Pyxis Tankers Inc. Form 20-F March 29, 2019
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 20-F
FORM 20-F
(Mark One) REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) or (g) OF THE SECURITIES EXCHANGE ACT OF 1934
OR
ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
OR
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
OR
[ ] SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission file number 001-37611

<b>PYXIS</b>	<b>TANKERS</b>	INC.
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(Exact name of Registrant as specified in its charter and translation of Registrant's name into English)

**Marshall Islands** 

(Jurisdiction of incorporation or organization)

59 K. Karamanli Street, Maroussi 15125 Greece

(Address of principal executive office)

Mr. Henry Williams, Chief Financial Officer

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(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

<u>Title of each class</u> <u>Nan</u>

Name of each exchange on which registered

Common Stock, par value U.S. \$0.001 per share Nasdaq Capital Market

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the Annual Report.

ommon Stock, par value U.S. \$0.001 per share: 21,060,190 as of December 31, 2018
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Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included

in this filing:

U.S. GAAP [X]	International Financial Reporting Standards as issued	Other[]
	by the International Accounting Standards Board [ ]	
	been checked in response to the previous question, indicas elected to follow: Item 17 [ ] Item 18 [ ]	rate by check mark which financial statement ite
	ual report, indicate by check mark whether the registrante Act). Yes [ ] No [X]	nt is a shell company (as defined in Rule 12b-2

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#### INTRODUCTION

Unless otherwise indicated in this Annual Report on Form 20-F ("Annual Report"), "Pyxis," the "Company," "we," "us" and "refer to Pyxis Tankers Inc. and its consolidated subsidiaries.

Our audited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles, or "U.S. GAAP" or "GAAP".

All references in this Annual Report to "\$," "US\$," "U.S.\$," "U.S. dollars," "dollars" and "USD" mean U.S. dollars and all references to "\$" and "euros," mean euros, unless otherwise noted.

#### FORWARD-LOOKING STATEMENTS

Our disclosure and analysis in this Annual Report pertaining to our operations, cash flows and financial position, including, in particular, the likelihood of our success in developing and expanding our business and making acquisitions, include forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Statements that are predictive in nature, that depend upon or refer to future events or conditions, or that include words such as "expects," "anticipates," "intends," "plans," "believes," "estimates," "projects," "forecasts," "potential", "should" and similar expressions are forward-looking statements. All statements in this Annual Report that are not statements of either historical or current facts are forward-looking statements. Forward-looking statements include, but are not limited to, such matters as our future operating or financial results, global and regional economic and political conditions, including piracy, pending vessel acquisitions, our business strategy and expected capital spending or operating expenses, including dry-docking and insurance costs, competition in the product tanker industry, statements about shipping market trends, including charter rates and factors affecting supply and demand, our financial condition and liquidity, including our ability to obtain financing in the future to fund capital expenditures, acquisitions and other general corporate activities, our ability to enter into fixed-rate charters after our current charters expire and our ability to earn income in the spot market and our expectations of the availability of vessels to purchase, the time it may take to construct new vessels, and vessels' useful lives. Many of these statements are based on our assumptions about factors that are beyond our ability to control or predict and are subject to risks and uncertainties that are described more fully under the "Item 3. Key Information – D. Risk Factors" section of this Annual Report. Any of these factors or a combination of these factors could materially affect our future results of operations and the ultimate accuracy of the forward-looking statements.

Factors that might cause future results to differ include, but are not limited to, the following:

changes in governmental rules and regulations or actions taken by regulatory authorities;

changes in economic and competitive conditions affecting our business, including market fluctuations in charter rates and charterers' abilities to perform under existing time charters;

our future operating or financial results;

our continued borrowing availability under our debt agreements and compliance with the covenants contained therein;

our ability to procure or have access to financing, our liquidity and the adequacy of cash flows for our operations;

our ability to successfully employ our vessels;

changes in our operating expenses, including bunker prices, dry docking and insurance costs;

our ability to fund future capital expenditures and investments in the construction, acquisition and refurbishment of our vessels (including the amount and nature thereof and the timing of completion thereof, the delivery and commencement of operations dates, expected downtime and lost revenue);

planned, pending or recent acquisitions, business strategy and expected capital spending or operating expenses, including drydocking, surveys, upgrades and insurance costs;

vessel breakdowns and instances of off-hire;

potential liability from pending or future litigation;

potential exposure or loss from investment in derivative instruments;

general product tanker shipping market trends, including fluctuations in charter hire rates and vessel values;

changes in supply and demand in the product tanker shipping industry, including the market for our vessels and the number of newbuildings under construction;

the strength of world economies;

fluctuations in interest rates and foreign exchange rates;

changes in seaborne and other transportation;

changes in governmental rules and regulations or actions taken by regulatory authorities;

general domestic and international political conditions; the length and number of off-hire periods and dependence on third-party managers; and

other factors discussed under the "Item 3. Key Information – D. Risk Factors" in this Annual Report and please see the Company's other filings with the SEC for a more complete discussion of certain of these and other risks and uncertainties.

You should not place undue reliance on forward-looking statements contained in this Annual Report, because they are statements about events that are not certain to occur as described or at all. All forward-looking statements in this Annual Report are qualified in their entirety by the cautionary statements contained in this Annual Report. These forward-looking statements are not guarantees of our future performance, and actual results and future developments may vary materially from those projected in the forward-looking statements. Except to the extent required by applicable law or regulation, we undertake no obligation to release publicly any revisions to these forward-looking statements to reflect events or circumstances after the date of this Annual Report or to reflect the occurrence of unanticipated events.

#### **PART I**

#### ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

#### ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

#### **ITEM 3. KEY INFORMATION**

#### A. Selected Financial Data

The following table presents in each case for the periods and at the dates indicated, our selected consolidated financial and operating data for each of the years in the three-year period ended December 31, 2018. You should read the table together with "Item 5. Operating and Financial Review and Prospects". Our selected consolidated financial data is a summary of, is derived from, and is qualified by reference to, our audited consolidated financial statements and notes thereto, which have been prepared in accordance with U.S. GAAP. The selected consolidated statements of comprehensive income and cash flow statement data for the fiscal year ended December 31, 2015 and the selected balance sheet data for the fiscal years ended December 31, 2016, and 2015 have been derived from our consolidated financial statements not included herein. Our audited consolidated statements of comprehensive loss, stockholders' equity and cash flows for the years ended December 31, 2016, 2017 and 2018 and the consolidated balance sheets at December 31, 2017 and 2018, together with the notes thereto, are included in "Item 18. Financial Statements" and you should read them in their entirety.

Statements of Comprehensive Income / (Loss) Data	Year ended	d December 31.	,		
(In thousands of U.S. dollars, except per share data)	2015	2016	2017	2018	
Revenues, net*	\$32,929	\$30,387	\$29,579	\$28,457	
Voyage related costs and commissions*	(4,484	) (6,288	) (8,463	) (11,817	)
Vessel operating expenses	(13,188	) (12,871	) (12,761	) (12,669	)

General and administrative expenses	(1,773	) (2,574	) (3,188	) (2,404	)
Management fees, related parties	(577	) (631	) (712	) (720	)
Management fees, other	(1,061	(1,024	) (930	) (930	)
Depreciation and amortization of special survey costs	(5,884	(6,004	) (5,640	) (5,633	)
Vessel impairment charge		(3,998	) —	(2,282	)
Bad debt provisions			(231	) (13	)
Gain from debt extinguishment				4,306	
Loss from financial derivative instrument				(19	)
Interest expenses and finance cost, net	(2,531	(2,810	) (2,897	) (4,490	)
Other income	74	_	_	_	
Net income / (loss)	\$3,505	\$(5,813	) \$(5,243	) \$(8,214	)
Earnings / (loss) per common share, basic and diluted	\$0.19	\$(0.32	) \$(0.28	) \$(0.39	)
Weighted average number of shares, basic	18,244,671	18,277,893	18,461,45	55 20,894,2	202
Weighted average number of shares, diluted	18,277,893	18,277,893	18,461,45	55 20,894,2	202

<sup>\*</sup> Pursuant to the adoption of ASU 2014-09, Revenues have been presented net of address commissions which were previously recognized under Voyage related costs and commissions. Comparative amounts have been reclassified accordingly.

Balance Sheets Data	Year ended December 31,				
(In thousands of U.S. dollars)	2015	2016	2017	2018	
Total current assets	\$6,028	\$4,184	\$3,895	\$4,307	
Total other non-current assets	5,193	5,215	5,144	4,318	
Total fixed assets, net	130,501	121,341	115,774	107,992	
Total assets	141,722	130,740	124,813	116,617	
Total current liabilities	11,200	12,870	12,531	13,545	
Total non-current liabilities	75,956	69,117	64,126	63,129	
Total stockholders' equity	\$54,566	\$48,753	\$48,156	\$39,943	

Statements of Cash Flows Data  Year ended December 31,				
(In thousands of U.S. dollars)	2015	2016	2017	2018
Net cash provided by / (used in) operating activities	\$12,366	\$4,446	\$3,677	\$(2,203)
Net cash used in investing activities	(18,766)		_	(99)
Net cash provided by / (used in) financing activities *	13,375	(7,285)	(2,767)	(187)
Change in cash and cash equivalents and restricted cash	\$6,975	\$(2,839)	\$910	\$(2,489)

<sup>\*</sup>Comparative amounts have been reclassified due to current presentation of restricted cash following the adoption of ASU No. 2016-18-Statement of Cash Flows-Restricted Cash.

	Year ended December 31,					
Fleet Operating Data	2015	2016	2017	2018		
Ownership days (1)	2,177	2,196	2,190	2,190		
Available days (2)	2,137	2,176	2,190	2,154		
Operating days (3)	2,092	1,986	1,956	1,816		
Utilization % (4)	97.9 %	91.3 %	89.3 %	84.3 %		
Daily time charter equivalent rate (5)	\$13,597	\$12,134	\$10,795	\$9,163		
Daily vessel operating expenses (6)	\$6,058	\$5,861	\$5,827	\$5,785		
Average number of vessels (7)	6.0	6.0	6.0	6.0		
Number of vessels at period end	6	6	6	6		
Weighted average age of vessels (8)	4.8	5.8	6.8	7.8		

Ownership days are the total number of days in a period during which we owned each of the vessels in our fleet.

- (1) Ownership days are an indicator of the size of our fleet over a period and affect both the amount of revenues generated and the amount of expenses incurred during the respective period.
  - Available days are the number of ownership days in a period, less the aggregate number of days that our vessels were off-hire due to scheduled repairs or repairs under guarantee, vessel upgrades or special surveys and
- (2) intermediate dry-dockings and the aggregate number of days that we spent positioning our vessels during the respective period for such repairs, upgrades and surveys. Available days measures the aggregate number of days in a period during which vessels should be capable of generating revenues.
- Operating days are the number of available days in a period, less the aggregate number of days that our vessels were off-hire or out of service due to any reason, including technical breakdowns and unforeseen circumstances.
- (3) Operating days measures the aggregate number of days in a period during which vessels actually generate revenues.
  - We calculate fleet utilization by dividing the number of operating days during a period by the number of available days during the same period. The shipping industry uses fleet utilization to measure a company's efficiency in
- (4) finding suitable employment for its vessels and minimizing the amount of days that its vessels are off-hire for reasons other than scheduled repairs or repairs under guarantee, vessel upgrades, special surveys and intermediate dry-dockings or vessel positioning.
- (5) Daily time charter equivalent ("TCE") rate is a standard shipping industry performance measure of the average daily revenue performance of a vessel on a per voyage basis. TCE is not calculated in accordance with U.S. GAAP. We utilize TCE because we believe it is a meaningful measure to compare period-to-period changes in our performance despite changes in the mix of charter types (i.e. spot charters, time charters and bareboat charters)

under which our vessels may be employed between the periods. Our management also utilizes TCE to assist them in making decisions regarding employment of the vessels. We believe that our method of calculating TCE is consistent with industry standards and is calculated by dividing voyage revenues after deducting voyage expenses, including commissions, by operating days for the relevant period. Voyage expenses primarily consist of brokerage commissions, port, canal and bunker costs that are unique to a particular voyage, which would otherwise be paid by the charterer under a time charter contract. Please see reconciliation of TCE under Item 5.A. Operating Results

[6] Daily vessel operating expenses are direct operating expenses such as crewing, provisions, repairs and

(6) maintenance, insurance, deck and engine stores, lubricating oils and tonnage tax divided by ownership days.

Average number of vessels is the number of vessels that constituted our fleet for the relevant period, as measured

- (7) by the sum of the number of days each vessel was part of our fleet during such period divided by the number of calendar days in the period.
- Weighted average age of the fleet is the sum of the ages of our vessels, weighted by the dead weight tonnage ("dwt") of each vessel on the total fleet dwt.

Recent Daily Fleet Data:					
(In U.S. dollars, except for Utilization %)		Year ende	ed Decembe	er 31,	
		2015	2016	2017	2018
Eco-Efficient MR2: (2 of our vessels)	TCE	15,631	15,015	13,027	10,524
	Opex	6,430	5,754	5,838	5,962
	Utilization %	99.4 %	97.0 %	94.1 %	91.8 %
Eco-Modified MR2: (1 of our vessels)					
	TCE	17,480	10,705	13,042	12,383
	Opex	6,461	6,255	6,433	6,505
	Utilization %	91.3 %	92.9 %	90.1 %	86.6 %
Standard MR2: (1 of our vessels)					
	TCE	17,237	15,504	12,209	8,887
	Opex	6,325	6,772	6,036	6,039
	Utilization %	100.0 %	90.5 %	99.2 %	91.0 %
Handysize Tankers: (2 of our vessels)					
	TCE	7,622	7,939	5,979	5,844
	Opex	5,358	5,315	5,408	5,122
	Utilization %	98.6 %	85.1 %	79.2 %	72.6 %
Fleet: (6 vessels)					
	TCE	13,597	12,134	10,795	9,163
	Opex	6,058	5,861	5,827	5,785
	Utilization %	97.9 %	91.3 %	89.3 %	84.3 %

Vessel operating expenses per day ("Opex") are our vessel operating expenses for a vessel, which consist primarily of crew wages and related costs, insurance, lube oils, communications, spares and consumables, tonnage taxes as well as repairs and maintenance, divided by the days in the applicable period. Please see "Item 4. Information on the Company – B. Business Overview – The International Product Tanker Shipping Industry – Eco Ships" for a description of the terms "eco-efficient", "eco-modified" and "standard".

## **B.** Capitalization and Indebtedness

Not applicable.

#### C. Reasons for the Offer and Use of Proceeds

Not applicable.

#### D. Risk Factors

#### Risks Related to Our Industry

We operate our vessels worldwide and as a result, our vessels are exposed to international and inherent operational risks that may reduce revenue or increase expenses.

The international shipping industry is an inherently risky business involving global operations. The operation of ocean-going vessels in international trade is affected by a number of risks. Our vessels and their cargoes will be at risk of being damaged or lost because of events, including bad weather, grounding, fire, explosions, mechanical failure, vessel and cargo property loss or damage, hostilities, labor strikes, adverse weather conditions, stowaways, placement on our vessels of illegal drugs and other contraband by smugglers, war, terrorism, piracy, human error, environmental accidents generally, collisions and other catastrophic natural and marine disasters. An accident involving any of our vessels could result in death or injury to persons, loss of property or environmental damage, delays in the delivery of cargo, damage to our customer relationships, loss of revenues from or termination of charter contracts, governmental fines, penalties or restrictions on conducting business or higher insurance rates. These sorts of events could interfere with shipping routes (such as delay or rerouting), and result in market disruptions that may reduce our revenue or increase our expenses and also subject us to litigation. International shipping is also subject to various security and customs inspection and related procedures in countries of origin and destination and transshipment points. Inspection procedures can result in the seizure of cargo and/or our vessels, delays in the loading, offloading or delivery and the levying of customs duties, fines or other penalties against us. It is possible that changes to inspection procedures or an increase in the frequency of vessel inspections could impose additional financial and legal obligations on us. Furthermore, changes to inspection procedures could also impose additional costs and obligations on our customers and may, in certain cases, render the shipment of certain types of cargo uneconomical or impractical.

The operation of tankers has unique operational risks associated with the transportation of refined petroleum products. A spill of such cargoes may cause significant environmental damage, and the associated costs could exceed the insurance coverage available to the Company. Compared to other types of vessels, tankers are exposed to a higher risk of damage and loss by fire, whether ignited by a terrorist attack, collision, or other cause, due to the high flammability and high volume of the refined petroleum products transported in tankers. If the Company's vessels suffer damage, they may need to be repaired at a drydocking facility. The costs of drydock repairs are unpredictable and may be substantial. The Company may have to pay drydocking costs that its insurance does not cover in full. The loss of revenues while these vessels are being repaired and repositioned, as well as the actual cost of these repairs, may adversely affect the Company's business, results of operations and financial condition. In addition, space at drydocking facilities is sometimes limited and not all drydocking facilities are conveniently located. The Company may be unable to find space at a suitable drydocking facility or its vessels may be forced to travel to a drydocking facility that is not conveniently located to the vessels' positions. The loss of earnings while these vessels are forced to wait for space or to travel to more distant drydocking facilities may adversely affect the Company's business, results of operations and financial condition. Further, the total loss of any of the Company's vessels could harm its reputation as a safe and reliable vessel owner and operator. If the Company is unable to adequately maintain or safeguard its vessels, it may be unable to prevent any such damage, costs, or loss which could negatively impact its business, results of operations and financial condition.

Our revenues are derived substantially from a single segment where charter hire rates for product tankers are cyclical and volatile.

Substantially all of our revenues are derived from a single market, the product tanker segment, and therefore our financial results depend on chartering activities and developments in this segment. The product tanker market is cyclical and volatile in charter hire rates. The degree of charter hire rate volatility among different types of product tankers has varied widely, and, as a result, our ability to charter, or to re-charter our vessels upon the expiration or termination of our current charters, the charter rates payable under any replacement charters and vessel values will depend upon, among other things, economic conditions in the product tanker market at that time and changes in the supply and demand for vessel capacity. Any renewal or replacement charters that the Company enters into may not be sufficient to allow the Company to operate its vessels profitably. After reaching historic highs in mid-2008, charter hire rates for product tankers declined significantly before increasing in 2015 and then declining again in 2016. Since then, charter hire rates have remained volatile. If charter hire rates remain depressed or fall further in the future when our charters expire, we may be unable to re-charter our vessels at rates as favorable to us, with the result that our earnings and available cash flow will continue to be adversely affected. In addition, a decline in charter hire rates will likely cause the value of our vessels to decline.

Charter hire rates depend on the demand for, and supply of, product tanker vessels.

The factors that influence the demand for product tanker vessel capacity are unpredictable and outside of our control, and include, among others:

demand and supply for refined petroleum products and other liquid bulk products such as vegetable and edible oils;

competition from alternative sources of energy and a shift in consumer demand towards other energy resources such as wind, solar or water energy as well as greater use of electric powered vehicles;

the globalization of manufacturing and developments of transportation services;

regional availability of refining capacity;

increases in the production of refined petroleum products in areas linked by pipelines to consuming areas, the extension of existing, or the development of new, pipeline systems in markets we may serve, or the conversion of existing non-oil pipelines to refined petroleum products pipelines in those areas;

the distance oil and petroleum products are moved by sea; changes in seaborne and other transportation patterns, including changes in the distances over which refined petroleum and chemical cargoes are transported;

competition from other shipping companies and other modes of transportation, such as railroads that compete with product tankers;

product imbalances across regions (affecting the level of trading activity);

global and regional economic and political conditions, including armed conflicts, terrorist activities, and strikes; environmental and other regulatory developments; developments in international trade generally;

international sanctions, embargoes, import and export restrictions, nationalizations and wars;

currency exchange rates; and

weather and natural disasters.

The factors that influence the supply of product tanker vessel capacity are also outside of our control and unpredictable and include, among others:

demand and supply for refined petroleum products and other liquid bulk products such as vegetable and edible oils;

availability and pricing of other energy resources such as natural gas;

the number of product tanker newbuilding deliveries;

the efficiency and age of the global product tanker fleet;

the scrapping rate of older product tankers or casualties;

the price of steel and vessel equipment;

the cost of newbuildings and the cost of retrofitting or modifying secondhand product tankers as a result of charterer requirements;

shipyard capacity, financial condition and new vessel construction throughput/delays in deliveries;

availability, terms and cost of capital;

cost and supply of labor;

technological innovations and advances in product tanker design and capacity, including the introduction of scrubbers;

conversion of product tankers to other uses and the conversion of other vessels to product tankers;

the number of product tankers used for floating storage;

the number of product tankers trading crude or "dirty" oil products;

availability of crude tankers to take petroleum products on their maiden voyage upon delivery from shipyards;

product tanker freight rates, whether time or spot charters, including spot market related pools the Company may join, which are themselves affected by factors that may affect the rate of newbuilding, scrapping and laying-up of product tankers;

port and canal congestion;

the cost of bunkers and fuel oil, and their impact on vessel speed; currency exchange rate fluctuations;

changes in governmental or maritime self-regulatory organizations' rules and regulations or actions taken by regulatory authorities;

changes in environmental and other regulations that may limit the useful lives of product tankers; and

the number of product tankers that are out of service.

These factors influencing the supply of and demand for product tanker capacity and charter rates are outside of our control, and we may not be able to correctly assess the nature, timing and degree of changes in industry conditions. A global economic downturn may reduce demand for transportation of refined petroleum products and chemicals. We cannot assure you that we will be able to successfully charter our product tankers in the future at all or at rates sufficient to allow us to meet our contractual obligations, including repayment of our indebtedness, or to pay dividends to our stockholders.

Product tanker rates fluctuate based on seasonal variations in demand.

Product tanker markets are typically stronger in the winter months as a result of increased refined petroleum products consumption in the northern hemisphere and weaker in the summer months as a result of lower consumption in the northern hemisphere and refinery maintenance that is typically conducted in the summer months. Unpredictable weather patterns during the winter months in the northern hemisphere tend to disrupt vessel routing and scheduling. The price volatility of products resulting from these factors has historically led to increased product trading activities in the winter months. As a result, revenues generated by vessels are typically weaker during the quarters ended June 30 and September 30, and stronger in the quarters ended March 31 and December 31. If increased revenues generated in the fall/winter months are not sufficient to offset any decreases in revenue in the spring/summer months, it may have an adverse effect on our business, results of operations and financial condition.

An over-supply of product tanker capacity may lead to reductions in charter rates, vessel values and profitability.

The market supply of product tankers is affected by a number of factors such as the demand for energy resources, oil, petroleum and chemical products, the level of current and expected charter hire rates, asset and newbuilding prices and the availability of financing, as well as overall global economic growth in parts of the world economy, including Asia, and has been increasing as a result of the delivery of substantial newbuilding orders over the last few years.

There has been a global trend towards energy efficient technologies, lower environmental emissions and alternative sources of energy. In the long-term, demand for oil may be reduced by increased availability of such energy sources and machines that run on them. In addition, reduced global supply of oil due to coordinated action, such as the production cuts recently agreed by the Organization of Petroleum Exporting Countries ("OPEC") and other oil producing nations, may lead to an over-supply of product tanker capacity due to lower demand for the transportation of refined petroleum products.

Newly built product tankers were delivered in significant numbers starting at the beginning of 2006 through 2018 and continuing into 2019. Furthermore, if the capacity of new ships delivered exceeds the capacity of product tankers being scrapped and lost, product tanker capacity will increase. For example, as of February 28, 2019, there were 179 product and product/chemical tankers on order, equivalent to 6.5% of the existing fleet by units and 7.0% of the existing fleet by dwt and the orderbook may increase further in the future. If the supply of product tanker capacity increases and if the demand for product tanker capacity does not increase correspondingly, charter rates and vessel values could materially decline. If that happens, as the Company's charters expire, the Company may only be able to re-charter its vessels at reduced or unprofitable rates, or the Company may not be able to charter its vessels at all. A reduction in charter rates and the value of our vessels for any of these reasons may have a material adverse effect on our business, results of operations and financial condition.

In addition, product tankers currently used to transport crude oil and other "dirty" products may be "cleaned up" and reintroduced into the product tanker market, which would increase the available product tanker tonnage which may affect the supply and demand balance for product tankers. This could have an adverse effect on our business, results of operations and financial position.

Over the last seven years, a number of vessel owners have ordered and taken delivery of so-called "eco-efficient" vessel designs, which offer significant bunker savings as compared to older designs. Increased demand for and supply of "eco-efficient" vessels could reduce demand for certain of our vessels that are not classified as such and expose us to lower vessel utilization and/or decreased charter rates.

We estimate that a significant proportion of newbuilding orders have been based on new vessel designs, which purport to offer material bunker savings compared to older designs, such as a significant proportion of our tanker vessels. See "Item 4. Information on the Company – B. Business Overview – The Fleet." New vessel designs have resulted in a significant reduction of bunker consumption and consequently cost for charterers. As the supply of "eco-efficient" tankers expands, if charterers prefer those vessels over our tankers that are not classified as such, this may reduce demand for our non-"eco-efficient" tankers, impair our ability to re-charter such tankers at competitive rates or at all and have a material adverse effect on our business, results of operations and financial condition.

Acts of piracy on ocean-going vessels could adversely affect our business.

Acts of piracy have historically affected ocean-going vessels trading in many regions of the world. Although the frequency of piracy on ocean-going vessels has decreased since 2014, piracy incidents continue to occur, such as in the Gulf of Aden off the coast of Somalia and the Gulf of Guinea. Tanker vessels are particularly vulnerable to attacks by pirates. If regions in which our vessels are deployed are characterized as "war risk" zones or "war and strikes" listed areas by insurers, or other parties such as the Joint War Committee of Lloyds Insurance and IUA Company, premiums payable for coverage could increase significantly and such insurance coverage may be more difficult to obtain. In addition, crew and security equipment costs, including employing onboard security guards, could increase in such circumstances. We may not be adequately insured to cover losses from these incidents. In addition, any detention hijacking as a result of an act of piracy against our vessels, increases in cost associated with seeking to avoid such events (including increased bunker costs resulting from vessels being rerouted or travelling at increased speeds as recommended by BMP4), or unavailability or increases in cost of insurance for our vessels, could have a material adverse impact on our business, results of operations and financial condition.

An economic slowdown or changes in the economic and political environment in the Asia Pacific region could have a material adverse effect on our business, financial condition and results of operations.

We anticipate a significant number of the port calls made by our vessels will continue to involve the loading or discharging of cargoesin ports in the Asia Pacific region. As a result, any negative changes in economic conditions in any Asia Pacific country, particularly in China, may have a material adverse effect on our business, financial condition and results of operations, as well as our future prospects. Before the global economic financial crisis that began in 2008, China had one of the world's fastest growing economies in terms of gross domestic product, or GDP, which had a significant impact on shipping demand. The quarterly year-over-year growth rate of China's GDP was approximately 6.5% for the year ended December 31, 2018, as compared to approximately 6.9% for the year ended December 31, 2017, and continues to remain below pre-2008 levels. We cannot assure you that the Chinese economy will not experience a significant contraction in the future.

Although state-owned enterprises still account for a substantial portion of the Chinese industrial output, in general, the Chinese government is reducing the level of direct control that it exercises over the economy through state plans and other measures. There is an increasing level of freedom and autonomy in areas such as allocation of resources, production, pricing and management and a gradual shift in emphasis to a "market economy" and enterprise reform. Limited price reforms were undertaken with the result that prices for certain refined petroleum products are principally determined by market forces. Many of the reforms are unprecedented or experimental and may be subject to revision, change or abolition based upon the outcome of such experiments. If the Chinese government does not continue to pursue a policy of economic reform, the level of imports to and exports from China could be adversely affected by changes to these economic reforms by the Chinese government, as well as by changes in political, economic and social conditions or other relevant policies of the Chinese government, such as changes in laws, regulations or export and import restrictions. Notwithstanding economic reform, the Chinese government may adopt policies that favor domestic shipping and tanker companies and may hinder our ability to compete with them effectively. For example, China imposes a tax for non-resident international transportation enterprises engaged in the provision of services of passengers or cargo, among other items, in and out of China using their own, chartered or leased vessels. The regulation may subject international transportation companies to Chinese enterprise income tax on profits generated from international transportation services passing through Chinese ports. This could have an adverse impact on our charterers' business, operating results and financial condition and could thereby affect their ability to make timely charter hire payments to us and to renew and increase the number of their time charters with us. Moreover, an economic slowdown in the economies of the European Union and other Asian countries may further adversely affect economic growth in China and elsewhere.

In addition, concerns regarding the possibility of sovereign debt defaults by European Union member countries, including Greece, have in the past disrupted financial markets throughout the world, and may lead to weaker consumer demand in the European Union, the United States, and other parts of the world. The possibility of sovereign debt defaults by European Union member countries, including Greece, and the possibility of market reforms to float the Chinese renminbi, either of which development could weaken the Euro against the Chinese renminbi, could adversely affect consumer demand in the European Union. Moreover, the revaluation of the renminbi may negatively impact the United States' demand for imported goods, many of which are shipped from China. Future weak economic conditions could have a material adverse effect on our business, results of operations and financial condition and our

ability to pay dividends to our stockholders. Our business, financial condition, results of operations, as well as our future prospects, will likely be materially and adversely affected by another economic downturn in any of the aforementioned countries and regions.

#### The current global economic condition and financial environment may negatively affect our business.

In recent years, businesses in the global economy have faced periods of slower growth, recessions, limited or no credit or credit on less favorable terms than previously obtained, lower demand for goods and services, reduced liquidity and volatile capital markets. These factors have had, and in part continue to have, a negative effect on the demand for refined petroleum products including fuel oil or bunkers, which, along with diminished trade credit available for the delivery of such cargoes have led to periodic decreased demand for product tankers, creating downward pressure on charter rates and reduced product tanker values. In particular, a significant number of the port calls we expect our vessels to make will likely involve the loading or discharging of cargo in ports in Organization of Economic Cooperation and Development countries and the Asia Pacific region. China's economy has shown signs of slowing its growth rate. We cannot assure you that the Chinese, Indian or Japanese economies, which generate a substantial amount of demand for shipping companies, will not experience a significant contraction or otherwise negatively change in the future, especially due to the recent effects from the turmoil in the Chinese capital markets. Moreover, a significant or protracted slowdown in the economies of the United States, the European Union ("EU") or various Asian countries may adversely affect economic growth in China and elsewhere. In addition, concerns persist regarding the debt burden of certain Eurozone countries and their ability to meet future financial obligations and the overall stability of the Euro. An extended period of adverse development in the outlook for European countries could reduce the overall demand for our services.

The United Kingdom's decision to leave the European Union following a referendum in June 2016 ("Brexit"), contributes to considerable uncertainty concerning the current and future economic environment. Brexit could adversely affect European or worldwide political, regulatory, economic or market conditions and could contribute to instability in global political institutions, regulatory agencies and financial markets. We believe that these effects of Brexit won't materially affect our business, results of operations and financial condition.

Further, governments may turn to trade barriers to protect their domestic industries against foreign imports, thereby depressing shipping demand. In particular, leaders in the United States have indicated the United States may seek to implement more protective trade measures. President Trump was elected on a platform promoting trade protectionism. The results of the presidential election have thus created significant uncertainty about the future relationship between the United States, China and other exporting countries, including with respect to trade policies, treaties, government regulations and tariffs. For example, on January 23, 2017, President Trump signed an executive order withdrawing the United States from the Trans-Pacific Partnership, a global trade agreement intended to include the United States, Canada, Mexico, Peru and a number of Asian countries. In March 2018, President Trump announced tariffs on imported steel and aluminum into the United States that could have a negative impact on international trade generally. Most recently, in January 2019, the United States announced expanded sanctions against Venezuela, which may have an effect on its oil output and in turn affect global oil supply. Protectionist developments, or the perception they may occur, may have a material adverse effect on global economic conditions, and may significantly reduce global trade. Moreover, increasing trade protectionism may cause an increase in (a) the cost of goods exported from regions globally, (b) the length of time required to transport goods and (c) the risks associated with exporting goods. Such increases may significantly affect the quantity of goods to be shipped, shipping time schedules, voyage costs and other associated costs, which could have an adverse impact on our charterers' business, operating results and financial condition and could thereby affect their ability to make timely charter hire payments to us and to renew and increase the number of their time charters with us. This could have a material adverse effect on our business, results of operations and financial condition.

These issues, along with the re-pricing of credit risk and the difficulties currently experienced by financial institutions, especially those lending in the shipping industry, have made, and will likely continue to make, it difficult to obtain financing. As a result of the disruptions in the credit markets and higher capital requirements, many lenders have enacted tighter lending standards, required more restrictive terms (including higher collateral ratios for advances, shorter maturities and smaller loan amounts), increased margins or lending rates or have refused to refinance existing debt at all. Moreover, certain banks that have historically been significant lenders to the shipping industry have reduced or ceased lending activities in the shipping industry. Further tightening of capital requirements and the resulting policies adopted by lenders, could further reduce lending activities.

Global economic conditions remain fragile with uncertainty surrounding sustainable recovery and long-term prospects. If the current global economic and financial environment persists or worsens, we may be negatively affected in the following ways, among others:

we may not be able to employ our vessels at charter rates as favorable to us as historical rates or operate our vessels profitably;

the market value of our vessels could decrease, which may cause us to, among other things, recognize losses if any of our vessels are sold or if their values are impaired, violate covenants in our current loan agreements and future financing agreements and be unable to incur debt at all or on terms that are acceptable to us; and

we may experience difficulties obtaining financing commitments or be unable to fully draw under loans we arrange in the future if the lenders are unwilling to extend financing to us or unable to meet their funding obligations due to their own liquidity, capital or solvency issues. We cannot be certain that financing will be available on acceptable terms or at all. If financing is not available when needed, or is available only on unfavorable terms, we may be unable to meet our future obligations as they come due. In the absence of available financing, we also may be unable to take advantage of business opportunities or respond to competitive pressures.

The occurrence of any of the foregoing could have a material adverse effect on our business, results of operations and financial condition.

Changes in fuel, or bunkers, prices may adversely affect profits.

Fuel, or bunkers, is a significant expense in shipping operations for our vessels employed on the spot market and changes in the price of fuel may adversely affect the Company's profitability and can have a significant impact on earnings. With respect to our vessels employed on time charter, the charterer is generally responsible for the cost and supply of fuel, but such cost may affect the charter rates we are able to negotiate for our vessels. The price and supply of fuel is unpredictable and fluctuates based on events outside our control, including geopolitical developments, supply and demand for oil and gas, actions by OPEC and other oil and gas producers, war and unrest in oil producing countries and regions, regional production patterns and environmental concerns. Further, fuel may become much more expensive in the future, including as a result of the imposition of lower sulfur oxide emissions under new IMO 2020 regulations, which may reduce the profitability and competitiveness of our business versus other forms of transportation, such as truck or rail. Also, older vessels usually consume more fuel than eco-efficient vessels. Consequently, employment of our older vessels may be lower and less profitable. Changes in the price of fuel may adversely affect our profitability.

Our vessels may call on ports located in or may operate in countries that are subject to restrictions imposed by the United States, the European Union or other governments that could result in fines and penalties imposed on us and may adversely affect our reputation and the market price of our common shares.

During the year ended December 31, 2018, none of our vessels called on ports located in countries subject to sanctions and embargoes imposed by the U.S. government and other authorities or countries or regions identified by the U.S. government or other authorities as state sponsors of terrorism; however, our vessels may call on ports in these countries or regions from time to time in the future on our charterers' instructions. The U.S. sanctions and embargo laws and regulations vary in their application, as they do not all apply to the same covered persons or proscribe the same activities, and such sanctions and embargo laws and regulations may be amended or strengthened over time.

We believe that we are currently in compliance with all applicable sanctions and embargo laws and regulations. In order to maintain compliance, we monitor and review the movement of our vessels on a frequent basis.

All or most of our future charters shall include provisions and trade exclusion clauses prohibiting the vessels from calling on ports where there is an existing U.S, embargo. Furthermore, as of the date hereof, neither the Company nor its subsidiaries have ever entered into or have any future plans to enter into, directly or indirectly, any contracts, agreements or other arrangements with the governments of North Korea, Iran, Syria, Cuba or Crimea or any entities owned or controlled by the governments of these countries or regions, including any entities organized in these countries or regions.

Due to the nature of our business and the evolving nature of the foregoing sanctions and embargo laws and regulations, there can be no assurance that we will be in compliance at all times in the future, particularly as the scope of certain laws may be unclear and may be subject to changing interpretations. Any such violation could result in fines, penalties or other sanctions that could severely impact our ability to access the U.S. capital markets and conduct our business, and could result in some investors deciding, or being required, to divest their interest, or refrain from investing, in us. In addition, certain institutional investors may have investment policies or restrictions that prevent them from holding securities of companies that have contracts with countries identified by the U.S. government as state sponsors of terrorism. The determination by these investors not to invest in, or to divest from, our common stock may adversely affect the price at which our common stock trades. Moreover, our charterers may violate applicable sanctions and embargo laws and regulations as a result of actions that do not involve us or our vessels, and those violations could in turn negatively affect our reputation. In addition, our reputation and the market for our securities may be adversely affected if we engage in certain other activities, such as entering into charters with individuals or entities in countries subject to U.S. sanctions and embargo laws that are not controlled by the governments of those countries, or engaging in operations associated with those countries pursuant to contracts with third parties that are unrelated to those countries or entities controlled by their governments. Investor perception of the value of our common stock may be adversely affected by the consequences of war, the effects of terrorism, civil unrest and governmental actions in these and surrounding countries.

Our vessels could be arrested by maritime claimants, which could result in a significant loss of earnings and cash flow if we are not able to post the required security to lift the arrest or attachment.

Generally, under the terms of the time charters for our vessels, a vessel would be placed off-hire (that is, the charterer could cease to pay charter hire) for any period during which it is "arrested" for a reason not arising from the fault of the charterer. Under maritime law in many jurisdictions, and under the International Convention on Arrest of Ships, 1999, crew members, tort claimants, claimants for breach of certain maritime contracts, vessel mortgagees, suppliers of goods and services to a vessel and shippers and consignees of cargo and others entitled to a maritime lien against the vessel may enforce their lien by "arresting" or "attaching" a vessel through court processes. In addition, claims may be brought by parties in hostile jurisdictions or on fictitious grounds or for claims against previous owners, if any, or in respect of previous cargoes. Any such claims could lead to the arrest of the vessel, against which the ship owner would have to post security to have the arrest lifted and to defend against such claims.

In addition, in those countries adopting the International Convention on Arrest of Ships, 1999, and in certain other jurisdictions, such as South Africa, under the "sister ship" theory of liability, a claimant may arrest not only the vessel with respect to which the claimant's maritime lien has arisen, but also any "associated" vessel owned or controlled by the legal or beneficial owner of that vessel. While in some of the jurisdictions which have adopted this doctrine, liability for damages is limited in scope and would only extend to a company and its vessel-owning subsidiaries, there can be no assurance that liability for damages caused by a vessel managed by International Tanker Management ("ITM") (but otherwise with no affiliation to us at all), would not be asserted against us or one or more of our vessels. The arrest of one or more vessels in our fleet could result in a material loss of cash flow for us and/or require us to pay substantial sums to have the arrest lifted.

Governments could requisition our vessels during a period of war or emergency.

A government could take actions for requisition of title, hire or seize our vessels. Requisition for title occurs when a government takes control of a vessel and becomes its owner. Also, a government could requisition our vessels for hire, which occurs when a government takes control of a vessel and effectively becomes her charterer at dictated charter rates. Generally, requisitions occur during a period of war or emergency. Government requisition of one or more of our vessels could negatively impact our business, results of operations and financial condition.

We are subject to increasingly complex laws and regulations, including environmental and safety laws and regulations, which expose us to liability and significant additional expenditures, and can adversely affect our insurance coverage and access to certain ports as well as our business, results of operations and financial condition.

Our operations are affected by extensive and changing international, national and local laws, regulations, treaties, conventions and standards in force in international waters, the jurisdictional waters of the countries in which our vessels operate, as well as the countries of our vessels' registration.

These laws and regulations include, but are not limited to, the U.S. Oil Pollution Act of 1990 (the "OPA"), requirements of the U.S Coast Guard ("USCG") and the U.S. Environmental Protection Agency (the "EPA"), the U.S. Comprehensive Environmental Response, Compensation and Liability Act of 1980 (the "CERCLA"), the U.S. Clean Air Act of 1970 (as amended from time to time and referred to herein as the "CAA"), the U.S. Clean Water Act of 1972 (as amended from time to time and referred to herein as the "CWA"), the International Maritime Organization (the "IMO"), the International Convention on Civil Liability for Oil Pollution Damage of 1969 (as amended from time to time and referred to herein as the "CLC"), the IMO International Convention on Civil Liability for Bunker Oil Pollution Damages (the "Bunker Convention"), the IMO International Convention for the Prevention of Pollution from Ships of 1973 (as amended from time to time and referred to herein as "MARPOL"), including designation of Emission Control Areas ("ECAs") thereunder, the IMO International Convention for the Safety of Life at Sea of 1974 (as amended from time to time and referred to herein as the "SOLAS Convention") and the International Management Code for the Safe Operation of Ships and Pollution Prevention (the "ISM Code") promulgated thereby, the International Convention for the Control and Management of Ships' Ballast Water and Sediments (the "BWM Convention"), the IMO International Convention on Load Lines of 1966 (as from time to time amended) (the "LL Convention"), the U.S. Maritime Transportation Security Act of 2002 (the "MTSA"), the International Labour Organization ("ILO"), the Maritime Labour Convention, EU regulations, and the International Ship and Port Facility Security Code (the "ISPS Code").

