Short LPG Outlook

This short-term market outlook seeks to pinpoint directional changes in asset values and earnings, addressing key development the next 1-2 years.

Freight rates

The Great Lockdown recession includes a massive drop in consumer demand which has led to sharp cuts in oil production with wide ranging consequences for the LPG shipping markets. On the one side, lower oil production has entailed lower LPG production. On the other side, lower crude prices have made Naphtha more competitive as an ethylene feedstock. Fleet growth is established for 2020 and 2021 with little room for amendments beyond scrapping and the dire conditions are expected to last until 2022 for the VLGCs. We expect demand for ammonia to be more resilient with Asian countries being a source of growing demand. Trade in petchem gases has moved lower in the 1H of 2020 but may see growth in the 2H and in 2021 as economic activity picks up. Wide Price differences can stimulate long haul trade from the US to Asia for ethylene.

Vessel prices

Newbuilding prices for vessels have increased substantially from the troughs of 2017. In 2019 and even more so, this far in 2020 however, shipyard demand has been weak. Uncertainties surrounding geopolitics, regulations and shut-in capacity due to the coronavirus are to blame. ViaMar expects ordering activity to remain low in the near term as increased volatility in trade and commodity markets complicates the outlook for shipping. Consequently, the global orderbook continues to decline. However, as the coronavirus threat fades, and the impact of the trade war abates, total ordering activity should pick up thereafter. Moreover, our earnings outlook will for the most part improve in the second half of 2021.Under this scenario the total orderbook will bottom out around the third quarter of 2021 and then contribute to asset value appreciation, as the orderbook builds through our last projection year in 2023.

Muted earnings and heightened uncertainty are expected to result in low newbuilding activity for LPG carriers in 2020. Lower newbuilding prices towards the end of 2020 and beginning 2021 may tempt some actors to move forward with new projects once the coronavirus pandemic has been contained and oil prices trend to normalize.

Business Environment

The US economy is experiencing a period of tremendous hardship caused by the Covid-19 pandemic. ViaMar expects economic growth to drop to a mere -6.6% in 2020, despite the most recent uptick in consumer confidence in May, following its collapse in March/April. In May retail sales saw the biggest monthly gain on record of 18%, as consumers returned, and states gradually reopened their economies. But the level of retail sales was still down -6% the same month. Much less positive is the current unemployment rate which runs at 15%. Manufacturers, however, are expected to work through their current high inventories as consumer demand recovers with easing restrictions. Not surprising then is that Industrial indicators are still negative. Industrial production declined 15-16% in April/May. Other leading indicators such as residential investments which was up by a strong 18.5% in the first quarter, has since collapsed. In efforts trying to combat the worst economic set back in decades the Fed has approved both fiscal and monetary easing, including a Paycheck Protection Program, which should support re-hiring and an economic recovery. Nearly USD 3tr in relief measures to support struggling businesses and individuals is expected to be approved.

European economies have had dramatic economic setbacks because of the Covid-19 pandemic. Major economies such as Germany, France and Italy now have two consecutive quarters (4th 2019 and 1st 2020) with negative GDP growth and are in recession. Others are certainly to follow despite containment measures easing in the 2nd quarter and mobility picking up. The latest data for manufacturing, retail sales and confidence show declines of 20% or more, uncovering how serious the situation is. For the European Union under one, it is expected that 2020 will see negative growth of 9%. Easing fiscal and monetary policies, various crisis packages, tax deferrals etc. offered by governments and the ECB should dampen the hardship. Regardless, it is unlikely that the EU will regain lost activity ahead of 2022.

Following a GDP collapse to -6.8% in the first quarter, the Chinese government set aside its growth target for 2020 but vowed to ensure stable economic conditions. The economy has felt the full brunt of the Coronavirus and its ramifications with lockdowns and social distancing in large parts of the country during the first half of 2020. Having taken the lead on preventive measures to fight the virus, the country was also in the forefront of easing restrictions and bringing the workforce gradually back. Though industrial production posted a solid comeback of 4.4% in May (avg. -6% ytd 2020), fixed asset investment, public investment, private investment and retail sales are all firmly in negative territory. China was early to develop stimuli plans to stymie the negative effects of the current crisis, just as it did in 2008 under the financial crisis. For 2020 the National Defense Research Committee (NDRC) has approved 3.7tr yuan for 2020, and expectations are for further funds to be approved for 2021 and beyond. While the traditional infrastructure and steel industries will receive attention, the modern time digital infrastructure will also be targeted. 2021 is the 100-year anniversary of the Communist Party and a long-term target was doubling of GDP from 2010 to 2020. A growth of 5.9% in 2020 was needed to fulfil that goal. ViaMar's 2020 estimate for Chinese growth currently stands at 1.2%.

