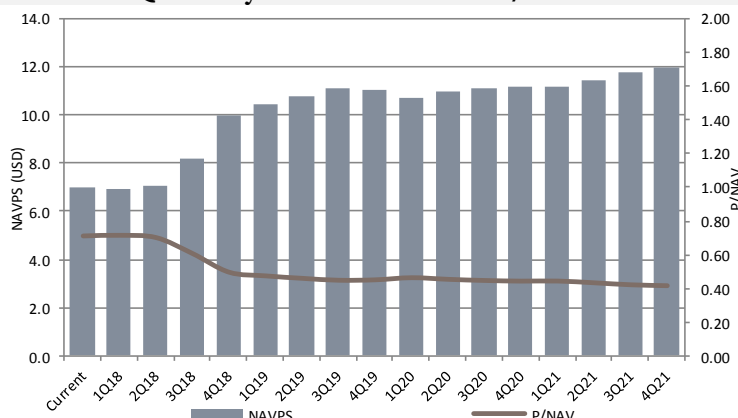


Valuation

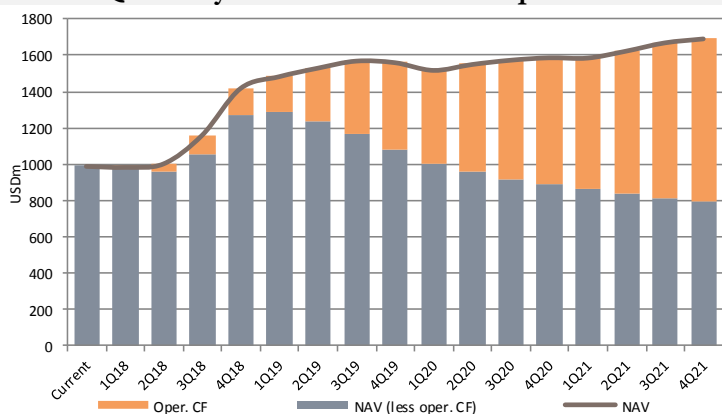
Valuation & target price

Net asset values			
USDm	4Q17	Fair value	Implied
Primary assets	2,136	2,113	1,849
Contract value	0	6	5
Other	220	160	140
GAV	2,356	2,279	1,994
Net debt	-1,285	-1,285	-1,285
Capex	0	0	0
Other	-4	-4	-4
NAV	1,068	990	705
Shares	142	142	142
NAVPS	7.52	6.98	4.97
Share price	58.5	54.3	38.6
P/NAV	0.66	0.71	1.00
EV/GAV	0.85	0.87	1.00
Adj. Total Assets	2,455	2,433	2,168
Adj. Equity Ratio	43%	41%	33%
Target price	NOK	69	78%

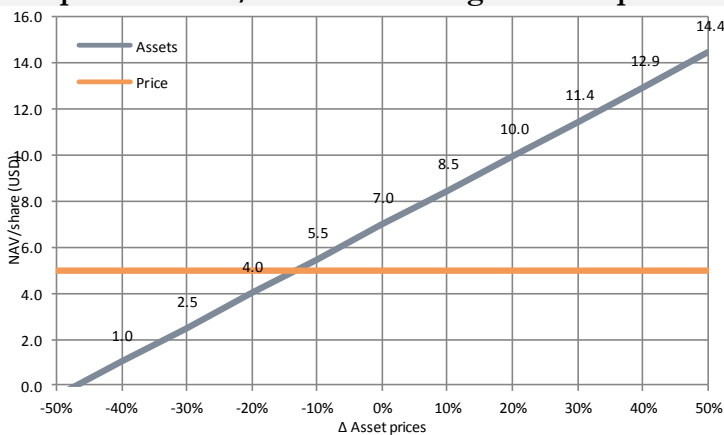
Quarterly forward NAV & P/NAV



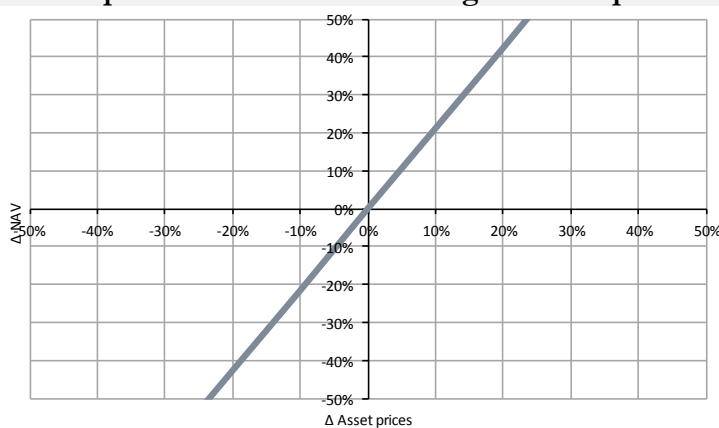
Quarterly forward NAV decomposition



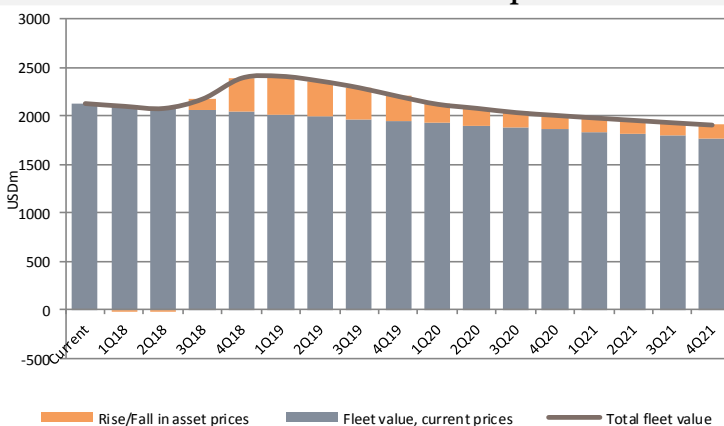
Impact on NAV/sh from % change in asset prices