Environmental laws often impose strict liability for remediation of spills and releases of oil and hazardous substances, which could subject us to liability without regard to whether we were negligent or at fault. Under the OPA, for example, owners, operators and bareboat charterers are jointly and severally strictly liable for the discharge of oil in U.S. waters, including the 200-nautical mile exclusive economic zone around the United States. An oil spill could also result in significant liability, including fines, penalties, criminal liability and remediation costs for natural resource damages under other international and U.S. federal, state and local laws, as well as third-party damages, and could harm our reputation with current or potential charterers of our tankers. We are required to satisfy insurance and financial responsibility requirements for potential oil (including marine fuel) spills and other pollution incidents. Although we have arranged insurance to cover certain environmental risks, there can be no assurance that such insurance will be sufficient to cover all such risks.

The safe operation of our vessels is affected by the requirements of the ISM Code, promulgated by the IMO under the SOLAS Convention. The ISM Code requires ship owners, ship managers and bareboat charterers to develop and maintain an extensive "Safety Management System" that includes the adoption of safety and environmental protection policies setting forth instructions and procedures for safe operation and describing procedures for dealing with emergencies. If we fail to comply with the ISM Code, we may be subject to increased liability, invalidation of our existing insurance, or reduction in available insurance coverage for our affected vessels. Such noncompliance may also result in a denial of access to, or detention in, certain ports which could have a material adverse impact on the Company's business, results of operations and financial condition.

Compliance with such laws and regulations, where applicable, may require installation of costly equipment, vessel modifications, operational changes or restrictions, a reduction in cargo-capacity and may affect the resale value or useful lives of our vessels as well as result in the denial of access to, or detention in, certain jurisdictional waters or ports. We may also incur additional costs in order to comply with other existing and future regulatory obligations, including, but not limited to, costs relating to air emissions including greenhouse gases, the management of ballast and bilge waters, maintenance and inspection, elimination of tin-based paint, development and implementation of emergency procedures and insurance coverage or other financial assurance of our ability to address pollution incidents. Government regulation of the shipping industry, particularly as it may relate to safety, ship recycling requirements, greenhouse gas emissions and climate change, and other environmental matters, can be expected to become stricter in the future, and may require us to incur significant capital expenditures on our vessels to keep them in compliance, may require us to scrap or sell certain vessels altogether, may reduce the residual value we receive if a vessel is scrapped, and may generally increase our compliance costs. A failure to comply with applicable laws and regulations may result in administrative and civil penalties, criminal sanctions or the suspension or termination of operations. Increased inspection procedures could increase costs and disrupt our business. International shipping is subject to various security and customs inspection and related procedures in countries of origin and destination and trans-shipment points. Inspection procedures can result in the seizure of the cargo and/or our vessels, delays in the loading, offloading or delivery and the levying of customs duties, fines or other penalties against us. It is possible that changes to inspection procedures could impose additional financial and legal obligations on us, could also impose additional costs and obligations on our customers and may, in certain cases, render the shipment of certain types of cargo uneconomical or impractical. All of the above, including any changes or developments, both individually and cumulatively, could have a material adverse effect on our business, results of operations and financial condition.

Recent action by the IMO's Maritime Safety Committee and U.S. agencies indicate that cyber-security regulations for the maritime industry are likely to be further developed in the near future in an attempt to combat cyber-security threats. This might cause companies to cultivate additional procedures for monitoring cyber-security, which could require additional expenses and/or capital expenditures. However, the impact of such regulations is hard to predict at this time.

The failure to maintain class certifications of authorized classification societies on one or more of our vessels would affect our ability to employ such vessels.

The hull and machinery of every commercial vessel must be certified as meeting its class requirements by a classification society authorized by the vessel's country of registry. The classification society certifies that the vessel is safe and seaworthy in accordance with the applicable rules and regulations of the country of registry of the vessel and the SOLAS Convention. The operating vessels in our fleet are classed by the major classification societies, Nippon Kaiji Kyokai ("NKK") and Det Norske Veritas ("DNV GL"). ITM and the vessels in our fleet have also been awarded certifications from major classification societies under the ISM Code. In order for a vessel to maintain its classification, the vessel must undergo annual surveys, intermediate surveys and special surveys. In lieu of a special survey, a vessel's machinery may be on a continuous survey cycle under which the machinery would be surveyed from time to time over a five year period. All of the vessels in our fleet on time charters or operating on the spot market are on special survey cycles for both hull and machinery inspection. Every vessel may also be required to be dry-docked every two to three years for inspection of the underwater parts of the vessel. If a vessel fails any survey or otherwise fails to maintain its class, the vessel will be unable to trade and will be unemployable, and may subject us to claims from the charterer if it has chartered the vessel, which would negatively impact our revenues as well as our reputation.

We could be adversely affected by violations of the U.S. Foreign Corrupt Practices Act of 1977 (the "FCPA") and similar worldwide anti-bribery laws.

The FCPA and similar worldwide anti-bribery laws generally prohibit companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. Our policies mandate compliance with these laws. In certain circumstances, third parties may request our employees and agents to make payments that may not comply with the FCPA and other anti-bribery laws. Despite such compliance program, we cannot assure you that our internal control policies and procedures always will protect us from reckless or negligent acts committed by our employees or agents. Violations of these laws, or allegations of such violations, could result in substantial fines, sanctions, civil and/or criminal penalties and curtailment of operations in certain jurisdictions and could have a negative impact on our business, results of operations and financial condition. In addition, actual or alleged violations could damage the Company's reputation and ability to do business. Furthermore, detecting, investigating, and resolving actual or alleged violations is expensive and can consume significant time and attention of the Company's senior management.

The Company obtains some of its insurance through protection and indemnity associations, which could result in significant additional premium payments.

The Company may be subject to increased premium payments, or calls, in amounts based on its claim records, the claim records of Maritime or ITM, as well as the claim records of other members of the protection and indemnity associations through which the Company receives insurance coverage for tort liability, including pollution-related

liability. The Company's protection and indemnity associations may not have sufficient resources to cover claims made against them. The Company's payment of these calls could result in significant expense to the Company, which could have a material adverse effect on us. Changes in the insurance markets or increased risks to other members of the Company's protection and indemnity associations attributable to terrorist attacks, piracy, environmental disasters or other maritime and non-maritime perils may cause increases to premiums and may make certain types of insurance more difficult for the Company to obtain due to increased premiums or reduced or restricted coverage, which could have a material adverse impact on its business, results of operations and financial condition.

We are subject to funding calls by our protection and indemnity associations, and our associations may not have enough resources to cover claims made against them.

We are indemnified for certain liabilities incurred while operating our vessels through membership in protection and indemnity associations, which are mutual insurance associations whose members contribute to cover losses sustained by other association members. Claims are paid through the aggregate premiums (typically annually) of all members of the association, although members remain subject to calls for additional funds if the aggregate premiums are insufficient to cover claims submitted to the association. Claims submitted to the association may include those incurred by members of the association, as well as claims submitted to the association from other protection and indemnity associations with which our association has entered into inter-association agreements. We cannot assure you that the associations to which we belong will remain viable.

We will incur additional costs to retrofit ballast water treatment systems in our vessels to comply with new regulations.

Vessels unload ballast water during passage by taking ballast water in one port and unloading it in another. This helps maintain safety and stability. However, the ballast water can contain local organisms and pathogens. When vessels unload ballast water they can then release organisms and pathogens in different parts of the world, which can be invasive to that local ecosystem. To avoid transfers of invasive species in ballast water, the IMO and United States have regulations that require ballast water is treated prior to the discharge. In order to comply with IMO and U.S. ballast water regulations, we are required to install ballast water treatment plants on all vessels from March 2019 to June 2022.

In February 2004, the IMO adopted the International Convention for the Control and Management of Ships' Ballast Water and Sediments ("BWM Convention"). The BWM Convention aims to prevent the spread of harmful aquatic organisms from one region to another by establishing standards and procedures for the management and control of ships' ballast water and sediments. The BWM Convention contains an environmentally protective numeric standard for the treatment of ship's ballast water before it is discharged. This standard, detailed in Regulation "D-2" of the BWM Convention, sets out the numbers of organisms allowed in specific volumes of treated discharge water. The IMO "D-2" standard is also the standard that has been adopted by the U.S. Coast Guard's ballast water regulations and the U.S. EPA's Vessel General Permit. The BWM Convention also contains an implementation schedule for the installation of IMO member state type approved treatment systems in existing ships and in new vessels, requirements for the development of vessel ballast water management plans, requirements for the safe removal of sediments from ballast tanks, and guidelines for the testing and type approval of ballast water treatment technologies. In July 2017 the IMO has extended the regulatory requirement of compliance to BWM Convention from September 8, 2017 to September 8, 2019. Vessels trading internationally will have to comply with the BWM Convention upon their next special survey after that date and for an MR2 tanker, the retrofit cost could be as much as \$1.0 million per vessel including labor. The cost of compliance per vessel for us is estimated to be between \$0.4 and \$0.6 million, depending on specifications of the vessel. Significant investments in ballast water treatment systems may have a material adverse effect on our future performance, results of operations, cash flows and financial position depending on the ability to install effective ballast water treatment systems, including ship yard availability, and the extent to which existing vessels must be modified to accommodate such systems

As of the date of this filing, one vessel in the Company's fleet currently has a ballast water treatment system installed. The Company cannot be assured that this system will be approved by the regulatory bodies of every jurisdiction in which it may wish to conduct its business. Accordingly, the Company may have to make additional investments in this vessel and substantial investments in the remaining vessels in its fleet that do not carry any such equipment. Also, as part of our loan agreements, lenders may require us to periodically deposit additional funds as a reserve to cover these expenditures.

Furthermore, United States regulations are currently changing. Although the 2013 Vessel General Permit ("VGP") program and U.S. National Invasive Species Act ("NISA") are currently in effect to regulate ballast discharge, exchange

and installation, the Vessel Incidental Discharge Act ("VIDA"), which was signed into law on December 4, 2018, requires that the U.S. Coast Guard develop implementation, compliance, and enforcement regulations regarding ballast water within two years. The new regulations could require the installation of new equipment, which may cause us to incur substantial costs.

Developments in safety and environmental requirements relating to the recycling of vessels may result in escalated and unexpected costs.

The 2009 Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (the "Hong Kong Convention") aims to ensure ships, being recycled once they reach the end of their operational lives, do not pose any unnecessary risks to the environment, human health, and safety. The Hong Kong Convention has yet to be ratified by the required number of countries to enter into force. Upon the Hong Kong Convention's entry into force, however, each ship sent for recycling will have to carry an inventory of its hazardous materials. The hazardous materials, whose use or installation is prohibited in certain circumstances, are listed in an appendix to the Hong Kong Convention. Ships will be required to have surveys to verify their inventory of hazardous materials initially, throughout their lives, and prior to the ship being recycled.

The Hong Kong Convention will enter into force 24 months after the date on which 15 IMO Member States, representing 40% of world merchant shipping by gross tonnage, have ratified or approved accession. As of January 31, 2019, seven countries have ratified the Hong Kong Convention. Even though the Hong Kong Convention is currently not in effect, the European Parliament and the Council of the EU have adopted the Ship Recycling Regulation, which retains the requirements of the Hong Kong Convention. Starting in December 31, 2018, certain commercial seagoing vessels flying the flag of an EU Member State may be recycled only in facilities included on the European list of permitted ship recycling facilities.

These regulatory developments, when implemented, may lead to cost escalation by shipyards, repair yards and scrap yards. This may then result in a decrease in the residual scrap value of a vessel, and a vessel could potentially not cover the cost to comply with latest requirements which may have an adverse effect on our future performance, results of operations, cash flows and financial position.

The Company does not plan to install scrubbers and may have to pay more for fuel starting 2020 which could adversely affect the Company's business, results of operations and financial condition.

In October 2016, the IMO set January 1, 2020 as the implementation date for vessels to comply with its low sulfur fuel oil ("LSFO") requirement, which cuts sulfur levels from 3.5% to 0.5%. The interpretation of "fuel oil used on board" includes use in main engine, auxiliary engines and boilers. Shipowners may comply with this regulation by (i) using 0.5% sulfur fuels on board, which is likely to be available around the world by 2020 but likely at a higher cost; (ii) installing scrubbers for cleaning of the exhaust gas; or (iii) by retrofitting vessels to be powered by liquefied natural gas, which may not be a viable option due to the lack of supply network and high costs involved in this process. Costs of compliance with these regulatory changes may be significant and may have a material adverse effect on our future performance, results of operations, cash flows and financial position. See "Item 4. Information on the Company – B. Business Overview – Government Regulation; Effect of Existing or Probable Governmental Regulations on the Business; Costs and Effects of Compliance with Environmental Laws."

In light of operating and economic uncertainties surrounding the use of scrubbers, the Company has chosen not to purchase and install these units. However, the Company may, in the future, determine to purchase scrubbers for installation on its vessels. While scrubbers rely on technology that has been developed over a significant period of time for use in a variety of applications, their use for maritime applications is a more recent development. Each vessel will require physical modifications to be made in order to install a scrubber, the scope of which will depend on, among other matters, the age and type of vessel, its engine and its existing fixtures and equipment. The purchase and installation of scrubbers will involve significant capital expenditures, currently estimated at \$2 million per vessel, and the vessel will be out of operation for as long as 25 days or more in order for the scrubbers to be installed. In addition, future arrangements that the Company may enter into with respect to shipyard drydock capacity to implement these scrubber installations may be affected by delays or issues affecting vessel modifications being undertaken by other vessel owners at those shipyards, which could cause the Company's vessels to be out of service for even longer periods or installation dates to be delayed. In addition, as there is a limited operating history of scrubbers on vessels such as those owned and operated by the Company, the operation and maintenance of scrubbers and related ongoing costs to these vessels is uncertain. Any unforeseen complications or delays in connection with acquiring, installing, operating or maintaining scrubbers installed on the Company's vessels could adversely affect the Company's business, results of operations and financial condition.

Furthermore, it is uncertain how the availability of high-sulfur fuel oil ("HSFO") and LSFO around the world will be affected by implementation of the IMO 2020 Regulations, as well as the prices of HSFO and LSFO generally and the price differential between the two fuels after January 1, 2020, are also uncertain. If LSFO is unavailable in port and we or our charterers cannot obtain a temporary waiver to refuel and use HSFO for the next voyage, we or our

charterers could be subject to fines by regulatory authorities and be in violation of the charter agreements. Scarcity in the supply of LSFO, or a higher-than-anticipated difference in the costs between the two types of fuel, may cause the Company to pay more than for its fuel than scrubber fitted vessels, which could adversely affect the Company's business, results of operations and financial condition.

Effective March 1, 2020, as part of the IMO 2020 Regulations, our vessels cannot carry HSFO. The charterer shall be responsible for off-loading of any remaining HSFO by that time. If any of our vessels are under spot charters and are carrying such bunker fuel, we would incur off-loading costs, tank cleaning expenses, potentially a write-down of inventory values and delays in our voyage activities.

There is limited operating history of using LSFO on our vessels and potentially new compliant fuel blends could be introduced but the vessel performance, economic impact and timing of using such fuels on our vessels is uncertain. In addition, our vessels will likely incur higher fuel costs associated with using more expensive compliant fuel. Such costs may be material and could adversely affect the Company's business, results of operations and financial condition, particularly in any case where we are unable to pass through the costs of higher fuel to charterers due to competition with vessels that have installed scrubbers, market conditions or otherwise.

Climate change and greenhouse gas restrictions may adversely impact our operations and markets.

Due to concern over the risk of climate change, a number of countries and the IMO have adopted, or are considering the adoption of, regulatory frameworks to reduce greenhouse gas emissions. These regulatory measures may include, among others, adoption of cap and trade regimes, carbon taxes, increased efficiency standards and incentives or mandates for renewable energy. In addition, although the emissions of greenhouse gases from international shipping currently are not subject to the Kyoto Protocol to the United Nations Framework Convention on Climate Change (the "Paris Agreement"), a new treaty may be adopted in the future that includes restrictions on shipping emissions. Compliance with changes in laws, regulations and obligations relating to climate change could increase our costs related to operating and maintaining our vessels and require us to install new emission controls, acquire allowances or pay taxes related to our greenhouse gas emissions or administer and manage a greenhouse gas emissions program. Revenue generation and strategic growth opportunities may also be adversely affected.

On June 29, 2017, the Global Industry Alliance ("GIA"), was officially inaugurated. The GIA is a program, under the Global Environmental Facility-United Nations Development Program-IMO project, which supports shipping, and related industries, as they move towards a low carbon future. Organizations including, but not limited to, shipowners, operators, classification societies and oil companies, signed to launch the GIA.

Adverse effects upon the oil and gas industry relating to climate change, including growing public concern about the environmental impact of climate change, may also adversely affect demand for our services. For example, increased regulation of greenhouse gases or other concerns relating to climate change may reduce the demand for oil and gas in the future or create greater incentives for use of alternative energy sources and electric powered vehicles. Therefore, any long-term material adverse effect on the oil and gas industry could have a material adverse effect on our future performance, results of operations, cash flows and financial position. Please read "Item 4. Information on the Company – B. Business Overview – Government Regulation; Effect of Existing or Probable Governmental Regulations on the Business; Costs and Effects of Compliance with Environmental Laws."

Technological innovation could reduce our charter hire income and the value of our vessels.

The charter hire rates and the value and operational life of a vessel are determined by a number of factors including the vessel's efficiency, operational flexibility and physical life. Efficiency includes speed, fuel economy and the ability to load and discharge cargo quickly. Flexibility includes the ability to enter harbors, utilize related docking facilities and pass through canals and straits. The length of a vessel's physical life is related to its original design and construction, its maintenance, the impact of the stress of operations and stipulations from classification societies. If new product tankers are built that are more efficient or more flexible or have longer physical lives than our vessels, competition from these more technologically advanced vessels could adversely affect the amount of charter hire payments we receive for our vessels once their initial charters expire and the resale value of our vessels could significantly decrease. As a result, our financial condition and available cash could be adversely affected.

Risks Related to Our Business and Operations

We operate in highly competitive international markets.

The product tanker industry is highly fragmented, with many charterers, owners and operators of vessels, and the transportation of refined petroleum products is characterized by intense competition. Competition arises primarily from other tanker owners, including major oil companies as well as independent tanker companies, some of which have substantially greater financial and other resources than we do. Although we believe that no single competitor has a dominant position in the markets in which we compete, the trend towards consolidation in the industry is creating an increasing number of global enterprises capable of competing in multiple markets, which will likely result in greater competition to us. Our competitors may be better positioned to devote greater resources to the development, promotion and employment of their businesses than we are. Competition for charters, including for the transportation of refined petroleum products, is intense and depends on price as well as on vessel location, size, age, condition and acceptability of the vessel and its operator to the charterer and reputation. Competition may increase in some or all of our principal markets, including with the entry of new competitors. We may not be able to compete successfully or effectively with our competitors and our competitive position may be eroded in the future, which could have an adverse effect on our business, results of operations and financial condition.

Because we intend to charter some of the vessels in our fleet in the spot market or in pools trading in the spot market, we expect to have exposure to the cyclicality and volatility of the spot charter market and incur additional working capital. At March 26, 2019, we operated two vessels in the spot market which is highly competitive and volatile. Spot charter rates may fluctuate dramatically based on the competitive factors listed in the preceding risk factor. Significant fluctuations in spot charter rates may result in significant fluctuations in our ability to continuously re-charter our vessels upon the expiration or termination of their current spot charters and in the earnings of our vessels operating on the spot market. Since we charter a number of our vessels on the spot market, and may in the future also admit our vessels in pools trading on the spot market, we have exposure to fluctuations in cash flows due to the cyclicality and volatility of the spot charter market. By focusing the employment of some of the vessels in our fleet on the spot market, we will benefit if conditions in this market strengthen. However, we will also be particularly vulnerable to declining spot charter rates. Future spot charters may continue to be at the rates currently prevailing in the spot market at which we cannot operate our vessels profitably and may fall further. If spot charter rates remain at current levels or decrease further, our earnings will be adversely impacted to the extent we have vessels trading on the spot market. Trading our vessels in the spot market or in pools requires greater working capital than operating under a time charter as the vessel owner is responsible for various voyage related costs, such as, fuel, port and canal charges, as well as additional timing for collections of charter receivables, including additional demurrage revenues.

We may be unable to secure medium- and long-term employment for our vessels at profitable rates and present and future vessel employment could be adversely affected by an inability to clear the oil majors' risk assessment process.

One of our strategies is to explore and selectively enter into or renew medium- and long-term, fixed rate time and bareboat charters for some of the vessels in our fleet in order to provide us with a base of stable cash flows and to manage charter rate volatility. However, the process for obtaining longer term charters is highly competitive and generally involves a more lengthy and intense screening and vetting process and the submission of competitive bids, compared to shorter term charters. Shipping, and especially refined petroleum product tankers have been, and will remain, heavily regulated. The so-called "oil majors", together with a number of commodities traders, represent a significant percentage of the production, trading and shipping logistics (terminals) of refined products worldwide. Concerns for the environment have led the oil majors to develop and implement a strict ongoing due diligence process when selecting their commercial partners. This vetting process has evolved into a sophisticated and comprehensive risk assessment of both the vessel operator and the vessel, including physical ship inspections, completion of vessel inspection questionnaires performed by accredited inspectors and the production of comprehensive risk assessment reports.

In addition to the quality, age and suitability of the vessel, longer term charters tend to be awarded based upon a variety of other factors relating to the vessel operator, including:

office assessments and audits of the vessel operator;

the operator's environmental, health and safety record;

compliance with heightened industry standards that have been set by several oil companies and other charterers;

compliance with the standards of the IMO;

compliance with several oil companies and other charterers' codes of conduct, policies and guidelines, including transparency, anti-bribery and ethical requirements and relationships with third-parties;

shipping industry relationships, reputation for customer service, technical and operating expertise and safety record;

shipping experience and quality of ship operations, including cost-effectiveness;

quality, experience and technical capability of crews;

the ability to finance vessels at competitive rates and overall financial stability;

relationships with shipyards and the ability to obtain suitable berths with on-time delivery of new vessels according to customer's specifications;

willingness to accept operational risks pursuant to the charter, such as allowing termination of the charter for force majeure events; and

competitiveness of the bid in terms of overall price.

We cannot assure you that we would be successful in winning medium- and long-term employment for our vessels at profitable rates.

A substantial portion of our revenues is derived from a limited number of customers, and the loss of any of these customers could result in a significant loss of revenues and cash flow.

We currently derive substantially all of our revenues from a limited number of customers. In 2018, three customers accounted for approximately 47% of our total revenues. The loss of any significant customer or a decline in the amount of services provided to a significant customer could have a material adverse effect on our future performance, results of operations, cash flows and financial position.

Additionally, oil and natural gas companies, refineries and energy companies have undergone significant consolidation. Further consolidation is possible and could result in fewer companies to charter or contract our services. Merger activity may result in a budget for a combined company that is less than the combined budget of the companies before consolidation. Future consolidation of the Company's customer base could reduce demand for our vessels and could have a material adverse impact on our business, results of operations and financial condition.

The Company's growth depends on its ability to expand relationships with existing customers and obtain new customers, for which it will face substantial competition.

The process of obtaining new charters is highly competitive, generally involves an intensive screening process and competitive bids and often extends for several months. Contracts are awarded based upon a variety of factors, including:

the owner's management experience, including the ability to obtain on-time delivery of new build vessels according to customer specifications;

the operator's industry relationships, experience and reputation for customer service, quality operations and safety;

the quality and age of the vessels;

the quality, experience and technical capability of the crew;

the operator's willingness to accept operational risks pursuant to the charter, such as allowing termination of the charter for force majeure events; and

the competitiveness of the bid in terms of overall price.

The Company's ability to obtain new customers will also depend upon a number of factors, many of which are beyond our control, including:

our ability to:

successfully manage our liquidity and obtain the necessary financing to fund our anticipated growth; identify and consummate desirable acquisitions, joint ventures or strategic alliances; and identify and capitalize on opportunities in new markets;

ITM's ability to:

attract, hire, train and retain qualified personnel and managers to manage and operate its fleet; and being approved through the vessel vetting process of certain charterers.

If we cannot meet our customers' quality and compliance requirements we may not be able to operate our vessels profitably which could have an adverse effect on our future performance, results of operations, cash flows and financial condition.

Our customers, in particular those in the petroleum products industry, have a high and increasing focus on quality and compliance standards with their suppliers across the entire value chain, including the shipping and transportation segment. Our continuous compliance with these standards and quality requirements is vital for our operations. Related risks could materialize in multiple ways, including a sudden and unexpected breach in quality and/or compliance concerning one or more vessels, or a continuous decrease in the quality concerning one or more vessels occurring over time. Moreover, continuous increasing requirements from petroleum products industry customers can further complicate our ability to meet the standards. Any noncompliance by us, either suddenly or over a period of time, on one or more vessels, or an increase in requirements by petroleum products operators above and beyond what we deliver, may have a material adverse effect on our future performance, results of operations, cash flows and financial condition.

We may not be able to successfully mix our charter durations profitably.

It may be difficult to properly balance time and spot charters and anticipate trends in these markets. If we are successful in employing vessels under medium- and long-term charters, those vessels will not be available for the spot market during an upturn in the product tanker demand cycle, when spot trading may be more profitable. By contrast, at the expiration of our charters, if a charter terminates early for any reason or if we acquire vessels charter-free, we may want to charter or re-charter our vessels under medium- and long-term charters. Should more vessels be available on the spot or short-term market at the time we are seeking to fix new medium- to long-term time charters, we may have difficulty entering into such charters at profitable rates and for any term other than a short-term and, as a result, our cash flow may be subject to instability. A more active short-term or spot market may require us to enter into charters on all our vessels based on fluctuating market rates, as opposed to long-term contracts based on a fixed rate, which could result in a decrease in our cash flow in periods when the charter rates for product tankers are depressed. If we cannot successfully employ our vessels in a profitable mix of medium- and long-term time charters and on the spot market, our business, results of operations and financial condition could be adversely affected.

We have limited current liquidity and have become reliant on Pyxis Maritime Corp. ("Maritime"), an entity affiliated with our Chairman and Chief Executive Officer, Mr. Valentis, for our short-term working capital financing.

At December 31, 2018, we had cash of \$0.5 million and restricted cash, required deposits by our lenders, of \$3.7 million. At December 31, 2018, Maritime extended \$3.4 million of advances which we used to pay various operating costs, debt service and other obligations. During the quarter ended September 30, 2018, such advances increased to a highpoint of \$7.5 million. In the near-term, we expect Maritime to advance us additional funds for similar purposes. There are no specific repayment terms with respect to these advances, which Maritime controls as our manager. We

cannot assure you that in the future we will be able to rely on Maritime for this working capital financing on similar terms, or at all, or on what terms Maritime will request repayment. If our operating cash flows are insufficient to satisfy our liquidity needs, we may have to rely on the sale of assets or additional equity financing to raise adequate funds or restructure our indebtedness, or a combination thereof. An inability to continue this financing in the future from Maritime or the imposition by Maritime of repayment terms that are unfavorable to us may negatively affect our liquidity position and our ability to fund our ongoing operations.

On June 29, 2018, we entered into an amendment to the Amended & Restated Promissory Note which we issued in favor of Maritime Investors on December 29, 2017. This amendment (i) extended the maturity date from June 15, 2019 to March 31, 2020, and (ii) increased the interest rate from 4.0% to 4.5% per annum effective July 1, 2018. The Amended & Restated Promissory Note can not be repaid until the principal payments of the loan agreement of one of our subsidiaries, Eighthone Corp. with certain institutional funds managed by EnTrust Partners LLC ("EntrustPermal") have been fully paid up under a cash flow sweep mechanism. Under the terms of the credit facility agreement of one of our subsidiaries, Eighthone Corp. with EntrustPermal, no repayment of principal under the Amended & Restated Promissory Note may be made while any Pay-in-kind ("PIK") interest or Principal Deficiency Amount (as defined in the credit facility agreement) is outstanding under the credit facility.

Counterparties, including charterers or technical managers, could fail to meet their obligations to us.

We enter into, among other things, memoranda of agreement, charter parties, ship management agreements and loan agreements with third parties with respect to the purchase and operation of our fleet and our business. Such agreements subject us to counterparty risks. The ability and willingness of each of our counterparties to perform its obligations under these agreements with us depends on a number of factors that are beyond our control and may include, among other things, general economic conditions, the condition of the tanker shipping industry and the overall financial condition of the counterparties. In particular, we face credit risk with our charterers. It is possible that not all of our charterers will provide detailed financial information regarding their operations. As a result, charterer risk is largely assessed on the basis of our charterers' reputation in the market, and even on that basis, there can be no assurance that they can or will fulfill their obligations under the contracts we enter into with them.

Charterers are sensitive to the commodity markets and may be impacted by market forces affecting commodities. In addition, in depressed market conditions, there have been reports of charterers renegotiating their charters or defaulting on their obligations under charters. Our customers may fail to pay charter hire or attempt to renegotiate charter rates. Should a charterer counterparty fail to honor its obligations under agreements with us, it may be difficult to secure substitute employment for that vessel, and any new charter arrangements we secure on the spot market or on substitute charters may be at lower rates depending on the then existing charter rate levels. The costs and delays associated with the default by a charterer under a charter of a vessel may be considerable. In addition, if the charterer of a vessel in our fleet that is used as collateral under our loan agreements defaults on its charter obligations to us, such default may constitute an event of default under our loan agreements, which may allow the banks to exercise remedies under our loan agreements.

As a result of these risks, we could sustain significant losses, which could have a material adverse effect on our business, results of operations and financial condition.

We depend on ITM and Maritime to operate our business and our business could be harmed if they fail to perform their services satisfactorily.

Pursuant to our management agreements, ITM provides us with day-to-day technical management services (including crewing, maintenance, repair, dry-dockings and maintaining required vetting approvals) and Maritime provides us with ship management and administrative services for our vessels. Our operational success depends significantly upon ITM and Maritime's satisfactory performance of these services. Our business would be harmed if ITM or Maritime failed to perform these services satisfactorily. In addition, if our management agreements with either ITM or Maritime were to be terminated or if their terms were to be altered, our business could be adversely affected, as we may not be able to immediately replace such services, and even if replacement services were immediately available, the terms offered could be less favorable than those under our management agreements. A change of technical manager may require approval by certain customers of ours for employment of a vessel.

Our ability to compete for and enter into new period time and spot charters and to expand our relationships with our existing charterers will depend largely on our relationship with ITM and Maritime, and their respective reputation and relationships in the shipping industry. If ITM or Maritime suffers material damage to its reputation or relationships, it may harm our ability to:

obtain new charters;

obtain financing on commercially acceptable terms;

maintain satisfactory relationships with our charterers and suppliers; and

successfully execute our business strategies.

If our ability to do any of the things described above is impaired, it could have a material adverse effect on our business, results of operations and financial condition.

We may fail to successfully control our operating and voyage expenses.

Our operating results are dependent on our ability to successfully control our operating and voyage expenses. Under our ship management agreements with ITM we are required to pay for vessel operating expenses (which includes crewing, repairs and maintenance, insurance, stores, lube oils and communication expenses), and, for spot charters, voyage expenses (which include bunker expenses, port fees, cargo loading and unloading expenses, canal tolls, agency fees and conversions). These expenses depend upon a variety of factors, many of which are beyond our or the technical manager's control, including unexpected increases in costs for crews, insurance or spare parts for our vessels, unexpected dry-dock repairs, mechanical failures or human error (including revenue lost in off-hire days), vessel age, arrest action against our vessels due to failure to pay debts, disputes with creditors or claims by third parties, labor strikes, severe weather conditions, any quarantines of our vessels and uncertainties in the world oil markets. Some of these costs, primarily relating to voyage expenses, have been increasing and may increase, possibly significantly, in the future. Repair costs are unpredictable and can be substantial, some of which may not be covered by insurance. If our vessels are subject to unexpected or unscheduled off-hire time, it could adversely affect our cash flow and may expose us to claims for liquidated damages if the vessel is chartered at the time of the unscheduled off-hire period. The cost of dry-docking repairs, additional off-hire time, an increase in our operating expenses and/or the obligation to pay any liquidated damages could adversely affect our business, results of operations and financial condition.

In addition, to the extent our vessels are employed under spot charters in the future, our expenses may be impacted by increases in bunker costs and by canal costs, including the cost of canal-related delays incurred by employment of the vessels on certain routes. Unlike time charters in which the charterer bears all bunker and canal costs, in spot charters we bear these costs. Because it is not possible to predict the future price of bunker or canal-related costs when fixing spot charters, a significant rise in these costs could have an adverse impact on the costs associated with any spot charters we enter into and our earnings. Additionally, an increase in the price of bunkers beyond our expectations may adversely affect our profitability at the time we negotiate time or bareboat charters, and new LSFO rules may result in a significant increase in vessel fuel costs starting in 2020.

We will be required to make substantial capital expenditures, for which we may be dependent on additional financing, to maintain the vessels we own or to acquire other vessels.

We must make substantial capital expenditures to maintain, over the long-term, the operating capacity of our fleet. Our business strategy is also based in part upon the expansion of our fleet through the purchase of additional vessels. Maintenance capital expenditures include dry-docking expenses, modification of existing vessels or acquisitions of new vessels to the extent these expenditures are incurred to maintain the operating capacity of our fleet. In addition, we expect to incur significant maintenance costs for our current and any newly-acquired vessels. A newbuilding vessel must be dry-docked within five years of its delivery from a shipyard, and vessels are typically dry-docked every 30 to 60 months thereafter depending on the vessel, not including any unexpected repairs. We estimate the cost to dry-dock a vessel is between \$0.8 and \$1.1 million (including estimated expenditures for upgrades to comply with new ballast water treatment system regulations), depending on the age, size and condition of the vessel and the location of dry-docking. In addition, capital maintenance expenditures could increase as a result of changes in the cost of labor and materials, customer requirements, increases in the size of our fleet, governmental regulations and maritime self-regulatory organization standards relating to safety, security or the environment and competitive standards.

To purchase additional vessels from time to time, we may be required to incur additional borrowings or raise capital through the sale of debt or additional equity securities. Asset impairments, financial stress, enforcement actions and credit rating pressures experienced in recent years by financial institutions to extend credit to the shipping industry due to depressed shipping rates and the deterioration of asset values that have led to losses in many banks' shipping portfolios, as well as changes in overall banking regulations, have severely constrained the availability of credit for shipping companies like us. For example, following heavy losses in its shipping portfolio, and at the EU Commission's behest, one of our lenders, HSH Nordbank AG ("HSH"), completed its sale on November 29, 2018, was subsequently renamed Hamburg Commercial Bank and its ongoing financing of the shipping industry is uncertain.

In addition, our ability to obtain bank financing or to access the capital markets for future offerings may be limited by the terms of our existing credit agreements, our financial condition, the actual or perceived credit quality of our customers, and any defaults by them, as well as by adverse market conditions resulting from, among other things, general economic conditions and contingencies and uncertainties that are beyond our control.

We cannot assure you that we will be able to obtain such additional financing in the future on terms that are acceptable to us or at all. Our failure to obtain funds for capital expenditures could have a material adverse effect on our business, results of operations and financial condition. In addition, our actual operating and maintenance capital expenditures will vary significantly from quarter to quarter based on, among other things, the number of vessels dry-docked during that quarter. Even if we are successful in obtaining the necessary funds for capital expenditures, the terms of such financings could limit our ability to pay dividends to our stockholders. Incurring additional debt may significantly increase our interest expense and financial leverage, and issuing additional equity securities may result in significant dilution.

Any vessel modification projects we undertake could have significant cost overruns, delays or fail to achieve the intended results.

Market volatility and higher bunker prices, coupled with increased regulation and concern about the environmental impact of the international shipping industry, have led to an increased focus on bunker efficiency. Some shipowners have implemented vessel modification programs for their existing ships in an attempt to capture potential efficiency gains. We will consider making modifications to our fleet in instances when we believe the efficiency gains will result in a positive return for our stockholders. However, these types of projects are subject to risks of delay and cost overruns, resulting from shortages of equipment, unforeseen engineering problems, work stoppages, unanticipated cost increases, inability to obtain necessary certifications and approvals, shortages of materials or skilled labor, among other problems. In addition, any completed modification may not achieve the full expected benefits or could even compromise the fleet's ability to operate at higher speeds, which is an important factor in generating additional revenue in an improving freight rate environment. The failure to successfully complete any modification project we undertake or any significant cost overruns or delays in any retrofitting projects could have a material adverse effect on our business, results of operations and financial condition.

We may not be able to implement our business strategy successfully or manage our growth effectively.

Our future growth will depend on the successful implementation of our business strategy. A principal focus of our business strategy is to grow by expanding the size of our fleet while capitalizing on a mix of charter types, including on the spot market. Growing any business by acquisition presents numerous risks, such as undisclosed liabilities and obligations, difficulty in obtaining additional qualified personnel and managing relationships with customers and suppliers and integrating newly acquired operations into existing infrastructures. The expansion of the Company's fleet may impose significant additional responsibilities on our management and may necessitate an increase in the number of personnel. Other risks and uncertainties include distraction of management from current operations, insufficient revenue to offset liabilities assumed, potential loss of significant revenue and income streams, unexpected expenses, inadequate return of capital, regulatory or compliance issues, the triggering of certain covenants in the Company's debt instruments (including accelerated repayment) and other unidentified issues not discovered in due diligence. As a result of the risks inherent in such transactions, the Company cannot guarantee that any such transaction will ultimately result in the realization of the anticipated benefits of the transaction or that significant transactions will not have a material adverse impact on its business, results of operations and financial condition. Our future growth will depend upon a number of factors, some of which are not within our control. These factors include, among others, our ability to:

identify suitable tankers and/or shipping companies for acquisitions at attractive prices;

identify and consummate desirable acquisitions, joint ventures or strategic alliances;

integrate any acquired tankers or businesses successfully with the Company's existing operations, including obtaining any approvals and qualifications necessary to operate vessels that the Company acquires;

hire, train and retain qualified personnel to manage and operate our growing business and fleet;

identify additional new markets;

enhance the Company's customer base;

improve our operating, financial and accounting systems and controls; and

obtain required financing for our existing and new vessels and operations.

Acquisitions of vessels may not be profitable to us at or after the time we acquire them. We may:

fail to realize anticipated benefits, such as new customer relationships, cost-savings or cash flow enhancements;

decrease our liquidity by using a significant portion of our available cash or borrowing capacity to finance vessel acquisitions;

significantly increase our interest expense or financial leverage if we incur additional debt to finance vessel acquisitions;

fail to integrate any acquired tankers or businesses successfully with our existing operations, accounting systems and infrastructure generally;

incur or assume unanticipated liabilities, losses or costs associated with the business or vessels acquired, particularly if any vessel we acquire proves not to be in good condition; or

incur other significant charges, such as impairment of goodwill or other intangible assets, asset devaluation or restructuring charges.

The Company's failure to effectively identify, purchase, develop and integrate additional tankers or businesses could adversely affect our business, results of operations and financial condition. The number of employees that perform services for the Company and our current operating and financial systems may not be adequate as the Company implements its plan to expand the size of our fleet, and we may not be able to effectively hire more employees or adequately improve those systems. Future acquisitions may also require additional equity issuances or debt issuances (with amortization payments). If any such events occur, the Company's financial condition may be adversely affected. The Company cannot give any assurance that we will be successful in executing our growth plans or that we will not incur significant expenses and losses in connection with our future growth.

In addition, unlike newbuildings, secondhand vessels typically provide very limited or no warranties with respect to the condition of the vessel. While we expect we would inspect secondhand vessels prior to purchase, this does not provide us with the same knowledge about their condition that we would have had if these vessels had been built for, and operated exclusively by, us. Generally, we do not receive the benefit of warranties from the builders of the secondhand vessels that we acquire.

We also seek to take advantage of changing market conditions, which may include taking advantage of pooling arrangements or profit sharing components of the charters we may enter into. In addition, our future growth will depend upon our ability to: maintain or develop new and existing customer relationships; employ vessels consistent with our chartering strategy; successfully manage our liquidity and expenses; and identify and capitalize on opportunities in new markets. Changing market and regulatory conditions may require or result in the sale or other disposition of vessels we are not able to charter because of customer preferences or because they are not or will not be compliant with existing or future rules, regulations and conventions. Additional vessels of the age and quality we desire may not be available for purchase at prices we are prepared to pay or at delivery times acceptable to us, and we may not be able to dispose of vessels at reasonable prices, if at all.

However, even if we successfully implement our business strategy, we may not improve our net revenues or operating results. Furthermore, we may decide to alter or discontinue aspects of our business strategy and may adopt alternative or additional strategies in response to business or competitive factors or factors or events beyond our control. Our failure to execute our business strategy or to manage our growth effectively could adversely affect our business, results of operations and financial condition.

