Navigator Holdings: It's Finally 2020

Porter Street Research
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Executive Summary

- Navigator Holdings (Ticker: NVGS) shares increased 43% in 2019 but only 5% since our recommendation to buy in September 2018 at $12. The S&P 500 is up 16% over the same period. Recently, at over $13/share, Navigator shares were at their highest levels since March 2017. Despite the strong recent performance, we think Navigator's shares remain undervalued.

- 2020 is a key year for Navigator. Multiple pipeline projects are finally coming online to increase the supply of LPG and petrochemical gases that require shipping. The industry order book is near record lows and as demand for vessels increases, day rates and utilization are set to improve into a tight market. Everything that Navigator has telegraphed for the last 24-36 months that is required to send earnings and EBITDA back above prior records appears on track. Specifically:

    - Handysize semi-refrigerated day rates were up 30% in 2019 increasing 18% since the middle of October
    - **Ethylene Export Terminal:** Navigator and Enterprise's ethylene export terminal began loading its first cargo in December and 25mn pounds of ethylene was exported on January 8, 2020. The terminal should ramp into February when contracts with major customer's kick in.
        - *Vessel Requirements: 8-12 handysize ethylene capable depending on destination*
    - **Mariner East:** ME2 work around is going ahead with construction and the startup of ME2X or ME3 remains on track for 1H2020
        - *Vessel Requirements: 5-6 handysize vessels*
    - **Pembina: Prince Rupert Island Terminal**: 25k bl/d for export in Western Canada expected to be in service 2H 2020. Pembina recently announced an increase in capacity to 40k bl/d by 2023. No refrigeration unit means that only semi-ref handysize vessels service the terminal.
        - *Vessel Requirement: 5-6 handysize semi ref vessels only*
    - **Gibbstown**: Off the coast of New Jersey likely starting in 2H2020
        - *Vessel Requirement: 4-6 handysize vessels*

- The handysize vessel market ended 2019 oversupplied by 14-17 vessels compared to a total fleet of 120. With demand increasing by as many as 26 vessels in 2020 compared to 2 new build deliveries, the market should begin to tighten in the first half of 2020. Most relevant to Navigator, within the ethylene capable fleet of handysize vessels, we see the supply demand dynamic improving even more favorably. There are just 36 handysize ethylene capable vessels globally and most are already engaged in long term trades on contracts. Navigator has the largest ethylene capable fleet with 10 handysize vessels and 4 medium size gas carriers. With expected demand of 8-12 handysize vessels and only a handful of vessels available for work in 2020 we think Navigator is in a favorable position to capture incremental demand from the Morgan's Point ethylene terminal at attractive day rates.

- Navigator's current mix of contracts and spot exposure will allow them to take advantage of rising day rates in 2020. By February 1, Navigator will have 18 of its 38 vessels capable of finding work in the spot, COA or long-term contract market. This timely spot exposure combined with Navigator's existing base of highly profitable long-term contracts creates a powerful base for earnings leverage in 2020 and 2021. As a result of a further tightening of the handysize market in 2020 we think earnings can surprise to the upside allowing Navigator to generate meaningful free cash flow to strengthen the balance sheet, de-lever and fund the next leg of growth.

- We are modeling flat day rates into 2020 from year end 2019. This is highly conservative and semi-refrigerated handysize rates have already risen 3% year to date. Should rates continue to rise we think Navigator can generate well over $180mn in EBITDA and see shares heading towards $20 in 2020 with upside momentum into 2021 that could see Navigator set a new record for earnings.

Key Statistics and Estimates

Key Statistics		
Ticker		NVGS
Price	$	12.6
Shares		55.8
Market Cap	$	704
Debt ex Terminal	$	810
Cash	$	57
Enterprise Value	**$**	**1,456**
Debt with Terminal	$	881
EV/with Terminal	**$**	**1,527**
EV/EBITDA w/Terminal		
2020		7.8
2021		5.5
Short Interest		0.12%
Average Daily Volume		100,000
$ Volume	**$**	**1,261,000**
Ownership		
WL Ross (Invesco)		39%
David Butters (CEO)		4%
Oppenheimer		3%
Frontier		3%
Horizon Kinetics		2%