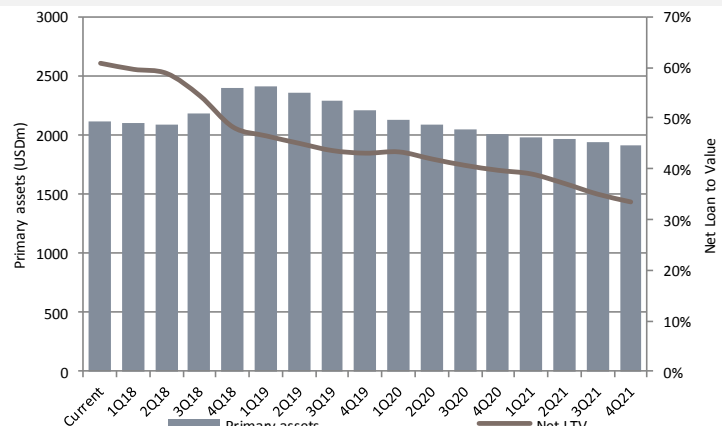
% Impact on NAV from % change in asset prices



Forward fleet valuation decomposition



Forward fleet value & net loan to value





	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Profit & Loss (USDm)									
Net sales	610	956	920	606	648	392	551	445	423
Operational costs	-419	-616	-490	-453	-517	-198	-184	-194	-194
EBITDA	191	340	430	153	131	194	368	250	229
Depreciation/Amortization	-59	-71	-85	-99	-127	-120	-120	-120	-120
EBIT	131	269	346	53	3	74	248	130	109
Net financials	-5	-13	-19	-29	-48	-43	-38	-31	-26
PTP	126	256	327	24	-44	32	210	99	83
Taxes/Minorities	-1	-2	-3	0	2	-1	0	0	0
Net earnings	125	255	324	24	-43	31	210	99	83
Non-recurring items	0	0	0	0	0	0	0	0	0
Net earnings (adj.)	125	255	324	24	-43	31	210	99	83
EPS	0.92	1.87	2.38	0.17	-0.30	0.22	1.48	0.70	0.59
EPS (adj.)	0.92	1.87	2.38	0.17	-0.30	0.22	1.48	0.70	0.59
DPS	0.00	0.91	1.88	0.74	0.00	0.20	0.74	0.35	0.31
Balance Sheet (USDm)									
Cash & short-term investments	111	70	94	81	57	107	211	252	326
Other current assets	143	103	107	85	219	219	219	219	219
Total current assets	254	173	201	166	276	326	430	471	546
Property & equip. (incl. NBs)	1,355	1,473	1,864	2,413	2,136	2,005	1,906	1,805	1,685
Other non-current assets	22	18	45	15	44	44	44	44	44
Total non-current assets	1,378	1,491	1,909	2,428	2,179	2,049	1,950	1,848	1,728
TOTAL ASSETS	1,631	1,664	2,110	2,594	2,455	2,375	2,380	2,320	2,274
Total equity	975	1,081	1,171	1,117	1,074	1,076	1,181	1,230	1,269
Short-term debt	105	60	120	431	265	219	259	293	259
Other current liabilities	47	52	51	65	41	41	41	41	41
Total current liabilities	152	112	171	497	305	259	299	334	300
Long-term debt	503	470	767	980	1,076	1,040	900	755	705
Other non-current liabilities	1	2	1	0	0	0	0	0	0
Total non-current liabilities	505	471	768	980	1,076	1,040	900	755	705
TOTAL EQUITY & LIABILITIES	1,631	1,664	2,110	2,594	2,455	2,375	2,380	2,320	2,274
Working capital, receivables	112	88	91	64	93	93	93	93	93
Working capital, payables	46	50	44	60	40	40	40	40	40
Net working capital	66	38	47	5	53	53	53	53	53
Interest bearing debt	609	529	887	1,411	1,341	1,259	1,159	1,049	964
Liquidity	111	70	94	81	57	107	211	252	326
Net interest bearing debt	498	459	793	1,330	1,285	1,152	948	797	638
Cash Flow (USDm)									
Net income	125	255	324	24	-43	31	210	99	83
Depreciation	59	71	85	99	127	120	120	120	120
Other	-50	4	9	58	-2	0	0	0	0
Cash earnings	134	329	417	182	82	151	330	219	203
Changes in working capital	-13	43	-11	35	-53	0	0	0	0
Net operational cash flow	121	372	407	217	29	151	330	219	203
Capex	-430	-181	-467	-230	-89	-22	-21	-19	0
Other investments	0	0	0	0	0	0	0	0	0
Proceeds from sales	6	0	0	43	111	33	0	0	0
Other	-1	-3	-37	-46	2	0	0	0	0
Net investing cash flow	-424	-184	-505	-233	24	11	-21	-19	0
Repayment of debt	126	-80	359	118	-70	-233	-100	-310	-85
Proceeds from debt	—	—	—	—	—	150	0	200	0
Dividends paid	0	-124	-256	-105	0	-29	-105	-50	-44
New equity	280	0	27	0	—	0	0	0	0
Other	-13	-25	-8	-11	-7	0	0	0	0
Net financing cash flow	393	-229	122	3	-77	-112	-205	-160	-129
Currency effect	0	0	0	0	0	0	0	0	0
Net cash flow	89	-41	24	-13	-24	50	104	41	74
Cash balance	111	70	94	81	57	107	211	252	326
Free cash flow	-304	188	-98	-16	53	162	309	201	203