If we purchase and operate secondhand vessels, we will be exposed to increased operating costs which could adversely affect our earnings and, as our fleet ages, the risks associated with older vessels could adversely affect our ability to obtain profitable charters.

The Company's current business strategy includes additional future growth through the acquisition of secondhand vessels and newbuild resales. While the Company typically inspects secondhand vessels prior to purchase, this does not provide the Company with the same knowledge about their condition that it would have had if these vessels had been built for and operated exclusively for us. Generally, the Company does not receive the benefit of warranties from the builders for the secondhand vessels that we acquire.

In general, the costs to maintain a vessel in good operating condition increase with the age of the vessel. Older vessels are typically less fuel-efficient than more recently constructed vessels due to improvements in engine technology. Cargo insurance rates increase with the age of a vessel, making older vessels less desirable to charterers.

Governmental regulations, safety or other equipment standards related to the age of vessels may require expenditures for alterations, or the addition of new equipment, to our vessels and may restrict the type of activities in which the vessels may engage. As our vessels age, market conditions may not justify those expenditures or enable us to operate our vessels profitably during the remainder of their useful lives.

In addition, unless we maintain cash reserves or raise external funds on acceptable terms for vessel replacement, we may be unable to replace the vessels in our fleet upon the expiration of their useful lives. We estimate the useful life of our vessels to be 25 years from the date of initial delivery from the shipyard and range from 2031 to 2040. Our cash flows and income are dependent on the revenues we earn by chartering our vessels to customers. If we are unable to replace the vessels in our fleet upon the expiration of their useful lives, our business, results of operations and financial condition will be materially adversely affected. Any reserves set aside for vessel replacement may not be available for other cash needs, including improvement of working capital, early repayment of debt or possible cash dividends.

New vessels may experience initial operational difficulties and unexpected incremental start-up costs.

New vessels, during their initial period of operation, have the possibility of encountering structural, mechanical and electrical problems as well as unexpected incremental start-up costs. Typically, the purchaser of a newbuilding will receive the benefit of a warranty from the shipyard for newbuildings, but we cannot assure you that any warranty we obtain will be able to resolve any problem with the vessel without additional costs to us and off-hire periods for the vessel. Upon delivery of a newbuild vessel from a shipyard, we may incur operating expenses above the incremental start-up costs typically associated with such a delivery and such expenses may include, among others, additional crew training, consumables and spares.

Delays in deliveries of additional vessels, our decision to cancel an order for purchase of a vessel, or our inability to otherwise complete the acquisitions of additional vessels for our fleet, could harm our operating results.

Although we currently have no vessels on order, under construction or subject to purchase agreements, we expect to purchase additional vessels from time to time. The delivery of these vessels, or vessels on order, could be delayed, not completed or cancelled, which would delay or eliminate our expected receipt of revenues from the employment of these vessels. The seller could fail to deliver these vessels to us as agreed, or we could cancel a purchase contract because the seller has not met its obligations. The delivery of vessels we propose to order or that are on order could be delayed because of, among other things:

work stoppages or other labor disturbances or other events that disrupt the operations of the shipyard building the vessels;

quality or other engineering problems;

changes in governmental regulations or maritime self-regulatory organization standards;

lack of raw materials;

bankruptcy or other financial crisis of the shipyard building the vessels;

our inability to obtain requisite financing or make timely payments;

a backlog of orders at the shipyard building the vessels;

hostilities or political or economic disturbances in the countries where the vessels are being built;

weather interference or a catastrophic event, such as a major earthquake, typhoon or fire;

our requests for changes to the original vessel specifications;

shortages or delays in the receipt of necessary construction materials, such as steel;

our inability to obtain requisite permits or approvals;

a dispute with the shipyard building the vessels, non-performance of the purchase or construction agreement with respect to a vessel by the seller or the shipyard as applicable;

non-performance of the vessel purchase agreement by the seller;

our inability to obtain requisite permits, approvals or financings; or

damage to or destruction of vessels while being operated by the seller prior to the delivery date.

If the delivery of any vessel is materially delayed or cancelled, especially if we have committed the vessel to a charter under which we become responsible for substantial liquidated damages to the customer as a result of the delay or cancellation, our business, results of operations and financial condition could be adversely affected.

Declines in charter rates and other market deterioration could cause us to incur impairment charges.

We evaluate the carrying amounts of our vessels to determine if events have occurred that would require an impairment of their carrying amounts. The Company reviews the carrying values of its vessels for impairment whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable. Whenever certain indicators of potential impairment are present, such as third party vessel valuation reports, the Company performs a test of recoverability of the carrying amount of the assets. The projection of future cash flows related to the vessels is complex and requires the Company to make various estimates including future freight rates, residual values, future dry-dockings and operating costs, which are included in the analysis. All of these items have been historically volatile. The Company recognizes an impairment charge if the carrying value is in excess of the estimated future

undiscounted net operating cash flows. The impairment loss is measured based on the excess of the carrying amount over the fair market value of the asset.

Although the Company believes that the assumptions used to evaluate potential impairment are reasonable and appropriate at the time they are made, such assumptions are highly subjective and likely to change, possibly materially, in the future. There can be no assurance as to how long charter rates and vessel values will remain at their current levels or whether they will improve by a significant degree. If charter rates were to remain at depressed levels, future assessments of vessel impairments would be adversely affected. Any impairment charges incurred as a result of further declines in charter rates could have a material adverse impact on the Company's business, results of operations and financial condition. We reviewed, at December 31, 2018, the carrying amount in connection with the estimated recoverable amount for each of our vessels. This review indicated that such carrying amount was not fully recoverable for the *Northsea Alpha* and the *Northsea Beta*. Consequently, we wrote down the carrying value of these vessels and recorded a total vessel impairment charge of \$2.3 million in 2018.

Our charterers may terminate charters early or choose not exercise options to extend charters or to re-charter with us, which could adversely affect our business, results of operations and financial condition.

Our charters may terminate earlier than the dates indicated in the charter party agreements. The terms of our charters vary as to which events or occurrences will cause a charter to terminate or give the charterer the option to terminate the charter, but these generally include a total or constructive loss of the relevant vessel, the requisition for hire of the relevant vessel, the dry-docking of the relevant vessel for a certain period of time or the failure of the relevant vessel to meet specified performance criteria. Also, a time charter may grant a charterer an option to extend the contract for a certain period of time at a higher rate. However, the failure to exercise that option could result in the vessel being re-delivered to us in a more difficult market environment. An early termination or decision not to exercise an option to extend an existing charter by our charters may adversely affect our business, results of operations and financial condition.

We cannot predict whether any of our charterers will, upon the expiration of their charters, re-charter our vessels on favorable terms or at all. If our charterers decide not to re-charter our vessels, we may not be able to re-charter them on terms similar to our current charters or at all. Also, we may incur additional costs depending on where the vessel is re-delivered to us. We may also employ our vessels on the spot-charter market, which is subject to greater rate fluctuation than the time charter market. If we receive lower charter rates under replacement charters or are unable to re-charter all of our vessels, our available cash may be significantly reduced or eliminated.

We are dependent on the services of our founder and Chief Executive Officer and other members of our senior management team.

We are dependent upon our Chief Executive Officer, Mr. Valentios ("Eddie") Valentis, and the other members of our senior management team for the principal decisions with respect to our business activities. The loss or unavailability of the services of any of these key members of our management team for any significant period of time, or the inability of these individuals to manage or delegate their responsibilities successfully as our business grows, could adversely affect our business, results of operations and financial condition. If the individuals were no longer to be affiliated with us, we may be unable to recruit other employees with equivalent talent and experience, and our business and financial condition may suffer as a result. We do not maintain "key man" life insurance for our Chief Executive Officer or other members of our senior management team.

Our founder, Chairman and Chief Executive Officer has affiliations with Maritime, which may create conflicts of interest.

Mr. Valentis, our founder, Chairman and Chief Executive Officer, also owns and controls Maritime. His responsibilities and relationships with Maritime could create conflicts of interest between us, on the one hand, and Maritime, on the other hand. These conflicts may arise in connection with the chartering, purchase, sale and operations of the vessels in our fleet versus vessels managed by other companies affiliated with Maritime and may not be resolved in our favor. Maritime entered into a Head Management Agreement (as defined herein) with us and into separate ship management agreements with our subsidiaries. The negotiation of these management arrangements may have resulted in certain terms that may not reflect market standard terms or may include terms that could not have been obtained from arms-length negotiations with unaffiliated third parties for similar services.

In addition, Maritime may give preferential treatment to vessels that are time chartered-in by related parties because our founder, Chairman and Chief Executive Officer and members of his family may receive greater economic benefits. In particular, as of December 31, 2018, Maritime provided commercial management services to one tanker vessel, other than the vessels in our fleet, that was owned or operated by one or more entities affiliated with Mr. Valentis. Such conflicts may have an adverse effect on our business, results of operations and financial condition.

Several of our senior executive officers do not, and certain of our officers in the future may not, devote all of their time to our business, which may hinder our ability to operate successfully.

Mr. Valentis, our Chairman and Chief Executive Officer, Mr. Lytras, our Chief Operating Officer and Secretary and Mr. Williams, our Chief Financial Officer, participate, and other of our senior officers which we may appoint in the future may also participate, in business activities not associated with us. As a result, they may devote less time to us than if they were not engaged in other business activities and may owe fiduciary duties to our stockholders as well as stockholders of other companies with which they may be affiliated. This may create conflicts of interest in matters involving or affecting us and our customers and it is not certain that any of these conflicts of interest will be resolved in our favor. This could have a material adverse effect on our business, results of operations and financial condition.

As we expand our business, both we and Maritime may need to improve our operating and financial systems and Maritime will need to recruit and retain suitable employees and crew for our vessels.

Our and Maritime's current operating and financial systems may not be adequate as the size of our fleet expands, and attempts to improve those systems may be ineffective. In addition, as we expand our fleet, Maritime may need to recruit and retain suitable additional seafarers and shore based administrative and management personnel. We cannot guarantee that Maritime will be able to continue to hire suitable employees as we expand our fleet. If we or Maritime encounter business or financial difficulties, we may not be able to adequately staff our vessels. If we are unable to accomplish the above, our financial reporting performance may be adversely affected and, among other things, it may not be compliant with the Securities and Exchange Commission ("SEC") rules.

Our insurance may be insufficient to cover losses that may result from our operations.

Although we carry hull and machinery, protection and indemnity and war risk insurance on each of the vessels in our fleet, we face several risks regarding that insurance. The insurance is subject to deductibles, limits and exclusions. Since it is possible that a large number of claims may be brought, the aggregate amount of these deductibles could be material. As a result, there may be other risks against which we are not insured, and certain claims may not be paid. We do not carry insurance covering the loss of revenues resulting from vessel off-hire time based on our analysis of the cost of this coverage compared to our off-hire experience.

Certain of our insurance coverage, such as tort liability (including pollution-related liability), is maintained through mutual protection and indemnity associations, and as a member of such associations we may be required to make additional payments over and above budgeted premiums if member claims exceed association reserves. Claims submitted to the association may include those incurred by members of the association, as well as claims submitted to the association from other protection and indemnity associations with which our association has entered into inter-association agreements. We cannot assure you that the associations to which we belong will remain viable. If such associations do not remain viable or are unable to cover our losses, we may have to pay what our insurance does not cover in full.

We may be unable to procure adequate insurance coverage at commercially reasonable rates in the future. For example, more stringent environmental regulations have led in the past to increased costs for, and in the future may result in the lack of availability of, insurance against risks of environmental damage or pollution. Changes in the insurance markets attributable to terrorist attacks may also make certain types of insurance more difficult for us to obtain. We maintain for each of the vessels in our existing fleet pollution liability coverage insurance in the amount of \$1.0 billion per incident. A catastrophic oil spill or marine disaster could exceed such insurance coverage. In addition, our insurance may be voidable by the insurers as a result of certain of our actions, such as our vessels failing to maintain certification with applicable maritime self-regulatory organizations. The circumstances of a spill, including non-compliance with environmental laws, could also result in the denial of coverage, protracted litigation

and delayed or diminished insurance recoveries or settlements. The insurance that may be available to us may be significantly more expensive than our existing coverage. Furthermore, even if insurance coverage is adequate, we may not be able to obtain a timely replacement vessel in the event of a loss. Any of these circumstances or events could negatively impact our business, results of operations and financial condition.

We may be subject to litigation that, if not resolved in our favor and not sufficiently insured against, could have a material adverse effect on us.

We may be, from time to time, involved in various litigation matters. These matters may include, among other things, contract disputes, environmental claims or proceedings, employment and personal injury matters, and other litigation that arises in the ordinary course of our business. Although we intend to defend these matters vigorously, we cannot predict with certainty the outcome or effect of any claim or other litigation matter, and the ultimate outcome of any litigation or the potential costs to resolve them may have a material adverse effect on us. Insurance may not be applicable or sufficient in all cases or insurers may not remain solvent, which may have a material adverse effect on our financial condition.

We and our subsidiaries may be subject to group liability for damages or debts owed by one of our subsidiaries or by

Although each of our vessels is and will be separately owned by individual subsidiaries, under certain circumstances, a parent company and its ship-owning subsidiaries can be held liable under corporate veil piercing principles for damages or debts owed by one of the subsidiaries or the parent. Therefore, it is possible that all of our assets and those of our subsidiaries could be subject to execution upon a judgment against us or any of our subsidiaries.

Maritime and ITM are privately held companies and there is little or no publicly available information about them.

The ability of Maritime and ITM to render their respective management services will depend in part on their own financial strength. Circumstances beyond each such company's control could impair its financial strength. Because each of these companies is privately held, information about each company's financial strength is not available. As a result, we and an investor in our securities might have little advance warning of financial or other problems affecting either Maritime or ITM even though its financial or other problems could have a material adverse effect on us and our stockholders.

Our vessels may operate in pooling arrangements in the future, which may or may not be beneficial compared to chartering our vessels outside of a pool.

In a pooling arrangement, the net revenues generated by all of the vessels in a pool are aggregated and distributed to pool members pursuant to a pre-arranged weighting system that recognizes each vessel's earnings capacity based on factors, which may include its cargo capacity, speed and bunker consumption, and actual on-hire performance. Pooling arrangements are intended to maximize vessel utilization. However, pooling arrangements are dependent on the spot charter market, in which rates fluctuate. Also, the pool manager requires the prompt payment of up to \$0.5 million of vessel working capital upon entry into the pool. Exit from the pool typically requires a minimum of three months advance notice to the pool manager. We cannot assure you that entering any of our vessels into a pool will be beneficial to us compared to chartering our vessels outside of a pool. If we participate in, or for any reason our vessels cease to participate in a pooling arrangement, their utilization rates could fall and the amount of additional hire paid could decrease, either of which could have an adverse effect on our business, results of operations and financial condition. We also cannot assure you that if we join a pooling arrangement that we will continue to use the pooling arrangement or whether the pools our vessels could participate in will continue to exist in the future.

Exchange rate fluctuations could adversely affect our revenues, financial condition and operating results.

We generate a substantial part of our revenues in U.S. dollars, but incur costs in other currencies. The difference in currencies could in the future lead to fluctuations in our net income due to changes in the value of the U.S. dollar relative to other currencies. We have not hedged our exposure to exchange rate fluctuations, and as a result, our U.S. dollar denominated results of operations and financial condition could suffer as exchange rates fluctuate.

We must protect the safety and condition of the cargoes transported on our vessels and any failure to do so may subject us to claims for loss or damage.

Under our time and spot charters, we are responsible for the safekeeping of cargo entrusted to us and must properly maintain and control equipment and other apparatus to ensure that cargo is not lost or damaged in transit. Claims and any liability for loss or damage to cargo that is not covered by insurance could harm our reputation and adversely affect our business, results of operations and financial condition.

Increase in frequency of immigrant salvage operations in the Mediterranean could adversely affect our business.

In 2017 and 2018, a significant portion of the *Northsea Alpha's* and the *Northsea Beta's* trading routes occurred in the Mediterranean Sea. In recent years, the number of immigrants attempting to cross the Mediterranean from North Africa to Europe in unseaworthy vessels has increased significantly. Many of the vessels are in such a poor condition that they either capsize and sink, incur engine problems or are otherwise incapacitated en route to Europe. As a result, commercial ships may, if witnessing an immigrant vessel in distress, deviate from the task and course and conduct a salvage operation. Such salvage operation may prove costly in terms of time and resources spent and can thus prove a substantial cost for the commercial vessel and may pose risks to the safety of the crew, vessel and cargo. If we are not able to mitigate this potential exposure, and dependent on the number of such salvage operations which must be carried out in the future, this could have a material adverse effect on our future performance, results of operations, cash flows and financial position.

We may face labor interruptions, which if not resolved in a timely manner, could have a material adverse effect on our business.

We, indirectly through our technical managers, employ masters, officers and crews to operate our vessels, exposing us to the risk that industrial actions or other labor unrest may occur. We may suffer labor disruptions if relationships deteriorate with the seafarers or the unions that represent them. A majority of the crew members on the vessels in our fleet that are under time or spot charters are employed under collective bargaining agreements. ITM is a party to some of these collective bargaining agreements. These collective bargaining agreements and any employment arrangements with crew members on the vessels in our fleet may not prevent labor interruptions, particularly since they are subject to renegotiation in the future. Any labor interruptions, including due to failure to successfully renegotiate collective bargaining employment agreements with the crew members on the vessels in our fleet, are not resolved in a timely and cost-effective manner, industrial action or other labor unrest could prevent or hinder our operations from being carried out as we expect, could disrupt our operations and could adversely affect our business, results of operations and financial condition.

We do not currently enter into hedging arrangements with respect to the cost of fuel.

We have not entered into hedging arrangements to establish, in advance, a price for the cost of fuel. As a result, although we may realize the benefit of any short-term decrease in the price of fuel, we will not be protected against increases in the price of fuel, which could materially adversely affect our business, results of operation and financial condition.

In addition, to the extent we decide to enter into hedging arrangements in the future, the success of any hedging arrangement generally depends on the degree of correlation between price movements of a derivative instrument and the position being hedged, the creditworthiness of the counterparty, the costs of the hedging transaction and other factors. While such transactions may reduce the risks of losses with respect to adverse movements in market factors, the transaction may also limit the opportunity for gain. In addition, these arrangements may require the posting of cash or other collateral at a time when we have insufficient cash or illiquid assets such that the posting of the cash is either impossible or requires the sale of assets at prices that do not reflect their underlying value. Moreover, these hedging arrangements may generate significant transactions costs, including potential tax costs and legal fees, which reduce the anticipated returns on an investment. There can be no assurance that any future hedging transaction we enter will successfully hedge the risks associated with hedged positions or that it will not result in poorer overall investment performance than if it had not been executed.

A cyber-attack could materially disrupt our business.

We and our ship managers rely on information technology systems and networks in our and their operations and business administration. The efficient operation of our business, including processing, transmitting and storing electronic and financial information, is dependent on computer hardware and software systems. Information systems are vulnerable to security breaches by computer hackers and cyber terrorists. We rely on industry accepted security measures and technology to securely maintain confidential and proprietary information maintained on our information systems. However, these measures and technology may not adequately prevent security breaches. Therefore, our or any of our ship managers' operations and business administration could be targeted by individuals or groups seeking to sabotage or disrupt such systems and networks, or to steal data and these systems may be damaged, shutdown or cease to function properly (whether by planned upgrades, force majeure, telecommunications failures, hardware or software break-ins or viruses, other cyber-security incidents or otherwise). A successful cyber-attack could materially disrupt our or our managers' operations, which could also adversely affect the safety of our operations or result in the unauthorized release or alteration of information in our or our managers' systems. Such an attack on us, or our managers, could result in significant expenses to investigate and repair security breaches or system damages and could lead to litigation, fines, other remedial action, heightened regulatory scrutiny, diminished customer confidence and damage to our reputation. We do not maintain cyber-liability insurance at this time to cover such losses. As a result, a cyber-attack or other breach of any such information technology systems could have a material adverse effect on our business, results of operations and financial condition

The EU has recently adopted a comprehensive overhaul of its data protection regime from the current national legislative approach to a single European Economic Area Privacy Regulation, the General Data Protection Regulation ("GDPR"). The GDPR came into force on May 25, 2018, and applies to organizations located within the EU, as well as to organizations located outside of the EU if they offer goods or services to, or monitor the behavior of, EU data subjects. It imposes a strict data protection compliance regime with significant penalties and includes new rights such as the "portability" of personal data. It applies to all companies processing and holding the personal data of data subjects residing in the EU, regardless of the company's location. Implementation of the GDPR could require changes to certain of our business practices, thereby increasing our costs.

Risks Related to our Indebtedness

We may not be able to generate sufficient cash flow to meet our debt service and other obligations.

Our ability to make scheduled payments on our outstanding indebtedness and other obligations will depend on our ability to generate cash from operations in the future. Our future financial and operating performance will be affected by a range of economic, financial, competitive, regulatory, business and other factors that we cannot control, such as general economic and financial conditions in the tanker sector or the economy generally. In particular, our ability to generate steady cash flow will depend on our ability to secure charters at acceptable rates. Our ability to renew our

existing charters or obtain new charters at acceptable rates or at all will depend on the prevailing economic and competitive conditions.

Amounts borrowed under our loan agreements bear interest at both fixed rates and variable rates. Increases in prevailing interest rates could increase the amounts that we would have to pay to our lenders, even though the outstanding principal amount remains the same, and our net income and cash flows would decrease.

In addition, our existing loan agreements require us to maintain various cash balances, our financial and operating performance is also dependent on our subsidiaries' ability to make distributions to us, whether in the form of dividends, loans or otherwise. The timing and amount of such distributions will depend on restrictions on our various debt instruments, our earnings, financial condition, cash requirements and availability, fleet renewal and expansion, the provisions of Marshall Islands and Maltese laws affecting the payment of dividends and other factors. Under Maltese law, dividends may only be distributed out of profits available for distribution and/or out of any distributable accumulated reserves.

At any time that our operating cash flows are insufficient to service our debt and other liquidity needs, we may be forced to take actions such as increasing our accounts payable and/or our amounts due to related parties, reducing or delaying capital expenditures, selling assets, restructuring or refinancing our indebtedness, seeking additional capital, seeking bankruptcy protection or any combination of the foregoing. For example, at December 31, 2017, our trade accounts payable were \$2.3 million and the amount due to related parties was \$2.1 million, but increased to \$4.7 million and \$3.4 million, respectively, at December 31, 2018. At September 30, 2018, accounts payable and the amount due to related parties were as high as \$6.3 million and \$7.5 million, respectively, but were reduced from the excess proceeds obtained from the refinancing of the outstanding loan on the Eighthone. We cannot assure you that any of the actions listed above could be effected on satisfactory terms, if at all, or that they would yield sufficient funds to make required payments on our outstanding indebtedness and to fund our other liquidity needs. As of December 31, 2018, our total funded debt outstanding, net of deferred financing costs, aggregated \$67.5 million. Also, the terms of existing or future debt agreements may restrict us from pursuing any of these actions as, among other things, if we are unable to meet our debt obligations or if some other default occurs under our loan agreements, the lenders could elect to declare that debt, together with accrued interest and fees, to be immediately due and payable and foreclose against the collateral vessels securing that debt. Any such action could also result in an impairment of cash flows and our ability to service debt in the future. Further, our debt level could make us more vulnerable than our competitors with less debt to competitive pressures or a downturn in our business or the economy generally.

The market values of tanker vessels are highly volatile, have decreased in the past and may decrease further in the future which may cause the Company to recognize losses if we sell our tankers or record impairments and affect the Company's ability to comply with its loan covenants and refinance its debt. The fair market values of product tankers have generally experienced high volatility. The fair market values for tankers declined significantly from historically high levels reached in 2008, and remain at average levels of the past 10 years. You should expect the market value of our vessels to fluctuate. Values for ships can fluctuate substantially over time due to a number of factors, including, among others:

prevailing economic conditions in the energy markets; general economic and market conditions affecting the international shipping industry,

a substantial or extended decline in demand for refined products;

competition from other shipping companies and other modes of transportation;

number of vessels in the world fleet;

the level of worldwide refined petroleum product production and exports;

demand for product tankers; changes in the supply-demand balance of the global product tanker market;

applicable governmental regulations;

the availability of newbuild and newer, more advanced vessels at attractive prices compared to our vessels;

changes in prevailing charter hire rates;

the physical condition of the vessel;

the vessel's size, age, technical specifications, efficiency and operational flexibility; and

the cost of newbuildings and the cost of retrofitting or modifying existing ships, as a result of technological advances in ship design or equipment, changes in applicable environmental or other regulations or standards, customer requirements or otherwise.

As vessels grow older, they naturally depreciate in value. If the market value of our fleet declines further, we may not be able to refinance our debt or obtain additional financing and our subsidiaries may not be able to make distributions to the Company. An additional decrease in these values could cause us to breach certain covenants that are contained in our loan agreements and in future financing agreements. The prepayment of certain debt facilities may be necessary to cause the Company to maintain compliance with certain covenants in the event that the value of the vessels falls below certain levels.

If we breach covenants in our loan agreements or future financing agreements and are unable to cure the breach, our lenders could accelerate our debt repayment and foreclose on vessels in our fleet securing those debt instruments or seek other similar remedies. In addition, if a charter contract expires or is terminated by the charterer, the Company may be unable to re-charter the affected vessel at an attractive rate and, rather than continue to incur maintenance and financing costs for that vessel, the Company may seek to dispose of the affected vessel. If the Company sells one or more of its vessels at a time when vessel prices have fallen, the sale price may be less than the vessel's carrying value on the Company's consolidated financial statements, resulting in a loss on sale or an impairment loss being recognized, ultimately leading to a reduction of net income. Furthermore, if vessel values fall significantly, this could indicate a decrease in the recoverable amount for the vessel and may have a material adverse impact on its business, results of operations and financial condition. During 2018, the market value of our fleet was less than its book value.

Accordingly, we will incur losses on disposition if we sell vessels below their depreciated book value.

Restrictive covenants in our current and future loan agreements may impose financial and other restrictions on us.

The restrictions and covenants in our current and future loan agreements could adversely affect our ability to finance future operations or capital needs or to pursue and expand our business activities. Our current loan agreements contain, and future financing agreements will likely contain, restrictive covenants that prohibit us or our subsidiaries from, among other things:

paying dividends under certain circumstances, including if there is a default under the loan agreements or, only with respect to our subsidiaries, Sixthone Corp. ("Sixthone") and Seventhone Corp. ("Seventhone"), if the ratio of our and our subsidiaries as a group total liabilities to market value adjusted total assets is greater than 65% in the relevant year. As of December 31, 2018, the ratio of total liabilities over the market value of our adjusted total assets was 68%, or 3% higher than the required threshold and therefore, Sixthone and Seventhone are not permitted to distribute dividends to us;

incurring or guaranteeing indebtedness;

charging, pledging or otherwise encumbering our vessels;

changing the flag, class, management or ownership of our vessels;

utilizing available cash;

changing ownership or structure, including through mergers, consolidations, liquidations or dissolutions;

making certain investments;

entering into a new line of business;

changing the commercial and technical management of our vessels;

selling, transferring, assigning or changing the beneficial ownership or control of our vessels; and

changing the control, or Mr. Valentis maintaining less than 50% ownership, of the corporate guarantor.

In addition, the loan agreements generally contain covenants requiring us, among other things, to ensure that:

we maintain minimum cash and cash equivalents based on the number of vessels owned and debt service requirements. Our required minimum cash balance as of December 31, 2017 and 2018 was \$5.0 million and \$3.7 million, respectively;

our subsidiaries, Sixthone and Seventhone, maintain retention accounts with monthly deposits equal to one-third of the next quarterly principal installment together with the appropriate amount of interest expense due; and

the fair market value of the mortgaged vessel plus any additional collateral must be no less than a certain percentage, ranging from 115% to 140%, of outstanding borrowings under the applicable loan agreement, less, in certain loan agreements, any money in respect of the principal outstanding with the credit of any applicable retention account and any free or pledged cash deposits held with the lender in our or its subsidiary's name.

As a result of the above, we may need to seek permission from our lenders in order to engage in some corporate actions. The lenders' interests may be different from ours and we may not be able to obtain our lenders' permission when needed. This may limit our ability to pay dividends, finance our future operations or capital requirements, make acquisitions or pursue business opportunities.

Our ability to comply with covenants and restrictions contained in our current and future loan agreements may also be affected by events beyond our control, including prevailing economic, financial and industry conditions. If our cash flow is insufficient to service our current and future indebtedness and to meet our other obligations and commitments, we will be required to adopt one or more alternatives, such as reducing or delaying our business activities, acquisitions, investments, capital expenditures, the payment of dividends or the implementation of our other strategies, refinancing or restructuring our debt obligations, selling vessels or other assets, seeking to raise additional debt or equity capital or seeking bankruptcy protection. However, we may not be able to effect any of these remedies or alternatives on a timely basis, on satisfactory terms or at all, which could lead to events of default under these loan agreements, giving the lenders foreclosure rights on our vessels.

Our ability to obtain additional debt financing may be dependent on the performance of our then existing charters and the creditworthiness of our charterers.

The actual or perceived credit quality of our charterers, and any defaults by them, may materially affect our ability to obtain the additional capital resources that we will require to purchase additional vessels or may significantly increase our costs of obtaining such capital. Our inability to obtain additional financing at all, or our ability to do so only at a higher than anticipated cost, may materially affect our results of operations and our ability to implement our business strategy.

If LIBOR is volatile and potential changes as a benchmark could affect our profitability, earnings and cash flow.

London Interbank Offered Rate ("LIBOR") is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms and other pressures may cause LIBOR to be eliminated or to perform differently than in the past. The consequences of these developments cannot be entirely predicted, but could include an increase in the cost of our variable rate indebtedness and obligations. LIBOR has been volatile in the past, with the spread between LIBOR and the prime lending rate widening significantly at times. Because the interest rates borne by a majority of our outstanding indebtedness fluctuates with changes in LIBOR, significant changes in LIBOR would have a material effect on the amount of interest payable on our debt, which in turn, could have an adverse effect on our financial condition. In order to hedge our variable interest rate exposure, on January 19, 2018, Seventhone entered into an interest rate cap agreement with its lender for a notional amount of \$10.0 million and a cap rate of 3.5%. The interest rate cap will terminate on July 18, 2022.

Furthermore, interest in most financing agreements in our industry has been based on published LIBOR rates. Recently, however, there is uncertainty relating to the LIBOR calculation process, which may result in the phasing out of LIBOR in the future. As a result, lenders have insisted on provisions that entitle the lenders, in their discretion, to replace published LIBOR as the base for the interest calculation with their cost-of-funds rate. If we are required to agree to such a provision in future financing agreements, our lending costs could increase significantly, which would have an adverse effect on our profitability, earnings and cash flow. In addition, the banks currently reporting information used to set LIBOR will likely stop such reporting after 2021, when their commitment to reporting information ends. The Alternative Reference Rate Committee, or "Committee", a committee convened by the Federal Reserve that includes major market participants, has proposed an alternative rate to replace U.S. Dollar LIBOR: the Secured Overnight Financing Rate, or "SOFR." The impact of such a transition away from LIBOR would be significant for us because of our substantial indebtedness.

Risks Related to Being a Public, Emerging Growth Company

We are an "emerging growth company," and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies make our securities less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). We expect to remain an "emerging growth company" until December 31, 2020. As an emerging growth company, we are not required to comply with, among other things, the auditor attestation requirements of the Sarbanes-Oxley Act. Further, the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt-out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such an election to opt-out is

irrevocable. We have elected not to opt-out of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an emerging growth company, will not adopt the new or revised standard until the time private companies are required to adopt the new or revised standard. This may make comparison of our financial statements with other public companies difficult or impossible because of the potential differences in accountant standards used. Investors may find our securities less attractive because we rely on these provisions. If investors find our securities less attractive as a result, there may be a less active trading market for our securities and prices of the securities may be more volatile.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, stockholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our securities.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations. Any testing by us conducted in connection with Section 404 of the Sarbanes-Oxley Act, or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that may require prospective or retroactive changes in our financial statements or identify other areas for further attention or improvement. In addition, for as long as we are an "emerging growth company," our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act. An independent assessment of the effectiveness of our internal controls could detect problems that our management's assessment might not. Undetected material weaknesses in our internal controls could lead to restatements of our financial statements and require us to incur the expense of remediation. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our securities.

The Public Company Accounting Oversight Board ("PCAOB") inspection of our independent accounting firm could lead to findings in our auditors' reports and challenge the accuracy of our published audited consolidated financial statements.

Auditors of U.S. public companies are required by law to undergo periodic PCAOB inspections that assess their compliance with U.S. law and professional standards in connection with performance of audits of financial statements filed with the SEC. These PCAOB inspections could result in findings in our auditors' quality control procedures, question the validity of the auditor's reports on our published consolidated financial statements and cast doubt upon the accuracy of our published audited financial statements.

Risks Related to our Common Stock

An investment in our common stock is speculative and there can be no assurance of any return on any such investment.

An investment in our common stock is highly speculative, and there is no assurance that investors will obtain any return on their investment. Investors will be subject to substantial risks involved in their investment, including the risk of losing their entire investment.

The price of our Common Stock may be volatile.

Our shares of common stock have been listed on the NASDAQ since November 2, 2015. We cannot assure you that the public market for our common stock will be active and liquid. The price of shares of our common stock may fluctuate due to a variety of factors, some of which are beyond our control, including:

actual or anticipated fluctuations in our periodic results and those of other public companies in the shipping industry; changes in market valuations of similar companies and stock market price and volume fluctuations generally;

speculation in the press or investment community about our business or the shipping industry generally;

mergers and strategic alliances in the shipping industry;

market prices and conditions in the shipping industry;

changes in government regulation;

introduction of new technology by the Company or its competitors;

commodity prices and in particular prices of oil and natural gas;

the ability or willingness of OPEC to set and maintain production levels for oil;

oil and gas production levels by non-OPEC countries;

potential or actual military conflicts or acts of terrorism;

natural disasters affecting the supply chain or use of petroleum products;

the failure of securities analysts to publish research about us, or shortfalls in our operating results compared to levels forecast by securities analysts;

the thin trading market for our common stock, which makes it somewhat illiquid;

the Company's capital structure;

additions or departures of key personnel;

announcements concerning us or our competitors;

the general state of the securities market; and

domestic and international economic, market and currency factors unrelated to our performance.

These market and industry factors may materially reduce the market price of shares of our common stock, regardless of our operating performance. The seaborne transportation industry has been highly unpredictable and volatile. The market for shares of our common stock may be equally volatile, and has been particularly volatile during the period from October through December 2018. Consequently, you may not be able to sell shares of our common stock at prices equal to or greater than those paid by you in any previous or future offerings.

We may issue additional shares of our common stock or other equity securities without stockholder approval, which would dilute your ownership interests and may depress the market price of our common stock.

We may issue additional shares of our common stock or other equity securities of equal or senior rank in the future in connection with, among other things, future vessel acquisitions, repayment of outstanding indebtedness or our equity incentive plan, without stockholder approval, in a number of circumstances. Our issuance of additional common stock or other equity securities of equal or senior rank would have the following effects:

our existing stockholders' proportionate ownership interest in us will decrease;

the amount of cash available per share, including for payment of dividends in the future, may decrease;

the relative voting strength of each previously outstanding share of our common stock may be diminished; and

the market price of our common stock may decline.

Future sales of shares of our common stock by existing stockholders could negatively impact our ability to sell equity in the future and cause the market price of shares of our common stock to decline.

The market price for shares of our common stock could decline as a result of sales by existing stockholders of large numbers of shares of our common stock, including Maritime Investors (the parent of Pyxis Holdings Inc.) and the selling stockholders named herein, or as a result of the perception that such sales may occur. Any future sales of shares of our common stock by these stockholders might make it more difficult to us to sell equity or equity-related securities in the future at a time and at the prices that we deem appropriate.

Reports published by analysts, including projections in those reports that exceed the Company's actual results, could adversely affect the price and trading volume of the Company's common stock.

The Company currently expects that securities research analysts will continue to publish their own periodic projections for the Company's business. These projections may vary widely and may not accurately predict the results the Company actually achieves. The Company's share price may decline if our actual results do not match the projections of these securities research analysts. Similarly, if one or more of the analysts who write reports on the Company downgrades the Company's stock or publishes inaccurate or unfavorable research about the Company's business, our share price could decline. If one or more of these analysts ceases coverage of the Company or fails to publish reports on the Company regularly, our share price or trading volume could decline.

We are incorporated in the Marshall Islands, which does not have a well-developed body of corporate or bankruptcy law and, as a result, stockholders may have fewer rights and protections under Marshall Islands law than under a U.S. jurisdiction.

Our corporate affairs are governed by our Articles of Incorporation, Bylaws and the Marshall Islands Business Corporations Act (the "BCA"). The provisions of the BCA resemble provisions of the corporation laws of a number of states in the United States. However, there have been few judicial cases in the Republic of the Marshall Islands interpreting the BCA. The rights and fiduciary responsibilities of directors under the laws of the Republic of the Marshall Islands are not as clearly established as the rights and fiduciary responsibilities of directors under statutes or judicial precedent in existence in certain U.S. jurisdictions. Stockholder rights may differ as well. While the BCA does specifically incorporate the non-statutory law, or judicial case law, of the State of Delaware and other states with substantially similar legislative provisions, our public stockholders may have more difficulty in protecting their interests in the face of actions by management, directors or significant stockholders than would stockholders of a corporation incorporated in a U.S. jurisdiction. Additionally, the Republic of the Marshall Islands does not have a legal provision for bankruptcy or a general statutory mechanism for insolvency proceedings. As such, in the event of a future insolvency or bankruptcy, our stockholders and creditors may experience delays in their ability to recover their claims after any such insolvency or bankruptcy. Further, in the event of any bankruptcy, insolvency, liquidation, dissolution, reorganization or similar proceeding involving us or any of our subsidiaries, bankruptcy laws other than those of the United States could apply. If we become a debtor under U.S. bankruptcy law, bankruptcy courts in the United States may seek to assert jurisdiction over all of our assets, wherever located, including property situated in other countries. There can be no assurance, however, that we would become a debtor in the United States, or that a U.S. bankruptcy court would be entitled to, or accept, jurisdiction over such a bankruptcy case, or that courts in other countries that have jurisdiction over us and our operations would recognize a U.S. bankruptcy court's jurisdiction if any other bankruptcy court would determine it had jurisdiction.

We are a holding company, and we depend on the ability of our subsidiaries to distribute funds to us in order to satisfy our financial and other obligations.

We are a holding company and have no significant assets other than the equity interests in our subsidiaries. Our subsidiaries own all of our existing vessels, and subsidiaries we form in the future will own any other vessels we may acquire in the future. All payments under our charters will be made to our subsidiaries. As a result, our ability to meet our financial and other obligations, and to pay dividends in the future, will depend on the performance of our subsidiaries and their ability to distribute funds to us. The ability of a subsidiary to make these distributions could be affected by a claim or other action by a third party, including a creditor, by the terms of our loan agreements, any financing agreement we may enter into in the future, or by Marshall Islands or Maltese law, which regulates the payment of dividends by our companies. The applicable loan agreement entered into by our subsidiaries, Sixthone and Seventhone, prohibits such subsidiaries from paying any dividends to us unless the ratio of the total liabilities to the market value adjusted total assets (total assets adjusted to reflect the market value of all our vessels) of us and our subsidiaries as a group is 65% or less. As of December 31, 2018, the ratio of total liabilities over the market value of our adjusted total assets was 68%, or 3% higher than the required threshold. If we, Sixthone or Seventhone do not satisfy the 65% requirement or if we or a subsidiary breach a covenant in our loan agreements or any financing agreement we may enter into in the future, such subsidiary may be restricted from paying dividends. If we are unable to obtain funds from our subsidiaries, we will not be able to fund our liquidity needs or pay dividends in the future unless we obtain funds from other sources, which we may not be able to do.

It may be difficult to serve process on or enforce a U.S. judgment against us, our officers and our directors because we are not a U.S. corporation.

We are a Marshall Islands corporation, a substantial portion of our assets are located outside of the United States and many of our directors and executive officers are not residents of the United States. As a result, you may have difficulty serving legal process within the United States upon us. You may also have difficulty enforcing, both in and outside the United States, judgments you may obtain in U.S. courts against us in any action, including actions based upon the civil liability provisions of U.S. federal or state securities laws. Furthermore, there is substantial doubt that the courts of the Marshall Islands or of the non-U.S. jurisdictions in which our offices are located would enter judgments in original actions brought in those courts predicated on U.S. federal or state securities laws. As a result, it may be difficult or impossible for you to bring an original action against us or against individuals in a Marshall Islands court in the event that you believe that your rights have been infringed under the U.S. federal securities laws or otherwise because the Marshall Islands courts would not have subject matter jurisdiction to entertain such a suit. A judgment entered in a foreign jurisdiction is enforceable in the Marshall Islands without a retrial on the merits so long as the provisions of the Marshall Islands Uniform Foreign Money-Judgments Recognition Act are complied with. In addition, there is doubt as to the enforceability in Greece against us and/or our executive officers and directors who are non-residents of the U.S., in original actions or in actions for enforcement of judgments of U.S. courts, of liabilities predicated solely upon the securities laws of the U.S.