PSR Estimates		2018		2019		2020		2021
TCE	$	247	$	241	$	316	$	386
Y/Y Growth				0%		31%		22%
Vessel EBITDA	$	118	$	110	$	184	$	254
Terminal EBITDA					$	12	$	23
Total EBITDA	**$**	**118**	**$**	**110**	**$**	**196**	**$**	**277**
EPS	$	(0.10)	$	(0.28)	$	1.09	$	2.47
Consensus Estimates		**2018**		**2019**		**2020**		**2021**
Revenue (TCE)	$	264	$	244	$	287	$	316
EPS +	$	(0.00)	$	(0.21)	$	0.97	$	1.64
EBITDA	$	121	$	113	$	165	$	192
Valuation		**2018**		**2019**		**2020**		**2021**
EV/EBITDA (Vessel Only)								
PSR				13.3		7.9		5.7
Consensus				12.9		8.8		7.6
P/E								
PSR				NM		11.6		5.1
Consensus				NM		13.0		7.7
Assumptions		**2018**		**2019**		**2020**		**2021**
Semi-Ref Rate/Month			$	515,000	$	650,000	$	750,000
Per Day			$	17,167	$	21,667	$	25,000
Overall TCE/Day			**$**	**20,430**	**$**	**25,053**	**$**	**29,747**
Utilization				**85%**		**90%**		**94%**
Free Cash Flow				**2019**		**2020**		**2021**
OCF-Maint-Cap-Ex/Dry Dock					$	122	$	198
FCF Equity						17%		28%

Sources: Porter Street Research estimates, Navigator Holdings, Capital IQ.
Note: Data as of 1/24/2020

Potential Earnings Power and Valuation

Navigator Fleet and Earnings Potential 2015 vs. 2022				
Vessels		**2015 (Actual)**		**2022 (Estimated)**
Ethylene Handy		10		10
Handysize LPG		20		24
Mid-Size Ethylene				4
Total		**30**		**38**
Upcycle Start		**2011**		**2019**
Total Handsize Fleet		**82**		**120**
Order Book 2YR Fwd % of Existing Fleet		**4%**		**3%**
		2015 (Actual)		**2022 (Estimated)**
TCE	$	30,300	$	29,895
Utilization		93%		94%
EBITDA	$	181	$	254
EBITDA/Vessel	$	6.0	$	6.7
Debt	$	505	$	524
Debt/EBITDA		2.8		2.1
EPS	$	1.8	$	2.6
Valuation Potential				
PE (Avg)		8.8		5.3
EV/EBITDA (Avg)		11		6.0
NVGS Stock Value at 2015 Multiples				
		Value/Share		**Upside (%)**
EV/EBITDA		**$ 31**		***132%***
PE		**$ 28**		***113%***

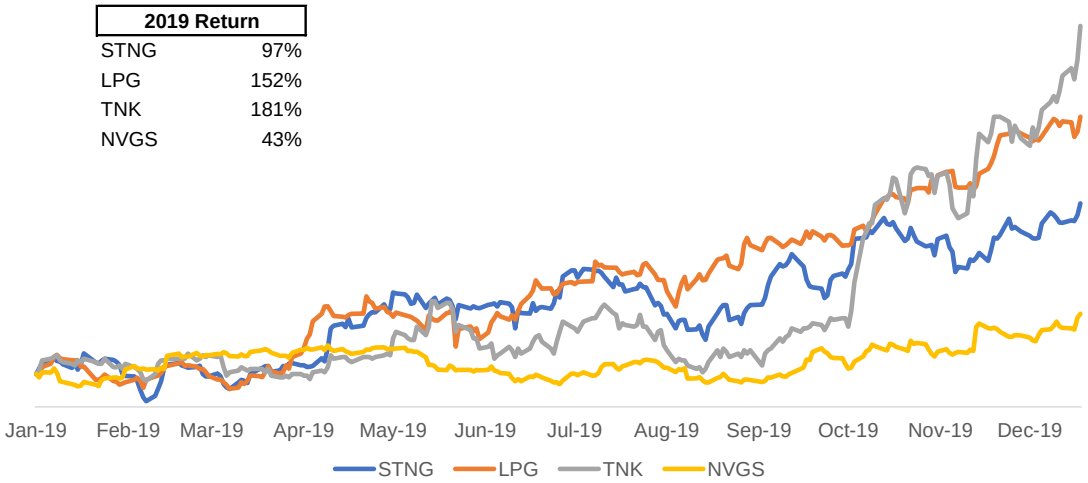
Sources: Porter Street Research estimates, Capital IQ, Stifel.

2019: Rates to the Rescue

Day rates across the shipping complex soared in 2019. Record low order books combined with a lack of vessels available ahead of IMO 2020 caused key shipping rates to more than double. On the back of the actual and expected improvement in rates, select shipping stocks also soared with some highly levered shipping stocks increasing over 200% in 2019. With little improvement expected in industry wide orderbooks and stable demand, many anticipate a once in a decade shipping bull market could be upon us. Despite a 43% gain in 2019, Navigator's share performance was an afterthought compared to other shipping companies. Even with Navigator's apparent lackluster ***relative*** performance, our view remains that Navigator is one of if not the only shipping stock a generalist could feel comfortable owning throughout a full cycle.