The Phase One trade deal between China and the US has led to a subtraction of some tariffs, but a partial deal in the short term will not resolve the fundamental differences in the two countries economic, political and strategic interests. Tariffs remain on $377bn worth of Chinese exports.

Demand

US, and recently Canada, have been the most significant contributors to world-wide LPG export growth in the past 5 years, driven by high production gains and flat local consumption. In EIA's latest forecast, US production growth is set to decline in the 2H of 2020 after showing strong growth in the 1Q. Further declines are expected for 2021. We now expect US production in 2020 to see only 0.6% growth and a decline of 5% for 2021.

Following the new Opec+ cuts announced on April 12th we expect abt. 22% lower LPG export from the Middle East in 2020, and abt.12% lower in 2021 (vs 2019). Economic sanctions against Iran are forecasted to remain in place for 2020 and 2021.

As countries slowly follow a reopening strategy, Asian demand for energy and feedstock is forecasted to resume. Small industry demand, restaurants and hotels have the potential to support demand for LPG as have domestic consumption from cooking and heating.

Pent up demand for non-consumables may stimulate industrial activity and demand for feedstocks., however, low crude prices will be a threat to the LPG demand in 2020 and into early 2021.

Lower crude runs will return less propylene which has traded Trans-Atlantic. US export of ethylene is still expected to increase on high production growth, attractive prices and a new terminal. The European butadiene export may now decline as local auto industry demand resumes.

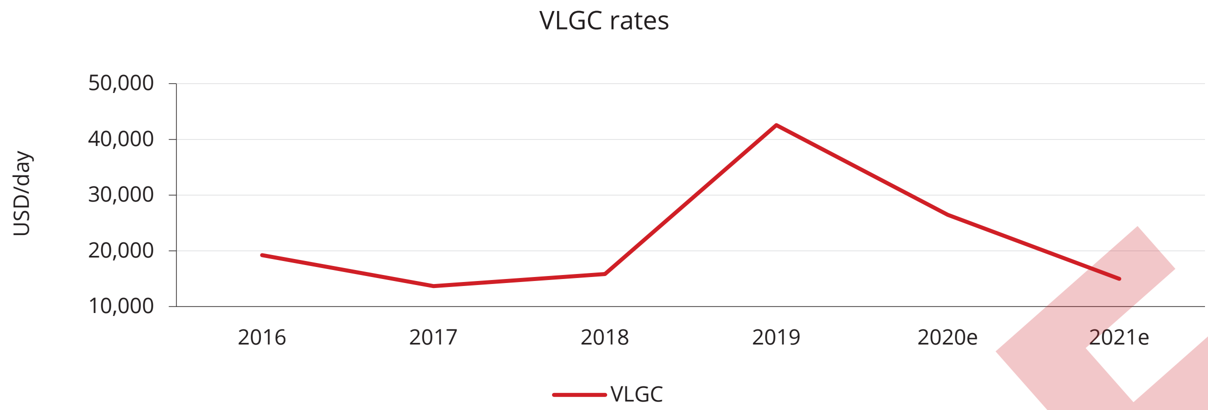
Renewed focus on food and self-sufficiency in production is likely to support demand for ammonia. Asia will lead the way with Latin America and North Africa trailing. ViaMar also expects growth in import to Europe.