We do not intend to pay dividends in the near future and cannot assure you that we will ever pay dividends.

We do not intend to pay dividends in the near future, and we will make dividend payments to our stockholders in the future only if our board of directors, acting in its sole discretion, determines that such payments would be in our best interest and in compliance with relevant legal, fiduciary and contractual requirements. The payment of any dividends is not guaranteed or assured, and, if paid at all in the future, may be discontinued at any time at the discretion of the board of directors.

Our ability to pay dividends will in any event be subject to factors beyond our control, including the following, among others:

our earnings, financial condition and anticipated cash requirements;

the terms of any current or future credit facilities or loan agreements;

the loss of a vessel or the acquisition of one or more vessels;

required capital expenditures;

increased or unanticipated expenses;

future issuances of securities;

disputes or legal actions; and

the requirements of the laws of the Marshall Islands, which limit payments of dividends if we are, or could become, insolvent and generally prohibit the payment of dividends other than from surplus (retaining earnings and the excess of consideration received for the sale of shares above the par value of the shares).

The payment of dividends would not be permitted if we are not in compliance with our loan agreements or in default of such agreements.

Maritime Investors beneficially owns approximately 80.9% of our total outstanding common stock, which may limit stockholders' ability to influence our actions.

Maritime Investors, a corporation controlled by our Chief Executive Officer, Mr. Valentis, beneficially owns approximately 80.9% of our outstanding common stock. As a result, Maritime Investors has the power to exert considerable influence over our actions through Maritime Investors' ability to effectively control matters requiring stockholder approval, including the determination to enter into a corporate transaction or to prevent a transaction, regardless of whether our other stockholders believe that any such transaction is in their or our best interests. For example, Maritime Investors could cause us to consummate a merger or acquisition that increases the amount of our indebtedness or causes us to sell all of our revenue-generating assets. We cannot assure you that the interests of Maritime Investors will coincide with the interests of other stockholders. As a result, the market price of shares of our common stock could be adversely affected.

Additionally, Maritime Investors may invest in entities that directly or indirectly compete with us, or companies in which Maritime Investors currently invests may begin competing with us. Maritime Investors may also separately pursue acquisition opportunities that may be complementary to our business, and as a result, those acquisition opportunities may not be available to us. As a result of these relationships, when conflicts arise between the interests of Maritime Investors and the interests of our other stockholders, Mr. Valentis may not be a disinterested director. Maritime Investors will effectively control all of our corporate decisions so long as they continue to own a substantial number of shares of our common stock.

If our common stock does not meet the NASDAQ's minimum share price requirement, and if we cannot cure such deficiency within the prescribed timeframe, our common stock could be delisted.

Under the rules of NASDAQ, listed companies are required to maintain a share price of at least \$1.00 per share. If the share price declines below \$1.00 for a period of 30 consecutive business days, then the listed company has a cure period of at least 180 days to regain compliance with the \$1.00 per share minimum. If the price of our common stock closes below \$1.00 for 30 consecutive days, and if we cannot cure that deficiency within the 180-day timeframe, then our common stock could be delisted. On September 6, 2018 we received a deficiency notice from The NASDAQ Stock Market, Inc. stating that, for a period of 30 consecutive trading days, our shares of common stock closed below the minimum price of \$1.00 per share as required for continued listing on NASDAQ. In accordance with the notice, we had until March 5, 2019 or 180 calendar days from the date of the notice, to regain compliance with NASDAQ's continued listing minimum closing bid price requirements (Marketplace Rule 5550(a)(2)). We received a written notification from the exchange on October 31, 2018 stating that the closing bid price of our shares had been \$1.00 per share or higher for 10 consecutive trading days, from October 15 to October 26, 2018, and, accordingly, we were again in compliance with the exchange's minimum closing bid price rule.

As a foreign private issuer, our corporate governance practices are exempt from certain NASDAQ corporate governance requirements applicable to U.S. domestic companies. As a result, our corporate governance practices may not have the same protections afforded to stockholders of companies that are subject to all of the NASDAQ corporate governance requirements.

We believe that our corporate governance practices are in compliance with the applicable NASDAQ listing rules and are not prohibited by the laws of the Republic of the Marshall Islands.

Anti-takeover provisions in our Articles of Incorporation and Bylaws could make it difficult for our stockholders to replace our board of directors or could have the effect of discouraging an acquisition, which could adversely affect the market price of our common stock.

Several provisions of our Articles of Incorporation and Bylaws make it difficult for our stockholders to change the composition of our board of directors in any one year. In addition, the same provisions may discourage, delay or prevent a merger or acquisition that stockholders may consider favorable. These provisions include:

providing for a classified board of directors with staggered, three year terms;

authorizing the board of directors to issue so-called "blank check" preferred stock without stockholder approval;

prohibiting cumulative voting in the election of directors;

authorizing the removal of directors only for cause and only upon the affirmative vote of the holders of two-thirds of the outstanding shares of our common stock cast at an annual meeting of stockholders;

prohibiting stockholder action by written consent unless consent is signed by all stockholders entitled to vote on the action;

limiting the persons who may call special meetings of stockholders;

establishing advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings; and

restricting business combinations with interested stockholders.

These anti-takeover provisions could substantially impede the ability of public stockholders to benefit from a change in control and, as a result, may adversely affect the market price of our common stock and your ability to realize any potential change of control premium.

Tax Risks

We may have to pay tax on U.S. source income, which would reduce our earnings and cash flow.

Under the Internal Revenue Code of 1986, as amended (the "Code"), 50% of the gross shipping income of a vessel-owning or chartering corporation (or "shipping income") that is attributable to voyages that either begin or end in the United States is characterized as "U.S.-source shipping income" and such income is generally subject to a 4% U.S. federal income tax (on a gross basis) unless that corporation qualifies for exemption from tax under Section 883 of the Code or under an applicable U.S. income tax treaty.

During our 2018 taxable year, we and our shipowning subsidiaries are organized under the laws of the Republic of the Marshall Islands and the laws of the Republic of Malta. The Republic of the Marshall Islands, is a country that does not have an income tax treaty with the United States. The Republic of Malta is a country that has an income tax treaty with the United States. In particular, this income tax treaty sets out the relevant rule to the effect that profits of an enterprise of a contracting state from the operation of ships in international traffic shall be taxable only in that state. Accordingly, income earned by our subsidiaries organized under the laws of Malta may qualify for a treaty-based exemption. Income earned by our subsidiaries under the law of the Marshall Islands don't qualify for a treaty-based exemption. However, we believe that we qualify for the exemption from tax under Section 883 of the Code for the 2018 taxable year and intend to take such position on our returns for the 2018 taxable year. Nevertheless, for the 2019 or any later taxable year, there are factual circumstances beyond our control that could cause us to lose the benefit of this tax exemption and thereby cause us to become subject to U.S. federal income tax on our U.S.-source shipping income. For example, there is a risk that we could no longer qualify for exemption under Section 883 of the Code for a particular taxable year if additional shares of our common stock are issued to new stockholders such that, due to their status or unwillingness to cooperate with certain substantiation and reporting requirements, we no longer satisfy one of the ownership test requirements for qualification. Due to the factual nature of the issues involved, we can give no assurances on the availability of the exemption to us.

If we and/or one or more of our Marshall Island subsidiaries are not entitled to this exemption under Section 883 of the Code for any taxable year, we and/or such subsidiaries would generally be subject for that year to a 4% U.S. federal income tax on the U.S.-source shipping income for that year. The imposition of this tax could have a negative effect on our business and would result in decreased earnings and cash flow. See "Item 10. Additional Information – E. Taxation – U.S. Federal Income Taxation of the Company" for a detailed discussion of the qualification for the exemption under Section 883 of the Code.

Our subsidiaries organized under the laws of the Republic of Malta would always benefit from the treaty based exemption since voyages that either begin or end in the United States (characterised by the Code as "U.S.-source shipping income") would qualify as international transport for purposes of the tax treaty. Furthermore and in addition to the tax treaty provisions, under article 12(1)(c)(iii)(k) of the Malta Income Tax Act, the profits of a non-resident shipowner as defined in article 28, are exempt from tax in Malta, provided that the country to which such non-resident shipowner belongs extends a similar exemption to shipowners who are not resident in such country but who are resident in Malta. This exemption is therefore extended on a reciprocity basis.

Various tax rules may adversely impact the Company's business, results of operations and financial condition.

The Company may be subject to taxes in the United States and other jurisdictions in which it operates. If the Internal Revenue Service (the "IRS"), or other taxing authorities disagree with the positions the Company has taken on the tax returns of its subsidiaries, the Company could face additional tax liability, including interest and penalties. If material, payment of such additional amounts upon final adjudication of any disputes could have a material impact on the Company's business, results of operations and financial condition. In addition, complying with new tax rules, laws or regulations could impact the Company's financial condition, and increases to federal or state statutory tax rates and other changes in tax laws, rules or regulations may increase the Company's effective tax rate. Any increase in the Company's effective tax rate could have a material adverse impact on our business, results of operations and financial condition.

If U.S. tax authorities were to treat us or one or more of our subsidiaries as a "passive foreign investment company," there could be adverse tax consequences to U.S. holders.

A non-U.S. corporation will be treated as a "passive foreign investment company" (or a "PFIC") for U.S. federal income tax purposes if either (i) at least 75% of its gross income for any taxable year consists of certain types of "passive income," or (ii) at least 50% of the average value of the corporation's assets produce, or are held for the production of, such types of "passive income." For purposes of these tests, "passive income" includes dividends, interest and gains from the sale or exchange of investment property and rents and royalties other than rents and royalties which are received from unrelated parties in connection with the active conduct of trade or business. For purposes of these tests, time and voyage charter income is generally viewed as income derived from the performance of services and not rental income and, therefore, would not constitute "passive income." U.S. stockholders of a PFIC are subject to a disadvantageous U.S. federal income tax regime with respect to the income derived by the PFIC, the distributions they receive from the PFIC and the gain, if any, they derive from the sale or other disposition of their shares in the PFIC.

U.S. shareholders of a PFIC generally are subject to an adverse U.S. federal income tax regime with respect to the income derived by the PFIC, the distributions they receive from the PFIC and the gain, if any, they derive from the sale or other disposition of their shares in the PFIC, and would be subject to annual information reporting to the U.S. Internal Revenue Service (the "IRS"). If we were to be treated as a PFIC for any taxable year (and regardless of whether we remained a PFIC for subsequent taxable years), a U.S. shareholder who does not make certain mitigating elections (as described more fully under "Item 10. Additional Information – E. Taxation – U.S. Federal Income Taxation of U.S. Holders") would be required to allocate ratably over such U.S. shareholder's holding period any "excess distributions" received (i.e., the portion of any distributions received on our common stock in a taxable year in excess of 125% of certain average historic annual distributions) and any gain realized on the sale, exchange or other disposition of our common stock. The amount allocated to the current taxable year and any year prior to the first year in which we were a PFIC would be subject to U.S. federal income tax as ordinary income and the amount allocated to each of the other taxable years would be subject to tax at the highest rate of tax in effect for the applicable class of taxpayer for that year. An interest charge for the deemed deferral benefit would be imposed with respect to the resulting tax attributable to each such other taxable year. Investors in our common stock are urged to consult with their own tax advisors regarding the tax consequences of the PFIC rules to them, including the benefit of any available mitigating elections. For a more complete discussion of the U.S. Federal income tax consequences of passive foreign investment company characterization, see "Item 10. Additional Information – E. Taxation – U.S. Federal Income Taxation of U.S. Holders."

Based on our current and projected operations, we do not believe that we (or any of our subsidiaries) were a PFIC in our 2017 taxable year, and we do not expect to become (or any of our subsidiaries to become) a PFIC with respect to the 2018 or any later taxable year. In this regard, we intend to treat the gross income we derive or are deemed to derive from our time chartering activities as services income, rather than rental income. Accordingly, we believe that our income from our time chartering activities does not constitute "passive income," and the assets that we own and operate in connection with the production of that income do not constitute "passive assets." There is, however, no direct legal authority under the PFIC rules addressing our method of operation. Accordingly, no assurance can be given that the IRS or a court of law will accept our position, and there is a risk that the IRS or a court of law could determine that we are (or were in a prior taxable year) a PFIC. Moreover, no assurance can be given that we would not constitute a PFIC for any taxable year if there were to be changes in the nature and extent of our operations.

If U.S. tax authorities were to treat us as a "controlled foreign corporation," there could be adverse U.S. federal income tax consequences to certain U.S. investors.

If more than 50% of the voting power or value of our shares is treated as owned by U.S. citizens or residents, U.S. corporations or partnerships, or U.S. estates or trusts (as defined for U.S. federal income tax purposes), each of which owned at least 10% of our voting power or value (each, a "U.S. Stockholder"), then we and one or more of our subsidiaries will be a controlled foreign corporation (or "CFC") for U.S. federal income tax purposes. If we were treated as a CFC for any taxable year, our U.S. Stockholders may face adverse U.S. federal income tax consequences and information reporting obligations. See "Item 10. Additional Information – E. Taxation – U.S. Federal Income Taxation of U.S. Holders."

#### ITEM 4. INFORMATION ON THE COMPANY

## A. History and Development of the Company

Our legal and commercial name is Pyxis Tankers Inc. We are an international maritime transportation holding company that was incorporated under the laws of the BCA on March 23, 2015, and we maintain our principal place of business at the offices of our ship manager, Pyxis Maritime Corp. ("Maritime"), at 59 K. Karamanli, Maroussi 15125, Athens, Greece. Our telephone number at that address is +30 210 638 0200. Our registered agent in the Marshall Islands is The Trust Company of the Marshall Islands, Inc. located at Trust Company Complex, Ajeltake Road, Ajeltake Island, Majuro, Marshall Islands MH96960.

We own the vessels in our fleet through six separate wholly-owned subsidiaries that are incorporated in the Marshall Islands and Malta. We acquired the vessel-owning subsidiaries from affiliates of our founder and Chief Executive Officer in connection with our merger with LookSmart in October 2015. Pursuant to which, LookSmart merged with and into Maritime Technologies Corp. and we commenced trading on the NASDAQ Capital Market under the symbol "PXS". As part of the merger transactions, LookSmart transferred all of its then existing business, assets and liabilities to its wholly-owned subsidiary, which was spun off to the LookSmart stockholders.

#### **Implications of Being an Emerging Growth Company**

As a company with less than \$1.07 billion in revenues for the last fiscal year, we qualify as an "emerging growth company" pursuant to the JOBS Act. An emerging growth company may take advantage of specified reduced reporting and other requirements that are otherwise applicable generally to public companies. These provisions include, but are not limited to, exemption from the auditor attestation requirement under Section 404 of the Sarbanes-Oxley Act of 2002 ("Section 404"), in the assessment of the emerging growth company's internal control over financial reporting. The JOBS Act also provides that an emerging growth company does not need to comply with any new or revised financial accounting standards until such date that a private company is otherwise required to comply with such new or revised accounting standards. Emerging growth companies are also exempt from mandatory auditor rotation and furthermore, we are not required to present selected financial information or any management's discussion herein for any period prior to the earliest audited period presented in connection with this Annual Report.

We will remain an emerging growth company until the earliest of (a) the last day of the fiscal year during which we have total annual gross revenues of at least \$1.07 billion; (b) the last day of our fiscal year following the fifth anniversary of the completion of the merger on December 31, 2020; (c) the date on which we have, during the previous three-year period, issued more than \$1.0 billion in non-convertible debt; or (d) the date on which we are deemed to be a "large accelerated filer" under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which would occur if the market value of our common stock that are held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter. Once we cease to be an emerging growth company, we will not be entitled to the exemptions provided in the JOBS Act discussed above.

### **B.** Business Overview

#### Overview

We are an international maritime transportation company focused on the product tanker sector. Our fleet is comprised of six double hull product tankers, which are employed under a mix of spot and medium-term time charters. As of March 26, 2019, our fleet had an average age of 8.1 years, based on dead weight tonnage, compared to an industry

average of approximately 11 years, with a total cargo carrying capacity of 216,635 dwt. We acquired these six vessels in 2015 from affiliates of our founder and Chief Executive Officer, Mr. Eddie Valentis. Four of the vessels in the fleet are medium range ("MR") tankers, three of which have eco-efficient or eco-modified designs, and two are short-range tanker sister ships. Each of the vessels in the fleet has IMO certifications and is capable of transporting refined petroleum products, such as naphtha, gasoline, jet fuel, kerosene, diesel and fuel oil, as well as other liquid bulk items, such as vegetable oils and organic chemicals.

Our principal objective is to own and operate our fleet in a manner that will enable us to benefit from short- and long-term trends that we expect in the product tanker sector to maximize our revenues. We intend to expand the fleet through selective acquisitions of modern product tankers, primarily MRs, and to employ our vessels through time charters to creditworthy customers and on the spot market. We intend to continually evaluate the markets in which we operate and, based upon our view of market conditions, adjust our mix of vessel employment by counterparty and stagger our charter expirations. In addition, we may choose to opportunistically direct asset sales or acquisitions when conditions are appropriate.

#### The Fleet

The following table provides summary information concerning our fleet as of March 26, 2019:

Vessel Name	Shipyard	Vessel type	Carrying Capacity (dwt)	Year Built	Type of Charter	Charter Rate (per day) (1)	Earliest Redelivery Date
Pyxis Epsilon (2)	SPP* / S. Korea	MR	50,295	2015	Time	\$13,350	March 2019
Pyxis Theta (3)	SPP / S. Korea	MR	51,795	2013	Time	\$13,800	May 2019
Pyxis Malou	SPP / S. Korea	MR	50,667	2009	Time	\$14,000	September 2019
Pyxis Delta	Hyundai / S. Korea	MR	46,616	2006	Time	\$12,800	April 2019
Northsea Alpha	Kejin / China	Small Tanker	8,615	2010	Spot	n/a	n/a
Northsea Beta	Kejin / China	Small Tanker	8,647	2010	Spot	n/a	n/a
			216,635				

- (1) These are gross charter rates and do not reflect any commissions payable.
- (2) *Pyxis Epsilon* is contracted to begin a new time charter on April 1, 2019 at a gross charter rate of \$15,350 for 12 months (plus / minus 30 days) with another 12 months at a gross charter rate of \$17,500 at charterer's option.
- (3) *Pyxis Theta* is contracted to begin a new time charter on June 1, 2019 at a gross charter rate of \$15,375 for 12 months (plus / minus 30 days) with another 12 months at a gross charter rate of \$17,500 at charterer's option.

\*SPP is SPP Shipbuilding Co., Ltd.

#### **Our Charters**

We generate revenues by charging customers a fee, typically called charter hire, for the use of our vessels. Customers utilize the vessels to transport their refined petroleum products and other liquid bulk items and have historically entered into the following types of contractual arrangements with us or our affiliates:

Time charters: A time charter is a contract for the use of a vessel for a fixed period of time at a specified daily rate. Under a time charter, the vessel owner provides crewing and other services related to the vessel's operation, the cost of which is included in the daily rate. The customer, also called a charterer, is responsible for substantially all of the vessel's voyage expenses, which are costs related to a particular voyage including the cost for bunkers and any port fees, cargo loading and unloading expenses, canal tolls and agency fees. In addition, a time charter may include a profit share component, which would enable us to participate in increased profits in the event rates increase above the specified daily rate.

Spot charters: A spot charter is a contract to carry a specific cargo for a single voyage. Spot charters for voyages involve the carriage of a specific amount and type of cargo on a load-port to discharge-port basis, subject to various cargo handling terms, and the vessel owner is paid on a per-ton basis. Under a spot voyage charter, the vessel owner is responsible for the payment of all expenses including voyage expenses, such as port, canal and bunker costs.

The table below sets forth the basic distinctions between these types of charters:

	Time Charter	Spot Charters
Typical contract length	Typically 3 months - 5 years or more	Indefinite but typically less than 3 months
Basis on which charter rate is paid	Per day	Per ton, typically
Voyage expenses	Charterer pays	We pay
Vessel operating costs (1)	We pay	We pay
Off-hire (2)	We pay	We pay

We are responsible for vessel operating costs, which include crewing, repairs and maintenance, insurance, stores, (1) lube oils, communication expenses and the commercial and technical management fees payable to our ship managers. The largest components of our vessel operating costs are generally crews and repairs and maintenance.

(2) "Off-hire" refers to the time a vessel is not available for service due primarily to scheduled and unscheduled repairs or dry-docking.

Under both time and spot charters on the vessels in the fleet, we are responsible for the technical management of the vessel and for maintaining the vessel, periodic dry-docking, cleaning and painting and performing work required by regulations. We have entered into a contract with Maritime to provide commercial, sale and purchase, and other operations and maintenance services to all of the vessels in our fleet. The chartering services of the Northsea Alpha and the Northsea Beta were performed by North Sea Tankers BV ("NST"), a third party manager, until we terminated our commercial management agreements with NST in 2016, as discussed below. Our vessel-owning subsidiaries have contracted with ITM, a third party technical manager and subsidiary of V. Ships Limited, to provide crewing and technical management to all of the vessels in our fleet. Please see "— Management of Ship Operations, Administration and Safety" below. We intend to continue to outsource the day-to-day crewing and technical management of all our vessels to ITM. We believe that ITM has a strong reputation for providing high quality technical vessel services, including expertise in efficiently managing tankers. Following our delivery of termination notices to NST, Maritime assumed full commercial management of the Northsea Beta and the Northsea Alpha in June and November 2016, respectively.

In the future, we may also place one or more of our vessels in pooling arrangements or on bareboat charters:

*Pooling Arrangements*. In pooling arrangements, vessels are managed by a single pool manager who markets a number of vessels as a single, cohesive fleet and collects, or pools, their net earnings prior to distributing them to the individual owners, typically under a pre-arranged weighting system that recognizes a vessel's earnings capacity based on various factors. The vessel owner also generally pays commissions on pooling arrangements generally ranging from 1.25% to 5.0% of the earnings.

*Bareboat Charters*. A bareboat charter is a contract pursuant to which the vessel owner provides the vessel to the charterer for a fixed period of time at a specified daily rate, and the charterer generally provides for all of the vessel's operating expenses in addition to the voyage costs and assumes all risk of operation. A bareboat charterer will generally be responsible for operating and maintaining the vessel and will bear all costs and expenses with respect to the vessel, including dry-dockings and insurance.

## **Our Competitive Strengths**

We believe that we possess a number of competitive strengths relative to other product tanker companies, including:

**High Quality Fleet of Modern Tankers.** As of March 26, 2019, our fleet had an average age of 8.1 years, based on dead weight tonnage, compared to an industry average of approximately 11 years. Our fleet of vessels consists mainly of MR tankers that were built in Korean shipyards. We believe these MR tankers, along with our smaller tankers, provide our customers with high quality and reliable transportation of cargos at competitive operating costs. Owning a modern fleet reduces off-hire time, repairs and maintenance costs, including dry-docking expenses, and improves safety and environmental performance. Also, lenders are attracted to modern, well maintained vessels, which can result in more reasonable terms for secured loans.

Established Relationships with Charterers. We have developed long-standing relationships with a number of leading tanker charterers, including major integrated and national oil companies, refiners, international trading firms and large vessel operators, which we believe will benefit us in the future as we continue to grow our business. Our customers have included, among others, BP, SK Energy, Equinor, Total, Petramina, Vitol, ST Shipping (an affiliate of Glencore), Repsol, Petrobras and their respective subsidiaries. We strive to meet high standards of operating performance, achieve cost-efficient operations, reliability and safety in all of our operations and maintain long-term relationships with our customers. We believe that our charterers value our fleet of modern, quality tankers as well as our management team's industry experience. These attributes should allow us to continue to charter our vessels and expand our fleet.

Competitive Cost Structure. Even though we currently operate a relatively small number of vessels, we believe we are very cost competitive as compared to other companies in our industry. For example, during the year ended December 31, 2018, our daily operating costs per vessel were \$5,785, while our general and administrative expenses were \$1,098 per vessel, per ownership day, excluding non-cash items. This is a result of our fleet profile, our experienced technical and commercial managers as well as the hands-on approach and substantial equity ownership

of our management team. Our technical manager, ITM, manages 46 tankers, including our vessels. Our technical and commercial management fees aggregate to approximately \$755 per day per vessel, which is competitive within our industry. Our collaborative approach between our management team and our external managers creates a platform that we believe is able to deliver excellent operational results at competitive costs and positions us for further growth.

Well-Positioned to Capitalize on Improving Rates. We believe our current fleet is positioned to capitalize when spot and time charter rates improve. As of March 26, 2019, we had four tankers contracted under time charters and two under spot voyages. As of March 26, 2019, 45% of our fleet's remaining available days in 2019 were contracted, exclusive of charterers' options. For any additional tankers we acquire, we expect to continue to employ our mixed chartering strategy.

**Experienced Management Team**. Our four senior officers, led by our Chairman and Chief Executive Officer, Mr. Valentios Valentis, have combined over 100 years of industry experience in shipping, including vessel ownership, acquisitions, divestitures, newbuildings, dry-dockings and vessel modifications, on-board operations, chartering, technical supervision, corporate management, legal/regulatory, accounting and finance.

## **Our Business Strategy**

Our principal objective is to own, operate and grow our fleet in a manner that will enable us to benefit from short- and long-term trends that we expect in the tanker sector. Our strategy to achieve this objective includes the following:

Maintain High Quality Fleet of Modern Tankers. We intend to maintain a high quality fleet that meets rigorous industry standards and our charterers' requirements and that has an average age of 10 years or less. We consider our fleet to be high quality based on the specifications to which our vessels were built and the reputation of each of the shipyards that built the vessels. We believe that our customers prefer the better reliability, fewer off-hire days and greater operating efficiency of modern, high quality vessels. Our MR tankers include eco-efficient and eco-modified designed vessels which offer the benefits of lower bunker consumption and reduced emissions. In addition, we are able to cost-effectively operate standard older MRs. We also intend to maintain the quality of our fleet through ITM's comprehensive planned maintenance and preventive maintenance programs.

Grow the Fleet Opportunistically. We plan to take advantage of what we believe to be attractive asset values in the product tanker sector to expand our fleet through acquisitions. We believe that demand for tankers will expand as trade routes for liquid cargoes continue to evolve to developed markets, such as those in the United States and Europe, and as changes in refinery production patterns in developing countries such as China and India, as well as in the Middle East, contribute to increases in the transportation of refined petroleum products. We believe that a diversified tanker fleet will enable us to serve our customers across the major tanker trade routes and to continue to develop a global presence. We have strong relationships with reputable owners, charterers, banks and shipyards, which we believe will assist us in identifying attractive vessel acquisition opportunities. We intend to focus primarily on the acquisition of IMO II and III class MR tankers of 10 years of age or less, which have been built in Tier 1 Asian shipyards and have modern bunker efficient designs given demands for lower bunker consumption and concerns about environmental emissions. We will also consider acquisitions of newbuild vessels (also called re-sales), which typically have lower operating costs, and of fleets of existing vessels when such acquisitions are accretive to stockholders or provide other strategic or operating advantages to us.

Optimize the Operating Efficiency of our Fleet. We evaluate each of our existing and future vessels regarding their operating efficiency, and if we believe it will advance the operation of our fleet and benefit our business, we may make vessel modifications to improve fuel consumption and meet stricter environmental standards. We will consider making such modifications when the vessels complete their charter contracts or undergo scheduled dry-docking, including installation of required of ballast water treatment systems, or with new acquisitions, at the time we acquire them. Among the modifications that we monitor and may make in the future to our vessels include: fitting devices that reduce main engine bunker consumption without reducing available power and speed; fitting devices that improve bunker combustion and therefore bunker consumption for auxiliary equipment; efficient electrical power generation and usage; minimizing hull and propeller frictional losses; systems that allow for optimized routing; and systems that allow for improved maintenance, performance monitoring and management. We refer to vessels that have one or more of these modifications as "eco-modified." We have evaluated and successfully installed in vessels a variety of technologies and equipment that have resulted in operating efficiencies. For example, we completed modifications on the Pyxis Malou during its first year special survey that we believe has resulted in our attaining an attractive return on such capital investment in the first year of operation. We will continue to build on our experience with these and other modifications and seek methods to efficiently improve the operational performance of our vessels while keeping costs competitive and in full regulatory compliance.

**Utilize Portfolio Approach for Commercial Employment.** We expect to employ the vessels in our fleet under a mix of spot and time charters (with and without profit share), bareboat charters and pooling arrangements. We expect to diversify our charters by customer and staggered duration. In addition, any long-term time charters we enter into with a profit sharing component will offer us some protection when charter rates decrease, while allowing us to share in increased profits in the event rates increase. We believe that this portfolio approach to vessel employment is an integral part of risk management which will provide us a base of stable cash flows while providing us the optionality to take advantage of rising charter rates and market volatility in the spot market.

**Preserve Strong Safety Record & Commitment to Customer Service and Support**. Maritime and ITM have strong histories of complying with rigorous health, safety and environmental protection standards and have excellent vessel safety records. We intend to maintain these high standards in order to provide our customers with a high level of safety, customer service and support.

**Maintain Financial Flexibility.** We intend to maintain financial flexibility to expand our fleet by targeting a balanced capital structure of debt and equity. As part of our risk management policies, we expect to enter into time charters for most of the vessels we acquire, which provide us predictable cash flows for the duration of the charter and attract lower-cost debt financing at more favorable terms. We believe this will allow us to build upon our strong

commercial lending relationships and optimize our ability to access the public capital markets to respond opportunistically to changes in our industry and financial market conditions.

# The LookSmart Agreement and the expiration of the Make-Whole Right

On April 23, 2015, we and our wholly-owned subsidiary, Maritime Technologies Corp., entered into the LookSmart Agreement with LookSmart and its then wholly-owned subsidiary, LSG. On October 28, 2015, LookSmart completed its merger with and into Maritime Technologies Corp. As a condition to the consummation of the merger, LookSmart transferred all of its business, assets and liabilities to LSG, which was spun off to the then existing LookSmart stockholders. In connection with the closing of the merger, each share of LookSmart was cancelled and exchanged for the right to receive 1.0667 shares of our common stock.

Pursuant to the Make-Whole Right included in the Looksmart Agreement, if Pyxis Tankers Inc. conducts an offering of its common stock or a sale of Pyxis Tankers Inc. and/or substantially all of its assets (either, a "Future Pyxis Offering") at a price per share that is less than \$4.30 following the merger with Looksmart, then Looksmart stockholders of record on April 29, 2015, who on the date of the consummation of such Future Pyxis Offering continue to hold such Pyxis common shares (the "MWR Holder"), are entitled to receive in Pyxis common shares the difference between the offering price of the Future Pyxis Offering and \$4.30; provided that the MWR Holders are only entitled to the Make-Whole Right in the event the Future Pyxis Offering exceeds \$5.0 million. In 2017, we completed a Future Pyxis Offering for less than \$5.0 million and as a result the Make-Whole Right may no longer be exercised.

#### Seasonality

For a description of the effect of seasonality on our business, please see "Item 3. Key Information – D. Risk Factors – Product tanker rates fluctuate based on seasonal variations in demand".

#### Management of Ship Operations, Administration and Safety

Our executive officers, internal auditors and secretary are employed by and their services are provided by Maritime.

Typically, Maritime and ITM enter into individual ship management agreements with our vessel-owning subsidiaries pursuant to which they provide us with:

commercial management services, which include obtaining employment, that is, the chartering, for our vessels and managing our relationships with charterers;

strategic management services, which include providing us with strategic guidance with respect to locating, purchasing, financing and selling vessels;

technical management services, which include managing day-to-day vessel operations, performing general vessel maintenance, ensuring regulatory and classification society compliance, supervising the maintenance and general efficiency of vessels, arranging the hire of qualified officers and crew, arranging and supervising dry-docking and repairs, arranging insurance for vessels, purchasing stores, supplies, spares and new equipment for vessels, appointing supervisors and technical consultants and providing technical support; and

shoreside personnel who carry out the management functions described above.

Head Management Agreement and Ship Management Agreements with Maritime. Headquartered in Maroussi, Greece, Maritime was formed in May 2007 by our founder and Chief Executive Officer to take advantage of opportunities in the tanker sector. Maritime's business employs or receives consulting services from 14 people in four departments: technical, operations, chartering and finance/accounting. We entered into a head management agreement with Maritime (the "Head Management Agreement") pursuant to which they provide us and our vessels, among other things, with ship management services and administrative services. Under the Head Management Agreement, each vessel-owning subsidiary that owns a vessel in our fleet also enters into a separate ship management agreement with Maritime. Maritime provides us and our vessels with the following services: commercial, sale and purchase, provisions, insurance, bunkering, operations and maintenance, dry-docking and newbuilding construction supervision. Maritime also provides administrative services to us such as executive, financial, accounting and other administrative services. As part of its responsibilities, Maritime supervises the crewing and technical management performed by ITM for all our vessels. In return for such services, Maritime receives from us:

for each vessel while in operation a fee of \$325 per day subject to annual inflationary adjustments, and for each vessel under construction, a fee of \$450 per day, plus an additional daily fee, which is dependent on the seniority of the personnel, to cover the cost of the engineers employed to conduct the supervision (collectively the "Ship-Management Fees");

- 1.00% of the purchase price of any sale and purchase transaction from the seller of the vessel;
- 1.25% of all chartering, hiring and freight revenue we receive that was procured by or through Maritime; and
- a lump sum of approximately \$1.6 million per annum for the administrative services it provides to us (the "Administration Fees").

The Ship-Management Fees and the Administration Fees are subject to annual adjustments to take into account inflation in Greece or such other country where Maritime was headquartered during the preceding year. Effective January 1, 2019, the Ship-Management Fees and the Administration Fees were increased by 0.62% in line with the average inflation rate in Greece in 2018. We believe these amounts payable to Maritime are very competitive to many of our U.S. publicly listed tanker competitors, especially given our relative size. We anticipate that once our fleet reaches 15 tankers, the fee that we pay to Maritime for its ship management services for vessels in operation will recognize a volume discount in an amount to be determined by the parties at that time.

The Head Management Agreement will continue until March 23, 2020, unless terminated by either party on 90 days' notice. Following the initial expiration date, the Head Management Agreement will automatically be renewed for a five year period. In addition, the ship management agreements have an initial term of five years, while following their initial expiration dates, they will automatically be renewed for consecutive five year periods, or until terminated by either party on three months' notice.

For more information on our Head Management Agreement and our ship management agreements with Maritime, please see "Item 7. Major Shareholders and Related Party Transactions – B. Related Party Transactions."

Ship Management Agreements with ITM. We outsource the day-to-day technical management of our vessels to an unaffiliated third party, ITM, which has been certified for ISO 9001:2008 and ISO 14001:2004. Each vessel-owning subsidiary that owns a vessel in our fleet under a time or spot charter also typically enters into a separate ship management agreement with ITM. ITM is responsible for all technical management, including crewing, maintenance, repair, dry-dockings and maintaining required vetting approvals. In performing its services, ITM is responsible for operating a management system that complies, and ITM ensures that each vessel and its crew comply, with all applicable health, safety and environmental laws and regulations. In addition to reimbursement of actual vessel related operating costs, we also pay an annual fee to ITM which in 2018 was \$155,000 per vessel (equivalent to approximately \$425 per day). This fee is reduced to the extent any vessel ITM manages is not fully operational for a time, which is also referred to as any period of "lay-up."

Each ship management agreement with ITM continues by its terms until it is terminated by either party. The ship management agreements can be cancelled by us for any reason at any time upon three months' advance notice, but neither party can cancel the agreement, other than for specified reasons, until 18 months after the initial effective date of the ship management agreement. We have the right to terminate the ship management agreement for a specific vessel upon 60 days' notice if in our reasonable opinion ITM fails to manage the vessel in accordance with sound ship management practice. ITM can cancel the ship management agreement if it has not received payment it requests within 60 days. Each ship management agreement will be terminated if the relevant vessel is sold (other than to our affiliates), becomes a total loss, becomes a constructive, compromised or arranged total loss or is requisitioned for hire.

*Insurance*. We are obligated to keep insurance for each of our vessels, including hull and machinery insurance and protection and indemnity insurance (including pollution risks and crew insurances), and we must ensure each vessel carries a certificate of financial responsibility as required. We are responsible to ensure that all premiums are paid. Please see "– Risk Management and Insurance" below.

#### **Classification, Inspection and Maintenance**

Every large, commercial seagoing vessel must be "classed" by a classification society. The classification society certifies that the vessel is "in class," signifying that the vessel has been built and is maintained in accordance with the rules of the classification society and complies with applicable rules and regulations of the vessel's country of registry and the international conventions of which that country is a party. In addition, where surveys of vessels are required by international conventions and corresponding laws and ordinances of a flag state, the classification society will undertake them on application or by official order, acting on behalf of the authorities concerned. The classification society also undertakes on request other surveys and checks that are required by regulations and requirements of the flag state. These surveys are subject to agreements made in each individual case and/or to the regulations of the country concerned.

For maintenance of the class, regular and extraordinary surveys of hull and machinery, including the electrical plant and any special equipment, are required to be performed as follows:

**Annual Surveys**. For seagoing vessels, annual surveys are conducted for the hull and the machinery, including the electrical plant, and where applicable, on special equipment classed at intervals of 12 months from the date of commencement of the class period indicated in the certificate.

**Intermediate Surveys.** Extended annual surveys are referred to as intermediate surveys and typically are conducted two and one-half years after commissioning and each class renewal. Intermediate surveys may be carried out on the occasion of the second or third annual survey.

Special (Class Renewal) Surveys. Class renewal surveys, also known as "special surveys," are carried out on the vessel's hull and machinery, including the electrical plant, and on any special equipment classed at the intervals indicated by the character of classification for the hull. During the special survey, the vessel is thoroughly examined, including audio-gauging to determine the thickness of the steel structures. Should the thickness be found to be less than class requirements, the classification society would prescribe steel renewals. The classification society may grant a one-year grace period for completion of the special survey. Substantial amounts of funds may have to be spent for steel renewals to pass a special survey if the vessel experiences excessive wear and tear. In lieu of the special survey every four or five years, depending on whether a grace period is granted, a ship owner has the option of arranging with the classification society for the vessel's hull or machinery to be on a continuous survey cycle, in which every part of the vessel would be surveyed within a five-year cycle. At an owner's discretion, the surveys required for class renewal may be split according to an agreed schedule to extend over the entire period of class. This process is referred to as continuous class renewal.

**Occasional Surveys.** These are inspections carried out as a result of unexpected events, for example, an accident or other circumstances requiring unscheduled attendance by the classification society for re-confirming that the vessel maintains its class, following such an unexpected event.

All areas subject to survey as defined by the classification society are required to be surveyed at least once per class period, unless shorter intervals between surveys are prescribed elsewhere. The period between two subsequent surveys of each area must not exceed five years. Most vessels are also dry-docked every 30 to 36 months for inspection of the underwater parts and for repairs related to inspections. If any defects are found, the classification surveyor will issue a "recommendation" which must be rectified by the ship owner within prescribed time limits.

Most insurance underwriters make it a condition for insurance coverage that a vessel be certified as "in class" by a classification society which is a member of the International Association of Classification Societies (the "IACS"). In December 2013, the IACS adopted new harmonized Common Structure Rules which apply to oil tankers and bulk carriers constructed on or after July 1, 2015. All of our vessels are certified as being "in-class" by NKK and DNV GL. We expect that all vessels that we purchase will be certified prior to their delivery and that we will have no obligation to take delivery of the vessel if it is not certified as "in class" on the date of closing.

# **Risk Management and Insurance**

General

The operation of any cargo carrying ocean-going vessel embraces a wide variety of risks, including the following:

Physical damage to the vessel:

mechanical failure or damage, for example by reason of the seizure of a main engine crankshaft;

physical damage to the vessel by reason of a grounding, collision or fire; and

other physical damage due to crew negligence.

Liabilities to third parties:

cargo loss or shortage incurred during the voyage;

damage to third party property, such as during a collision or berthing operation;

personal injury or death to crew and/or passengers sustained due to accident; and

environmental damage, for example arising from marine disasters such as oil spills and other environmental mishaps.

Business interruption and war risk or war-like operations:

this would include business interruption, for example by reason of political disturbance, strikes or labor disputes, or physical damage to the vessel and/or crew and cargo resulting from deliberate actions such as piracy, war-like actions between countries, terrorism and malicious acts or vandalism.

The value of such losses or damages may vary from modest sums, for example for a small cargo shortage damage claim, to catastrophic liabilities, for example arising out of a marine disaster such as a serious oil or chemical spill, which may be virtually unlimited. While we expect to maintain the traditional range of marine and liability insurance coverage for our fleet (hull and machinery insurance, war risks insurance and protection and indemnity coverage) in amounts and to extents that we believe will be prudent to cover normal risks in our operations, we cannot insure against all risks, and it cannot be assured that all covered risks are adequately insured against. Furthermore, there can be no guarantee that any specific claim will be paid by the insurer or that it will always be possible to obtain insurance coverage at reasonable rates. Any uninsured or under-insured loss could harm our business and financial condition.