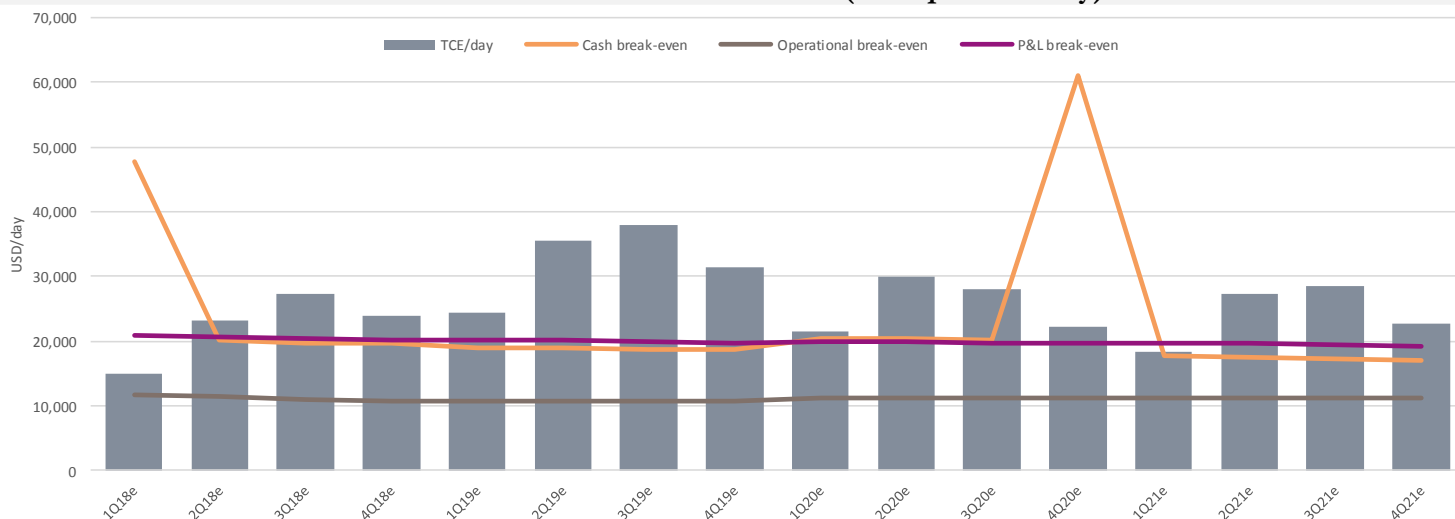
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BUY/TP 69

Share Data & Valuation (USDm)	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Shares outstanding, end	136	136	136	142	142	142	142	142	142
Share price, avg (USD)	7	9	8	5	5	5	5	5	5
Share price, end (USD)	10	7	8	4	5	5	5	5	5
Market Cap.	1,296	960	1,129	598	670	705	705	705	705
NIBD	498	459	793	1,330	1,285	1,152	948	797	638
Minorities	10	10	10	7	3	3	3	3	3
Enterprise value	1,784	1,410	1,912	1,921	1,951	1,854	1,650	1,498	1,340
Key Figures & Ratios	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
P/E (reported)	10.4	3.8	3.5	24.6		22.7	3.4	7.1	8.5
P/E (adj.)	10.4	3.8	3.5	24.6		22.7	3.4	7.1	8.5
P/CE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P/Sales	2.1	1.0	1.2	1.0	1.0	1.8	1.3	1.6	1.7
EV/Sales	2.9	1.5	2.1	3.2	3.0	4.7	3.0	3.4	3.2
EV/EBITDA	9.4	4.1	4.4	12.6	14.9	9.6	4.5	6.0	5.9
EV/EBIT	13.6	5.2	5.5	36.0		24.9	6.7	11.5	12.3
P/B	1.3	0.9	1.0	0.5	0.6	0.7	0.6	0.6	0.6
FCF yield	-23%	20%	-9%	-3%	8%	23%	44%	28%	29%
Dividend yield	0.0%	12.9%	22.7%	17.5%	0.0%	4.1%	14.9%	7.0%	6.3%
Return on equity (ROE)	12.9%	23.8%	27.9%	2.2%	-4.0%	2.9%	17.9%	8.1%	6.6%
Return on capital employed (ROCE)	8.9%	17.5%	17.6%	2.2%	0.1%	3.3%	11.6%	6.4%	5.7%
Return on assets (ROA)	7.6%	15.3%	15.4%	0.9%	-1.7%	1.3%	8.8%	4.3%	3.7%
Sales growth	15%	57%	-4%	-34%	7%	-39%	41%	-19%	-5%
EBITDA margin	31%	36%	47%	25%	20%	49%	67%	56%	54%
EBIT margin	22%	28%	38%	9%	1%	19%	45%	29%	26%
Net margin	20%	27%	35%	4%	-7%	8%	38%	22%	20%
Net interest rate	1.1%	2.3%	2.1%	2.1%	3.7%	3.7%	4.0%	3.9%	4.0%
Tax rate	0.0%	0.3%	0.2%	1.0%	-1.2%	1.7%	0.0%	0.0%	0.0%
Equity ratio	60%	65%	55%	43%	44%	45%	50%	53%	56%
Leverage ratio	40%	35%	45%	57%	56%	55%	50%	47%	44%
NIBD / EBITDA (past 1y)	2.6	1.4	1.8	8.7	9.8	5.9	2.6	3.2	2.8
Operating cash flow/NIBD	0.2	0.8	0.5	0.2	0.0	0.1	0.3	0.3	0.3
Net interest coverage ratio (EBITDA)	34.8	32.8	25.5	5.5	2.8	4.5	9.8	8.1	8.9
Current ratio	1.7	1.5	1.2	0.3	0.9	1.3	1.4	1.4	1.8
Adj. equity ratio					42%	52%	57%	59%	63%
Operating assets	1,521	1,594	2,016	2,513	2,399	2,268	2,169	2,068	1,948
Operating liabilities	48	54	52	66	41	41	41	41	41
Net operating assets	1,472	1,540	1,964	2,448	2,358	2,228	2,128	2,027	1,907