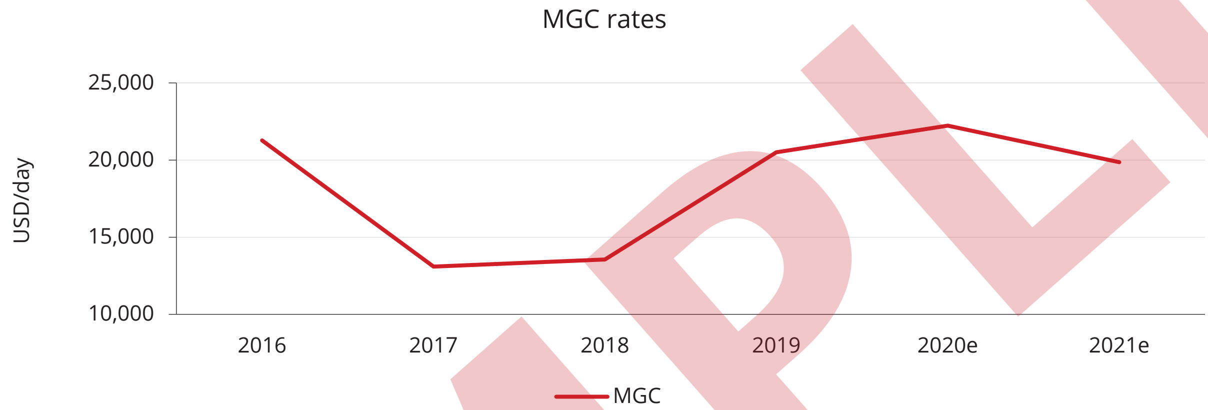
Supply

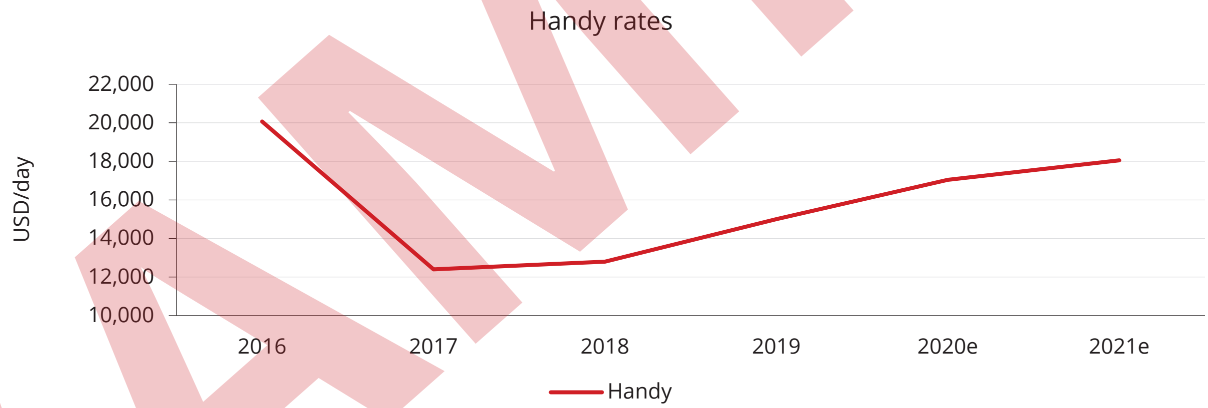
Loss of income and elevated uncertainty is likely to keep shipbuilding activity at a very low level going forward. Softer earnings will likely activate new scrap initiatives. The current orderbook for VLGCs stands at 12.7%, and there are 28 ships trading with an age at 25 years or above. ViaMar forecast a fleet growth of 6.8% for 2020 declining to 6.2% for 2021.

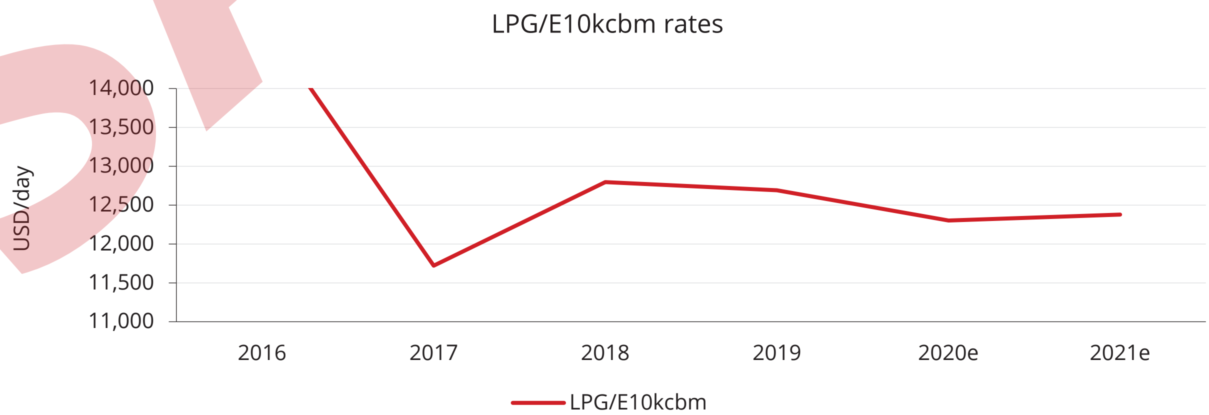
In the mid-size segment, the orderbook now stands at 12.2% with 12 ships on order. There are 5 ships trading with an age of 25 years or older. The fleet growth is still estimated to be -0.1% in 2020 and 3.3% in 2021.

Also, in the small size segment, ViaMar expects a modest fleet growth going forward. The orderbook is limited to 4.6% and there is a large element of over-aged tonnage. Fleet growth is now estimated to be 2.1% in 2020 and 1.8% for 2021.