The following table sets forth information regarding the insurance coverage on our existing fleet as of December 31, 2018.

Type Aggregate Sum Insured For All Vessels in our Existing Fleet

Hull and Machinery \$202.0 million War Risk \$202.0 million

Protection and Indemnity ("P&I")Pollution liability claims: limited to \$1.0 billion per vessel per incident

Hull and Machinery Insurance and War Risk Insurance

The principal coverages for marine risks (covering loss or damage to the vessels, rather than liabilities to third parties) are hull and machinery insurance and war risk insurance. These address the risks of the actual (or constructive) total loss of a vessel and accidental damage to a vessel's hull and machinery, for example from running aground or colliding with another vessel. These insurances provide coverage which is limited to an agreed "insured value" which, as a matter of policy, is never less than the particular vessel's fair market value. Reimbursement of loss under such coverage is subject to policy deductibles which vary according to the vessel and the nature of the coverage.

Protection and Indemnity Insurance

P&I insurance is the principal coverage for a ship owner's third party liabilities as they arise out of the operation of its vessel. Such liabilities include those arising, for example, from the injury or death of crew, passengers and other third parties working on or about the vessel to whom the ship owner is responsible, or from loss of or damage to cargo carried on board or any other property owned by third parties to whom the ship owner is liable. P&I coverage is traditionally (and for the most part) provided by mutual insurance associations, originally established by ship owners to provide coverage for risks that were not covered by the marine policies that developed through the Lloyd's market.

Our P&I coverage for liabilities arising out of oil pollution is limited to \$1.0 billion per vessel per incident in our existing fleet. As the P&I associations are mutual in nature, historically, there has been no limit to the value of coverage afforded. In recent years, however, because of the potentially catastrophic consequences to the membership of a P&I association having to make additional calls upon the membership for further funds to meet a catastrophic liability, the associations have introduced a formula based overall limit of coverage. Although contingency planning by the managements of the various associations has reduced the risk to as low as reasonably practicable, it nevertheless remains the case that an adverse claims experience across an association's membership as a whole may require the members of that association to pay, in due course, unbudgeted additional funds to balance its books.

#### Uninsured Risks

Not all risks are insured and not all risks are insurable. The principal insurable risks which nevertheless remain uninsured across our fleet are "loss of hire" and "strikes." We will not insure these risks because the costs are regarded as disproportionate. These insurances provide, subject to a deductible, a limited indemnity for revenue or "loss of hire" that is not receivable by the ship-owner under the policy. For example, loss of hire risk may be covered on a 14/90/90 basis, with a 14 days deductible, 90 days cover per incident and a 90-day overall limit per vessel per year. Should a vessel on time charter, where the vessel is paid a fixed hire day by day, suffer a serious mechanical breakdown, the daily hire will no longer be payable by the charterer. The purpose of the loss of hire insurance is to secure the loss of hire during such periods.

## Competition

We operate in international markets that are highly competitive. As a general matter, competition is based primarily on the supply and demand of commodities and the number of vessels operating at any given time. We compete for charters, in particular, on the basis of price and vessel location, size, age and condition, as well as the acceptability of the vessel's operator to the charterer and on our reputation. We will arrange charters for our vessels typically through the use of brokers, who negotiate the terms of the charters based on market conditions. Competition arises primarily from other product tanker owners, including major oil companies as well as independent tanker companies, some of which have substantially greater financial and other resources than we do. Although we believe that no single competitor has a dominant position in the markets in which we compete, the trend towards consolidation in the industry is creating an increasing number of global enterprises capable of competing in multiple markets, which will likely result in greater competition to us. Our competitors may be better positioned to devote greater resources to the development, promotion and employment of their businesses than we are. Ownership of product tankers is highly fragmented and is divided among publicly listed companies, state-controlled owners and independent shipowners, some of which also have other types of tankers or vessels that carry diverse cargoes. Several of our publicly listed competitors include Scorpio Tankers Inc., Ardmore Shipping Corporation, Capital Product Partners L.P., Top Ships Inc. and Tsakos Energy Navigation Limited.

#### **Customers**

We market our vessels and related services to a broad range of customers, including international commodity trading companies and oil, gas, and large shipping companies.

Our significant customers that accounted for more than 10% of our revenues in 2017 and 2018 were as follows:

Charterer	2017	2018
Trafigura Maritime Logistics Pte. Ltd.		23 %
PMI Trading Ltd.	18 %	
MTM Trading LLC	16 %	
Koch Shipping Pte. Ltd.		15 %
Shell Tankers (Singapore) Pte. Ltd.	15 %	
	49 %	38 %

In addition to these companies, we and our ship manager, Maritime, also have historical and growing chartering relationships with major integrated oil and international trading companies, including BP, SK Energy, Equinor, Total, Petramina, Vitol, ST Shipping (an affiliate of Glencore), Repsol, Petrobras and their respective subsidiaries.

As of December 31, 2018, we did not have any material trade receivable outstanding from any of our customers that accounted more than 10% of our revenues during 2018. We do not believe that we are dependent on any one of our key customers. In the event of a default of a charter by any of our key customers, we could seek to re-employ the vessel in the spot or time charter markets, although the rate could be lower than the charter rate agreed with the defaulting charterer.

## The International Product Tanker Shipping Industry

All the information and data contained in this section, including the analysis of relating to the international product tanker shipping industry, has been provided by Drewry Maritime Advisors ("Drewry"). Drewry has advised us that the statistical and graphical information contained in this section is drawn from its database and other sources. In connection therewith, Drewry has advised that: (i) certain information in its database is derived from estimates or subjective judgments, (ii) the information in the databases of other maritime data collection agencies may differ from the information in its database, and (iii) while Drewry has taken reasonable care in the compilation of the statistical and graphical information and believe it to be accurate and correct, data compilation is subject to limited audit and validation procedures. We believe that all third-party data provided in this section, "The International Product Tanker Shipping Industry," is reliable.

## **Summary**

The refined petroleum products ("products") tanker shipping industry has undergone some fundamental changes since 2003. From 2003 to 2008 seaborne trade in products was spurred on by rising global oil demand and by changes in the location of refinery capacity. While in recent years, the development of shale oil reserves in the United States (U.S.) has helped to underpin the continued expansion in seaborne products trades, with the U.S. becoming the world's largest exporter of products.

Overall, seaborne trade in products grew by a compound annual growth rate (CAGR) of 3.1% between 2008 and 2018, rising from 765 to 1,033 million tons. However, product tanker ton-mile demand increased at a CAGR of 3.2% over the same period as geographical shifts in the trade pattern have led to increased trade on long-haul routes. Apart from the U.S., countries such as India and Saudi Arabia have also seen more growth in their products export in the last decade.

#### **Products - Seaborne Trade Index**

\* Provisional estimate

Source: Drewry

Future growth in seaborne product trades is dependent on a number of factors, not least of which will be prevailing trends in the global economy and in oil demand. However, it is apparent that seaborne trade will continue to be underpinned by the emergence of the US as a major exporter of products and the growth in refining capacity in countries such as India and the Middle East, which are heavily focused on servicing export markets.

In terms of vessel supply, products are carried in product tankers, product/chemical tankers and to a limited extent in chemical tankers. Within the context of this report, product tankers include coated and uncoated ships with average tank sizes in excess of 3,000 cubic meters and product/chemical tankers, which are certified by the IMO to transport products, and certain chemicals/edible oils, with average tank sizes of less than 3,000 cubic meters. Chemical tankers are all IMO certified and they normally possess multiple tanks of less than 3,000 cubic meters, which are used almost exclusively to transport bulk liquid chemicals and edible oils. They have therefore been excluded in this report. The fleet trading in products, therefore, consists principally of product tankers and product/chemical tankers. As of February 28, 2019, the total fleet of these two categories amounted to 2,734 ships, with a combined capacity of 148.9 million deadweight tons (dwt).

Between 2010 and 2014, fleet growth in these sectors was relatively subdued and this helped to create a tighter balance between vessel supply and demand, which ultimately led to an improvement in freight rates. However, there were other factors which also facilitated the creation of a healthier market, including:

- (i) increased trade due to higher stocking activity and improved demand for oil products
- (ii) longer voyage distances because of refining capacity additions in Asia and the Middle East
- (iii) product tankers are also carrying crude oil encouraged by firm freight rates for dirty tankers
- (iv) lower bunker prices were a factor contributing to higher net earnings

As a result of these developments, the average daily time charter equivalent (TCE) rate for a Medium Range 1 (MR1) product tanker in 2015 was \$21,050/day, compared with an average of \$12,125/day in 2014. Similarly, the average TCE rate for a Medium Range 2 (MR2) product tanker was \$20,133/day in 2015, compared with \$6,875/day in 2014. On a one-year time charter rate basis, MR1 rates rose from \$12,938/day in 2014 to \$14,958/day in 2015. For MR2 vessels, the equivalent rates were \$14,438/day and \$17,271/day, respectively. However, the increase in freight rates encouraged new ordering, and at its highest point in 2016, the ratio of the MR2 product tanker orderbook to the existing global MR2 fleet was 11.7%. Negative market sentiment and newbuild deliveries combined to push the market down, and in 2016, the average one-year time charter rates for a MR2 tanker declined to \$15,125/day – a decrease of 12.4% from 2015.

A spate of newbuilding deliveries in 2017 aggravated the situation further for shipowners, and the average one-year time charter rate for a MR2 tanker declined further by 12.8% to average \$13,188/ day in 2017. The market remained weak in 2018 and the average time charter rate for these vessels slid marginally to \$13,133/day. Nevertheless, the product tanker market bottomed out in the fall of 2018. There were signs that the market will improve over the next two years as supply growth will be moderate in the wake of reduced new vessel ordering. As of February 28, 2019, the orderbook-to-existing fleet ratio by dwt stood at 7.0% for the product fleet as a whole, and in the case of MR2 tankers to 7.4%. Moreover, in December 2018, at \$13,500/day, the MR2 one-year time charter rates were 12.5% higher than the low of \$12,000/day in October 2016. The rate has been improving gradually since October 2018, and MR2 vessels were locked in for one-year time charters at \$13,500/day in February 2019.

#### **Product Tanker One-Year Time Charter Rates**

(US\$ Per Day)

2008-2018			2013	2014	2015	2016	2017	2018		
Vessels	ls AveragesLow		High	Averages	Averages	Averages	Averages	Averages	Averages	
MR1	13,458	9,700	22,500	12,833	12,938	14,958	13,833	11,458	11,646	
MR2	14,972	10,800	25,000	14,246	14,438	17,271	15,125	13,188	13,133	
LR1	15,674	12,500	25,000	13,708	15,188	19,333	17,000	12,979	12,938	
LR2	17,836	12,500	30,250	14,488	15,708	21,688	22,063	15,625	15,125	

Source: Drewry

There is also a vibrant second-hand market for ships and product tankers change hands between owners on a regular basis. Second-hand prices are generally influenced by potential vessel earnings, which in turn are influenced by trends in the supply and demand for shipping capacity. The improvement in freight rates and more positive market sentiment in the period from late 2014 to early 2016 had a beneficial impact on second-hand vessel values. For example, in the winter months of 2015-16, a five-year old MR2 was valued at \$27.0 million, compared with \$25.0 million in the corresponding month of 2014-15. However, limited access and higher cost of capital, including traditional bank debt, have slowed down sale and purchase activity and resulted in lower vessel valuations; value of these vessels dropped to \$22.0 million by October 2016.

Despite the low freight rates in both 2017 and 2018, values for younger vessels of good quality have moved up in the last two years, and in February 2019, a five-year old MR2 tanker was valued at \$28.0 million – close to the average price between 2008 and 2018. The increased activity in the S&P market at historically low vessel values in 2017 and expected recovery in the tanker market – in 2019-20 – were the key factors that drove asset prices in 2018.

#### The Products Market

The maritime transport industry is fundamental to international trade as it is the only pragmatic and economic way of transporting large volumes of many essential commodities, semi-finished and finished goods around the world. In turn, the product tanker shipping industry is a vital link in the global energy supply chain, given its ability to carry large quantities of products and bulk liquid chemicals as well as vegetable oils and fats between points of production and points of consumption.

The product tanker shipping industry is highly competitive, with vessel earnings sensitive to changes in the demand for and supply of shipping capacity and it is consequently cyclical and volatile in nature. The wider oil tanker market is divided between crude tankers that carry either crude oil or dirty products such as residual fuel oil, product tankers that carry cargoes such as gas oils and gasoline and more sophisticated product/chemical and chemical tankers, which can carry additionally chemicals and vegetable oils and fats. Petroleum products consist of a number of different grades of dirty products (e.g., fuel oil) and different grades of clean products (e.g., gasoline). The basic structure of the tanker shipping market is shown in the following diagram.

Source: Drewry

Demand for tanker shipping is a product of the physical quantity of the cargo (measured in tons) together with the distance the cargo is carried (measured in miles). Generally, demand cycles move in line with developments in the global economy, but other factors such as changes in sources of oil production and refinery capacity, plus movements in oil prices also play a key role.

The volume of oil moved by sea was adversely affected by the global financial crisis of 2008 and 2009, but since then, renewed growth in the world economy and in oil demand has had a positive impact on seaborne trade. Oil demand has benefited from economic growth in Asia, especially in China, where oil consumption increased at a CAGR of 5.2% to 13.1 million barrels per day (mbpd) between 2008 and 2018. World oil demand grew from 86.3 mbpd in 2008 to 99.2 mbpd in 2018 at a CAGR of 1.4%. The provisional estimates suggest that world oil demand in 2019 will be 100.6

mbpd – an increase of 1.4% from 2018.

**World Oil Consumption: 1991-2018** 

(Million bpd)

Source: Drewry

Low per capita oil consumption in developing countries such as China and India compared to the developed world provides scope for higher oil consumption in these economies. Conversely, oil consumption in developed OECD economies has been in decline for much of the last decade. However, this trend was reversed in 2015 because of the positive impact of lower oil prices on demand for products such as gasoline and record new vehicle sales. Oil demand in OECD economies increased at a CAGR of 1.2% from 45.8 mbpd in 2014 to 47.4 mbpd in 2017. In 2018, OECD oil demand further grew by 0.4 mbpd to reach 47.8 mbpd. Provisional data for the U.S. and some European countries indicates continued rising consumption because of higher industrial activity on the back of improving general economic conditions in developed economies. In 2019, OECD oil consumption is provisionally estimated at 48.2 mbpd.

In 2018, 3,417 million tons of crude oil, products and vegetable oils/chemicals were moved by sea. Of this, crude shipments accounted for 2,135 million tons of cargo, products 1,033 million tons, with the balance made up of other bulk liquids, including vegetable oils, chemicals and associated products. During the period 2013-18, the seaborne trade of products and vegetable oils/chemicals increased at an average CAGR of 2.7% – 0.5% higher than the growth in seaborne trade of crude oil during the same period. Additionally, lower growth in trade in 2018 compared with 2017 is due to inventory drawdown, as well as as lower growth in oil demand. The oil demand grew 1.2% in 2018 compared with 1.8% in 2017. During the period of 2008-18, the seaborne transportation of products and vegetable oils/chemicals increased at an average CAGR of 3.3%, which is highly correlated to average global GDP growth of 3.4% per year during the same period.

## World Seaborne Tanker Trade: 2001-2018

	Crude Oil		Oil Products			Chemicals			Total			Global GDP (IMF)	)
Year	Million	%	Million	%		Million	%		Million	%		%	
	tons	у-о-у	tons	у-о-у		tons	у-о-у		tons	у-о-у		у-о-у	
2001	1,751	3.2 %	518	3.0	%	114	-3.1	%	2,382	2.8	%	2.3	%
2002	1,756	0.3 %	519	0.3	%	122	7.0	%	2,396	0.6	%	2.9	%
2003	1,860	5.9 %	550	6.0	%	129	5.9	%	2,538	5.9	%	3.7	%
2004	1,963	5.6 %	599	8.8	%	141	9.5	%	2,703	6.5	%	5.0	%
2005	1,994	1.6 %	646	8.0	%	156	10.5	%	2,797	3.5	%	4.6	%
2006	1,996	0.1 %	677	4.7	%	166	6.5	%	2,839	1.5	%	5.5	%
2007	2,008	0.6 %	723	6.8	%	176	5.9	%	2,907	2.4	%	5.6	%
2008	2,014	0.3 %	765	5.8	%	179	1.8	%	2,957	1.7	%	3.0	%
2009	1,928	-4.2 %	5 <b>777</b>	1.6	%	185	3.3	%	2,889	-2.3	%	-0.1	%
2010	1,997	3.6 %	810	4.3	%	197	6.8	%	3,004	4.0	%	5.4	%
2011	1,941	-2.8 %	860	6.3	%	207	4.7	%	3,008	0.1	%	4.3	%
2012	1,988	2.4 %	859	-0.2	%	212	2.6	%	3,059	1.7	%	3.5	%
2013	1,918	-3.5 %	904	5.3	%	217	2.5	%	3,039	-0.6	%	3.5	%
2014	1,893	-1.3 %	914	1.1	%	222	2.2	%	3,029	-0.3	%	3.6	%
2015	1,962	3.6 %	963	5.3	%	234	5.3	%	3,158	4.3	%	3.4	%
2016	2,051	4.6 %	5 1,003	4.2	%	234	0.1	%	3,288	4.1	%	3.2	%
2017	2,101	2.4 %	5 1,032	2.9	%	248	5.9	%		2.8	%	3.6	%
2018*	2,135	1.6 %	· ·		%	248	0.1	%	•	1.1	%	3.6	%
CAGR (2013-2018)	2.2 %		2.7 %			2.7 %			2.4 %				
CAGR (2008-2018)	0.6 %	)	3.1 %			3.3 %			1.5 %				

<sup>\*</sup> Provisional estimates

Source: Drewry

Tanker supply is determined by the size of the existing fleet, measured in terms of dwt. Changes in supply are influenced by a variety of factors such as the size of the existing fleet by number and ship size, the rate of deliveries of newbuildings from the vessel orderbook, and the rate of removals from the fleet through scrapping, conversion and regulatory obsolescence. Other factors, such as port congestion and vessel speeds, also influence supply.

Crude oil, products and chemicals/vegetable oils and fats are essentially carried by four different types of tankers.

Crude oil is transported in uncoated vessels, which range upwards in size from 55,000 dwt. Clean products are carried in coated tankers ranging in size from 10,000 dwt to 80,000 dwt plus and by product/chemical tankers which have the ability to carry both products and certain chemicals because they have an IMO Certificate of Fitness to Carry Bulk Liquid Chemicals. This latter category represents 'swing' ships, with the ability to move between the product and chemical sectors depending on market conditions. Finally, there is a specialist chemical fleet which is all IMO rated, and which is employed primarily in transporting chemicals and vegetable oils and fats. The pure chemical fleet represents nearly 28.0% of all tankers (based on capacity) that can carry products, but because the majority of it is trading in chemicals, it is excluded from the analysis of the fleets and orderbook.

The main types of product tanker, together with indicative vessel sizes by class, the type and average size of tanks, IMO certification and the main cargoes carried are shown in the table below. Unless otherwise specified, references in this section to "product tankers" include both non-IMO product tankers and IMO-certified product/chemical tankers.

# **Types of Product Tanker**

<b>Product Tanker Type</b>	Products		Product /Che	mical
Sub Types/Size (Dwt)	Long Range 2 (LR2)	80,000+	Long Range 1 (LRI) Medium	55-79,999
	Long Range 1 (LRI)	55-79,999	Range 2 (MR2) Medium	37-54,999
	Medium Range 2 (MR2)	37-54,999	Range 1 (MR1)	25-36,999
	Medium Range 1 (MR1) Handy	25-36,999 10-24,999	Handy	10-24,999
Average Tank Size (1)	>3,000 cbm		>3,000 cbm	
Tanks (2)	Coated/Uncoated		Coated	
IMO Certification (3)	Non IMO		IMO 2/3 & IMO 3	
Cargoes Carried (4)	Clean Products		Clean Products	
	Dirty Products		Vegetable Oils Certain chemicals	

Tankers with an average tank size below 3,000 cbm are deemed to be chemical tankers.

- (2) Type of tank coating. Coated ships includes epoxy, zinc etc, while some chemical tankers have all/part stainless steel tanks.
- (3) International Maritime Organisation ("IMO") Certificate of Fitness for the Carriage of Chemicals in Bulk.
- (4) The main cargoes carried by each ship type.

Source: Drewry

<sup>(1)</sup> Product capable tankers with an average tank size above 3,000 cubic metres (cbm) are deemed to be Product or Product/Chemical tankers.

Product tankers are employed in the market through a number of different chartering options:

A **single** or **spot voyage charter** involves the carriage of a specific amount and type of cargo on a load port to discharge port basis, subject to various cargo handling terms. Most of these charters are of a single or spot voyage nature. The cost of repositioning the ship to load the next cargo falls outside the charter and is at the cost and discretion of the owner. The owner of the vessel receives one payment derived by multiplying the tons of cargo loaded on board by the agreed upon freight rate expressed on a per cargo ton basis. The owner is responsible for the payment of all expenses including voyage, operating and capital costs of the vessel.

A **time charter** involves the use of the vessel, either for a number of months or years or in few instances, for a trip between specific delivery and redelivery positions. The charterer pays all voyage related costs. The owner of the vessel receives monthly charter hire payments on a per day basis and is responsible for the payment of all vessel-operating expenses and capital costs of the vessel.

A **contract of affreightment**, or **COA**, relates to the carriage of multiple cargoes over the same route and enables the COA holder to nominate different ships to perform individual voyages. This arrangement constitutes a number of voyage charters to carry a specified amount of cargo during the term of the COA, which usually spans a number of years. All of the ship's operating; voyage and capital costs are borne by the ship-owner. The freight rate is normally agreed on a per cargo ton basis.

A **bareboat charter** involves the use of a vessel usually over long periods ranging up to several years. All voyage related costs, including vessel fuel, or bunkers, and port dues as well as all vessel operating expenses, such as day-to-day operations, maintenance, crewing and insurance are the responsibility of the charterer. The owner of the vessel receives monthly charter hire payments on a per day basis and is responsible only for the payment of capital costs related to the vessel.

The basic structure of the products tanker shipping industry and certain major trading routes of product tankers are outlined in the following diagram.

The Product Tanker Shippin	2 Industry
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Source: Drewry

# Seaborne Trade in Products, Vegetable Oils and Bulk Liquid Chemicals

In 2018, total seaborne trade in products, vegetable oils and fats, and bulk liquid chemicals amounted to 1,281.6 million tons. The development of trade in these cargoes between 2008 and 2018 is shown in the table below. Since 2008, seaborne trade in these cargoes has increased in every year.

# Seaborne Trade in Products, Vegetable Oils & Fats and Bulk Liquid Chemicals: 2008-2018

(Million Tons)

Sector	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Products											
Fuel Oil	238.1	240.0	248.3	259.0	241.3	256.6	247.1	246.3	246.1	253.9	242.6
Gasoil/Diesel	187.3	208.4	212.1	230.0	237.6	252.2	259.0	273.7	295.2	311.4	309.8
Gasoline	124.2	126.9	136.4	147.7	146.2	148.3	149.3	165.8	179.6	184.6	188.8
Kerosene/Jet Fuel	76.2	74.3	75.5	82.1	79.6	88.3	90.2	95.6	98.3	100.1	102.6
Lubricating Oil	17.5	17.3	19.1	21.4	22.9	23.1	23.5	27.5	27.3	29.4	30.8
Naphtha	44.5	46.0	50.8	49.8	49.6	54.2	94.7	96.7	98.6	98.6	96.9
Other/Unknown	76.9	63.7	67.4	70.4	81.4	81.5	50.6	55.9	58.4	54.1	62.0
<b>Total Products</b>	764.6	776.5	809.5	860.3	858.7	904.2	914.3	961.5	1003.6	1032.0	1033.5
Vegetable Oils & Fats	56.8	59.1	61.5	63.6	68.7	70.1	72.7	79.8	75.3	81.3	79.6
Bulk Liquid Chemicals	121.9	125.5	135.6	142.6	142.9	146.5	149.1	154.1	158.8	166.5	168.5
Total	943.2	961.1	1,006.6	1,066.5	1,070.3	1,120.8	1,136.1	1,195.5	1,237.7	1,279.9	1,281.6

Source: Drewry

A prime factor driving products trades in the last few years has been developments in E&P activity in the U.S. energy sector. Horizontal drilling and hydraulic fracturing have enabled shale oil deposits in the U.S. to be developed and this has led to a steep rise in U.S. domestic oil production. Between 2008 and 2018, U.S. oil production rose from 5.0 mbpd to 10.9 mbpd. Rising crude oil production also ensured the availability of cheaper feedstocks to local refineries, and as a result, the U.S. became a major net exporter of refined products.

# U.S. Crude Oil Production and Refined Petroleum Product Exports to Latin America: Jan 2008-Jan 2019

(Million Barrels Per Day)

Source: Drewry

In a relatively short span of time, the U.S. has become the largest exporter of refined products in the world, with supplies from the U.S. Gulf Coast terminals heading to most parts of the globe. By way of illustration, the U.S. products exports to Latin America were close to 14.9 million tons in 2005, but by 2018 had grown to 84.6 million tons at a CAGR of 14.3%. This was due to strong import demand from Latin American countries and the growth in the availability of U.S. products. Most of these exports were carried by MR product tankers, which constitute about 55% of global product tanker fleet capacity and have been the mainstay of seaborne trade in refined petroleum products.

However, lower crude oil prices in 2015 and 2016 have adversely impacted U.S. shale oil producers. The U.S. crude oil production peaked at 9.6 mbpd in April 2015 and was on declining trend till September 2016. Nevertheless, the production cut by OPEC members from January 2017 came as a relief for domestic producers, and U.S. crude production is on the rise; the U.S. became the largest crude producer in September 2018. The U.S. crude production increased at a CAGR of 11.3% between 2016 and 2018. Additionally, U.S. producers pumped a record 12 mbpd in the second week of February 2019; a surge in U.S. output will further strengthen its position in the global oil market.

#### The U.S. Products Sector

Source: Drewry

The shift in the location of global oil production is also being accompanied by a shift in the location of global refinery capacity and throughput. In short, capacity and throughput are moving from the developed to the developing world. Between 2008 and 2018, refining throughput in OECD Europe and OECD Asia Oceania declined by 9.0% and 3.1% respectively, whereas throughput in OECD Americas during the same period moved up by 8.5% to reach 19.5 mbpd. Overall, total OECD refining throughput remained flat over the last decade – largely as a result of cutbacks in OECD Europe and OECD Asia Oceania. In 2018, refining throughput of OECD countries stood at 38.6 mbpd and accounted for 46.9% of global refinery throughput down from 51.4% in 2008.

#### Refinery Throughput (1) 2008-2018

('000 Barrels Per Day)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
OECD Americas	17,928	17,443	17,841	17,825	18,113	18,429	18,817	18,952	18,802	19,133	19,449
OECD Europe	13,359	12,385	12,266	11,961	11,953	11,320	11,278	13,120	12,400	12,630	12,155
OECD Asia Oceania	7,195	6,816	6,940	6,896	6,910	6,868	6,689	6,828	6,981	6,900	6,974
FSU	6,232	6,224	6,411	6,678	6,835	7,029	7,324	7,200	6,700	6,700	6,990
Non-OECD Europe	699	641	658	627	587	559	557	500	500	570	585
China	7,299	7,762	8,630	9,041	9,749	10,427	10,864	10,400	10,790	11,830	12,000
Other Asia	7,739	8,038	8,435	8,541	8,659	8,525	8,562	9,200	10,244	9,720	10,598
Latin America	5,307	5,066	4,818	4,992	4,607	4,725	4,677	4,680	4,200	4,050	3,507
Middle East	6,685	6,530	6,837	6,870	7,029	6,951	7,090	6,900	7,100	7,450	7,951
Africa	2,398	2,303	2,422	2,153	2,210	2,253	2,226	2,099	2,000	1,920	2,022
Total	74,841	73,208	75,258	75,584	76,652	77,086	78,084	79,879	79,717	80,903	82,232

<sup>(1)</sup> The difference between oil consumption and refinery throughput is accounted for by condensates, output gains; direct burning of crude oil and other non-gas liquids.

Source: Drewry

Asia (excluding China) and the Middle East added over 0.63 mbpd of refinery capacity in 2017, a substantial part of which is destined for international markets, whereas there was no material change in refining capacity in OECD America and OECD Europe. Nearly 0.60 mbpd of new refining capacity in the Middle East and another 0.24 mbpd in Asia (excluding China) came online in 2018. As a result of these developments, countries such as India and Saudi Arabia have consolidated their positions as major exporters of products. Export-oriented refineries in India and the Middle East, coupled with the closure of refining capacity in the developed world, have promoted long-haul shipments to cater to products demand.

In the products market, there has been growth in U.S. domestic oil production, which ensured greater availability of crude feedstock, rising refinery throughput and the expansion of pipeline infrastructure to make large-scale product exports feasible, particularly of middle distillates from the U.S. Gulf. Average U.S. exports of products have grown from 1.6 mbpd in 2008 to 5.1 mbpd in 2018 at a CAGR of 12.3%. Changes in the U.S., Saudi Arabian and Indian product exports from January 2008 to January 2019 are shown in the following chart.

Oil Product Exports – Major Exporters: Jan 2008-Jan 2019
(Million Barrels Per Day)
Source: Drewry
Changing Product Trades - Longer Haul Voyages
Source: Drewry
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New refining capacity of 1.7 mbpd came online in 2018 and further new refinery capacity is currently scheduled for both the Middle East and Asia from 2019 to 2023. In the period 2019 to 2023, anticipated additions to refinery capacity on a regional basis amount to 6.2 mbpd, or 6.2% of existing refinery capacity.

Planned Additions to Global Refining Capacity (1)

(Million Barrels Per Day)

(1) Assumes all announced plans go ahead as scheduled

Source: Drewry

In developed economies, such as Europe, refinery capacity is on the decline. This trend is likely to continue as refinery development plans are concentrated in areas such as Asia and the Middle East or close to oil producing centers, and majority of the planned refining capacities are export orientated. These new refineries are more competitive as they can process sour (higher sulfur) crude oil and are technically more advanced, as well as more environment friendly compared with existing European refineries. By contrast, Chinese and Indian refinery capacity has grown at faster rates than any other global regions in the last decade, owing to strong domestic oil consumption and the construction of export-orientated refineries. From 2008 to 2018, Chinese refining capacity increased by 76.3% and Indian refining capacity expanded by 65.9%.

China & India – Refining Capacity
('000 Barrels Per Day)
Capacity for 2019 to 2021 assumes all announced plans go ahead as scheduled
Source: Drewry
The trend in product imports of major product importing regions of the world from January 2008 to January 2019 is shown in the following chart.
Oil Product Imports – Major Regions: Jan 2008-Jan 2019
(Million Barrels Per Day)
Source: Drewry
On the whole, the changes that are taking place in both the volume and geographical structure of seaborne product trades are of benefit to MR product tankers, the workhorses of the industry. In addition to being the mainstay for key trade routes such as gasoline movements across the Atlantic, MR vessels have the flexibility to service a diverse range of ports and the capability to accommodate the most common parcel sizes.
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# **Product Tanker Demand**

Changes in seaborne product trades and product tanker ton-mile demand in the period 2008 to 2018 are shown in the table given below.

Seaborne Product Trade and Ton Mile Demand: 2008-2018

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2008- CAGI	
Products Trade - Million Tons Ton Miles -	764.6	776.5	809.6	860.3	858.8	904.3	914.3	961.5	1001.5	1032.0	1033.5	3.1	%
Billion Ton Miles Avg Haul Length - Miles	2,283 2,986	2,450 3,155	2,514 3,105	2,566 2,983	2,586 3,011	2,733 3,022	2,859 3,127	3,022	3,139	3,126	3,132	0.1	%
Vegetable Oils Trade - Million Tons	56.8	59.1	61.5	63.6	68.7	70.1	72.7	79.8	75.3	81.3	79.6	3.4	%
Ton Miles - Billion Ton Miles Avg Haul Length - Miles	<ul><li>244</li><li>4,306</li></ul>	250 4,223	<ul><li>263</li><li>4,279</li></ul>	255 4,008	282 4,107	297 4,240	298 4,104	330 4,138	312 4,141	337 4,143	324 4,069	2.9	%
Chemicals Trade - Million Tons	121.9	125.5	135.6	142.6	142.9	146.5	149.4	154.1	158.8	166.5	168.5	3.3	%
Ton Miles - Billion Ton Miles Avg Haul Length -	431 3,535	438 3,491	475 3,500	501 3,512	493 3,453	490 3,341	497 3,323	521 3,380	555 3,496	583 3,500	593 3,520	3.2 0.0	% %

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Miles

Total													
Trade -													
Million	943	961	1,007	1,067	1,070	1,121	1,136	1,196	1,236	1,280	1,282	3.1	%
Tons													
Ton Miles -													
Billion Ton	2,959	3,138	3,252	3,322	3,361	3,519	3,654	3,873	4,005	4,046	4,049	3.2	%
Miles													
Avg Haul													
Length -	3,137	3,265	3,230	3,115	3,140	3,140	3,215	3,239	3,242	3,161	3,159	0.1	%
Miles													

Source: Drewry

Tanker demand, expressed in terms of ton-miles, can be calculated by multiplying the volume of products carried on the loaded leg (measured in metric tons) by the distance over which it is carried (measured in miles). Based on the ton-mile approach, demand in the product sector increased at a CAGR of 3.2% between 2008 and 2018. In effect, changes in the geographical pattern of product movements have led to an increase in average voyage lengths. For example, in 2008, the average loaded voyage length in the product sector was 2,986 miles, but by 2015, the average voyage length had increased to around 3,141 miles. However, because of growth in intra-Asian products trades, average voyage lengths dropped to 3,031 miles in 2018. The changes that have taken place in total product tanker trade and ton-mile demand between 2008 and 2018 are illustrated in the chart below. Continued growth at these historical levels is feasible, but will be subject to global economic growth and a continuation of recent trade and refinery trends.

Product Tanker - Seaborne Trade and Vessel Demand: 2008-2018

<sup>\*</sup> Provisional estimates

Source: Drewry

Changes in the volume of seaborne trade on the main product routes in the period 2008-2018 are shown in the table below. The data in the table substantiates the previous remarks regarding the expansion of export trades from countries such as the US, China and India.

Seaborne Product Trades: 2008-2018

('000 Tons)

Exporter	Importer	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
India	Brazil	1,479	943	2,432	3,079	3,456	2,700	5,149	1,519	294	50	24
	Saudi Arabia	1,417	1,725	906	1,395	4,624	7,050	7,828	3,771	1,092	660	684
	Singapore United	5,713	4,013	7,961	9,865	10,882	8,547	7,426	6,223	9,389	13,577	12,03
	Arab Emirates	7,456	5,563	7,885	7,134	7,046	4,534	6,940	6,959	8,095	7,985	8,991
	United States Total	292	180	952	1,689	1,377	3,507	4,585	3,428	3,655	3,555	4,516
Total named routes	named	16,356	12,424	20,136	23,161	27,384	26,337	31,929	21,900	22,524	25,827	26,25
												1
Russia	Germany Netherlands Singapore	618 12,148 2,139	162 13,649 3,828	437 16,325 3,769	340 15,741 1,999	662 18,350 1,819	1,609 18,127 836	3,729 19,107 5,979	3,310 20,244 5,619	2,453 16,961 5,726	2,289 14,619 7,557	2,509 13,673 5,207
Russia	Netherlands Singapore South	12,148	13,649	16,325	15,741	18,350	18,127	19,107	20,244	16,961	14,619	13,67
Russia	Netherlands Singapore South Korea Turkey	12,148 2,139	13,649 3,828	16,325 3,769	15,741 1,999	18,350 1,819	18,127 836	19,107 5,979	20,244 5,619	16,961 5,726	14,619 7,557	13,67 5,207
Russia	Netherlands Singapore South Korea Turkey United States	12,148 2,139 647	13,649 3,828 1,008	16,325 3,769 700	15,741 1,999 852	18,350 1,819 1,419	18,127 836 2,946	19,107 5,979 6,156	20,244 5,619 7,445	16,961 5,726 3,980	14,619 7,557 3,504	13,672 5,207 4,671
Russia	Netherlands Singapore South Korea Turkey United	12,148 2,139 647 5,964	13,649 3,828 1,008 8,332	16,325 3,769 700 10,719	15,741 1,999 852 8,944	18,350 1,819 1,419 9,081	18,127 836 2,946 6,539	19,107 5,979 6,156 5,041	20,244 5,619 7,445 6,102	16,961 5,726 3,980 6,571	14,619 7,557 3,504 8,176	13,677 5,207 4,671 10,177 7,226
Russia Saudi Arabia	Netherlands Singapore South Korea Turkey United States Total named	12,148 2,139 647 5,964 4,927	13,649 3,828 1,008 8,332 6,468	16,325 3,769 700 10,719 3,784	15,741 1,999 852 8,944 6,073	18,350 1,819 1,419 9,081 4,491	18,127 836 2,946 6,539 4,469	19,107 5,979 6,156 5,041 5,953	20,244 5,619 7,445 6,102 8,426	16,961 5,726 3,980 6,571 12,102	14,619 7,557 3,504 8,176 8,506	13,67; 5,207 4,671 10,17;

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United
Arab
Emirates

Emirates												
	Total named routes	4,003	6,774	5,914	7,715	8,300	9,922	11,741	10,809	9,856	10,795	9,748
United States	Brazil	984	1,268	3,434	4,195	5,628	4,891	6,182	4,848	8,558	13,590	10,73
	Chile Colombia Ecuador France Netherlands Panama Singapore Total named routes	3,994 1,106 678 893 6,452 2,597 3,853	3,307 1,893 1,712 1,106 9,258 3,159 5,729 27,433	3,136 3,242 2,873 982 7,659 4,135 6,119 31,580	5,356 3,159 2,527 2,027 10,552 4,917 5,954 38,688	6,079 3,756 2,607 3,186 10,926 5,932 5,786 43,899	5,634 5,915 3,442 4,756 10,723 6,251 6,800 48,413	5,727 7,384 4,237 4,862 9,134 6,819 5,703	6,124 8,998 4,618 4,747 8,811 6,459 4,694	6,076 6,928 3,908 4,063 7,664 4,725 4,785	6,265 4,667 4,018 3,184 6,113 5,202 6,056 49,095	6,565 3,927 3,931 2,486 7,001 6,003 5,658
China	Singapore Panama South Korea Vietnam Indonesia Australia Total named routes	1,579 3,750 971 572 826 106 7,804	3,893 3,664 750 2,347 2,002 159 12,814	4,312 4,371 883 1,663 2,638 88	1,811 5,321 1,133 1,247 2,865 104 12,480	1,961 5,019 1,328 1,272 2,131 196 11,908	3,783 4,144 1,539 1,525 2,594 147 13,732	4,160 3,471 1,813 1,934 2,096 599 14,073	6,850 3,276 2,261 1,902 1,212 1,453 16,954	2,472 936 3,223 10,503 2,017 1,488 20,640	1,676 1,003 3,322 12,297 3,295 1,238 22,833	1,803 320 2,785 12,546 1,235 1,607 20,296

<sup>\*</sup> Provisional estimates

Source: Drewry

#### Product Tankers –Vessel Types

To recap, within the context of this review the product capable fleet consists of product tankers and product/chemical tankers, and as such, pure chemical tankers are excluded from the analysis. The product capable fleet can be further divided into the five main size sectors which are shown in the table below.

# **Product Tanker Types and Main Uses**

Class of Tanker	Cargo Capacity (Dwt)	Typical Use
Long Range 2 (LR2)	80,000 +	Short- to medium-haul crude oil and refined petroleum products transportations from the North Sea or West Africa to Europe or the East Coast of the United States, from the Middle East Gulf to the Pacific Rim.
Long Range 1 (LR1)	55,000 - 79,999	Short- to medium-haul crude oil and refined petroleum products transportations worldwide, mostly on regional trade routes.
Medium Range 2 (MR2)	37,000-54,999	Flexible vessels involved in medium-haul petroleum products trades both in the Atlantic Basin and the growing intra-Asian/Middle East/ISC trades.
Medium Range 1 (MR1)	25,000-36,999	
Small	1,000 - 24,999	Short-haul of mostly refined petroleum products worldwide, usually on local or regional trade routes.

Source: Drewry

Long Range (LR) product tankers are normally classed as either LR1 or LR2 ships depending on their size. They are employed on various routes, but are less flexible than Medium Range ("MR") tankers as many ports do not have the facilities to accommodate larger ships. MR tankers carry the majority of products transported by sea as their size allows the greatest flexibility on trade routes and port access. The MR fleet can be divided into MR1, typically sized 25,000 dwt to 36,999 dwt, and MR2 typically sized 37,000 dwt to 54,999 dwt. The smallest product tankers, often referred to as "Handies", are largely deployed on short-haul routes.

# The Product Tanker Fleet

As of February 28, 2019, the product tanker fleet comprised of 2,734 vessels with a combined capacity of 148.9 million dwt. The product tanker fleet by vessel type and size as on February 28, 2019, is shown in the table given below.