Source for financial items: Historical numbers primarily gathered from Bloomberg and company data. Forecast from Gersemi Research

Break-even levels vs TCE revenue (USD per fleet day)



SLPG (#BUY, 14): Focus continues to be on the balance sheet, but we believe investors are overly pessimistic ahead of improving earnings

LPG-US

BUY/TP 14

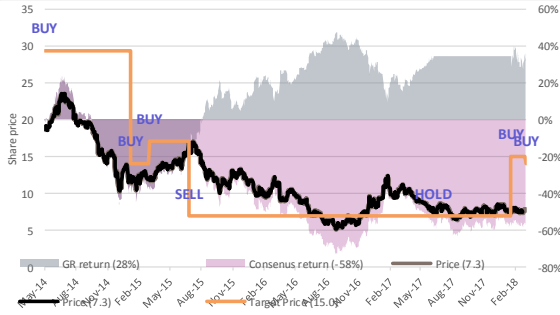
Investors Are Overly Pessimistic

Dorian LPG continues to focus on restructuring its balance sheet, but we do not share the concerns currently priced into the share price. Further sale/leasebacks might be in the short-term pipeline, but we are confident that the company will find a sustainable solution that is not too costly for shareholders given our forecast of rising earnings from 2Q18 and beyond. We reiterate our BUY recommendation with a \$14/sh target price.

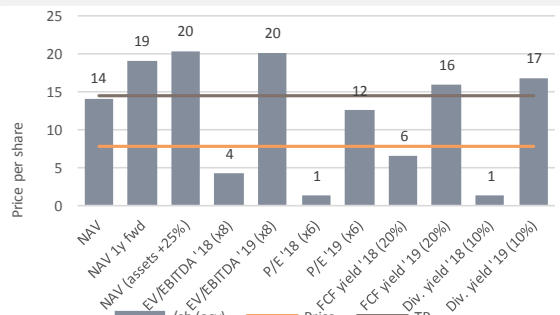
Company overview: Dorian LPG ordered a massive fleet of VLGC newbuildings in the expansionary phase of the last cycle, which were delivered into the peak cycle from 2014 to early 2016. The company currently has 22 VLGCs on the water of which two are under sale/leasebacks. The fleet is mainly operating in the spot market, although a few vessels are chartered out for longer durations. [BW LPG](#) is currently the second largest shareholder at 14.2% after picking up shares during HNA's exit in January.

Investment case: With three-year-old VLGCs trading at all-time-lows, the current share price in Dorian LPG lets investors buy the same vessels at an additional 24% discount and getting the operations for free. We expect focus in 2018 will continue to be on the balance sheet but improving earnings from 2Q18 should support a sustainable solution. We forecast an EV/EBITDA of 4.8 in 2019 and a dividend yield of 21%.

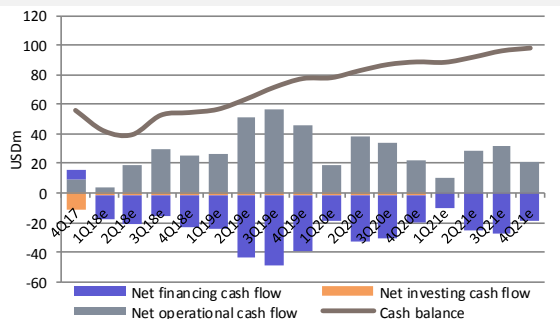
Share price vs target price



Valuation matrix



Cash & cash flows



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Key numbers

USDm	2018	2019	2020	2021
Net sales	198	298	227	203
EBITDA	113	213	142	117
EBIT	47	147	76	51
PTP	11	114	48	26
Net earnings	11	114	48	26
EPS	0.20	2.08	0.87	0.48
DPS	0.13	1.67	0.81	0.68
USDm	2018	2019	2020	2021
Fwd NAV	1,041	1,057	1,105	1,135
Adj. equity ratio	60%	62%	65%	67%
FCF yield	17%	41%	25%	22%
Dividend yield	2%	21%	10%	9%
EV/EBITDA	9.8	4.8	6.8	7.8
P/E (adj.)	38.7	3.7	8.9	16.3