2019 Performance of Shipping Related Stocks

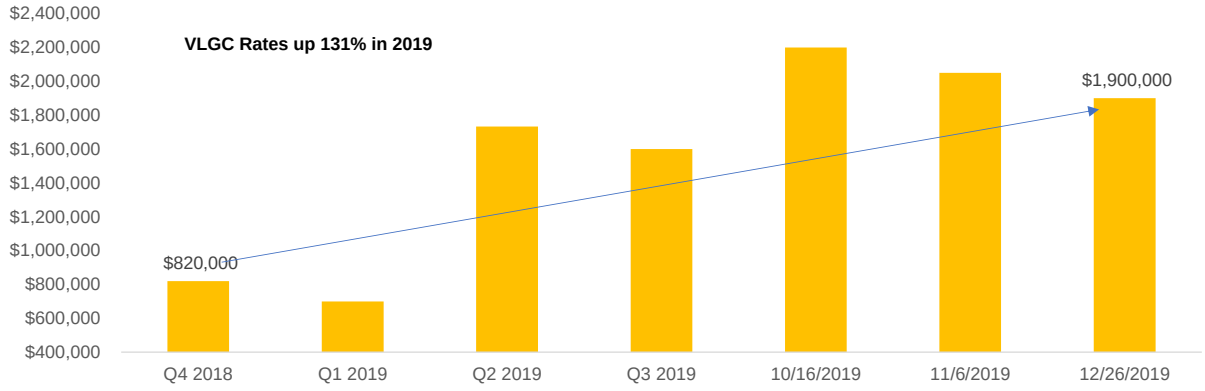
	2019 Return
STNG	97%
LPG	152%
TNK	181%
NVGS	43%



Sources: Porter Street Research, Yahoo Finance.

Day rates for Very Large Gas Carriers (VLGCs) were up over 130% in 2019. This matters to Navigator as increased rates and demand for VLGC's will pull VLGC's out of routes that compete down for the same LPG cargos handysize vessels move. The increase in VLGC rates in 2019 helps to explain at least some of the increase in handysize semi-ref rates since October 2018.

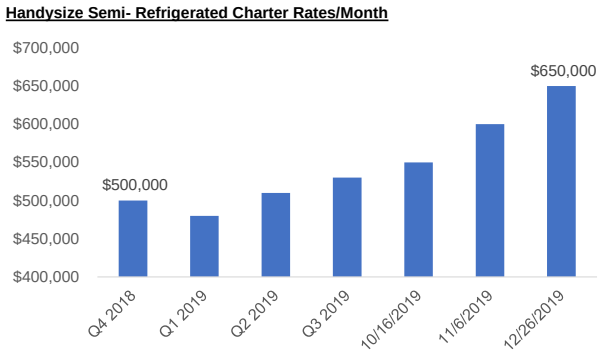
VLGC Rates: USD/Month

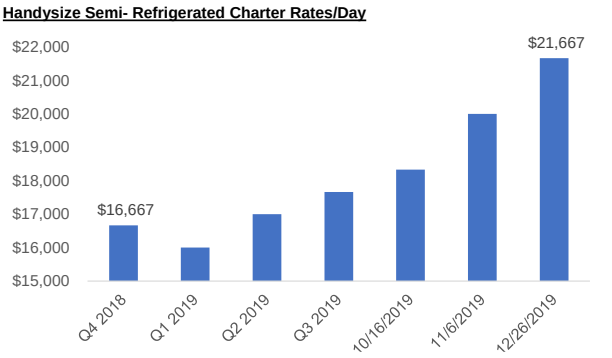


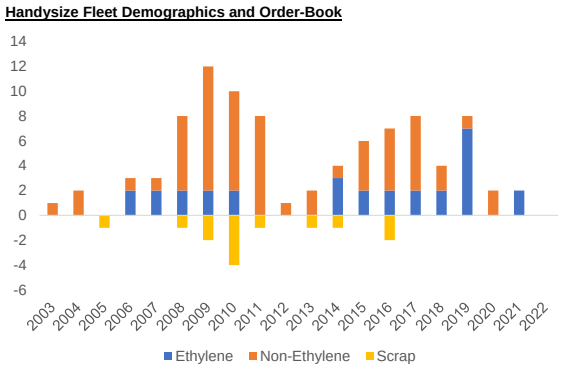
Source: Fearnleys Securities.