# The Product Tanker Fleet (1)

Total Product Fleet	Deadweight Tons (Dwt)	Number of Vessels	% of Fleet	Capacity '000 Dwt	% of Fleet
Long Range 2 (LR2) Long Range 1 (LR1) Medium Range 2 (MR2) Medium Range 1 (MR1) Handy Total	80,000+ 55-79,999 37-54,999 25-36,999 10-24,999	329 369 1,662 135 239 2,734	12.0 13.5 60.8 4.9 8.7 100.0	36,479 27,047 77,391 4,509 3,546 148,972	24.5 18.2 51.9 3.0 2.4 100.0
Of Which: Product Tankers	Deadweight Tons (Dwt)	Number of Vessels	% of Fleet	Capacity '000 Dwt	
Long Range 2 (LR2) Long Range 1 (LRI) Medium Range 2 (MR2) Medium Range 1 (MR1) Handy Total	80,000+ 55-79,999 37-54,999 25-36,999 10-24,999	326 331 458 93 238 1,446	22.5 22.9 31.7 6.4 16.5 100.0	36,181 24,289 21,067 3,043 3,521 88,101	41.1 27.6 23.9 3.5 4.0 100.0
Product/Chemical	Deadweight Tons (Dwt)	Number of Vessels	% of Fleet	Capacity '000 Dwt	
Long Range 2 (LR2) Long Range 1 (LRI) Medium Range 2 (MR2) Medium Range 1 (MR1) Handy	80,000+ 55-79,999 37-54,999 25-36,999 10-24,999	3 38 1,204 42 1	0.2 3.0 93.5 3.3 0.1	298 2,758 56,324 1,467 25	0.5 4.5 92.5 2.4 0.0

Total 1,288 100.0 60,871 100.0

(1) As of February 28, 2019. Excludes U.S. flag vessels

Source: Drewry

Future supply will be affected by the size of the newbuilding orderbook. As of February 28, 2019, there were 179 product and product/chemical tankers on order, equivalent to 6.5% of the existing fleet by units and 7.0% of the existing fleet by dwt. The MR2 orderbook was equivalent to 7.1% of the existing MR2 fleet by units and 7.4% by dwt. The existing orderbook to fleet ratio for product tankers is substantially lower than ~25% in 2009 and ~15% in 2016. A total of 52 vessels (including 43 MR2) were ordered in the last 12 months ended February 28, 2019.

# Product Tanker Orderbook (1) and Scheduled Year of Delivery

Total Product Fleet	Scheduled Year of Delivery										
	Deadweight	Order	Orderbook		% Fleet 2019		2020		C	2021+	
Vessel Size	Tons (Dwt)	No	000 Dwt	No	Dwt	No	000 Dwt	No	000 Dwt	No	000 Dwt
Long Range 2 (LR2)	80,000+	31	3,388	9.4	9.3	13	1,402	8	842	10	1,144
Long Range 1 (LR1)	55-79,999	10	751	2.7	2.8	6	449	4	302	0	0
Medium Range 2 (MR2)	37-54,999	118	5,745	7.1	7.4	74	3,574	40	1,971	4	200
Medium Range 1 (MR1)	25-36,999	6	203	4.4	4.5	5	170	1	33	0	0
Handy	10-24,999	14	267	5.9	7.5	7	116	7	151	0	0
Total		179	10,354	6.5	7.0	105	5,711	60	3,299	14	1,344

# Of Which:

Product Tankers	Deadweight	Orderbook		% Fleet 2		2019	2019		2020		2021+	
	Tons (Dwt)	No	000 Dwt	No	Dwt	No	000 Dwt	No	000 Dwt	No	000 Dwt	
Long Range 2 (LR2)	80,000+	31	3,388	9.5	9.4	13	1,402	8	842	10	1,144	
Long Range 1 (LRI)	55-79,999	10	751	3.0	3.1	6	449	4	302	0	0	
Medium Range 2 (MR2)	37-54,999	6	297	1.3	1.4	1	45	5	252	0	0	
Medium Range 1 (MR1)	25-36,999	1	33	1.1	1.1	0	0	1	33	0	0	
Handy	10-24,999	13	243	5.5	6.9	6	92	7	151	0	0	
Total		61	4,712	4.2	5.3	26	1,988	25	1,580	10	1,144	

Product/Chemical	Deadweight	Orderbook		% Fleet 2019		9 202		)	2021+		
	Tons	No	000	No	Durt	No	000	No	000	No	000
	(Dwt)	NO	Dwt	NO	Dwt No I		Dwt	INO	Dwt	Dwt	
Long Range 2 (LR2)	80,000+	0	0	0.0	0.0	0	0	0	0	0	0
Long Range 1 (LRI)	55-79,999	0	0	0.0	0.0	0	0	0	0	0	0
Medium Range 2 (MR2)	37-54,999	112	5,448	9.3	9.7	73	3,529	35	1,719	4	200
Medium Range 1 (MR1)	25-36,999	5	170	11.9	11.6	5	170	0	0	0	0
Handy	10-24,999	1	24	100.0	97.3	1	24	0	0	0	0
Total		118	5,642	9.2	9.3	79	3,723	35	1,719	4	200

<sup>(1)</sup> As of February 28, 2019. Excludes U.S. flag vessels

Source: Drewry

Based on the total orderbook and scheduled deliveries as of February 28, 2019, nearly 5.7 million dwt is expected to be delivered in the next 10 months of 2019, 3.3 million dwt in 2020 and 1.3 million dwt in 2021 and beyond. Nearly 88 newbuild MR2 vessels with an aggregate capacity of 4.24 million dwt are expected to join the global product tanker fleet in 2019. In recent years, however, the orderbook has been affected by the non-delivery of vessels (sometimes referred to as "slippage"), which in certain years has been as high as 35% of the scheduled deliveries. In 2018, the newbuild deliveries of MR2 vessels recorded a slippage of 17.9%. Some of this slippage resulted from delays, either through mutual agreement or through shipyard problems, while some were due to vessel cancellations. Slippage is likely to remain an issue going forward and, as such, it will have a moderating effect on product tanker fleet growth in over next two years.

Tanker supply is also affected by vessel scrapping or demolition and the removal of vessels through loss and conversion. As a product tanker ages, vessel owners often conclude that it is more economical to scrap a vessel that has exhausted its useful life than to upgrade the vessel to maintain its "in-class" status. Often, particularly when tankers reach approximately 25 years of age (less in the case of larger vessels), the costs of conducting the class survey and performing required repairs become economically inefficient. Nearly 51 product tankers with an aggregate capacity of 2.5 million dwt were scrapped in 2018, which is the highest since 2011. The average age of the product and product/chemical fleet was 11.0 years as of February 28, 2019. The age profile is shown in the following table.

Product and Product/Chemical Fleet – Age Profilé<sup>1)</sup>

Product	< 5 Yrs		5-10 Yrs	)			15-20 Yrs		20-2: Yrs	5	25+ Yrs		Average Age - Yrs
10-24,999 Dwt	8	%	17	%	18	%	13	%	13	%	31	%	19.5
25-36,999 Dwt	2	%	13	%	18	%	30	%	17	%	19	%	18.8
37-54,999 Dwt	1	%	28	%	37	%	22	%	8	%	5	%	13.8
55-79,999 Dwt	14	%	28	%	48	%	8	%	1	%	0	%	10.1
80,000+ Dwt	41	%	26	%	22	%	6	%	4	%	0	%	7.6

Product/Chemical	< 5 Yrs		5-10 Yrs		10-15 Yrs	5	15-20 Yrs	)	20-2: Yrs	5	25+ Yrs		Average Age - Yrs
10-24,999 Dwt	0	%	0	%	0	%	100	%	0	%	0	%	19.0
25-36,999 Dwt	5	%	14	%	31	%	50	%	0	%	0	%	14.1
37-54,999 Dwt	31	%	24	%	33	%	9	%	3	%	0	%	8.8
55-79,999 Dwt	26	%	34	%	34	%	5	%	0	%	0	%	7.8
80,000+ Dwt	0	%	0	%	100	%	0	%	0	%	0	%	14.3

(1) Based on February 28, 2019 fleet

Source: Drewry

The age profile data indicates that the more sophisticated product/chemical fleet is generally younger than its straight product tanker counterpart. The average age of MR1 and MR2 product tankers is 18.8 and 13.8 years respectively, whereas for product/chemical tankers, the average age of MR1 and MR2 tankers are 14.1 and 8.8 years, respectively. As on February 28, 2019 the average age of global MR2 fleet is 10.2 years. Nearly 37% of the MR1 product tanker fleet is over 20 years of age, and for MR2s, the equivalent figure is 13%. In the product/chemical fleet, there are no MR1 ships over 20 years of age and nearly 3.0% of MR2s are aged 20 years or more. Overall, 5.6% of the current

MR2 fleet or 93 vessels are aged 20 years or more.

In addition to vessel age, demolitions are also influenced by freight markets. During periods of high freight rates, scrapping activity will decline and the opposite will occur when freight rates are low. This is evident from the chart below, which shows the trend in product tanker demolitions from 2011 to 2018. High levels of demolitions were seen from 2011 to 2014, and this was also a key factor that facilitated the recovery of product tanker freight rates. Scrapping levels declined in 2015 and 2016 due to a stronger freight market and the fact that the age profile of the product fleet was reduced by the influx of newbuildings. In 2017, weak vessel earnings led to increased scrapping activity, and vessels with combined capacity of 1.5 million dwt were sent to the scrapyards, with 13 MR2s demolished. A depressed freight market has stimulated even greater demolitions and an aggregate capacity of 2.5 million dwt (including 21 MR2 vessels with combined capacity of 0.942 million dwt) were scrapped in 2018.

Product Tanker Scrapping: 2011-2018

('000 Dwt)

Source: Drewry

Two other important factors are likely to affect product tanker supply in the future. The first is the requirement to retrofit Ballast Water Management Systems (BWTS) to existing vessels. In February 2004, the IMO adopted the International Convention for the Control and Management of Ships' Ballast Water and Sediments. The IMO Ballast Water Management Convention (the "BWM Convention") contains an environmentally protective numeric standard for the treatment of a ship's ballast water before it is discharged. This standard, detailed in Regulation 'D-2' of the BWM Convention, sets out the numbers of organisms allowed in specific volumes of treated discharge water. The IMO 'D-2' standard is also the standard that has been adopted by the U.S. Coast Guard's ballast water regulations and the U.S. EPA's Vessel General Permit. The BWM Convention also contains an implementation schedule for the installation of IMO member state type approved treatment systems in existing ships and in new vessels, requirements for the development of vessel ballast water management plans, requirements for the safe removal of sediments from ballast tanks, and guidelines for the testing and type approval of ballast water treatment technologies. In July 2017, the IMO extended the regulatory requirement of compliance to the BWM Convention from September 8, 2017 to September 8, 2019. Vessels trading internationally will have to comply with the BWM Convention upon their next special survey after that date, and for an MR2 tanker, the retrofit cost could be as much as \$1.0 million per vessel, including labor. Expenditure of this kind will be another factor impacting the decision to scrap older vessels once the BWM convention comes into force in September 2019.

The second factor that is likely to impact future vessel supply is the drive to introduce low sulfur fuels. Heavy fuel oil (HFO) has been the main fuel of the shipping industry since many years. It is relatively inexpensive and widely available, but it is 'dirty' from an environmental point of view. The sulfur content of HFO is extremely high and it is the reason that maritime shipping accounts for 8% of global emissions of sulfur dioxide ("SO2"), an important source for acid rain, as well as respiratory diseases. In some port cities, such as Hong Kong, shipping is the largest single source of SO2 emissions, as well as emissions of particulate matter (PM), which are directly tied to the sulfur content of the fuel. One estimate suggests that PM emissions from maritime shipping led to 87,000 premature deaths worldwide in 2012.

The implementation of IMO's 2020 sulfur cap regulation will require all ships to burn fuel with less than 0.5% sulfur content, compared with a present limit of 3.5%. As on February 28, 2019 the worldwide commercial fleet consists of 95,821 vessels with total capacity of 1,347.7 million GT. For shipowners, the principal options are: (i) Burn alternative bunker fuels, such as Marine Gas Oil and Low Sulfur Fuel Oil (LSFO), (ii) Retrofit existing ships with an Exhaust Gas Cleaning System (EGCS) also known as scrubbers, which will allow the continued use of fuels with

higher sulfur content and (iii) For those owners ordering newbuildings, there is also the option to order LNG dual-fueled vessels, but with a significant price premium. Vessel owners might prefer to demolish the older vessels over installing scrubbers, a first-hand estimate suggest that 29 MR2 vessels are scheduled to face their fourth special survey in the remaining 10 months of 2019. As on February 28, 2019 there were 122 MR2 vessels which were 19 years of age or older and account for 7.3% of the global MR2 fleet.

At the moment, the ramifications of the IMO's 2020 regulations are not clear as refineries are not revealing their upgrading capacity expansion plans to cope with the expected surge in demand for low-sulphur bunker fuel. However, as there is a high chance of tight supply in LSFO, it is likely to lead to a surge in demand for low-sulphur marine gas oil (LSMGO). Similarly, the high cost of bunkers is likely to force the shipowners not opting for scrubbers to resort to slow steaming, which will curb vessel supply.

The IMO, the governing body of international shipping, has made a decisive effort to diversify the industry away from HFO into cleaner fuels with less harmful effects on the environment and human health. Effective in 2015, ships operating within the Emission Control Areas ("ECAs") covering the Economic Exclusive Zone of North America, the Baltic Sea, the North Sea, and the English Channel are required to use marine gas oil with allowable sulfur content up to 0.1%. The IMO's 2020 regulations stipulates that from January 1, 2020, ships sailing outside ECAs will switch to an alternate fuel with permitted sulfur content up to 0.5%. This will create openings for a variety of new fuels, or major capital expenditures for costly scrubbers to be retrofitted on existing ships, and as such, it will be another factor hastening the demise of older ships. Within the context of the wider market, increased vessel scrapping is a positive development as it helps to counterbalance new ship deliveries and moderates the fleet growth.

The Product Tanker Charter Market

The product tanker charter market is fragmented and highly competitive. Competition is based primarily on the offered charter rate, the location and technical specification of the vessel. Similarly, the reputation of the vessel and its manager also play a major role in the product tanker market than other shipping sectors. Typically, the agreed terms are based on standard industry charter parties prepared to streamline the negotiation and documentation processes.

The major charterers of product tanker tonnage are oil companies, both private and state-controlled, oil traders and refiners, and in some cases independent ship owners. The oil companies, in particular, have their own predefined set of procedures for vetting and approving tonnage suitable for charter. Oil companies' vetting procedures are generally more stringent than others, especially when vessels are being taken on time charter. Typically, the vetting procedures will include periodic assessments of the vessel owner's office set-up and management, the setting of key performance indicators (KPIs), and examination of crew retention rates and appraisal of the financial accounts of the company providing the ship for charter.

**Product Tanker Charter Rates** 

Worldscale is the tanker shipping industry's standard reference for calculating spot charter rates. Worldscale provides the flexibility required for the oil trade. Products are a fairly homogenous commodity as it does not vary significantly in quality and it is relatively easy to transport by a variety of methods. These attributes, combined with the volatility

of the world oil markets, means that a products cargo may be bought and sold many times while at sea, and therefore, the cargo owner requires greater flexibility in the choice of discharge options. If tanker fixtures were priced in the same way as dry cargo fixtures, this would involve the shipowner calculating separate individual charter rates for a wide variety of discharge points. Worldscale provides a set of nominal rates designed to provide roughly the same daily income irrespective of the discharge point. Time charter equivalent (TCE) is the measurement that describes the earnings potential of any spot market voyage based on the quoted Worldscale rate. As described above, the Worldscale rate is set and can then be converted into dollars per cargo ton. A voyage calculation is then performed which removes all expenses (port costs, bunkers and commission) from the gross revenue, resulting in a net revenue which is then divided by the total voyage days, which includes the days from discharge of the prior cargo until discharge of the cargo for which the charter is paid (at sea and/or in port), to give a daily TCE rate.

The supply and demand for product tanker capacity influences product tanker charter hire rates and vessel values. In general, time charter rates are less volatile than spot rates as they reflect the fact that the vessel is fixed for a longer period. In the spot market, rates will reflect the immediate underlying conditions in vessel supply and demand and are thus more prone to volatility. The chart and table below illustrate changes in the monthly average TCE rates for product tankers in the period from January 2008 to January 2019 for selected representative routes.

# **Product Tanker Time Charter Equivalent (TCE) Rates: Jan 2008-Jan 2019** (US\$/Day – Period Averages)

Source: Drewry

# **Time Charter Equivalent (TCE) Rates: 2008-February 2019 (1)** (US\$/Day – Period Averages)

Year	MR1	MR2	LR1	LR2
Period Average	Med-Med	Caribs-USAC	AG-Japan	AG-Japan
1 CHOU Average	(Clean)	Carios-OSAC	(Clean)	(Clean)
2008	19,600	23,358	28,800	n/a
2009	5,417	8,575	9,267	n/a
2010	8,908	9,875	6,608	11,580
2011	6,750	8,442	2,408	7,515
2012	8,117	7,875	4,800	8,246
2013	9,375	9,142	5,417	8,490
2014	12,125	6,875	8,858	14,283
2015	21,050	20,133	21,742	28,673
2016	11,633	13,200	12,142	14,858
2017	10,386	11,575	7,225	7,936
2018	10,006	13,133	8,002	9,411
Feb-19	12,864	14,000	11,331	18,106
2008-2018				
Averages	11,215	12,017	10,479	12,339
Low	1,600	1,100	-3,800	-1,252
High	32,400	32,400	51,600	49,945

<sup>(1)</sup> TCE rates are based on normal sailing speeds/consumption. In weak freight markets this can theoretically lead to negative rates, but in most cases, this is avoided by reducing sailing speeds and fuel consumption.

Source: Drewry

After a period of favourable market conditions between 2004 and 2008, demand for products fell as the world economy went into recession in the latter half of 2008 and there was a negative impact on product tanker demand. With supply at the same time increasing at a fast pace, falling utilization levels pushed tanker charter rates downwards in 2009. The product tanker market continued to remain weak on account of surge in newbulding deliveries and as a result shipowners faced a period of suppressed vessel earning between 2009 and 2014.

Charter rates in the tanker sector started to improve in the second half of 2014 as result of low growth in vessel supply and rising vessel demand. In the products sector, a number of other factors combined to push up rates, including:

Falling crude oil prices
Increased trade due to higher stocking activity and improved demand for oil products
Longer voyage distances because of refining capacity additions in Asia
Product tankers also carrying crude encouraged by firm charter rates for dirty tankers
Lower bunker prices contributing to higher net earnings
Freight rates remained firm throughout 2015 and this led to higher revenue and improved profitability for ship-owners

However, by early 2016 product tanker charter rates were on decline as newbuilding orders placed in 2013-2015 led to a sharp increase in product tanker supply in 2016. Moreover, high levels of newbuilding deliveries of product and product/chemical tankers in 2017 outpaced demand growth and TCE rates declined accordingly. The market remained weak through the fall of 2018 before reflecting signs of improvement in vessel earnings in the latter months of the year. Time charter rates have followed a similar trend to spot market rates. The trend in one- year period average time charter (TC) rates for product tankers from January 2008 to January 2019 are shown in the chart and table given below.

Product Tanker One Year Time Charter Rates: 2008- Jan 2019

(US\$ Per Day – Period Averages)

Source: Drewry

One Year Time Charter Rates: 2008-February 2019

(US\$ Per Day – Period Averages)

Year	MR1	MR2	LR1	LR2		
<b>Period Average</b>	IVIKI	MIKZ	LKI	LK2		
2008	21,438	23,092	23,429	28,525		
2009	13,675	14,850	16,338	18,617		
2010	11,038	12,388	14,608	16,333		
2011	12,208	13,633	13,767	14,758		
2012	12,013	13,325	13,129	13,263		
2013	12,833	14,246	13,708	14,488		
2014	12,938	14,438	15,188	15,708		
2015	14,958	17,271	19,333	21,688		
2016	13,833	15,125	17,000	22,063		
2017	11,458	13,188	12,979	15,625		
2018	11,646	13,133	12,938	15,125		
Feb-19	12,750	13,500	14,500	18,750		
2008-2018						
Averages	13,458	14,972	15,674	17,836		
Low	9,700	10,800	12,500	12,500		
High	22,500	25,000	25,000	30,250		

Source: Drewry

During weak freight markets owners often use slow steaming to reduce bunker consumption, but the use of triangulation voyage can help to bolster earnings. Triangulation in effect reduces the amount of time a vessel will spend sailing in ballast (i.e., empty) and seeks to maximize the amount of time the vessel is on a revenue-generating voyage. The map below indicates how triangulation works for a typical MR tanker.

Typical MR Triangulation in the Atlantic Basin

Source: Drewry

**Eco Ships** 

Shipbuilders have designed and built ships that use less fuel while carrying the same amount of cargo as an existing ship. These vessels are referred to in the industry as "eco" ships. In addition, an eco-ship has a number of technical innovations designed to reduce emissions. Such vessels are a comparatively new development, with the first designs appearing in 2012 and are typically called "eco-efficient" tankers.

A newbuild eco-ship has an optimized hull form and a fuel-efficient engine, which will reduce fuel consumption. Existing ships can also reduce fuel consumption by lowering sailing speeds, but in practice, this only happens when markets are substantially over-supplied and bunker prices are high. Other options for existing ships to reduce fuel consumption include retrofitting equipment such as applying low friction paint or installing Mewis ducts (which maximizes propeller thrust) and a rudder bulb or other similar features (vessels with such features are typically called "eco-modified" tankers).

Size is important in evaluating the relative benefits of eco vessels as smaller ships spend a greater proportion of their trading year in port, where there is little economic benefit between an eco-design and an older or "standard" tanker without added or retrofitted fuel consumption reduction features. Shipbuilders do not provide warranted performance data for eco-ships, but the experience of vessels delivered to date appears to suggest that fuel savings of about 15% over standard tankers are achievable under normal sailings speeds. For an MR2 product tanker, the difference in daily fuel consumption between an eco and a non-eco ship is approximately 15% lower fuel consumption per day, while sailing at design speeds. It also seems to be the case that the first eco ships that were delivered in 2012 are less sophisticated in design than ships delivered post-2015. The eco-designed MR2 vessels could command a premium of \$1,000/day to 1,500/day over non eco-designed counterparts in time charter market.

#### Newbuilding Prices and Second-hand Values

Vessels are constructed at shipyards of varying size and technical sophistication. Drybulk carriers are generally considered to be the least technically sophisticated vessels to construct, with oil and product tankers, container vessels and LNG carriers entailing a much higher degree of technical sophistication. The actual construction of a vessel can take place in two years and can be sub-divided into five stages: contract signing, steel cutting, keel laying, launching and delivery. The amount of time between signing a newbuilding contract and the date of delivery is usually between 20-24 months, but in times of high shipbuilding demand, it can extend up to three years.

The table which follow illustrate the trend in newbuilding ("NB") prices and second-hand ("SH") values (5 years old and 10 years old) for an MR2 product and product/chemical tanker.

MR2 Product & Product/Chemical Tanker

Newbuilding Price & Second-hand Value: 2008-February 2019

(US\$ Million)

	MR2						
		MD D '	SH	arr D :	SH	SH Price	
End Year	NB Price	NB Price	Price	SH Price	Price	- 10 Yrs Average	
		Average	- 5	Average	- 10		
	11100	08-18	Yrs	08-18	Yrs	08-18	
			Old		Old	00 10	
2008	46.5	36.9	42.0	28.6	34.0	20.2	
2009	36.0	36.9	24.0	28.6	17.0	20.2	
2010	36.0	36.9	24.0	28.6	18.0	20.2	
2011	36.0	36.9	27.0	28.6	18.0	20.2	
2012	33.0	36.9	24.0	28.6	15.0	20.2	
2013	35.0	36.9	29.0	28.6	19.0	20.2	
2014	37.0	36.9	24.0	28.6	16.0	20.2	
2015	36.0	36.9	27.0	28.6	19.0	20.2	
2016	32.0	36.9	22.0	28.6	15.0	20.2	
2017	33.0	36.9	24.0	28.6	16.0	20.2	
2018	36.0	36.9	27.0	28.6	18.0	20.2	
Feb-19	36.0	36.9	28.0	28.6	18.0	20.2	

Note: Newbuilding prices prior to 2016 and second hand prices are for Tier II vessels, Newbuilding prices from 2016 are for Tier III vessels. Additionally scrubber installation on an MR2 vessel will be in the range of \$1.0 to 1.5 million

Source: Drewry

Newbuilding prices increased significantly between 2003 and 2007 primarily as a result of increased tanker demand. Thereafter, prices weakened in the face of a depressed freight market and lower levels of new ordering. In late 2013, prices started to recover and they continued to edge up slowly during 2014 before falling marginally in late 2015. Moreover, newbuilding prices fell further in 2016 because of excess capacity available at shipyards accompanied with low steel prices. New orders declined on account of diminishing earning potential of oil tankers, and mandatory compliance to Tier III emission for ships ordered on or after January 1, 2016, as well as owners' limited access to cost-effective capital. However, newbuild prices increased in the range of 5 to 15% over last two years mainly on the back of increased steel prices and improved bargaining power of shipyards.

The IMO's Tier III norms aims to reduce nitrogen oxides ("NOx") emission by approximately 70% compared with current Tier II regulations. The implementation of Tier III emission norms apply to vessels in North America, the Caribbean, the Baltic Sea, the North Sea, and all future NOx Emission Control Areas: any vessel that might pass through must comply. The shipowners have to adopt Selective Catalytic Reduction ("SCR") to comply with Tier III emission norms. The IMO stipulates that all vessels ordered on or after January 1, 2016 must have SCR installed on it.

Second-hand values primarily, albeit with a lag, reflect prevailing and expected charter rates. During extended periods of high charter rates vessel values tend to appreciate and vice versa. However, vessel values are also influenced by other factors, including the age of the vessel. Prices for young vessels, those approximately up to five years old, are also influenced by newbuilding prices while prices for old vessels, near the end of their useful economic life, those approximately at or in excess of 25 years, are influenced by the value of scrap steel. In addition, values for younger vessels tend to fluctuate less on a percentage basis than values for older vessels. This is attributed to the finite useful economic life of older vessels which makes the value of younger vessels, commensurate with longer remaining economic lives, less susceptible to the level of prevailing and expected charter rates in the short term.

Vessel values are determined on a daily basis in the sale and purchase ("S&P") market, where vessels are sold and bought through specialized sale and purchase brokers who regularly report these transactions to the market. The sale and purchase market for product tankers is transparent and quite liquid, with a large number of vessels changing hands on a regular basis.

In the period 2005 to 2007, second-hand values of modern tankers rose substantially as a result of the underlying trend in freight rates and newbuilding prices. At times, during the height of the boom, values for modern second-hand tankers exceeded newbuilding prices. However, the downturn in tanker charter rates in the second half of 2008 had an immediate and adverse impact on second-hand values as the tables indicate. There was a brief rally in values in late 2010/early 2011, but this proved to be short-lived, and thereafter, prices continued to decline until the middle of 2013.

In late 2013, prices for all modern tankers increased as a result of improvement in freight rates and positive market sentiment and further gains were recorded in 2014 and 2015. However, in 2016, second-hand prices saw a double-digit decline on account of weakening charter rates. For illustration, the second-hand price of a five-year old MR 2 tanker fell by 18.5% from \$27.0 million at end-2015 to \$22.0 million by end-2016. However, the market saw increased demand for modern second-hand vessels in 2017-18, in anticipation of a recovery in the freight market and buyers trying to take advantage of historically low asset prices. As such, second-hand modern product tanker prices showed a rising trend in the last two years. For example, the second-hand price of a five-year old MR2 increased by 27.3% since December 2016, and as of February 28, 2019, five-year old MR2 vessels were changing hands at \$28 million. The second-hand price for 5 year old MR2 vessels from January 2018 reflects the asset values of first generation Eco-efficient MR2 vessels.

Environmental and Other Regulations in the Shipping Industry

Government regulation and laws significantly affect the ownership and operation of our fleet. We are subject to international conventions and treaties, national, state and local laws and regulations in force in the countries in which our vessels may operate or are registered relating to safety and health and environmental protection including the storage, handling, emission, transportation and discharge of hazardous and non-hazardous materials, and the remediation of contamination and liability for damage to natural resources. Compliance with such laws, regulations

and other requirements entails significant expense, including vessel modifications and implementation of certain operating procedures.

A variety of government and private entities subject our vessels to both scheduled and unscheduled inspections. These entities include the local port authorities (applicable national authorities such as the United States Coast Guard ("USCG"), harbor master or equivalent), classification societies, flag state administrations (countries of registry) and charterers, particularly terminal operators. Certain of these entities require us to obtain permits, licenses, certificates and other authorizations for the operation of our vessels. Failure to maintain necessary permits or approvals could require us to incur substantial costs or result in the temporary suspension of the operation of one or more of our vessels.

Increasing environmental concerns have created a demand for vessels that conform to stricter environmental standards. We are required to maintain operating standards for all of our vessels that emphasize operational safety, quality maintenance, continuous training of our officers and crews and compliance with United States and international regulations. We believe that the operation of our vessels is in substantial compliance with applicable environmental laws and regulations and that our vessels have all material permits, licenses, certificates or other authorizations necessary for the conduct of our operations. However, because such laws and regulations frequently change and may impose increasingly stricter requirements, we cannot predict the ultimate cost of complying with these requirements, or the impact of these requirements on the resale value or useful lives of our vessels. In addition, a future serious marine incident that causes significant adverse environmental impact could result in additional legislation or regulation that could negatively affect our profitability.

#### **International Maritime Organization**

The International Maritime Organization, the United Nations agency for maritime safety and the prevention of pollution by vessels (the "IMO"), has adopted the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, collectively referred to as MARPOL 73/78 and herein as "MARPOL," adopted the International Convention for the Safety of Life at Sea of 1974 ("SOLAS Convention"), and the International Convention on Load Lines of 1966 (the "LL Convention"). MARPOL establishes environmental standards relating to oil leakage or spilling, garbage management, sewage, air emissions, handling and disposal of noxious liquids and the handling of harmful substances in packaged forms. MARPOL is applicable to drybulk, tanker and LNG carriers, among other vessels, and is broken into six Annexes, each of which regulates a different source of pollution. Annex I relates to oil leakage or spilling; Annexes II and III relate to harmful substances carried in bulk in liquid or in packaged form, respectively; Annexes IV and V relate to sewage and garbage management, respectively; and Annex VI, lastly, relates to air emissions. Annex VI was separately adopted by the IMO in September of 1997.

In 2012, the IMO's Marine Environmental Protection Committee, or the "MEPC," adopted a resolution amending the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, or the "IBC Code." The provisions of the IBC Code are mandatory under MARPOL and the SOLAS Convention. These amendments, which entered into force in June 2014, pertain to revised international certificates of fitness for the carriage of dangerous chemicals in bulk and identifying new products that fall under the IBC Code. We may need to make certain financial expenditures to comply with these amendments.

#### Air Emissions

In September of 1997, the IMO adopted Annex VI to MARPOL to address air pollution from vessels. Effective May 2005, Annex VI sets limits on sulfur oxide and nitrogen oxide emissions from all commercial vessel exhausts and prohibits "deliberate emissions" of ozone depleting substances (such as halons and chlorofluorocarbons), emissions of volatile compounds from cargo tanks, and the shipboard incineration of specific substances. Annex VI also includes a global cap on the sulfur content of fuel oil and allows for special areas to be established with more stringent controls on sulfur emissions, as explained below. Emissions of "volatile organic compounds" from certain vessels, and the shipboard incineration (from incinerators installed after January 1, 2000) of certain substances (such as polychlorinated biphenyls, or PCBs) are also prohibited. We believe that all our vessels are currently compliant in all material respects with these regulations.

The MEPC, adopted amendments to Annex VI regarding emissions of sulfur oxide, nitrogen oxide, particulate matter and ozone depleting substances, which entered into force on July 1, 2010. The amended Annex VI seeks to further reduce air pollution by, among other things, implementing a progressive reduction of the amount of sulfur contained in any fuel oil used on board ships. On October 27, 2016, at its 70th session, the MEPC agreed to implement a global 0.5% m/m sulfur oxide emissions limit (reduced from 3.50%) starting from January 1, 2020. This limitation can be

met by using low-sulfur compliant fuel oil, alternative fuels, or certain exhaust gas cleaning systems. Once the cap becomes effective, ships will be required to obtain bunker delivery notes and International Air Pollution Prevention ("IAPP") Certificates from their flag states that specify sulfur content. Additionally, at MEPC 73, amendments to Annex VI to prohibit the carriage of bunkers above 0.5% sulphur on ships were adopted and will take effect March 1, 2020. These regulations subject ocean-going vessels to stringent emissions controls, and may cause us to incur substantial costs.

Sulfur content standards are even stricter within certain "ECAs. As of January 1, 2015, ships operating within an ECA were not permitted to use fuel with sulfur content in excess of 0.1%. Amended Annex VI establishes procedures for designating new ECAs. Currently, the IMO has designated four ECAs, including specified portions of the Baltic Sea area, North Sea area, North American area and United States Caribbean area. Ocean-going vessels in these areas will be subject to stringent emission controls and may cause us to incur additional costs. Areas in China are subject to local regulations that impose stricter emission controls. If other ECAs are approved by the IMO, or other new or more stringent requirements relating to emissions from marine diesel engines or port operations by vessels are adopted by the U.S. Environmental Protection Agency ("EPA") or the states where we operate, compliance with these regulations could entail significant capital expenditures or otherwise increase the costs of our operations.

Amended Annex VI also establishes new tiers of stringent nitrogen oxide emissions standards for marine diesel engines, depending on their date of installation. At the MEPC meeting held from March to April 2014, amendments to Annex VI were adopted which address the date on which Tier III NOx standards in ECAs will go into effect. Under the amendments, Tier III NOx standards apply to ships that operate in the North American and U.S. Caribbean Sea ECAs designed for the control of NOx produced by vessels with a marine diesel engine installed and constructed on or after January 1, 2016. Tier III requirements could apply to areas that will be designated for Tier III NOx in the future. At MEPC 70 and MEPC 71, the MEPC approved the North Sea and Baltic Sea as ECAs for nitrogen oxide for ships built after January 1, 2021. The EPA promulgated equivalent (and in some senses stricter) emissions standards in late 2009. As a result of these designations or similar future designations, we may be required to incur additional operating or other costs.

As determined at the MEPC 70, the new Regulation 22A of MARPOL Annex VI became effective as of March 1, 2018 and requires ships above 5,000 gross tonnage to collect and report annual data on fuel oil consumption to an IMO database, with the first year of data collection commencing on January 1, 2019. The IMO intends to use such data as the first step in its roadmap (through 2023) for developing its strategy to reduce greenhouse gas emissions from ships, as discussed further below.

As of January 1, 2013, MARPOL made mandatory certain measures relating to energy efficiency for ships. All ships are now required to develop and implement Ship Energy Efficiency Management Plans ("SEEMPS"), and new ships must be designed in compliance with minimum energy efficiency levels per capacity mile as defined by the Energy Efficiency Design Index ("EEDI"). Under these measures, by 2025, all new ships built will be 30% more energy efficient than those built in 2014.

We may incur costs to comply with these revised standards. Additional or new conventions, laws and regulations may be adopted that could require the installation of expensive emission control systems and could adversely affect our business, results of operations, cash flows and financial condition.

Safety Management System Requirements

The SOLAS Convention was amended to address the safe manning of vessels and emergency training drills. The Convention of Limitation of Liability for Maritime Claims (the "LLMC") sets limitations of liability for a loss of life or personal injury claim or a property claim against ship owners. We believe that our vessels are in substantial compliance with SOLAS and LLMC standards.

Under Chapter IX of the SOLAS Convention, or the International Safety Management Code for the Safe Operation of Ships and for Pollution Prevention (the "ISM Code"), our operations are also subject to environmental standards and requirements. The ISM Code requires the party with operational control of a vessel to develop an extensive safety management system that includes, among other things, the adoption of a safety and environmental protection policy setting forth instructions and procedures for operating its vessels safely and describing procedures for responding to emergencies. We rely upon the safety management system that we and our technical management team have developed for compliance with the ISM Code. The failure of a vessel owner or bareboat charterer to comply with the ISM Code may subject such party to increased liability, may decrease available insurance coverage for the affected vessels and may result in a denial of access to, or detention in, certain ports.

The ISM Code requires that vessel operators obtain a safety management certificate for each vessel they operate. This certificate evidences compliance by a vessel's management with the ISM Code requirements for a safety management system. No vessel can obtain a safety management certificate unless its manager has been awarded a document of

compliance, issued by each flag state, under the ISM Code. We have obtained applicable documents of compliance for our offices and safety management certificates for all of our vessels for which the certificates are required by the IMO. The document of compliance and safety management certificate are renewed as required.

Regulation II-1/3-10 of the SOLAS Convention governs ship construction and stipulates that ships over 150 meters in length must have adequate strength, integrity and stability to minimize risk of loss or pollution. Goal-based standards amendments in SOLAS regulation II-1/3-10 entered into force in 2012, with July 1, 2016 set for application to new oil tankers and bulk carriers. The SOLAS Convention regulation II-1/3-10 on goal-based ship construction standards for bulk carriers and oil tankers, which entered into force on January 1, 2012, requires that all oil tankers and bulk carriers of 150 meters in length and above, for which the building contract is placed on or after July 1, 2016, satisfy applicable structural requirements conforming to the functional requirements of the International Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers (GBS Standards).

Amendments to the SOLAS Convention Chapter VII apply to vessels transporting dangerous goods and require those vessels be in compliance with the International Maritime Dangerous Goods Code ("IMDG Code"). Effective January 1, 2018, the IMDG Code includes (1) updates to the provisions for radioactive material, reflecting the latest provisions from the International Atomic Energy Agency, (2) new marking, packing and classification requirements for dangerous goods, and (3) new mandatory training requirements.

The IMO has also adopted the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers ("STCW"). As of February 2017, all seafarers are required to meet the STCW standards and be in possession of a valid STCW certificate. Flag states that have ratified SOLAS and STCW generally employ the classification societies, which have incorporated SOLAS and STCW requirements into their class rules, to undertake surveys to confirm compliance.

Furthermore, recent action by the IMO's Maritime Safety Committee and United States agencies indicate that cybersecurity regulations for the maritime industry are likely to be further developed in the near future in an attempt to combat cybersecurity threats. For example, cyber-risk management systems must be incorporated by ship-owners and managers by 2021. This might cause companies to create additional procedures for monitoring cybersecurity, which could require additional expenses and/or capital expenditures. The impact of such regulations is hard to predict at this time.

#### Pollution Control and Liability Requirements

The IMO has negotiated international conventions that impose liability for pollution in international waters and the territorial waters of the signatories to such conventions. For example, the IMO adopted an International Convention for the Control and Management of Ships' Ballast Water and Sediments (the "BWM Convention") in 2004. The BWM Convention entered into force on September 9, 2017. The BWM Convention requires ships to manage their ballast water to remove, render harmless, or avoid the uptake or discharge of new or invasive aquatic organisms and pathogens within ballast water and sediments. The BWM Convention's implementing regulations call for a phased introduction of mandatory ballast water exchange requirements, to be replaced in time with mandatory concentration limits, and require all ships to carry a ballast water record book and an international ballast Water management certificate.

On December 4, 2013, the IMO Assembly passed a resolution revising the application dates of BWM Convention so that the dates are triggered by the entry into force date and not the dates originally in the BWM Convention. This, in effect, makes all vessels delivered before the entry into force date "existing vessels" and allows for the installation of ballast water management systems on such vessels at the first International Oil Pollution Prevention (IOPP) renewal survey following entry into force of the convention. The MEPC adopted updated guidelines for approval of ballast water management systems (G8) at MEPC 70. At MEPC 71, the schedule regarding the BWM Convention's implementation dates was also discussed and amendments were introduced to extend the date existing vessels are subject to certain ballast water standards. Ships over 400 gross tons generally must comply with a "D-1 standard," requiring the exchange of ballast water only in open seas and away from coastal waters. The "D-2 standard" specifies the maximum amount of viable organisms allowed to be discharged, and compliance dates vary depending on the IOPP renewal dates. Depending on the date of the IOPP renewal survey, existing vessels must comply with the D-2 standard on or after September 8, 2019. For most ships, compliance with the D-2 standard will involve installing on-board systems to treat ballast water and eliminate unwanted organisms. Ballast Water Management systems, which include systems that make use of chemical, biocides, organisms or biological mechanisms, or which alter the chemical or physical characteristics of the Ballast Water, must be approved in accordance with IMO Guidelines (Regulation D-3). Costs of compliance with these regulations may be substantial.

Once mid-ocean ballast water treatment requirements become mandatory under the BWM Convention, the cost of compliance could increase for ocean carriers and may have a material effect on our operations. However, many countries already regulate the discharge of ballast water carried by vessels from country to country to prevent the introduction of invasive and harmful species via such discharges. The U.S., for example, requires vessels entering its

waters from another country to conduct mid-ocean ballast exchange, or undertake some alternate measure, and to comply with certain reporting requirements.