Key numbers

USDm	2018	2019	2020	2021
Net operational cash flow	77	180	114	92
Free cash flow	71	174	108	92
Net cash flow	-1	23	11	9
TCE/day	24,662	37,043	28,254	25,213
Cash break-even	29,260	22,365	20,857	19,734
Liquidity	16	38	50	59
Property & Equip. (incl. NBs)	1,544	1,484	1,424	1,358
Total equity	980	1,002	1,005	994
Interest bearing debt	696	636	585	539
Net interest bearing debt	680	598	535	480
Market Cap.	428	428	428	428
Enterprise value	1,108	1,026	963	908
Capex	6	6	6	-

Source: Gersemi Research, Bloomberg, company data

Disclaimer: The publisher currently owns shares in the company. More disclaimers at the end of this document



Estimate Changes

Profit & Loss

Estimate changes USDm	New				Old				Change				
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	
Net sales	198	298	227	203	206	310	245	203	-8	-12	-17	-	
EBITDA	113	213	142	117	112	215	150	117	1	-3	-8	-	
EBIT	47	147	76	51	46	149	84	51	1	-3	-8	-	
PTP	11	114	48	26	13	121	58	26	-2	-6	-10	-	
Net earnings	11	114	48	26	13	121	58	26	-2	-6	-10	-	
EPS	0.20	2.08	0.87	0.48	0.24	2.19	1.05	0.48	-0.04	-0.12	-0.18	-	
DPS	0.13	1.67	0.81	0.68	-	2.11	1.33	0.68	0.13	-0.44	-0.52	-	
									2018	2019	2020	2021	
									TCE revenue	-8	-12	-17	-
									Opex & G&A	-9	-9	-9	-
									Depreciation	0	0	0	-
									Net finance	3	4	2	-
									Taxes & Minorities	-	-	-	-

Cash Flows & Balance Sheet

Estimate changes USDm	New				Old				Change			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Net operational cash flow	77	180	114	92	79	187	124	92	-2	-6	-10	-
Free cash flow	71	174	108	92	79	187	124	92	-8	-12	-16	-
Net cash flow	-1	23	11	9	-5	16	-	9	4	7	11	-
TCE/day	24,662	37,043	28,254	25,213	25,662	38,537	30,394	25,213	-1,000	-1,494	-2,140	-
Cash break-even	29,260	22,365	20,857	19,734	25,015	22,154	21,249	19,734	4,245	211	-393	-
Liquidity	16	38	50	59	75	91	91	59	-60	-53	-41	-
Property & Equip. (incl. NBs)	1,544	1,484	1,424	1,358	1,491	1,425	1,359	1,358	53	59	65	-
Total equity	980	1,002	1,005	994	959	964	948	994	21	39	57	-
Interest bearing debt	696	636	585	539	679	624	574	539	17	12	11	-
Net interest bearing debt	680	598	535	480	603	533	483	480	77	65	52	-
Market Cap.	428	428	428	428	425	425	425	428	3	3	3	-
Enterprise value	1,108	1,026	963	908	1,028	958	907	908	80	68	56	-
Capex	6	6	6	-	-	-	-	-	6	6	6	-

Valuation

Estimate changes USDm	New				Old				Change			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Fwd NAV	1,041	1,057	1,105	1,135	1,078	1,101	1,145	1,135	-37	-44	-40	-0
Adj. equity ratio	60%	62%	65%	67%	61%	63%	66%	67%	-1%	-1%	-1%	0%
FCF yield	17%	41%	25%	22%	19%	44%	29%	22%	-2%	-3%	-4%	0%
Dividend yield	2%	21%	10%	9%	0%	27%	17%	9%	2%	-6%	-7%	0%
EV/EBITDA	9.8	4.8	6.8	7.8	9.2	4.5	6.1	7.8	0.6	0.4	0.7	-
P/E (adj.)	38.7	3.7	8.9	16.3	32.4	3.5	7.3	16.3	6	0	2	-