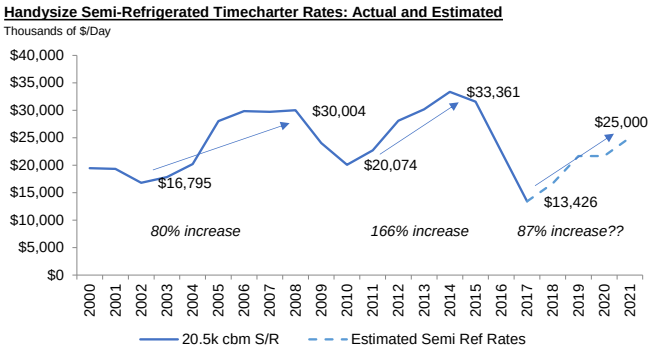
The most relevant shipping rate for Navigator is the handysize semi-refrigerated rates. Day rates increased 30% in 2019. Rates were flat most of 2019 before increasing in September and October. At over $21,000/day, rates for semi-ref handysize vessels are back to their highest levels since 2016 having averaged $16,000/day over the last three years. Ethylene capable handysize day rates were down 5% in 2019 to $23,667/day but still at a premium to semi-refs. While a much thinner market than handy size semi-refrigerated vessels, we expect ethylene capable rates to kick up as the Navigator and Enterprise's ethylene terminal ramps up in January and February of 2020.

Putting the recent increase in rates into perspective, semi-refrigerated handysize day rates are still well below the $30,000/day and $33,000/day reached in 2006-2007 and 2014-2015, the last time Navigator's earnings peaked.









Sources: Fearnleys Securities, Clarksons and Navigator Holdings

As the table on the following page makes clear, assuming most of the LPG and ethylene projects come online in 2020 as scheduled, the market could be in deficit by the end of year. On the supply side, out of the approximately 120 handysize vessels, there are about 40 in the spot market, with the remainder on COAs or long-term contracts. As a result of new build deliveries and the weakness related to Venezuela, the market was oversupplied by an estimated 14 vessels as of 6/30/3019 which increased to 17 vessels with three new builds in 2H 2019. On the demand side, starting in very late Q4 2019, and into 1H 2020, the market should continue to tighten as it did in Q4 2019. Assuming Gibbstown and ME2X start up as planned in Q1/Q2, 2020, the handysize market could be nearly in balance by 6/30/2020 and headed towards deficit by the end of the year. To simplify the exercise, by the end of 2021, up to 32 new vessels worth of demand could be needed against just 4 new builds. From a starting point of 17 vessels of oversupply the possibility of demand being greater than supply at some point in the next 1-2 years remains supportive of near-term day rates.

Handysize Supply/Demand Dynamics

New Supply	2018	1H 2019	2H 2019	1H 2020	2H 2020	2020	2021
Total LPG Handy	84	85	85	86	87	87	87
New Vessels		1		1	1	2	
Total Ethylene Handy	28	32	35	35	35	35	35
New Vessels		4	3				2
End Fleet	**112**	**117**	**120**	**121**	**122**	**122**	**124**

New Demand	2018	1H 2019	2H 2019	1H 2020	2H 2020	2020	2021
Mariner East 2 (Handy LPG)					2	2	
Mariner East 3 (Handy LPG)				3		3	
EPD JV (Ethylene Handy)				8	2	10	2
Pembina/Canada (Semi Ref LPG)					5	5	
Gibbs Town (Semi Ref LPG)				6		6	
Assume Venezuela Resolved (Handy LPG)							4
Cumulative New Demand	**0**	**0**	**0**	**17**	**26**	**26**	**32**

Supply/Demand Summary	2018	1H 2019	2H 2019	1H 2020	2H 2020	2020	2021
Current Oversupply	9	9	14	17	1	17	-7
Net Adds		5	3	-16	-8	-24	-4
New Oversupply/Undersupply	**9**	**14**	**17**	**1**	**-7**	**-7**	**-11**
Over/Undersupply							
as a % of Total Fleet	***8.0%***	***12.0%***	***14.2%***	***0.8%***	***-5.7%***	***-5.7%***	***-8.9%***

Sources: Navigator Holdings and Porter Street estimates

Navigator mentioned on their Q3 2019 earnings call in November 2019 that a Greek company placed an order for six medium sized fully refrigerated vessels. However, these are to be used for commodity LPG/Ammonia routes and wont be delivered for another two years. With the industry orderbook for handysize vessels expected to increase by just 4 vessels or 3% of the total, we anticipate more new build announcements in 2020. However, even if orders are placed, shipyards globally are in a scramble to install scrubbers and other workarounds ahead of the upcoming IMO 2020 fuel standards. With most yards catering to this work, we estimate there are only three shipyards globally capable of building semi refrigerated mid and handysize vessels and one, Sinopacific is emerging from bankruptcy. It is unclear how soon they will be taking orders. That leaves two yards that are currently financially sound and operational: Hyundai Mipo in Korea and Jiangnan in China. Butters and Navigator have very strong relations with Jiangnan and are likely in front of the line should they begin placing orders. The last time the forward orderbook has approached these levels, day rates have drifted upwards. We see no reason why this cycle will be any different.