The IMO adopted the International Convention on Civil Liability for Oil Pollution Damage of 1969, as amended by different Protocols in 1976, 1984, and 1992, and amended in 2000 ("the CLC"). Under the CLC and depending on whether the country in which the damage results is a party to the 1992 Protocol to the CLC, a vessel's registered owner may be strictly liable for pollution damage caused in the territorial waters of a contracting state by discharge of persistent oil, subject to certain exceptions. The 1992 Protocol changed certain limits on liability expressed using the International Monetary Fund currency unit, the Special Drawing Rights. The limits on liability have since been amended so that the compensation limits on liability were raised. The right to limit liability is forfeited under the CLC where the spill is caused by the shipowner's actual fault and under the 1992 Protocol where the spill is caused by the shipowner's intentional or reckless act or omission where the shipowner knew pollution damage would probably result. The CLC requires ships over 2,000 tons covered by it to maintain insurance covering the liability of the owner in a sum equivalent to an owner's liability for a single incident. We have protection and indemnity insurance for environmental incidents. P&I Clubs in the International Group issue the required Bunkers Convention "Blue Cards" to enable signatory states to issue certificates. All of our vessels are in possession of a CLC State issued certificate attesting that the required insurance coverage is in force.

The IMO also adopted the International Convention on Civil Liability for Bunker Oil Pollution Damage (the "Bunker Convention") to impose strict liability on ship owners (including the registered owner, bareboat charterer, manager or operator) for pollution damage in jurisdictional waters of ratifying states caused by discharges of bunker fuel. The Bunker Convention requires registered owners of ships over 1,000 gross tons to maintain insurance for pollution damage in an amount equal to the limits of liability under the applicable national or international limitation regime (but not exceeding the amount calculated in accordance with the LLMC). With respect to non-ratifying states, liability for spills or releases of oil carried as fuel in ship's bunkers typically is determined by the national or other domestic laws in the jurisdiction where the events or damages occur.

Ships are required to maintain a certificate attesting that they maintain adequate insurance to cover an incident. In jurisdictions, such as the United States where the CLC or the Bunker Convention has not been adopted, various legislative schemes or common law govern, and liability is imposed either on the basis of fault or on a strict-liability basis.

**Anti-Fouling Requirements** 

In 2001, the IMO adopted the International Convention on the Control of Harmful Anti-fouling Systems on Ships, or the "Anti-fouling Convention." The Anti-fouling Convention, which entered into force on September 17, 2008, prohibits the use of organotin compound coatings to prevent the attachment of mollusks and other sea life to the hulls of vessels. Vessels of over 400 gross tons engaged in international voyages will also be required to undergo an initial survey before the vessel is put into service or before an International Anti-fouling System Certificate is issued for the first time; and subsequent surveys when the anti-fouling systems are altered or replaced. We have obtained Anti-fouling System Certificates for all of our vessels that are subject to the Anti-fouling Convention.

#### **Compliance Enforcement**

Noncompliance with the ISM Code or other IMO regulations may subject the ship owner or bareboat charterer to increased liability, may lead to decreases in available insurance coverage for affected vessels and may result in the denial of access to, or detention in, some ports. The USCG and European Union authorities have indicated that vessels not in compliance with the ISM Code by applicable deadlines will be prohibited from trading in U.S. and European Union ports, respectively. As of the date of this report, each of our vessels is ISM Code certified. However, there can be no assurance that such certificates will be maintained in the future. The IMO continues to review and introduce new regulations. It is impossible to predict what additional regulations, if any, may be passed by the IMO and what effect, if any, such regulations might have on our operations.

**United States Regulations** 

The U.S. Oil Pollution Act of 1990 and the Comprehensive Environmental Response, Compensation and Liability Act

The U.S. Oil Pollution Act of 1990 ("OPA") established an extensive regulatory and liability regime for the protection and cleanup of the environment from oil spills. OPA affects all "owners and operators" whose vessels trade or operate within the U.S., its territories and possessions or whose vessels operate in U.S. waters, which includes the U.S.'s territorial sea and its 200 nautical mile exclusive economic zone around the U.S. The U.S. has also enacted the

Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), which applies to the discharge of hazardous substances other than oil, except in limited circumstances, whether on land or at sea. OPA and CERCLA both define "owner and operator" in the case of a vessel as any person owning, operating or chartering by demise, the vessel. Both OPA and CERCLA impact our operations.

Under OPA, vessel owners and operators are "responsible parties" and are jointly, severally and strictly liable (unless the spill results solely from the act or omission of a third party, an act of God or an act of war) for all containment and clean-up costs and other damages arising from discharges or threatened discharges of oil from their vessels, including bunkers (fuel). OPA defines these other damages broadly to include:

- (i) injury to, destruction or loss of, or loss of use of, natural resources and related assessment costs;
- (ii) injury to, or economic losses resulting from, the destruction of real and personal property;
- (iv) loss of subsistence use of natural resources that are injured, destroyed or lost;
- net loss of taxes, royalties, rents, fees or net profit revenues resulting from injury, destruction or loss of real or personal property, or natural resources;
- (v) lost profits or impairment of earning capacity due to injury, destruction or loss of real or personal property or natural resources; and
- net cost of increased or additional public services necessitated by removal activities following a discharge of oil, such as protection from fire, safety or health hazards, and loss of subsistence use of natural resources.

OPA contains statutory caps on liability and damages; such caps do not apply to direct cleanup costs. Effective December 21, 2015, the USCG adjusted the limits of OPA liability for a tank vessel, other than a single-hull tank vessel, over 3,000 gross tons liability to the greater of \$2,200 per gross ton or \$18,796,800 (subject to periodic adjustment for inflation). These limits of liability do not apply if an incident was proximately caused by the violation of an applicable U.S. federal safety, construction or operating regulation by a responsible party (or its agent, employee or a person acting pursuant to a contractual relationship), or a responsible party's gross negligence or willful misconduct. The limitation on liability similarly does not apply if the responsible party fails or refuses to (i) report the incident where the responsible party knows or has reason to know of the incident; (ii) reasonably cooperate and assist as requested in connection with oil removal activities; or (iii) without sufficient cause, comply with an order issued under the Federal Water Pollution Act (Section 311 (c), (e)) or the Intervention on the High Seas Act.

CERCLA contains a similar liability regime whereby owners and operators of vessels are liable for cleanup, removal and remedial costs, as well as damages for injury to, or destruction or loss of, natural resources, including the reasonable costs associated with assessing the same, and health assessments or health effects studies. There is no liability if the discharge of a hazardous substance results solely from the act or omission of a third party, an act of God or an act of war. Liability under CERCLA is limited to the greater of \$300 per gross ton or \$5.0 million for vessels carrying a hazardous substance as cargo and the greater of \$300 per gross ton or \$500,000 for any other vessel. These limits do not apply (rendering the responsible person liable for the total cost of response and damages) if the release or threat of release of a hazardous substance resulted from willful misconduct or negligence, or the primary cause of the release was a violation of applicable safety, construction or operating standards or regulations. The limitation on liability also does not apply if the responsible person fails or refused to provide all reasonable cooperation and assistance as requested in connection with response activities where the vessel is subject to OPA.

OPA and CERCLA each preserve the right to recover damages under existing law, including maritime tort law. OPA and CERCLA both require owners and operators of vessels to establish and maintain with the USCG evidence of financial responsibility sufficient to meet the maximum amount of liability to which the particular responsible person may be subject. Vessel owners and operators may satisfy their financial responsibility obligations by providing a proof of insurance, a surety bond, qualification as a self-insurer or a guarantee. We comply and plan to comply going forward with the USCG's financial responsibility regulations by providing applicable certificates of financial responsibility.

The 2010 *Deepwater Horizon* oil spill in the Gulf of Mexico resulted in additional regulatory initiatives or statutes, including higher liability caps under OPA, new regulations regarding offshore oil and gas drilling, and a pilot inspection program for offshore facilities. However, several of these initiatives and regulations have been or may be revised. For example, the U.S. Bureau of Safety and Environmental Enforcement's ("BSEE") revised Production Safety Systems Rule ("PSSR"), effective December 27, 2018, modified and relaxed certain environmental and safety protections under the 2016 PSSR. Additionally, the BSEE released proposed changes to the Well Control Rule, which could roll back certain reforms regarding the safety of drilling operations, and the U.S. President proposed leasing new sections of U.S. waters to oil and gas companies for offshore drilling, expanding the U.S. waters that are available for such activity over the next five years. The effects of these proposals are currently unknown. Compliance with any new requirements of OPA and future legislation or regulations applicable to the operation of our vessels could impact the cost of our operations and adversely affect our business.

OPA specifically permits individual states to impose their own liability regimes with regard to oil pollution incidents occurring within their boundaries, provided they accept, at a minimum, the levels of liability established under OPA and some states have enacted legislation providing for unlimited liability for oil spills. Many U.S. states that border a navigable waterway have enacted environmental pollution laws that impose strict liability on a person for removal costs and damages resulting from a discharge of oil or a release of a hazardous substance. These laws may be more stringent than U.S. federal law. Moreover, some states have enacted legislation providing for unlimited liability for discharge of pollutants within their waters, although in some cases, states which have enacted this type of legislation have not yet issued implementing regulations defining vessel owners' responsibilities under these laws. The Company intends to comply with all applicable state regulations in the ports where the Company's vessels call.

We currently maintain pollution liability coverage insurance in the amount of \$1.0 billion per incident for each of our vessels. If the damages from a catastrophic spill were to exceed our insurance coverage, it could have an adverse effect on our business, results of operation and financial condition.

#### Other United States Environmental Initiatives

The U.S. Clean Air Act of 1970 (including its amendments of 1977 and 1990) ("CAA") requires the EPA to promulgate standards applicable to emissions of volatile organic compounds and other air contaminants. Our vessels are subject to vapor control and recovery requirements for certain cargoes when loading, unloading, ballasting, cleaning and conducting other operations in regulated port areas. The CAA also requires states to draft State Implementation Plans, or SIPs, designed to attain national health-based air quality standards in each state. Although state-specific, SIPs may include regulations concerning emissions resulting from vessel loading and unloading operations by requiring the installation of vapor control equipment. Our vessels operating in such regulated port areas with restricted cargoes are equipped with vapor recovery systems that satisfy these existing requirements.

The U.S. Clean Water Act ("CWA") prohibits the discharge of oil, hazardous substances and ballast water in U.S. navigable waters unless authorized by a duly-issued permit or exemption, and imposes strict liability in the form of penalties for any unauthorized discharges. The CWA also imposes substantial liability for the costs of removal, remediation and damages and complements the remedies available under OPA and CERCLA. In 2015, the EPA expanded the definition of "waters of the United States" ("WOTUS"), thereby expanding federal authority under the CWA. Following litigation on the revised WOTUS rule, in December 2018, the EPA and Department of the Army proposed a revised, limited definition of "waters of the United States." The effect of this proposal on U.S. environmental regulations is still unknown.

The EPA and the USCG have also enacted rules relating to ballast water discharge, compliance with which requires the installation of equipment on our vessels to treat ballast water before it is discharged or the implementation of other port facility disposal arrangements or procedures at potentially substantial costs, and/or otherwise restrict our vessels from entering U.S. Waters. The EPA will regulate these ballast water discharges and other discharges incidental to the normal operation of certain vessels within United States waters pursuant to the Vessel Incidental Discharge Act ("VIDA"), which was signed into law on December 4, 2018 and will replace the 2013 Vessel General Permit (the "VGP") program (which authorizes discharges incidental to operations of commercial vessels, and contains numeric ballast water discharge limits for most vessels to reduce the risk of invasive species in U.S. waters, stringent requirements for exhaust gas scrubbers, and requirements for the use of environmentally acceptable lubricants) and current Coast Guard ballast water management regulations adopted under the U.S. National Invasive Species Act ("NISA"), such as mid-ocean ballast exchange programs and installation of approved USCG technology for all vessels equipped with ballast water tanks bound for U.S. ports or entering U.S. waters. VIDA establishes a new framework for the regulation of vessel incidental discharges under Clean Water Act (CWA), requires the EPA to develop performance standards for those discharges within two years of enactment, and requires the U.S. Coast Guard to develop implementation, compliance, and enforcement regulations within two years of EPA's promulgation of standards. Under VIDA, all provisions of the 2013 VGP and USCG regulations regarding ballast water treatment remain in force and effect until the EPA and U.S. Coast Guard regulations are finalized. Non-military, non-recreational vessels greater than 79 feet in length must continue to comply with the requirements of the VGP, including submission of a Notice of Intent ("NOI") or retention of a PARI form and submission of annual reports. We have submitted NOIs for our vessels where required. Compliance with the EPA, U.S. Coast Guard and state regulations could require the installation of ballast water treatment equipment on our vessels or the implementation of other port facility disposal procedures at potentially substantial cost, or may otherwise restrict our vessels from entering U.S. waters.

#### **European Union Regulations**

In October 2009, the European Union amended a directive to impose criminal sanctions for illicit ship-source discharges of polluting substances, including minor discharges, if committed with intent, recklessly or with serious negligence and the discharges individually or in the aggregate result in deterioration of the quality of water. Aiding and abetting the discharge of a polluting substance may also lead to criminal penalties. The directive applies to all types of vessels, irrespective of their flag, but certain exceptions apply to warships or where human safety or that of the ship is in danger. Criminal liability for pollution may result in substantial penalties or fines and increased civil liability claims. Regulation (EU) 2015/757 of the European Parliament and of the Council of 29 April 2015 (amending EU Directive 2009/16/EC) governs the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and, subject to some exclusions, requires companies with ships over 5,000 gross tonnage to monitor and report carbon dioxide emissions annually starting on January 1, 2018, which may cause us to incur additional expenses.

The European Union has adopted several regulations and directives requiring, among other things, more frequent inspections of high-risk ships, as determined by type, age, and flag as well as the number of times the ship has been detained. The European Union also adopted and extended a ban on substandard ships and enacted a minimum ban period and a definitive ban for repeated offenses. The regulation also provided the European Union with greater authority and control over classification societies, by imposing more requirements on classification societies and providing for fines or penalty payments for organizations that failed to comply. Furthermore, the EU has implemented regulations requiring vessels to use reduced sulfur content fuel for their main and auxiliary engines. The EU Directive 2005/33/EC (amending Directive 1999/32/EC) introduced requirements parallel to those in Annex VI relating to the sulfur content of marine fuels. In addition, the EU imposed a 0.1% maximum sulfur requirement for fuel used by ships at berth in EU ports.

#### International Labour Organization

The International Labor Organization (the "ILO") is a specialized agency of the UN that has adopted the Maritime Labor Convention 2006 ("MLC 2006"). A Maritime Labor Certificate and a Declaration of Maritime Labor Compliance is required to ensure compliance with the MLC 2006 for all ships above 500 gross tons in international trade. We believe that all our vessels are in substantial compliance with and are certified to meet MLC 2006.

#### Greenhouse Gas Regulation

Currently, the emissions of greenhouse gases from international shipping are not subject to the Kyoto Protocol to the United Nations Framework Convention on Climate Change, which entered into force in 2005 and pursuant to which adopting countries have been required to implement national programs to reduce greenhouse gas emissions with targets extended through 2020. International negotiations are continuing with respect to a successor to the Kyoto Protocol, and restrictions on shipping emissions may be included in any new treaty. In December 2009, more than 27 nations, including the U.S. and China, signed the Copenhagen Accord, which includes a non-binding commitment to reduce greenhouse gas emissions. The 2015 United Nations Climate Change Conference in Paris resulted in the Paris Agreement, which entered into force on November 4, 2016 and does not directly limit greenhouse gas emissions from ships. On June 1, 2017, the U.S. President announced that the United States intends to withdraw from the Paris Agreement. The timing and effect of such action has yet to be determined, but the Paris Agreement provides for a four-year exit process.

At MEPC 70 and MEPC 71, a draft outline of the structure of the initial strategy for developing a comprehensive IMO strategy on reduction of greenhouse gas emissions from ships was approved. In accordance with this roadmap, in April 2018, nations at the MEPC 72 adopted an initial strategy to reduce greenhouse gas emissions from ships. The initial strategy identifies "levels of ambition" to reducing greenhouse gas emissions, including (1) decreasing the carbon intensity from ships through implementation of further phases of the EEDI for new ships; (2) reducing carbon dioxide emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008 emission levels; and (3) reducing the total annual greenhouse emissions by at least 50% by 2050 compared to 2008 while pursuing efforts towards phasing them out entirely. The initial strategy notes that technological innovation, alternative fuels and/or energy sources for international shipping will be integral to achieve the overall ambition. These regulations could cause us to incur additional substantial expenses.

The EU made a unilateral commitment to reduce overall greenhouse gas emissions from its member states from 20% of 1990 levels by 2020. The EU also committed to reduce its emissions by 20% under the Kyoto Protocol's second period from 2013 to 2020. Starting in January 2018, large ships calling at EU ports are required to collect and publish data on carbon dioxide emissions and other information.

In the United States, the EPA issued a finding that greenhouse gases endanger the public health and safety, adopted regulations to limit greenhouse gas emissions from certain mobile sources, and proposed regulations to limit greenhouse gas emissions from large stationary sources. However, in March 2017, the U.S. President signed an executive order to review and possibly eliminate the EPA's plan to cut greenhouse gas emissions. The EPA or individual U.S. states could enact environmental regulations that would affect our operations.

Any passage of climate control legislation or other regulatory initiatives by the IMO, the EU, the U.S. or other countries where we operate, or any treaty adopted at the international level to succeed the Kyoto Protocol or Paris Agreement, that restricts emissions of greenhouse gases could require us to make significant financial expenditures which we cannot predict with certainty at this time. Even in the absence of climate control legislation, our business may be indirectly affected to the extent that climate change may result in sea level changes or certain weather events.

**Vessel Security Regulations** 

Since the terrorist attacks of September 11, 2001 in the United States, there have been a variety of initiatives intended to enhance vessel security such as the U.S. Maritime Transportation Security Act of 2002 ("MTSA"). To implement certain portions of the MTSA, the USCG issued regulations requiring the implementation of certain security requirements aboard vessels operating in waters subject to the jurisdiction of the United States and at certain ports and facilities, some of which are regulated by the EPA.

Similarly, Chapter XI-2 of the SOLAS Convention imposes detailed security obligations on vessels and port authorities and mandates compliance with the International Ship and Port Facilities Security Code ("the ISPS Code"). The ISPS Code is designed to enhance the security of ports and ships against terrorism. To trade internationally, a vessel must attain an International Ship Security Certificate ("ISSC") from a recognized security organization approved by the vessel's flag state. Ships operating without a valid certificate may be detained, expelled from, or refused entry at port until they obtain an ISSC. The various requirements, some of which are found in the SOLAS Convention, include, for example, on-board installation of automatic identification systems to provide a means for the automatic transmission of safety-related information from among similarly equipped ships and shore stations, including information on a ship's identity, position, course, speed and navigational status; on-board installation of ship security alert systems, which do not sound on the vessel but only alert the authorities on shore; the development of vessel security plans; ship identification number to be permanently marked on a vessel's hull; a continuous synopsis record kept onboard showing a vessel's history including the name of the ship, the state whose flag the ship is entitled to fly, the date on which the ship was registered with that state, the ship's identification number, the port at which the ship is registered and the name of the registered owner(s) and their registered address; and compliance with flag state security certification requirements.

The USCG regulations, intended to align with international maritime security standards, exempt non-U.S. vessels from MTSA vessel security measures, provided such vessels have on board a valid ISSC that attests to the vessel's compliance with the SOLAS Convention security requirements and the ISPS Code. Future security measures could have a significant financial impact on us. We intend to comply with the various security measures addressed by MTSA, the SOLAS Convention and the ISPS Code.

The cost of vessel security measures has also been affected by the escalation in the frequency of acts of piracy against ships, notably off the coast of Somalia, including the Gulf of Aden, Arabian Sea area and West Africa area. Substantial loss of revenue and other costs may be incurred as a result of detention of a vessel or additional security measures, and the risk of uninsured losses could significantly affect our business. Costs are incurred in taking additional security measures in accordance with Best Management Practices to Deter Piracy, notably those contained in the BMP4 industry standard.

#### **Inspection by Classification Societies**

The hull and machinery of every commercial vessel must be classed by a classification society authorized by its country of registry. The classification society certifies that a vessel is safe and seaworthy in accordance with the applicable rules and regulations of the country of registry of the vessel and SOLAS. Most insurance underwriters make it a condition for insurance coverage and lending that a vessel be certified "in class" by a classification society which is a member of the International Association of Classification Societies, the IACS. The IACS has adopted harmonized Common Structural Rules, or the Rules, which apply to oil tankers and bulk carriers constructed on or after July 1, 2015. The Rules attempt to create a level of consistency between IACS Societies. All of our vessels are certified as being "in class" by all the applicable Classification Societies (*e.g.*, DNV-GL and NKK).

A vessel must undergo annual surveys, intermediate surveys, drydockings and special surveys. In lieu of a special survey, a vessel's machinery may be on a continuous survey cycle, under which the machinery would be surveyed periodically over a five-year period. Every vessel is also required to be drydocked every 30 to 36 months for inspection of the underwater parts of the vessel. If any vessel does not maintain its class and/or fails any annual survey, intermediate survey, drydocking or special survey, the vessel will be unable to carry cargo between ports and will be unemployable and uninsurable which could cause us to be in violation of certain covenants in our loan agreements. Any such inability to carry cargo or be employed, or any such violation of covenants, could have a material adverse impact on our business, results of operations and financial condition.

## **Risk of Loss and Liability Insurance**

#### General

The operation of any cargo vessel includes risks such as mechanical failure, physical damage, collision, property loss, cargo loss or damage and business interruption due to political circumstances in foreign countries, piracy incidents, hostilities and labor strikes. In addition, there is always an inherent possibility of marine disaster, including oil spills and other environmental mishaps, and the liabilities arising from owning and operating vessels in international trade. OPA, which imposes virtually unlimited liability upon shipowners, operators and bareboat charterers of any vessel trading in the exclusive economic zone of the United States for certain oil pollution accidents in the United States, has made liability insurance more expensive for shipowners and operators trading in the United States market. We carry insurance coverage as customary in the shipping industry. However, not all risks can be insured, specific claims may be rejected, and we might not be always able to obtain adequate insurance coverage at reasonable rates.

#### Hull and Machinery Insurance

We procure hull and machinery insurance, protection and indemnity insurance, which includes environmental damage and pollution insurance and war risk insurance and freight, demurrage and defense insurance for our fleet. We generally do not maintain insurance against loss of hire (except for certain charters for which we consider it appropriate), which covers business interruptions that result in the loss of use of a vessel.

#### Protection and Indemnity Insurance

Protection and indemnity insurance is provided by mutual protection and indemnity associations, or P&I Associations, covers our third-party liabilities in connection with our shipping activities. This includes third-party liability and other related expenses of injury or death of crew, passengers and other third parties, loss or damage to cargo, claims arising from collisions with other vessels, damage to other third-party property, pollution arising from oil or other substances, and salvage, towing and other related costs, including wreck removal. Protection and indemnity insurance is a form of mutual indemnity insurance, extended by protection and indemnity mutual associations, or "clubs."

Our current protection and indemnity insurance coverage for pollution is \$1 billion per vessel per incident. The 13 P&I Associations that comprise the International Group insure approximately 90% of the world's commercial tonnage and have entered into a pooling agreement to reinsure each association's liabilities. The International Group's website states that the Pool provides a mechanism for sharing all claims in excess of US\$ 10 million up to, currently, approximately US\$ 8.2 billion. As a member of a P&I Association, which is a member of the International Group, we are subject to calls payable to the associations based on our claim records as well as the claim records of all other members of the individual associations and members of the shipping pool of P&I Associations comprising the International Group.

**Exchange Controls** 

Under Marshall Islands law, there are currently no restrictions on the export or import of capital, including foreign exchange controls or restrictions that affect the remittance of dividends, interest or other payments to non-resident holders of shares of our common stock.

#### C. Organizational Structure

We were incorporated under the laws of the Republic of the Marshall Islands on March 23, 2015. We own the vessels in our fleet through six separate wholly-owned subsidiaries that are incorporated in the Republic of Marshall Islands and the Republic of Malta.

The following is a list of our subsidiaries:

Name of Company	Country of Incorporation	Principal Activities	Ownersh (%)	ip
SECONDONE CORPORATION LTD	Malta	Ship ownership and operations	100	%
THIRDONE CORPORATION LTD.	Malta	Ship ownership and operations	100	%
FOURTHONE CORPORATION LTD.	Malta	Ship ownership and operations	100	%
SIXTHONE CORP.	Marshall Islands	Ship ownership and operations	100	%
SEVENTHONE CORP.	Marshall Islands	Ship ownership and operations	100	%
EIGHTHONE CORP.	Marshall Islands	Ship ownership and operations	100	%
MARITIME TECHNOLOGIES CORP.	Delaware	Non-operating subsidiary	100	%

## D. Property, Plants and Equipment

Other than our vessels, we do not own any material property. Maritime, our affiliated ship management company, provides office space to us in part of Maritime's offices in Maroussi, Greece in connection with the administrative services provided to us under the terms of the Head Management Agreement.

## ITEM 4A. UNRESOLVED STAFF COMMENTS

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#### ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

This section is a discussion of our financial condition and results of operations as of and for the years ended December 31, 2016, 2017 and 2018. You should read the following discussion and analysis together with our financial statements and related notes included elsewhere in this Annual Report. This discussion includes forward-looking statements which are subject to risks and uncertainties that could cause actual events or conditions to differ materially from those currently anticipated, expressed or implied by such forward-looking statements. For a discussion of some of those risks and uncertainties, please read the section entitled "Forward-Looking Statements" and "Item 3. Key Information – D. Risk Factors."

#### **Important Financial and Operational Terms**

We use a variety of financial and operational terms and concepts. These include the following:

#### Voyage Revenues, net

We generate revenues by chartering our vessels for the transportation of petroleum products and other liquid bulk items, such as organic chemicals and vegetable oils. Revenues are generated primarily by the number of vessels in our fleet, the number of voyage days employed and the amount of daily charter hire earned under vessels' charters. These factors, in turn, can be affected by a number of decisions by us, including the amount of time spent positioning a vessel for charter, dry-dockings, repairs, maintenance and upgrading, as well as the age, condition and specifications of our ships and supply and demand factors in the product tanker market. At December 31, 2018, we employed three of our vessels on time charters with the remaining three vessels in our fleet employed in the spot market. Revenues from time charter agreements providing for varying daily rates are accounted as operating leases and thus are recognized on a straight line basis over the term of the time charter as service is performed. Revenue under spot charters is recognized from loading of the current spot charter to discharge of the current spot charter as discussed below. Vessels operating on time charters provide more predictable cash flows, but can yield lower profit margins than vessels operating in the spot market during periods characterized by favorable market conditions. The vessel owner generally pays commissions on both types of charters on the gross charter rate.

As of January 1, 2018, we adopted Accounting Standard Update ("ASU") 2014-09 "Revenue from Contracts with Customers (Topic 606)". The core principle is that a company should recognize revenue when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. We analyzed our contacts with charterers and determined that our spot charters fall under the provisions of ASC 606, while our time charter agreements are lease agreements that contain certain non-lease components.

We elected to adopt ASC 606 by applying the modified retrospective transition method, recognizing the cumulative effect of adopting this guidance as an adjustment to the 2018 opening balance of accumulated deficit. As of December 31, 2017, there were no vessels employed under spot charters and as a result, we have not included any adjustments to the 2018 opening balance of accumulated deficit and prior periods were not retrospectively adjusted.

We assessed our contract with charterers for spot charters during the year ended December 31, 2018 and concluded that there is one single performance obligation for each of our spot charters, which is to provide the charterer with a transportation service within a specified time period. In addition, we have concluded that spot charters meet the criteria to recognize revenue over time as the charterer simultaneously receives and consumes the benefits of our performance. The adoption of this standard resulted in a change whereby our method of revenue recognition changed from discharge-to-discharge (assuming a new charter has been agreed before the completion of the previous spot charter) to load-to-discharge. This resulted in no revenue being recognized from discharge of the prior spot charter to loading of the current spot charter and all revenue being recognized from loading of the current spot charter to discharge of the current spot charter. This change results in revenue being recognized later in the voyage, which may cause additional volatility in revenues and earnings between periods. Demurrage income represents payments by a charterer to a vessel owner when loading or discharging time exceeds the stipulated time in the spot charter. We have determined that demurrage represents variable consideration and we estimate demurrage at contract inception. Demurrage income estimated, net of address commission, is recognized over the time of the charter as the performance obligation is satisfied.

Under a spot charter, we incur and pay for certain voyage expenses, primarily consisting of brokerage commissions, port and canal costs and bunker consumption, during the spot charter (load-to-discharge) and during the ballast voyage (date of previous discharge to loading, assuming a new charter has been agreed before the completion of the previous spot charter). Before the adoption of ASC 606, all voyage expenses were expensed as incurred, except for brokerage commissions. Brokerage commissions are deferred and amortized over the related voyage period in a charter to the extent revenue has been deferred since commissions are earned as revenues are earned. Under ASC 606 and after implementation of ASC 340-40 "Other assets and deferred costs" for contract costs, incremental costs of obtaining a contract with a customer and contract fulfillment costs, should be capitalized and amortized as the performance obligation is satisfied, if certain criteria are met. We assessed the new guidance and concluded that voyage costs during the ballast voyage represented costs to fulfil a contract which give rise to an asset and should be capitalized and amortized over the spot charter, consistent with the recognition of voyage revenues from spot charter from load-to-discharge, while voyage costs incurred during the spot charter should be expensed as incurred. As of December 31, 2018, deferred contract fulfillment costs were not material. With respect to incremental costs, we have selected to adopt the practical expedient in the guidance and any costs to obtain a contract will be expensed as incurred (for the Company's spot charters that do not exceed one year). Vessel operating expenses are expensed as incurred. The Company's adoption of the new revenue standard, did not have a material effect on the consolidated statement of comprehensive loss for the year ended December 31, 2018 and the consolidated balance sheet as of December 31, 2018, since only one vessel was under spot charter as of December 31, 2018.

In addition, pursuant to this standard, and the new Leases standard discussed below, as of January 1, 2018, we elected to present Revenues, net of address commissions. Address commissions represent a discount provided directly to the charterers based on a fixed percentage of the agreed upon charter. Since address commissions represent a discount (sales incentive) on services rendered by us and no identifiable benefit is received in exchange for the consideration provided to the charterer, these commissions are presented as a reduction of revenue in the accompanying audited consolidated statements of comprehensive loss included elsewhere herein. In this respect, for the years ended December 31, 2016 and 2017, Revenues, net and Voyage related costs and commissions each decreased by \$0.3 million and \$0.2 million, respectively. This reclassification has no impact on our consolidated financial position and results of operations for any of the periods presented.

We do not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less, in accordance with the optional exception in ASC 606.

In February 2016, Financial Accounting Standards Board ("FASB") issued ASU 2016-02, "Leases (Topic 842)", which was amended and supplemented by ASU 2017-13, ASU 2018-01 and ASU 2018-11. The new lease standard does not substantially change lessor accounting. ASC 842 is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early application is permitted. Lessees and lessors will be required to apply the new standard at the beginning of the earliest period presented in the financial statements in which they first apply the new guidance, using a modified retrospective transition method. Entities are also provided with practical expedients that allow entities to not (i) reassess whether any expired or existing contracts are considered or contain leases; (ii) reassess the lease classification for any expired or existing leases; and (iii) reassess initial direct costs for any existing leases. In addition, the new standard (i) provides entities with an additional (and optional) transition method to adopt the new leases standard, under which an entity initially applies the new leases standard at

the adoption date and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption consistent with preparers' requests and (ii) provide lessors with a practical expedient, by class of underlying asset, to not separate non-lease components from the associated lease component and, instead, to account for those components as a single component if both of the following are met: (a) The timing and pattern of transfer of the non-lease component(s) and associated lease component are the same and (b) The lease component, if accounted for separately, would be classified as an operating lease. If the non-lease component or components associated with the lease component are the predominant component of the combined component, an entity is required to account for the combined component in accordance with ASC 606. Otherwise, the entity should account for the combined component as an operating lease in accordance with ASC 842.

We elected to early adopt ASC 842 as of September 30, 2018 with adoption reflected as of January 1, 2018. We adopted the standard by using the modified retrospective method and selected the optional transition method. We also selected to apply all the practical expedients discussed above. In this respect no cumulative-effect adjustment was recognized to the 2018 opening balance of accumulated deficit. We assessed our new time charter contracts at the adoption date under the new guidance and concluded that these contracts contain a lease with the related executory costs (insurance), as well as non-lease components to provide other services related to the operation of the vessel, with the most substantial service being the crew cost to operate the vessel. We concluded that the criteria for not separating lease and non-lease components of its time charter contracts are met, since (i) the time pattern of recognizing revenues for crew and other services for the operation of the vessels, is similar to the time pattern of recognizing rental income, (ii) the lease component of the time charter contracts, if accounted for separately, would be classified as an operating lease, and (iii) the predominant component in its time charter agreements is the lease component. Brokerage and address commissions on time charter revenues are deferred and amortized over the related voyage period, to the extent revenue has been deferred, since commissions are earned as revenues earned, and are presented in voyage expenses and as a reduction to voyage revenues, respectively. Vessel operating expenses are expensed as incurred. By taking the practical expedients, existing time charterers at January 1, 2018 continue to be accounted for under ASC 840, while new time charterers commenced in 2018 are accounted for under ASC 842. The early adoption of ASC 842 had no effect on our consolidated financial position and results of operations for the year ended December 31, 2018.

#### Time Charters

A time charter is a contract for the use of a vessel for a specific period of time during which the charterer pays substantially all of the voyage expenses, including port and canal charges and the cost of bunker (fuel oil), but the vessel owner pays vessel operating expenses, including the cost of crewing, insuring, repairing and maintaining the vessel, the costs of spares and consumable stores and tonnage taxes. Time charter rates are usually set at fixed rates during the term of the charter. Prevailing time charter rates fluctuate on a seasonal and on a year-to-year basis and, as a result, when employment is being sought for a vessel with an expiring or terminated time charter, the prevailing time charter rates achievable in the time charter market may be substantially higher or lower than the expiring or terminated time charter rate. Fluctuations in time charter rates are influenced by changes in spot charter rates, which are in turn influenced by a number of factors, including vessel supply and demand. The main factors that could increase total vessel operating expenses are crew salaries, insurance premiums, spare parts orders, repairs that are not covered under insurance policies and lubricant prices.

## **Spot Charters**

Generally, a spot charter refers to a contract to carry a specific cargo for a single voyage, which commonly lasts from several days up to three months. Spot charters typically involve the carriage of a specific amount and type of cargo on a load-port to discharge-port basis, subject to various cargo handling terms, and the vessel owner is paid on a per-ton basis. Under a spot charter, the vessel owner is responsible for the payment of all expenses including its capital costs, voyage expenses (such as port, canal and bunker costs) and vessel operating expenses. Fluctuations in spot charter rates are caused by imbalances in the availability of cargoes for shipment and the number of vessels available at any given time to transport these cargoes at a given port.

#### Voyage Related Costs and Commissions

We incur voyage related costs for our vessels operating under spot charters, which mainly include port and canal charges and bunker expenses primarily increase in periods during which vessels are employed on spot charters because these expenses are for the account of the vessel owner. Brokerage commissions payable, if any, depend on a number of factors, including, among other things, the number of shipbrokers involved in arranging the charter and the amount of commissions charged by brokers related to the charterer. Such commissions are deferred and amortized over the related voyage period in a charter to the extent revenue has been deferred since commissions are earned as revenues are earned.

## Vessel Operating Expenses

We incur vessel operating expenses for our vessels operating under time and spot charters. Vessel operating expenses primarily consist of crew wages and related costs, the cost of insurance, expenses relating to repairs and maintenance, the cost of spares and consumable stores, tonnage taxes and other miscellaneous expenses necessary for the operation of the vessel. All vessel operating expenses are expensed as incurred.

#### General and Administrative Expenses

The primary components of general and administrative expenses consist of the annual fee payable to Maritime for the administrative services under our Head Management Agreement, which includes the services of our senior executive officers, and the expenses associated with being a public company. Such public company expenses include the costs of preparing public reporting documents, legal and accounting costs, including costs of legal and accounting professionals and staff, and costs related to compliance with the rules, regulations and requirements of the SEC, the rules of NASDAQ, board of directors' compensation and investor relations.

#### Management Fees

We pay management fees to Maritime and ITM for commercial and technical management services, respectively, for our vessels. These services include: obtaining employment for our vessels and managing our relationships with charterers; strategic management services; technical management services, which include managing day-to-day vessel operations, ensuring regulatory and classification society compliance, arranging our hire of qualified officers and crew, arranging and supervising dry-docking and repairs and arranging insurance for vessels; and providing shoreside personnel who carry out the management functions described above. As part of their ship management services, Maritime provides us with supervision services for new construction of vessels; these costs are capitalized as part of the total delivered cost of the vessel.

Previously, we paid management fees to NST for their chartering services for the *Northsea Alpha* and the *Northsea Beta*. In June and November 2016, we terminated the commercial management agreements for both such vessels with NST, and Maritime assumed full commercial management of the *Northsea Beta* and the *Northsea Alpha*, respectively.

#### Depreciation

We depreciate the cost of our vessels after deducting the estimated residual value, on a straight-line basis over the expected useful life of each vessel, which is estimated to be 25 years from the date of initial delivery from the shipyard. We estimate the residual values of our vessels to be \$300 per lightweight ton. The rule under Maltese tax law is to the effect that for tax purposes, seagoing vessels are depreciated over a ten year period even though there is more flexibility for accounting purposes as long as the period adopted is reasonable.

#### Special Survey and Drydocking

We are obliged to periodically drydock each of our vessels for inspection, and to make significant modifications to comply with industry certification or governmental requirements. Generally, each vessel is drydocked every 30 to 60 months for scheduled inspections, depending on its age. The capitalized costs of drydockings for a given vessel are amortized on a straight-line basis to the next scheduled drydocking of the vessel.

#### Interest and Finance Costs

We have historically incurred interest expense and financing costs in connection with the debt incurred to partially finance the acquisition of our existing fleet. We have also incurred interest expense in relation to the \$5.0 million promissory note we issued in favor of Maritime Investors. Except for the interest payments under our promissory note and the new loan for the Eighthone that are based on fixed rates, the interest rate under our debt agreements is linked to the three month LIBOR rate. In order to hedge our variable interest rate exposure, on January 19, 2018, we, via one of our vessel-owning subsidiaries, purchased an interest rate cap with one of our lenders for a notional amount of \$10.0 million and a cap rate of 3.5%. The interest rate cap will terminate on July 18, 2022. In the future, we may consider the use of additional financial hedging products to further limit our interest rate exposure.

In evaluating our financial condition, we focus on the above financial and operating measures as well as fleet and vessel type for utilization, time charter equivalent rates and operating expenses to assess our operating performance. We also monitor our cash position and outstanding debt to assess short-term liquidity and our ability to finance further fleet expansion. Discussions about possible acquisitions or sales of existing vessels are based on our financial and operational criteria which depend on the state of the charter market, availability of vessel investments, employment opportunities, anticipated dry-docking costs and general economic prospects.

We believe that the important factors to consider in analyzing future results of operations and trends in future periods include the following:

charter rates and periods of charter hire and any revenues we would receive in the future from any pools in which our vessels may operate;

vessel operating expenses and voyage related costs and commissions;

depreciation and amortization expenses, which are a function of the cost of our vessels, significant vessel maintenance or improvement costs, our vessels' estimated useful lives and estimated residual values;

financing costs related to our indebtedness, including hedging of interest rate risk;

costs of being a public reporting company, including general and administrative expenses, compliance, accounting and legal costs and regulatory expenses; and

fluctuations in foreign exchange rates because our revenues are in U.S. dollars but some of our expenses are paid in other currencies.

Revenues from time charters, and to the extent we enter into any in the future, bareboat charters, are stable over the duration of the charter, provided there are no unexpected or periodic off-hire periods and no performance claims from the charterer or charterer defaults. Revenues fluctuate from spot charters and, in case we also decide to participate in pools, depending on the hire rate in effect at the time of the charter or the results of the spot based pool.

Recent accounting pronouncements are discussed in Note 2 of the consolidated financial statements contained within this Annual Report.

#### A. Operating Results

At December 31, 2018, we employed three of the vessels in our fleet on time charters and three vessels were operating in the spot market. Our MR vessels are available to operate the entire year, except for scheduled special surveys and dry-dockings. Due to challenging market conditions and greater spot trading activities, the number of non-operating days per year, which represent average time spent off-hire, has recently increased. If a vessel undergoes a scheduled intermediate or special survey, the estimated duration is five and 20 days, respectively.

The break-out of revenue by spot and time charters for the recent reported periods is reflected below (in thousands of U.S. dollars):

	Year ended		Year ended		Year ended	
	December 31,		December 31,		December 31,	
	2016		2017		2018	
	Spot	Time	Spot	Time	Spot	Time
Revenues, net	\$9,295	\$21,092	\$16,668	\$12,911	\$16,990	\$11,467

The following table reflects our fleet's ownership days, available days, operating days, utilization, TCE, average number of vessels, number of vessels at period end, average age and operating expenses in each case, for the years ended December 31, 2016, 2017 and 2018.