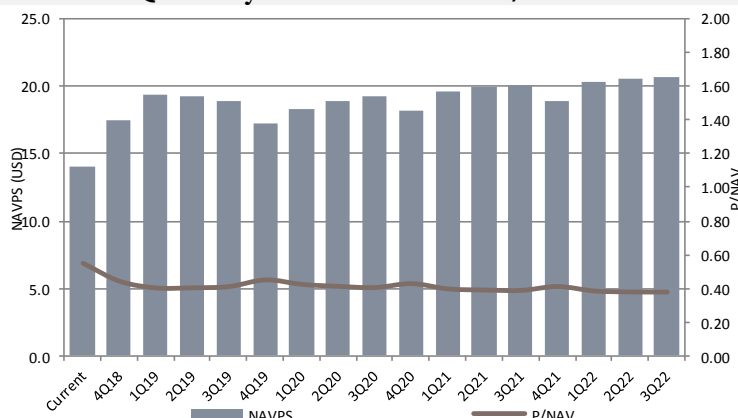


Valuation

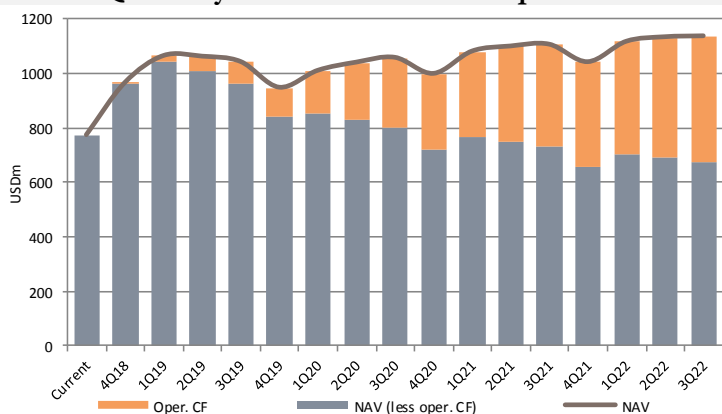
Valuation & target price

Net asset values			
USDm	3Q18	Fair value	Implied
Primary assets	1,555	1,367	1,041
Contract value	0	1	0
Other	86	86	65
GAV	1,641	1,453	1,107
Net debt	-672	-672	-672
Capex	0	0	0
Other	-7	-7	-7
NAV	962	774	428
Shares	55	55	55
NAVPS	17.5	14.0	7.8
Share price	17.5	14.0	7.8
P/NAV	0.45	0.55	1.00
EV/GAV	0.67	0.76	1.00
Adj. Total Assets	1,706	1,517	1,192
Adj. Equity Ratio	56%	51%	36%
Target price	USD	14	86%

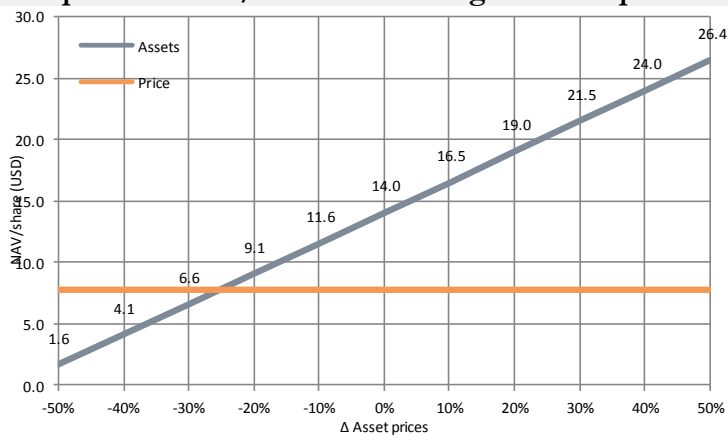
Quarterly forward NAV & P/NAV



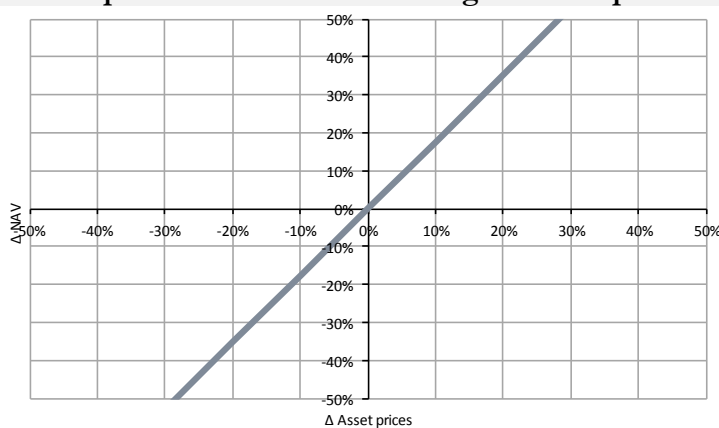
Quarterly forward NAV decomposition



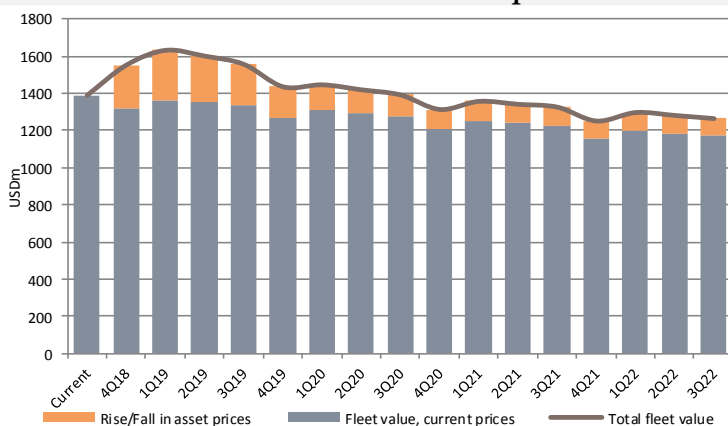
Impact on NAV/sh from % change in asset prices