Contract Mix Leaves Navigator Favorably Exposed to Improving Spot Market

Navigator's current fleet is well positioned to take advantage of the recent increase in day rates. The fleet's spot exposure combined with Navigator's mix of highly profitable contracts will help support earnings in 2020 and beyond. As shown below, as of November 13, 2019, Navigator had 11 vessels in the spot market, 6 of which are handysize semi refrigerated vessels. By February 1, 2020 there will be an additional 7 vessels available to release into a strong and hopefully rising spot market. Five of those vessels are ethylene capable including two medium size carriers which are perfectly suited to long term contracts to move ethylene at premium day rates. By February 1, 2020 Navigator will have 47% of its fleet in the spot market.

Fleet Contract Status as a % of Total Capacity	**Contracted**	**Spot**
Ethylene Capable	27%	14%
Semi Ref	26%	14%
Fully Ref	19%	0%
Total	**72%**	**28%**

As of November 13, 2019

Contract Type	**As of 11/13/2019**		**As of Feb 1, 2020**	
	# Vessels	**% of Total**	**# Vessels**	**% of Total**
Charter	24	63%	13	34%
COA	3	8%	7	18%
Spot	11	29%	***18***	***47%***
Total	**38**	**100%**	**38**	**100%**

Sources: Navigator Holdings and Porter Street estimates

Not to be forgotten, Navigator's fleet leverage to an improving spot market comes on the back of a strong base of highly profitable existing contracts. As laid out below, we estimate that Navigator will earn close to $71mn in EBITDA from 10 vessels (26% of total vessels) in 2020 and beyond. In 2019, six contracts alone produced an estimated $47mn or 42% of Navigator $110-$115mn in total EBITDA in 2019. The power and profitability of these long-term contracts can't be understated.

Navigator's Estimated Contract Profitability

Contract/Vessel	**Rev/Month**	**Op-Ex/Month**	**TCE/Day**	**EBITDA Per Day**	**Contract End**	**Estimated Utilization**	**EBITDA ($mn)**	**Op. Days**
COA Ethylene Handy *NEW*	$ 750,000	$ 250,000	$ 25,000	$ 16,667	12/31/2025	95%	$ 5.8	347
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Aurora	$ 960,000	$ 250,000	$ 32,000	$ 25,000	12/31/2026	90%	$ 8.2	329
Jorf	$ 1,000,000	$ 250,000	$ 33,333	$ 25,000	8/31/2027	90%	$ 8.2	329
Leo (Ice Class)	$ 960,000	$ 250,000	$ 32,000	$ 23,667	12/31/2023	90%	$ 7.8	329
Libra (Ice Class)	$ 960,000	$ 250,000	$ 32,000	$ 23,667	12/31/2023	90%	$ 7.8	329
Luga (Ice Class)	$ 960,000	$ 250,000	$ 32,000	$ 23,667	2/28/2022	90%	$ 7.8	329
Yauza (Ice Class)	$ 960,000	$ 250,000	$ 32,000	$ 23,667	4/30/2022	90%	$ 7.8	329
							$ 71	**3,358**
Total Operating Days								**13,832**
Contracted % Of Total								24%
Vessels % of Total Fleet								26%

Sources: Navigator Holdings and Porter Street Research estimates

Ethylene Terminal: Houston We Have Lift Off

In late December 2019, there were reports from S&P Global Intelligence that Navigator and Enterprise began loading their first ethylene cargo from Morgan's Point, just east of Houston. On January 8, 2020 Navigator and Enterprise confirmed that they exported the first cargo of 25mn pounds of ethylene. This is a great accomplishment for both companies and the project was more or less on schedule. At a flow rate of 1,000 MT/Hour the tanks can fill a handysize vessel in about 24 hours and a medium size carrier in two days. With 75% of the current capacity contracted and capacity for 2020 expected to be at just 85% of total in 2020, the terminal will begin flowing at near effective capacity to service the four existing contracts throughout 2020.

We have always thought that as the terminal begins to operate, once running for a quarter or two, investors will start to take notice and begin to factor in the favorable impact to terminal will have on the supply and demand for ethylene capable vessels. Below is a snapshot of the overall ethylene and ethane capable fleet.