VLGC rates
USD/day
50,000
40,000
30,000
20,000
10,000
2016
2017
2018
2019
2020e
2021e
VLGC


MGC rates
USD/day
25,000
20,000
15,000
10,000
2016
2017
2018
2019
2020e
2021e
MGC


Handy rates
USD/day
22,000
20,000
18,000
16,000
14,000
12,000
10,000
2016
2017
2018
2019
2020e
2021e
Handy


LPG/E10kcbm rates
USD/day
14,000
13,500
13,000
12,500
12,000
11,500
11,000
2016
2017
2018
2019
2020e
2021e
LPG/E10kcbm

Freight rates and asset values

Freight rates – USD/day

	2017	2018	2019	2020e	2021e
VLGC	13,670	15,850	42,561	26,463	14,962
MGC	13,094	13,556	20,502	22,230	19,862
Handy	12,399	12,800	15,005	17,043	18,051
LPG/E10kcbm	11,721	12,795	12,690	12,302	12,378
P 3 500 cbm	6,074	10,995	9,231	6,439	6,412

Newbuilding prices – USD M

	2017	2018	2019	2020e	2021e
VLGC	69.5	69.3	71.2	71.4	67.8
MGC	45.0	45.0	47.1	47.5	45.8
Handy	40.2	40.0	41.7	40.6	38.4
LPG/E12kcbm	37.8	38.5	41.1	40.9	38.8
P 3 500 cbm	13.3	14.6	15.8	15.8	15.2

Secondhand values 5 years old – USD M

	2017*	2018*	2019*	2020e	2021e
VLGC	56.3	60.8	67.4	70.9	62.7
MGC	30.4	31.6	37.7	38.6	33.5
Handy	38.6	38.1	39.5	38.4	36.3
LPG/E10kcbm	26.6	33.9	34.4	32.1	30.1
P 3 500 cbm	8.4	9.1	10.1	10.1	9.1

Secondhand values 10 years old – USD M

	2017*	2018*	2019*	2020e	2021e
VLGC	46.4	44.8	49.5	53.0	47.2
MGC	23.2	21.4	25.2	26.5	22.5
Handy	28.8	28.5	30.0	29.0	27.4
LPG/E9kcbm	18.0	20.1	22.0	20.6	19.0
P 3 500 cbm	7.5	7.6	8.1	7.5	6.4

Demand

Total seaborne trade - Tons k

	2017	2018	2019	2020e	2021e
LPG	97,799	106,458	108,556	105,153	105,422
Ammonia	15,287	16,136	16,054	15,837	16,545
Ethylene	6,102	5,838	5,888	5,330	6,005
Propylene	6,722	6,405	7,170	6,779	7,124
Butadiene	2,559	2,336	2,149	2,260	2,320
VCM	3,527	3,494	3,780	3,975	3,935
Total	**131,995**	**140,666**	**143,595**	**139,334**	**141,351**

Total trade – Growth rates

	2017	2018	2019	2020e	2021e
LPG	0.7 %	6.9 %	7.5 %	5.4 %	-5.3 %
Ammonia	6.6 %	5.9 %	-5.2 %	-2.7 %	6.3 %
Ethylene	14.3 %	9.9 %	-16.5 %	15.7 %	1.5 %
Propylene	7.9 %	-4.1 %	17.7 %	-6.5 %	15.1 %
Butadiene	22.9 %	-14.0 %	-0.9 %	4.4 %	-8.5 %
VCM	21.0 %	1.1 %	6.0 %	4.6 %	6.7 %
Total	**2.0 %**	**6.3 %**	**5.9 %**	**4.9 %**	**-3.9 %**

LPG trade - Tons M

Import	2017	2018	2019	2020e	2021e
China	18.3	22.5	23.3	22.3	23.6
India	11.2	12.6	14.2	13.6	14.4
Japan + Korea	16.9	17.3	18.1	18.2	17.9

Export	2017	2018	2019	2020e	2021e
North America	28.1	31.5	38.0	42.7	37.8
Middle East	36.2	41.9	37.2	30.6	34.2
Africa	10.2	9.6	9.4	8.8	8.8

Ethylene trade - Tons M

Import	2017	2018	2019	2020e	2021e
China	2,158	2,578	2,509	2,000	1,835
Rest of Asia	1,533	1,332	1,402	1,780	1,825
Euro (extra)	439	357	605	150	335

Export	2017	2018	2019	2020e	2021e
US	170	276	214	435	805
Middle East	534	444	362	410	450
Asia	2,796	2,618	3,208	2,720	2,790

Supply

Fleet no. of ships – Mid year

	2017	2018	2019	2020e	2021e
VLGC	247	265	272	296	314
MGC + LGC	120	129	124	125	134
Small (<23k)	1,033	1,016	1,018	1,030	1,029
Ethylene	172	165	169	171	172
Total	**1,572**	**1,575**	**1,583**	**1,622**	**1,649**

Orderbook – No. of ships

	2017	2018	2019	2020e	2021e
VLGC	21	10	17	21	23
MGC	15	9	2	1	9
Small (<23k)	25	14	12	40	17
Ethylene	7	8	8	2	2
Total	**68**	**41**	**39**	**64**	**51**

Data Contained

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