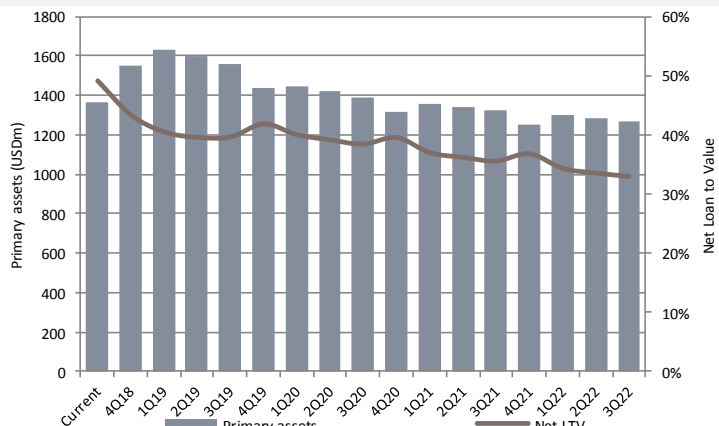
% Impact on NAV from % change in asset prices



Forward fleet valuation decomposition



Forward fleet value & net loan to value





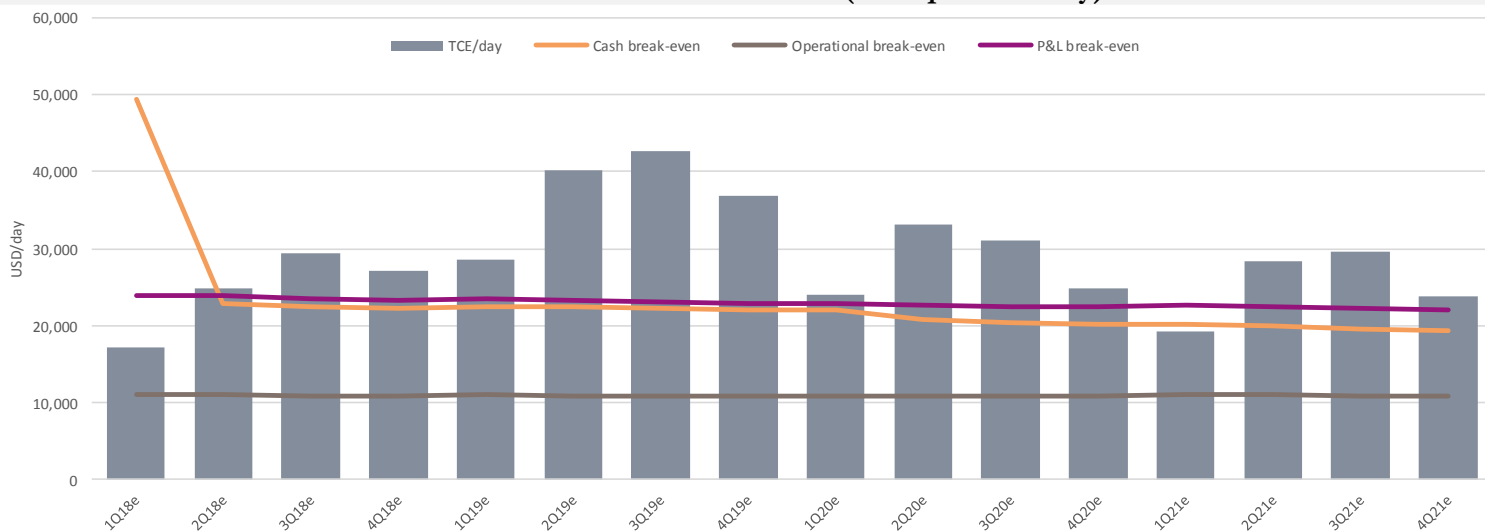
Profit & Loss (USDm)	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Net sales	0	0	126	301	170	198	298	227	203
Operational costs				-100	-91	-85	-85	-85	-86
EBITDA				201	79	113	213	142	117
Depreciation/Amortization				-43	-65	-66	-66	-66	-66
EBIT	—	—	30	158	14	47	147	76	51
Net financials			-5	-29	-15	-36	-32	-28	-25
PTP	—	—	25	130	-1	11	114	48	26
Taxes/Minorities			0	0	0	0	0	0	0
Net earnings	—	—	25	130	-1	11	114	48	26
Non-recurring items			0	0	0	0	0	0	0
Net earnings (adj.)	—	—	25	130	-1	11	114	48	26
EPS			0.44	2.31	-0.03	0.20	2.08	0.87	0.48
EPS (adj.)			0.44	2.31	-0.03	0.20	2.08	0.87	0.48
DPS			0.00	0.00	0.00	0.13	1.67	0.81	0.68
Please note that Dorian LPG has diverging accounting year. I.e. FY 2017 ended 31/03/2017									
Balance Sheet (USDm)	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Cash & short-term investments	—	279	205	46	17	16	38	50	59
Other current assets		36	28	59	47	47	47	47	47
Total current assets	—	315	233	106	64	62	85	97	106
Property & equip. (incl. NBs)	—	518	819	1,668	1,604	1,544	1,484	1,424	1,358
Other non-current assets		7	47	69	78	78	78	78	78
Total non-current assets	—	525	866	1,737	1,682	1,622	1,563	1,503	1,437
TOTAL ASSETS	—	840	1,099	1,842	1,746	1,685	1,648	1,599	1,543
Total equity	—	692	873	986	976	980	1,002	1,005	994
Short-term debt	—	10	16	66	66	39	47	55	52
Other current liabilities		5	13	22	20	20	20	20	20
Total current liabilities	—	15	28	88	86	59	67	74	71
Long-term debt	—	119	185	746	684	656	589	530	487
Other non-current liabilities		14	13	22	0	0	0	0	0
Total non-current liabilities	—	133	198	768	684	657	590	530	488
TOTAL EQUITY & LIABILITIES	—	840	1,099	1,842	1,746	1,696	1,659	1,610	1,554
Working capital, receivables		3	3	2	3	3	3	3	3
Working capital, payables	—	2	11	17	12	12	12	12	12
Net working capital		1	-7	-14	-10	-10	-10	-10	-10
Interest bearing debt		129	200	813	750	696	636	585	539
Liquidity		310	205	46	17	16	38	50	59
Net interest bearing debt		-181	-4	766	733	680	598	535	480
Cash Flow (USDm)	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Net income	—	—	25	130	-1	11	114	48	26
Depreciation				43	65	66	66	66	66
Other				17	-19	0	0	0	0
Cash earnings			44	189	45	77	180	114	92
Changes in working capital	—	—	-19	-38	7	0	0	0	0
Net operational cash flow	—	—	26	151	52	77	180	114	92
Capex	—	—	-315	-896	-2	-6	-6	-6	0
Other investments	0	0	0	0	0	0	0	0	0
Proceeds from sales	—	—	0	3	0	0	0	0	0
Other			2	-18	0	3	3	3	3
Net investing cash flow	—	—	-312	-910	-2	-6	-6	-6	0
Repayment of debt	—	—	70	636	-66	-110	-60	-52	-45
Proceeds from debt	—	—	80	677	0	56	0	0	0
Dividends paid	—	—	0	0	0	-7	-92	-45	-37
New equity	—	—	156	0	0	0	0	0	0
Other			-93	-712	-13	3	3	3	3
Net financing cash flow	—	—	214	601	-79	-72	-151	-97	-83
Currency effect	—	—	-1	0	0	0	0	0	0
Net cash flow			-74	-158	-29	-1	23	11	9
Cash balance		183	22	32	56	54	77	88	98
Free cash flow			-287	-759	50	71	174	108	92