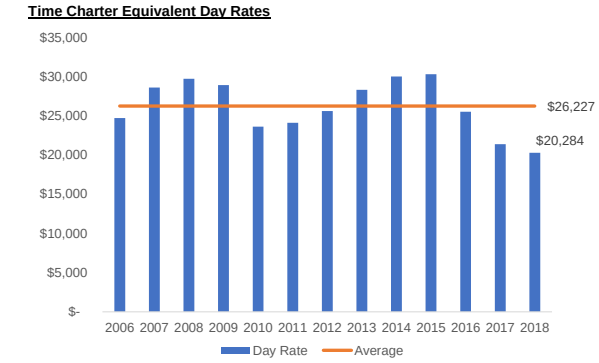
Ethane/Ethylene Global Fleet Existing & Newbuild				
Owner	**Handysize**	**Midsize**	**VLEC**	**Total**
Navigator Gas	10	4		14
Evergas		8	2	10
Solvang	8			8
Reliance			6	6
Pacific Gas	6			6
Petredec	4			4
Harpain	4			4
Ocean Yield		2		2
Other	3	1		4
Total	**35**	**15**	**8**	**58**

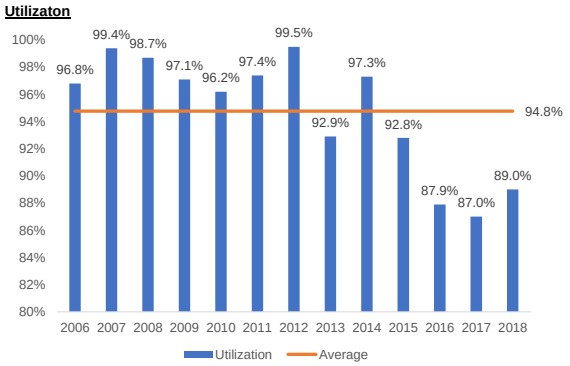
Source: Navigator Holdings

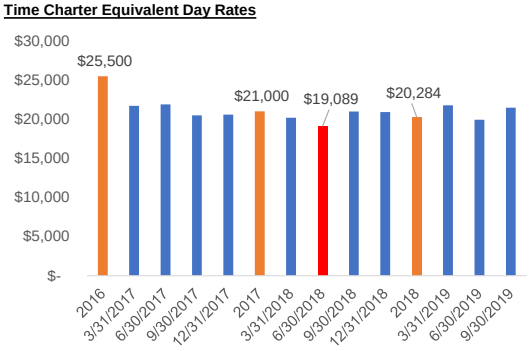
Excluding VLECs, there are just 48 vessels within Navigator's competitive landscape. With 14 vessels, Navigator is by far the dominant player. As mentioned, with demand from the ethylene terminal expected to increase by 8-12 handysize vessels we think it will be a scramble for new build's over the next few years. Within its ethylene capable fleet, by February, Navigator will have 7 vessels including 2 medium size carriers capable of servicing the terminal in 2020 and beyond. While information is limited, we believe Navigator's fleet is competitively positioned to win most if not all the work servicing the ethylene terminal. Navigator's main competitors in the ethylene capable market are Evergas, with a fleet of 8 medium size vessels, and Solvang, with 8 handysize vessels. Both are private companies and information on them is limited. However, it is our understanding that all of Evergas' midsize vessels are on long term, 10 year plus, contracts with Enos to move ethane and petrochemicals to Enos' cracker in Scotland. The family who owns Evergas is currently undergoing financial problems with other large investments in their portfolio. As all of their fleet is currently contracted and they aren't in a strong financial position, we don't view them as a major threat to order new vessels or take market share in the petrochemical shipping market in the coming years. Solvang, a recently private company, is owned by a collection of Germany and European families. They have set up the ownership of the business and vessels to be tax efficient. Our sense is they are happy with their position and don't see a need to expand despite how attractive market conditions may become. Petradec is a trader. What is good for their business can sometimes conflict with their clients. While they are have rumored to already placed order for two new ethylene capable handysize vessels for delivery in late 2021, it is unclear if they would be able to secure long term contracts from customers. For Petradec or any other competitor, long-term contracts may be required to lock in vessel economics and to secure financing for new vessel orders. David Butters has always said Navigator will expand the fleet but it will only do so against long term contracts. Given Navigator's demonstrated ability to lock in and service long term contracts for customers, we believe they are in the pole position to secure additional contracts against new builds as demand materializes in 2020.

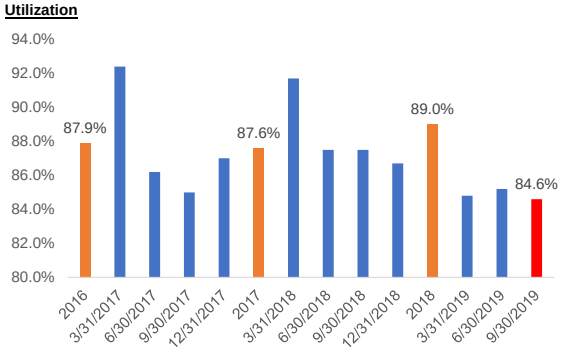
Conclusion: Navigator's Fundamentals Are Turning and Shares Remains Cheap into a Recovery

The last three years have been very difficult for Navigator. Day rates and utilization have both set new lows. While they have recovered, Q4 2019 should mark the turning point with significant improvement in 2020.



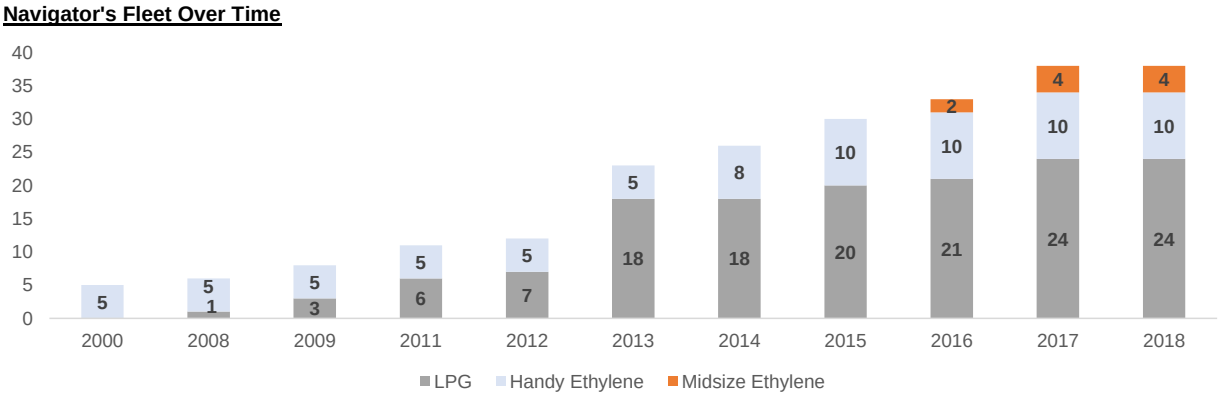






Source: Navigator Holdings

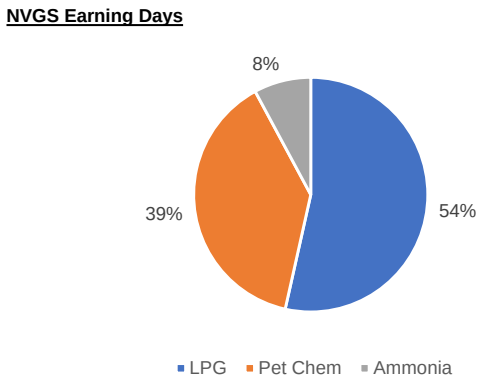
With the prospect that Navigator could surpass 2015's prior peak earnings ($182mn in EBITDA) in the next 2-3 years, there are key differences between 2015 and now. First, Navigator's fleet is larger, 38 vs. 30 vessels, is higher quality and able to earn significantly more per vessel. Navigator spent over $300mn in capital on 4 medium size ethylene capable vessels that we believe are capable over earning over $10mn/EBITDA each annually.

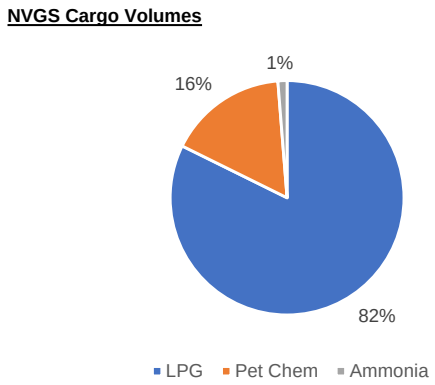


Source: Navigator Holdings

Second, Navigator's mix of contracts, cargos and customers has shifted in terms of quality. In 2016, 80% of Navigator's cargos were related to LPG. However, the addition of a chiller at Marcus Hook as well as a glut of VLGC's led to a drop in VLGC rates which pulled away work from handysize cargos and depressed handysize rates. Navigator's current mix of earning days and cargos is shown below:

Navigator's Earning Days and Cargo Volumes as of 6/30/2019





Source: Navigator Holdings

Making full use of their fleets capabilities and positioning their order book towards future industry growth, Navigator's fleet is now geared towards petrochemical gases. As of 6/30/2019, petrochemical gases represented 16% of Navigator's volumes but 39% of its earning days. We expect both the mix in volumes and earning days to continue to shift towards more profitable petrochemical cargoes in the coming years. Finally, we would make the point that Navigator has tailored its business more towards end consumers of LPG and petrochemicals and shifted away from traders. Traders currently account for 30% of Navigator's business, down from 60% a few years ago.