Share Data & Valuation (USDm)	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
Shares outstanding, end	—	48	58	56	55	55	55	55	55
Share price, avg (USD)		18	13	8	8	8	8	8	8
Share price, end (USD)	—	—	13	9	11	8	8	8	8
Market Cap.			756	528	579	428	428	428	428
NIBD		-181	-4	766	733	680	598	535	480
Minorities	—	0	0	0	0	0	0	0	0
Enterprise value			752	1,294	1,312	1,108	1,026	963	908
Key Figures & Ratios	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E
P/E (reported)			29.9	4.1		38.7	3.7	8.9	16.3
P/E (adj.)			29.9	4.1		38.7	3.7	8.9	16.3
P/CE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P/Sales			6.0	1.8	3.4	2.2	1.4	1.9	2.1
EV/Sales			6.0	4.3	7.7	5.6	3.4	4.2	4.5
EV/EBITDA				6.4	16.6	9.8	4.8	6.8	7.8
EV/EBIT			25.0	8.2	93.7	23.4	7.0	12.6	17.7
P/B			0.9	0.5	0.6	0.4	0.4	0.4	0.4
FCF yield			-38%	-144%	9%	17%	41%	25%	22%
Dividend yield			0.0%	0.0%	0.0%	1.7%	21.4%	10.5%	8.7%
Return on equity (ROE)			2.9%	13.2%	-0.1%	1.1%	11.4%	4.8%	2.6%
Return on capital employed (ROCE)			3.6%	9.3%	0.8%	3.0%	9.5%	5.2%	3.6%
Return on assets (ROA)			2.3%	7.0%	-0.1%	0.7%	6.9%	3.0%	1.7%
Sales growth				139%	-43%	16%	50%	-24%	-11%
EBITDA margin				67%	46%	57%	71%	62%	58%
EBIT margin			24%	53%	8%	24%	49%	33%	25%
Net margin			20%	43%	-1%	6%	38%	21%	13%
Net interest rate		0.0%	0.0%	0.0%	0.0%	5.3%	5.4%	5.3%	5.2%
Tax rate			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Equity ratio		82%	79%	54%	56%	58%	61%	63%	64%
Leverage ratio		18%	21%	46%	44%	42%	39%	37%	36%
NIBD / EBITDA (past 1y)				3.8	9.3	6.0	2.8	3.8	4.1
Operating cash flow/NIBD			-5.7	0.2	0.1	0.1	0.3	0.2	0.2
Net interest coverage ratio (EBITDA)						3.1	6.6	5.0	4.7
Current ratio		21.2	8.3	1.2	0.7	1.1	1.3	1.3	1.5
Adj. equity ratio					50%	60%	62%	65%	67%
Operating assets		526	861	1,745	1,678	1,618	1,559	1,499	1,433
Operating liabilities		19	26	44	20	20	20	20	20
Net operating assets		506	836	1,701	1,658	1,598	1,538	1,478	1,413

Source for financial items: Historical numbers primarily gathered from Bloomberg and company data. Forecast from Gersemi Research

Break-even levels vs TCE revenue (USD per fleet day)





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