Risks

Despite our positive stance, below we highlight key risks to our thesis in Navigator.

1. Further Delays in Key Projects

- Mariner East, both ME2 and MEX have been delayed multiple times. It remains to be seen whether each will be operating when they say
- Gibbstown, Pembina and Navigator's ethylene terminal are all new, and subject to start up risk which has plagued the industry thus far

2. Sustained Increase in Natural Gas Prices

- Key aspect of ethylene pricing arbitrage is a bet on low US natural gas and ethane prices
- As many US listed natural gas shale producers who account for a larger percentage of natural gas production in the US are facing financial stress, should they pull back production growth against increasing demand, prices would have to rise which may pressure ethane to ethylene margins. How long they rise and to what level is key.

3. Trade War and Recession Risk

- Any tariffs on moving cargos or restrictions on exports as well as any actual or perceived slowdown in global economic growth could hurt demand for LPG and petrochemical gases
- Manufacturing sector and industrial weakness in the US, Germany and China indicate a slowdown in economic cycle is underway

4. Capital Markets Freeze

- Navigator must repay or re-financing its 2021 bond. Should capital markets dry up and Navigator not have the cash to pay off the bond in full, there is a risk of a dilutive equity or capital raise at unfavorable terms to shareholders

If the market continues to strengthen it would not surprise us if Navigator set new records for earnings and EBITDA in the next 12-24 months. Despite elevated dry-docking and maintenance cap-ex in 2020 and 2021 of $12mn/year, we think Navigator can generate over $100mn in cash flow this year. That is more than enough to fund the required term loan amortizations and to help fund the remaining $20mn of terminal cap-ex. Our base case is for day rates to remain flat in 2020 and utilization to kick up slightly. This is highly conservative, and on the following page we provide a sensitivity of Navigator's EBITDA and cash flow to increases in rates. Every 6% or so increase in day rates leads to $15-$20mn in incremental cash flow to Navigator.

Simple Sensitivity					
	Flat	**Up 6%**	**Up 15%**	**Up 23%**	**Up 38%**
Semi-Ref Rate/Day	***$ 21,667***	***$ 23,000***	***$ 25,000***	***$ 26,667***	***$ 30,000***
Spot EBITDA	$ 113	$ 130	$ 146	$ 163	$ 196
Avg. Contract Rate/Day	***29,333***	***29,333***	***29,333***	***29,333***	***29,333***
Contract EBITDA	$ 71	$ 71	$ 71	$ 71	$ 71
Total EBITDA	**$ 184**	**$ 201**	**$ 217**	**$ 234**	**$ 267**
Cash Interest	$ (44)				
Maint + Dry Dock	$ (15)				
Debt Amortization	$ (69)				
Terminal Cap-ex	$ (20)				
Total Cash Uses	**$ (148)**	**$ (148)**	**$ (148)**	**$ (148)**	**$ (148)**
Net Cash Generation	**$ 36**	**$ 53**	**$ 69**	**$ 86**	**$ 119**
Incremental Cash Flow		*$ 17*	*$ 33*	*$ 50*	*$ 83*

Source: Porter Street Estimates

An investment in Navigator since our recommendation has proved volatile with multiple opportunities to buy on weakness. Even after a 40%+ run off the lows we think the opportunity in Navigator's shares today is arguably better than it was a year ago. We fully acknowledge we are near the end of the current economic cycle and ten years into a bull market. The risks outside of Navigator's control are high. However, of those they can control we think that in a base case scenario, where things stay as they are, there are powerful forces set to kick in over the next 3-12 months that will lead to a recovery in Navigator's earnings and EBITDA for years to come. Our scenario cases over the next few years remain unchanged. In a mild recovery, we see shares worth at least $22/share over the next 2-3 years and in a full industry normalization, with day rates back to prior peaks, we think shares can be worth near $30/share. Both of our scenarios don't give credit for the ethylene terminal which as we stated before, we think will begin to be valued by the middle of next year as Navigator increases disclosure around its financial performance. Our downside scenario is essentially more the same. If there is a recession, Navigator will likely muddle through and work with banks and bondholders to re-finance its credit facilities and bonds. This will pressure the stock but won't delay the eventual rebalancing in the handysize sector that needs to take place, it will simply delay the inevitable.