	Year ended December 31,				
Fleet Operating Data	2016	2017	2018		
Ownership days (1)	2,196	2,190	2,190		
Available days (2)	2,176	2,190	2,154		
Operating days (3)	1,986	1,956	1,816		
Utilization % (4)	91.3 %	89.3 %	84.3 %		
Daily time charter equivalent rate (5)	\$12,134	\$ 10,795	\$ 9,163		
Daily vessel operating expenses (6)	\$5,861	\$ 5,827	\$ 5,785		
Average number of vessels (7)	6.0	6.0	6.0		
Number of vessels at period end	6	6	6		
Weighted average age of vessels (8)	5.8	6.8	7.8		

<sup>(1)</sup> Ownership days are the total number of days in a period during which we owned each of the vessels in our fleet. Ownership days are an indicator of the size of our fleet over a period and affect both the amount of revenues

- generated and the amount of expenses incurred during the respective period.
- Available days are the number of ownership days in a period, less the aggregate number of days that our vessels were off-hire due to scheduled repairs or repairs under guarantee, vessel upgrades or special surveys and
- (2)intermediate dry-dockings and the aggregate number of days that we spent positioning our vessels during the respective period for such repairs, upgrades and surveys. Available days measures the aggregate number of days in a period during which vessels should be capable of generating revenues.
- Operating days are the number of available days in a period, less the aggregate number of days that our vessels were off-hire or out of service due to any reason, including technical breakdowns and unforeseen circumstances.
- Operating days measures the aggregate number of days in a period during which vessels actually generate revenues.
  - We calculate fleet utilization by dividing the number of operating days during a period by the number of available days during the same period. The shipping industry uses fleet utilization to measure a company's efficiency in
- (4) finding suitable employment for its vessels and minimizing the amount of days that its vessels are off-hire for reasons other than scheduled repairs or repairs under guarantee, vessel upgrades, special surveys and intermediate dry-dockings or vessel positioning.
  - Daily TCE rate is a standard shipping industry performance measure of the average daily revenue performance of a vessel on a per voyage basis. TCE is not calculated in accordance with U.S. GAAP. We utilize TCE because we believe it is a meaningful measure to compare period-to-period changes in our performance despite changes in the mix of charter types (i.e., spot charters, time charters and bareboat charters) under which our vessels may be
- (5) employed between the periods. Our management also utilizes TCE to assist them in making decisions regarding employment of the vessels. We believe that our method of calculating TCE is consistent with industry standards and is calculated by dividing voyage revenues after deducting voyage expenses, including commissions, by operating days for the relevant period. Voyage expenses primarily consist of brokerage commissions, port, canal and bunker costs that are unique to a particular voyage, which would otherwise be paid by the charter under a time charter contract.
- (6) Daily vessel operating expenses are direct operating expenses such as crewing, provisions, repairs and maintenance, insurance, deck and engine stores, lubricating oils and tonnage tax divided by ownership days.

  Average number of vessels is the number of vessels that constituted our fleet for the relevant period, as measured
- (7) by the sum of the number of days each vessel was part of our fleet during such period divided by the number of calendar days in the period.
- (8) Weighted average age of the fleet is the sum of the ages of our vessels, weighted by the dwt of each vessel on the total fleet dwt.

The following table reflects the calculation of our daily TCE rates for the years ended December 31, 2016, 2017 and 2018 (in thousands of U.S. dollars, except total operating days and daily TCE rates):

	Year ended December 31,				
	2016	2017	2018		
Revenues, net	\$30,387	\$29,579	\$28,457		
Voyage related costs and commissions	(6,288)	(8,463)	(11,817)		
Time charter equivalent revenues *	\$24,099	\$21,116	\$16,640		
Total operating days	1.986	1,956	1.816		
Total operating days	1,900	1,930	1,010		
Daily time charter equivalent rate	\$12,134	\$10,795	\$9,163		

\* Subject to rounding

The decline in the TCE rate in 2017 and 2018 over the same period in 2016 is primarily attributable to weaker freight markets in the product tanker sector, lower vessel utilization and greater spot market chartering activity, which resulted in lower revenues net of voyage related costs and commissions.

#### **Recent Daily Fleet Data:**

(In U.S. dollars, except for Utilization %)

		Year ended December 31,		
		2016	2017	2018
Eco-Efficient MR2: (2 of our vessels)				
	TCE	15,015	13,027	10,524
	Opex	5,754	5,838	5,962
	Utilization %	97.0 %	94.1 %	91.8 %
Eco-Modified MR2: (1 of our vessels)				
	TCE	10,705	13,042	12,383
	Opex	6,255	6,433	6,505
	Utilization %	92.9 %	90.1 %	86.6 %
Standard MR2: (1 of our vessels)				
	TCE	15,504	12,209	8,887
	Opex	6,772	6,036	6,039
	Utilization %	90.5 %	99.2 %	91.0 %
Handysize Tankers: (2 of our vessels)				
	TCE	7,939	5,979	5,844
	Opex	5,315	5,408	5,122
	Utilization %	85.1 %	79.2 %	72.6 %
Fleet: (6 vessels)				
	TCE	12,134	10,795	9,163
	Opex	5,861	5,827	5,785
	Utilization %	91.3 %	89.3 %	84.3 %

Our fleet consists of two eco-efficient MR2 tankers, the *Pyxis Theta* and the *Pyxis Epsilon*, one eco-modified MR2, the *Pyxis Malou*, one standard MR2 (a non-eco-efficient or eco-modified tanker, which was built prior to 2012), the *Pyxis Delta*, and the handysize tankers, the *Northsea Alpha* and the *Northsea Beta*. During 2016 to 2018, the vessels in our fleet were employed at various occasions under time and spot charters.

Consolidated Statements of Comprehensive Loss for the Fiscal Year Ended December 31, 2017 Compared to the Fiscal Year Ended December 31, 2018

2017 2018 Change % (In thousands of U.S. dollars)

\$29,579 \$28,457 \$(1,122) (3.8 )%

Revenues, net:

Expenses:

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Voyage related costs and commissions	(8,463)	(11,817)	(3,354)	39.6 %
Vessel operating expenses	(12,761)	(12,669)	92	(0.7)%
General and administrative expenses	(3,188)	(2,404)	784	(24.6)%
Management fees, related parties	(712)	(720)	(8)	1.1 %
Management fees, other	(930)	(930)	_	
Amortization of special survey costs	(73)	(133)	(60)	82.2 %
Depreciation	(5,567)	(5,500)	67	(1.2)%
Vessel impairment charge		(2,282)	(2,282)	_
Bad debt provisions	(231)	(13)	218	(94.4)%
Operating loss	\$(2,346)	\$(8,011)	\$(5,665)	241.5%
Other expenses:				
Gain from debt extinguishment	_	4,306	4,306	_
Loss from financial derivative		(19)	(19)	
Interest and finance costs, net	(2,897)	(4,490)	(1,593)	55.0 %
Total other expenses, net	\$(2,897)	\$(203)	\$2,694	(93.0)%
Net loss	\$(5,243)	\$(8,214)	\$(2,971)	56.7 %

Revenues, net: Revenues, net, of \$28.5 million for the year ended December 31, 2018, represent a decrease of \$1.1 million, or 3.8%, from \$29.6 million in the comparable period in 2017. We owned six vessels during the year, the same number as in the prior year, with 2,154 available days for revenue generation in 2018 compared to 2,190 available days in 2017. Available days were lower in 2018 due to the scheduled special survey of *Pyxis Theta* and the drydocking of *Pyxis Malou*. Our Handysize tankers operated solely in the spot market during 2018 whereas our MR tankers operated both on spot and in the time charter market, all under difficult conditions for most of 2018.

Revenue from spot voyages in 2018 was \$17.0 million, an increase of \$0.3 million from \$16.7 million in 2017. Time charter revenue decreased by 11.2% or \$1.4 million, from \$12.9 million in 2017 to \$11.5 million in 2018. The overall revenue decrease in 2018 was attributable to lower time charter equivalent rates from weaker freight markets as well as to a decrease in total operating days as a result of increased idle days between charters, particularly for the Handysize vessels, and the dry docking of the two vessels during the year.

Voyage related costs and commissions: Voyage related costs and commissions of \$11.8 million for the year ended December 31, 2018, represented an increase of \$3.4 million, or 39.6%, from \$8.5 million in the comparable period in 2017. The increase is largely attributable to the number of days that the fleet operated under spot charter. Under spot charters, all voyage expenses are typically borne by us rather than the charterer and the increase in spot chartering results in an increase in voyage related costs and commissions.

*Vessel operating expenses*: Vessel operating expenses of \$12.7 million for the year ended December 31, 2018, represented a slight decrease of \$0.1 million, or 0.7%, from \$12.8 million in the comparable period in 2017.

General and administrative expenses: General and administrative expenses were \$2.4 million for the year ended December 31, 2018, a decrease of \$0.8 million, or 24.6%, from \$3.2 million in the comparable period in 2017. The reduction in general and administrative expenses in 2018 was largely a result of lower non-cash restricted stock compensation of \$0.4 million and lower legal, audit and other expenses of \$0.4 million, substantially associated with a terminated securities offering in 2017.

*Management fees, related parties*: Management fees to Maritime of \$0.7 million for the year ended December 31, 2018, remained the same in 2017.

*Management fees, other*: Management fees, payable to ITM of \$0.9 million for the year ended December 31, 2018, were the same in 2017.

Amortization of special survey costs: Amortization of special survey costs of \$0.1 million for the year ended December 31, 2018, was relatively the same as the prior year.

*Depreciation*: Depreciation of \$5.5 million for the year ended December 31, 2018, remained flat compared to the year ended December 31, 2017.

*Vessel Impairment Charge:* Vessel impairment charge for the year ended December 31, 2018 was \$2.3 million compared to \$0.0 million in the prior year. The impairment charges for the year ended December 31, 2018 related to vessels *Northsea Alpha* and *Northsea Beta* whereas there was no vessel impairments charge in 2017.

*Bad debt provisions*: Bad debt provisions of \$0.2 million for the year ended December 31, 2017, which represent doubtful trade accounts receivables, decreased to \$0.0 million for the year ended December 31, 2018.

Gain from debt extinguishment: Gain from debt extinguishment in 2018 was \$4.3 million compared to zero in the prior year. The gain was a result of debt discount received for the early prepayment of loans from Commerzbank when *Northsea Alpha, Northsea Beta* and *Pyxis Malou* were refinanced in full with Amsterdam Trade Bank, N.V. ("ATB") in February, 2018.

Interest and finance costs, net: Interest and finance costs, net, for the year ended December 31, 2018, amounted to \$4.5 million, compared to \$2.9 million in the comparable period in 2017, an increase of \$1.6 million, or 55.0%. The increase was attributed to the increase of the LIBOR-based interest rates applied to our outstanding bank debt and a refinancing of the loans for four of our vessels at significantly higher interest rates. While the total loans outstanding decreased from \$66.9 million at December 31, 2017 to \$63.4 million at December 31, 2018, the overall weighted average interest rate increased from 3.7% in 2017 to 6.0% in 2018.

# Consolidated Statements of Comprehensive Income / (Loss) for the Fiscal Year Ended December 31, 2016 Compared to the Fiscal Year Ended December 31, 2017

Revenues, net:	2016 (In thousa \$30,387	2017 nds of U.S. \$29,579	Change dollars) \$(808)	% (2.7 )%
Expenses:				
Voyage related costs and commissions	(6,288)	(8,463	(2,175)	34.6 %
Vessel operating expenses	(12,871)			(0.9)%
General and administrative expenses	(2,574)	(3,188	(614)	23.9 %
Management fees, related parties	(631)	(712	(81)	12.8 %
Management fees, other	(1,024)	(930	) 94	(9.2)%
Amortization of special survey costs	(236)	(73	) 163	(69.1)%
Depreciation	(5,768)	(5,567	) 201	(3.5)%
Vessel impairment charge	(3,998)		3,998	(100.0)%
Bad debt provisions	<b>\$</b> —	\$(231	\$(231)	n/a
Operating income / (loss)	(3,003)	(2,346)	) 657	(21.9)%
Other income / (expenses):				
Interest and finance costs, net	(2,810)	(2,897	(87)	3.1 %
Total other expenses, net	\$(2,810)	\$(2,897	\$(87)	3.1 %
Net income / (loss)	\$(5,813)	\$(5,243)	\$570	(9.8)%

*Revenues, net*: Revenues, net of \$29.6 million for the year ended December 31, 2017, represented a decrease of \$0.8 million, or 2.7%, from \$30.4 million in the comparable period in 2016. The decrease in 2017 was attributed to lower time charter equivalent rates as well as to a decrease in total operating days attributed to increased idle days between voyage charter employments.

*Voyage related costs and commissions*: Voyage related costs and commissions of \$8.5 million for the year ended December 31, 2017, represented an increase of \$2.2 million, or 34.6%, from \$6.3 million in the comparable period in 2016. The increase was primarily attributed to greater spot charter activity, which incurs voyage costs.

*Vessel operating expenses*: Vessel operating expenses of \$12.8 million for the year ended December 31, 2017, represented a slight decrease of approximately \$0.1 million, or 0.9%, from \$12.9 million in the comparable period in 2016.

General and administrative expenses: General and administrative expenses of \$3.2 million for the year ended December 31, 2017, increased by \$0.6 million, or 23.9%, from \$2.6 million in the comparable period in 2016. The increase in general and administrative expenses was primarily attributed to the \$0.4 million non-cash restricted stock compensation that was recorded in the fourth quarter of 2017 and to the one-off expenses of \$0.3 million relating to the public equity offering that was terminated in July 2017.

Management fees, related parties: Management fees to Maritime of \$0.7 million for the year ended December 31, 2017, increased by \$0.1 million, or 12.8%, from \$0.6 million in the comparable period in 2016. The increase was attributed to the increase in the daily management fee of the *Northsea Beta* and the *Northsea Alpha* as a result of Maritime's assumption of full commercial management of these vessels in June and November 2016, respectively.

Management fees, other: Management fees mainly payable to ITM of \$0.9 million for the year ended December 31, 2017, decreased by \$0.1 million, or 9.2%, compared to the year ended December 31, 2016, which included the services of North Sea Tankers BV, the former commercial manager of the *Northsea Alpha* and the *Northsea Beta*.

Amortization of special survey costs: Amortization of special survey costs was \$0.1 million for the year ended December 31, 2017, compared to \$0.2 million for the year ended December 31, 2016. The decrease in amortization of special survey costs is attributed to the write-off of the unamortized portion of the special survey costs of the *Northsea Alpha* and the *Northsea Beta* since an impairment charge was recognized on both vessels as of December 31, 2016.

*Depreciation*: Depreciation of \$5.6 million for the year ended December 31, 2017, remained relatively stable compared to the year ended December 31, 2016.

*Vessel Impairment Charge:* Vessel impairment charge for the year ended December 31, 2017 was \$0.0 million compared to \$4.0 million in the prior year. The prior year vessel impairment charge relates to the vessels *Northsea Alpha* and *Northsea Beta*.

*Bad debt provisions*: Bad debt provisions of \$0.2 million for the year ended December 31, 2017, represented an increase in doubtful trade accounts receivable.

*Interest and finance costs, net:* Interest and finance costs, net, for the year ended December 31, 2017, amounted to \$2.9 million, compared to \$2.8 million in the comparable period in 2016, an increase of \$0.1 million, or 3.1%. The increase was mainly attributed to the increase of the LIBOR-based interest rates applied to our outstanding bank debt.

#### **B.** Liquidity and Capital Resources

Overview

Our principal sources of liquidity are cash flows from operations, borrowings from bank debt, proceeds from issuances of equity and, we expect in the future, from the selective sale of vessels and the proceeds from further issuances of equity and debt. We expect that our future liquidity requirements will relate primarily to:

payments of interest and other debt-related expenses and the repayment of principal on our loans;

our operating expenses, including dry-docking and special survey costs;

maintenance of cash reserves to provide for contingencies and to adhere to minimum liquidity for loan covenants; and

vessel acquisitions.

On March 30, 2018, we filed with the SEC a prospectus supplement to sell up to \$2.3 million of common shares through an At-the-Market ("ATM") offering or similar direct placement. We did not issue any securities under this

program, but in November 19, 2018 we amended the prospectus supplement to increase the offering to \$3.675 million. In November 2018 we sold 182,297 common shares at weighted average price per share of \$1.73. Following this sale, Mr. Valentis' beneficial ownership of our common stock declined to 80.9%.

We expect to rely upon operating cash flows from the employment of our vessels on spot and time charters and amounts due to related parties, long-term borrowings and the proceeds from future equity and debt offerings to fund our liquidity and capital needs and implement our growth plan. The Company performs on a regular basis cash flow projections to evaluate whether it will be in a position to cover its liquidity needs for the next 12-month period and be in compliance with the financial and security collateral cover ratio covenants under its existing debt agreements. In developing estimates of future cash flows, the Company makes assumptions about the vessels' future performance, with significant assumptions relating to time charter equivalent rates by vessel type, vessels' operating expenses, vessels' capital expenditures, fleet utilization, the Company's management fees, general and administrative expenses, and debt servicing requirements. The assumptions used to develop estimates of future cash flows are based on historical trends as well as future expectations. As of December 31, 2018 the Company had a working capital deficit of \$9.2 million, defined as current assets minus current liabilities. As of the filing date of the consolidated financial statements, the Company expects that it will be in a position to cover its liquidity needs for the next 12-month period through cash generated from operations and by managing its working capital requirements. In addition, the Company may consider the raising of capital including debt, equity securities, joint ventures and / or sale of assets.

Our business is capital intensive and our future success will depend on our ability to maintain a high quality fleet through the acquisition of modern tanker vessels and the selective sale of older tanker vessels. We may pursue a sale or other long-term strategy such as a bareboat charter agreement with purchase option or commitment for the *Northsea Alpha* and the *Northsea Beta*. These acquisitions and dispositions will be principally subject to management's expectation of future market conditions, our ability to acquire and dispose of tanker vessels on favorable terms as well as access to cost-effective capital on reasonable terms.

We do not intend to pay dividends to the holders of our shares in the near future and expect to retain our cash flows primarily for the payment of vessel operating costs, dry-docking costs, debt servicing and other obligations, general corporate and administrative expenses, and reinvestment in our business (such as to fund vessel or fleet acquisitions), in each case, as determined by our board of directors.

Cash Flow Analysis

Cash and cash equivalents as of December 31, 2018, amounted to \$0.5 million, compared to \$1.7 million as of December 31, 2017. We define working capital as current assets minus current liabilities. We had a working capital deficit of \$9.2 million as of December 31, 2018, compared to the working capital deficit of \$8.6 million as of December 31, 2017. The increase in our working capital deficit is due to a decrease in cash and cash equivalents of \$1.1 million and an increase in trade accounts receivable of \$1.9 million, offset by a \$3.0 million decrease in the current portion of long-term debt, net of deferred financing costs, an increase of \$2.5 million in trade accounts payable, an increase of \$1.3 million in amounts due to related parties, an increase of \$0.4 million in hire received in advance and an increase of \$0.2 million in the remaining current liabilities, net of the remaining current assets.

# Consolidated Cash Flows information:

Statements of Cash Flows Data		Year ended				
		December 31,				
(In millions of U.S. dollars)	2016	2017	2018			
Net cash provided by / (used in) operating activities	\$4.4	\$3.7	\$(2.2)			
Net cash used in investing activities	<b>\$</b> —	\$	\$(0.1)			
Net cash used in financing activities	\$(7.3)	\$(2.8)	\$(0.2)			

Operating Activities: Net cash used in operating activities was \$2.2 million for 2018, compared to net cash provided by operating activities of \$3.7 million for 2017. There were a number of factors driving the decrease in our net cash from operating activities. Firstly, a decrease in revenues in 2018 of \$1.1 million was attributable to lower time charter equivalent rates from weaker freight markets as well as to a decrease in total operating days as a result of increased idle days between charters, particularly for the Handysize vessels, and the dry docking of the two vessels during the year. Secondly, there was an increase in voyage related costs and commissions of \$3.4 million due to greater spot chartering activity during 2018 compared to 2017. Finally, the movement in changes to assets and liabilities increased cash from operating activities by \$2.0 million in 2018 compared to \$2.5 million in 2017.

Net cash provided by operating activities was \$3.7 million for 2017, compared to \$4.4 million for 2016. The decrease in our net cash from operating activities was mainly due to a decrease in voyage revenues, net of voyage related costs and commissions by \$3.0 million due to lower time charter equivalent and utilization rates, an increase in general and administrative expenses, excluding the non-cash share based compensation recorded in 2017, of \$0.3 million following the write-off of costs from the terminated public equity offering, and an increase in cash outflows from changes in other assets and liabilities that in aggregate amounted to \$0.3 million, partially offset by an increase in cash inflows from changes in trade receivables, net, of \$2.0 million, an increase in cash inflows from changes in balances due to related parties by \$0.8 million, and a decrease in vessel operating expenses by \$0.1 million. The effects of greater spot charter activity in 2017 primarily resulted in lower operating income and changes to other current assets and current liabilities.

*Investing Activities*: Net cash used in investing activities was \$0.1 million during 2018 which relates to an advance payment for the ballast water treatment system that will be fitted on *Pyxis Malou* in early 2019 during her scheduled special survey. There was no net cash provided by or used in investing activities for 2017.

Financing Activities: Net cash used in financing activities in 2018 amounted to \$0.2 million. During 2018, the Company received \$44.5 million in new loan facilities with ATB and EntrustPermal and repaid long-term debt of \$43.6 million as discussed below, including fully repaying the debt outstanding with Commerzbank and DVB Bank of \$26.9 million (before the \$4.3 million gain from debt extinguishment) and \$16.0 million, respectively. Financing costs of \$0.9 million were paid in relation to the new loan facilities during 2018 and \$0.3 million of cash received from

issuing common stock during 2018 was offset by \$0.4 million payment of costs related to the filing of the Universal Shelf Registration Statement under Form F-3 and the ATM program in 2018.

Net cash used in financing activities was \$2.8 million for 2017, which mainly reflects long-term debt repayments of \$7.0 million, and the payment of common stock offering costs of \$0.4 million and financing costs of \$0.2 million, partially offset by the gross proceeds of \$4.8 million from the issuance of common stock pursuant to the Private Placement discussed above. Net cash used in financing activities was \$7.3 million for 2016, which mainly reflects long-term debt repayments.

#### **Indebtedness**

Our vessel-owning subsidiaries, as borrowers, entered into loan agreements in connection with the purchase of each of the vessels in our fleet. As of December 31, 2018, our vessel-owning subsidiaries had outstanding borrowings under the following loan agreements:

SECONDONE CORP. ("Secondone") (which owns the *Northsea Alpha*), THIRDONE CORP. ("Thirdone") (which owns the *Northsea Beta*) and FOURTHONE CORP. ("Fourthone") (which owns the *Pyxis Malou*) refinanced existing indebtedness of \$26.9 million on February 28, 2018 under the Secondone, Thirdone and Fourthone loan agreements utilizing a new 5-year secured term loan of \$20.5 million with Amsterdam Trade Bank N.V., and cash of \$2.1 million. The remaining balance of approximately \$4.3 million was written-off by the previous lender at closing and was recorded as gain from debt extinguishment in the first quarter of 2018. The new loan bears interest at LIBOR plus a margin of 4.65% per annum, and matures in February 2023. The loan is repayable in quarterly installments and a balloon payment. Standard loan covenants include, amongst others, a minimum loan to value ratio and liquidity. As a condition subsequent to the execution of this loan agreement, the borrowers, Secondone, Thirdone and Fourthone, proceeded with all required procedures for their re-domiciliation to the jurisdiction of the Republic of Malta. The re-domiciliation became effective on March 1, 2018 and the borrowers were renamed to Secondone Corporation Ltd., Thirdone Corporation Ltd. and Fourthone Corporation Ltd., respectively. The loan is secured by joint-and-several first preferred mortgages over the *Northsea Alpha*, the *Northsea Beta* and the *Pyxis Malou*. As of December 31, 2017 and 2018, the aggregate outstanding balance of the loans for these vessels was \$26.9 million and \$19.3 million, respectively.

SIXTHONE CORP. ("Sixthone") (which owns the *Pyxis Delta*), and SEVENTHONE CORP. ("Seventhone") (which owns the *Pyxis Theta*), jointly and severally entered into a loan agreement on October 12, 2012, as subsequently amended and supplemented, with HSH Nordbank AG providing for a loan facility up to \$37.3 million. In February 2013, Sixthone drew down an amount of \$13.5 million and, in September 2013, Seventhone drew down an amount of \$21.3 million ("Tranche A" and "Tranche B", respectively). The loan bears interest at LIBOR plus a margin of 3.35% per year. Under the original agreement, the tranche relating to Sixthone matured in May 2017 and the tranche relating to Seventhone matured in September 2018. On September 29, 2016, we agreed with the lender of Sixthone to extend the maturity of Tranche A from May 2017 to September 2018, under the same amortization schedule and applicable margin. In addition, on June 6, 2017, HSH Nordbank AG agreed to further extend the maturity of the respective loans from September 2018 to September 2022 under the same applicable margin, but with an extended amortization profile. The loan is repayable in quarterly installments and a balloon payment. The loan is secured by joint-and-several first preferred mortgages over *Pyxis Delta* and *Pyxis Theta*. As of December 31, 2017 and 2018, the aggregate outstanding balance of the loan for these vessels was \$23.1 million and \$20.1 million, respectively.

EIGTHONE CORP. ("Eighthone"), (which owns the *Pyxis Epsilon*), entered into a new \$24.0 million loan agreement with Wilmington Trust National Association on September 27, 2018 for the purpose of refinancing the outstanding indebtedness with DVB Bank SE. The loan facility bears an interest rate of 11.0% per annum and matures in September 2023. Fees are payable upon early prepayment or on final repayment of outstanding principal. The principal obligation amortizes in 18 quarterly installments starting in March 29, 2019, equal to the lower of \$0.4 million and excess cash computed through a cash sweep mechanism, plus a balloon payment due at maturity. The facility is secured by a first priority mortgage over *Pyxis Epsilon*, As of December 31, 2017 and 2018, the aggregate outstanding balance of the loan for *Pyxis Epsilon* was \$16.9 million and \$24.0 million, respectively.

Each of the loan agreements referenced above is secured by a first priority mortgage over the respective vessel and a first priority assignment of the vessel's insurances and earnings, and guaranteed by the parent company. In addition, certain of our loan agreements and guarantees require us to maintain specified financial ratios and satisfy financial covenants. These financial ratios and covenants include requirements that:

the certain vessel-owning subsidiaries that are a borrower under the respective loan agreement must maintain pledged deposits equal to a specified dollar amount;

we must maintain minimum liquidity of between \$0.3 million and \$0.85 million per vessel;

certain of our vessel-owning subsidiaries maintain a retention account with monthly deposits equal to one-third of the next principal installment together with the appropriate percentage of interest next due;

the fair market value of the mortgaged vessel plus any additional collateral must be no less than a certain percentage, ranging from 115% to 140%, of outstanding borrowings under the applicable loan agreement, less, in certain loan agreements, any money in respect of the principal standing to the credit of the retention account and any free or pledged cash deposits held with the lender in our or its subsidiary's name (the minimum security collateral cover or "MSC"); and

for the HSH credit facility, the total liabilities to market value adjusted total assets ratio should not exceed 65% in order for the relevant vessel-owning companies to proceed with dividend distributions. As of December 31, 2018, the ratio of total liabilities to market value adjusted total assets was 68%, or 3% higher than the required threshold. Until such time as the ratio of total liabilities to market value adjusted total assets falls below the 65% threshold, the borrowers under the credit facility, Sixthone and Seventhone, will be unable to pay any dividend or make any other form of distribution.

The events of default under our loan documents generally include provisions relating to events of default, such as:

the non-payment on the due date of any amount under the loan agreements or any related document;

the breach of any covenant or undertaking or failure to provide additional security as required;

any untrue or incorrect representation or warranty; and

any cross-default.

As of December 31, 2018, we were in compliance with all of our financial covenants with respect to our loan agreements and there was no amount available to be drawn down under our existing loan agreements.

As discussed above, with the exception of the Eigthone loan, our interest rates are calculated at LIBOR plus a margin, and hence we are exposed to movements in LIBOR. In order to hedge our variable interest rate exposure, on January 19, 2018, Seventhone entered into an interest rate cap agreement with its lender for a notional amount of \$10.0 million and a cap rate of 3.5%. The interest rate cap will terminate on July 18, 2022. At inception, Seventhone paid \$0.05 million to enter into the interest rate cap which at December 31, 2018 had a value of \$0.03 million.

### **Major Capital Expenditures**

In January 2018, \$0.3 million was paid for certain work carried out on *Pyxis Malou* in advance of her dry docking scheduled in early 2019 and in September 2018, \$0.3 million was paid for the scheduled first fifth year special survey of *Pyxis Theta*.

### **Critical Accounting Policies**

The discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of those financial statements required us to make estimates and judgments that affect the reported amounts of assets and liabilities, revenues and expenses and related disclosure at the date of our financial statements. Actual results may differ from these estimates under different assumptions and conditions. Critical accounting policies are those that reflect significant judgments of uncertainties and potentially result in materially different results under different assumptions and conditions. We have described below what we believe are our most critical accounting policies, because they generally involve a comparatively higher degree of judgment in their application. For a description of all of our significant accounting policies, please see Note 2 to our audited consolidated financial statements included elsewhere in this Annual Report.

Going Concern

We perform on cash flow projections on a regular basis to evaluate whether we will be in a position to both cover our liquidity needs for the next 12-month period and be in compliance with the financial and security collateral cover ratio covenants under our existing debt agreements. In developing estimates of future cash flows, we make assumptions about the vessels' future performance, with significant assumptions relating to time charter equivalent rates by vessel type, vessels' operating expenses, vessels' capital expenditures, fleet utilization, our management fees and general and administrative expenses, and cash flow requirements for debt servicing. The assumptions used to develop estimates of future cash flows are based on historical trends as well as future expectations.

We determine cash flow projections by considering the:

estimated vessel utilization ranging from 85.0% and 98.6%, depending on the vessel type and whether the vessel is operating on spot or under time charter;

charter revenues from existing time charters for the fixed fleet days, and an estimated daily time charter equivalent using independent market analysts' estimates for similar vessels for the unfixed days over the remaining period until the end of the 12-month period, net of our recent historical data on vessel operating expenses, management fees and general and administrative expenses; and

estimated cost of scheduled intermediate and special survey dry-dockings.

As of December 31, 2018, we had a working capital deficit of \$9.2 million, defined as current assets minus current liabilities. We considered such deficit in conjunction with the future market prospects and potential future financings. As of the filing date of this Annual Report, we believe that we will be in a position to cover our liquidity needs for the next 12-month period and in compliance with the financial and security collateral cover ratio covenants under our existing debt agreements.

### Vessel Impairment

The carrying values of our vessels may not represent their fair market value at any point in time since the market prices of secondhand vessels tend to fluctuate with changes in charter rates and the cost of newbuildings. Historically, both charter rates and vessel values tend to be cyclical. We record impairment losses only when events occur that cause us to believe that future cash flows for any individual vessel (which is considered a cash generating unit) will be less than its carrying value. The carrying amounts of vessels held and used by us are reviewed accordingly for potential impairment whenever events or changes in circumstances indicate that the carrying amount of a particular vessel may not be fully recoverable. In these instances, an impairment charge would be recognized if the estimate of the undiscounted future cash flows expected to result from the use of the vessel and our eventual disposition is less than the vessel's carrying amount. This assessment is made at the individual vessel level as separately identifiable cash flow information for each vessel is available. Measurement of the impairment loss is based on the fair value of the asset. We determine the fair value of our assets based on management estimates and assumptions and by making use of available market data and taking into consideration third party valuations. As of December 31, 2017 and 2018, our fleet was independently valued at \$109.3 million and \$103.4 million, respectively, based on the average of appraisals from two internationally recognized maritime brokers.

As of December 31, 2016, we obtained market valuations for all of our vessels from reputable marine appraisers. Based on these valuations, we identified impairment indications for all of our vessels, except for the *Pyxis Epsilon*. More specifically, the market values of these vessels were, in aggregate, \$15.8 million lower than their carrying values, including any unamortized deferred charges relating to special survey costs, as of December 31, 2016. In this

respect, we performed an impairment analysis to estimate the future undiscounted cash flows for each of these vessels. The analysis resulted in higher undiscounted cash flows than each vessel's carrying value as of December 31, 2016, except for the *Northsea Alpha* and the *Northsea Beta* for which a total vessel impairment charge of \$4.0 million was recorded as of December 31, 2016, of which \$3.4 million was charged against vessels, net, and \$0.6 million against deferred charges, net.

As of December 31, 2017, we obtained market valuations for all of our vessels from reputable marine appraisers. Based on these valuations, we identified impairment indications for certain of our vessels. More specifically, the market values of these vessels were, in aggregate, \$8.3 million lower than their carrying values, including any unamortized deferred charges relating to special survey costs, as of December 31, 2017. In this respect, we performed an impairment analysis to estimate the future undiscounted cash flows for each of these vessels. The analysis resulted in higher undiscounted cash flows than each vessel's carrying value as of December 31, 2017, and accordingly, no adjustment to the vessels' carrying values was required.

As of December 31, 2018, we obtained market valuations for all of our vessels from reputable marine appraisers. Based on these valuations, we identified impairment indications for all of our vessels, except for the *Pyxis Epsilon*. More specifically, the market values of these vessels were, in aggregate, \$10 million lower than their carrying values, including any unamortized deferred charges relating to special survey costs, as of December 31, 2018. In this respect, we performed an impairment analysis to estimate the future undiscounted cash flows for each of these vessels. The analysis resulted in higher undiscounted cash flows than each vessel's carrying value as of December 31, 2018 with the exception of *Northsea Alpha* and *Northsea Beta*. A total impairment charge of \$0.7 million was recorded at December 31, 2018, all of which was charged against vessels, net on the balance sheet. This impairment charge was in addition to the \$1.6 million impairment charge recorded in the first quarter, 2018 relating to the write down of the carrying amount of *Northsea Alpha* and *Northsea Beta* to their fair values following the impairment analysis carried out for the fleet at March 31, 2018. The aggregate non-cash impairment charges for the Handysize vessels in 2018 was approximately \$2.3 million.

For the purposes of the impairment test, we determine future undiscounted net operating cash flows for each vessel and compare it to the vessel's carrying value. The future undiscounted net operating cash flows are determined by considering the:

estimated vessel utilization of 85.0% to 98.6% (depending on the type of the vessel) for the first year and 98.0% or 93.0%, including scheduled off-hire days for planned dry-dockings and vessel surveys, for the years thereafter, based on historical experience;

estimated vessel scrap value at \$300 per lightweight ton;

charter revenues from existing time charters for the fixed fleet days and an estimated daily time charter equivalent based on recent market estimates for the first year and the most recent seven year historical average time charter rates, where available, for similar vessels for the unfixed days over the remaining estimated useful life of the vessel, net of our recent historical data on vessel operating expenses;

estimated cost of scheduled intermediate and special survey dry-dockings; and

inflationary factor for vessel operating expenses and dry-docking costs of 2.0% per year.

When the estimate of future undiscounted net operating cash flows for any vessel is lower than the vessel's carrying value, we compare the carrying value to the vessel's fair value. If the fair market value is lower than the vessel's carrying value, the carrying value is written down to the vessel's fair market value, by recording a charge to operations.

Although we believe that the assumptions used to evaluate potential impairment are reasonable and appropriate, these assumptions are highly subjective. For example, we determined future undiscounted net operating cash flows, in part, based on the average gross one year time charter equivalent rate for the most recent seven-year period. This seven year period represents a reasonable amount of time in which a substantial portion of the worldwide product tankers newbuild orderbook was delivered and the global economic conditions gradually improved. Historically, actual freight rates, which have experienced wide spreads between peaks and troughs, industry costs and scrap prices have been volatile, and long-term estimates may differ considerably. There can be no assurance as to how long charter rates and vessel values will remain at their present levels or whether they will change by any significant degree.

Vessel Lives and Depreciation

We depreciate our vessels on a straight line basis over the expected useful life of each vessel, which is 25 years from the date of its initial delivery from the shipyard, which we believe is within industry standards and represents the most reasonable useful life for each of our vessels. Depreciation is based on the cost of the vessel less its estimated residual value at the date of the vessel's acquisition, which is estimated at \$300 per lightweight ton, which our management believes is common in the shipping industry. Secondhand vessels are depreciated from the date of their acquisition

through their remaining estimated useful lives. A decrease in the useful life of a vessel or in its residual value would have the effect of increasing the annual depreciation charge. When regulations place limitations over the ability of a vessel to trade on a worldwide basis, its useful life is adjusted to end at the date such regulations become effective.

# C. Research and Development, Patents and Licenses, etc.

Not applicable.

### **D. Trend Information**

Our results of operations depend primarily on the charter hire rates that we are able to realize for our vessels, which depend on the supply and demand dynamics characterizing the product tanker market at any given time. The product tanker industry has been highly cyclical in recent years, experiencing volatility in charter hire rates and vessel values resulting from changes in the supply of and demand for products and tanker capacity. For other trends affecting our business please see other discussions in "Item 4. Information on the Company" and "Item 5. Operating and Financial Review and Prospects".

### E. Off-Balance Sheet Arrangements.

We do not have any off-balance sheet arrangements as of the date of this Annual Report.

### F. Tabular Disclosure of Contractual Obligations

The following table sets forth our contractual obligations and their maturity dates as of December 31, 2018.

	Total	Less than 1 year	1-3 years	3-5 years	Mor than 5 year	ı
	(In thous	ands of U.	S. dollars)			
Loan agreements - principal (1)	\$63,422	\$4,503	\$9,506	\$49,413	\$	
Interest on loans (2)	\$24,580	\$5,924	\$10,909	\$7,747	\$	—
Promissory note - principal (3)	\$5,000	\$	\$5,000	\$—	\$	
Interest on promissory note (3)	\$281	\$225	\$56	\$—	\$	
Technical management agreements – ITM (4)	\$229	\$229	<b>\$</b> —	<b>\$</b> —	\$	—
Ship management agreements – Maritime (5)	\$179	\$179	<b>\$</b> —	<b>\$</b> —	\$	—
Administrative services – Maritime (6)	\$1,997	\$1,628	\$369	<b>\$</b> —	\$	—
Total	\$95,688	\$12,688	\$25,840	\$57,160	\$	—

Secondone, Thirdone and Fourthone, together, Sixthone and Seventhone, together, and Eighthone, independently, (1) entered into loan agreements with lenders, for which the vessels they own are mortgaged as collateral. Please read "- Liquidity and Capital Resources - Indebtedness" above for more information.

Assumes scheduled loan principal amortization as described above, based on an average 3-month LIBOR rate of 2.81% plus the applicable margin over LIBOR for the entire duration of the existing loan agreements. Please read "Item 7. Major Shareholders and Related Party Transactions – B. Related Party Transactions – Promissory Note Issued to Maritime Investors" for more information.

On October 28, 2015, we and Maritime Investors entered into a promissory note, which as subsequently amended and supplemented, has an outstanding principal balance of \$5.0 million payable on March 31, 2020, which bore a

- (3) fixed interest rate of 4.00% per annum from December 29, 2017 to June 30, 2018 and an increased fixed rate of 4.5% per annum from July 1, 2018 and until paid in full, payable quarterly in cash. Please refer to "Item 7 Related Party Transactions" below for more information.
- The technical management agreements with ITM can be cancelled by us for any reason at any time upon three months' advance notice, but neither party can cancel the agreement, other than for specified reasons, until 18 months after the initial effective date of the ship management agreement. As of December 31, 2018, all such agreements were cancelable upon three months' advance notice.

The management agreements for the vessels had initial terms of five years. For Northsea Alpha, Northsea Beta and Pyxis Delta the base term expired on December 31, 2015, for Pyxis Theta it expired on December 31, 2017 and

- (5) they expired on December 31, 2018 for Pyxis Epsilon and Pyxis Malou. Following their initial expiration dates, the management agreements renewed for consecutive five year periods, but may be terminated by either party on three months' notice.
- (6) Pursuant to our Head Management Agreement, administrative services will be provided at least until March 23, 2020.

### G. Safe Harbor

Forward-looking information discussed in this Item 5 includes assumptions, expectations, projections, intentions and beliefs about future events. These statements are intended as "forward-looking statements". We caution that assumptions, expectations, projections, intentions and beliefs about future events may and often do vary from actual results and the differences can be material. Please see the section entitled "Forward-Looking Statements" in this Annual Report.

### ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

### A. Directors and Senior Management

### **Directors and Executive Officers**

The following table sets forth information regarding our executive officers and directors as of the date of the Annual Report. The business address of each of the below-listed directors and officers is c/o Pyxis Tankers Inc., K.Karamanli 59, Maroussi 15125, Athens, Greece.

Name	Age	Position
Eddie Valentis	52	Chairman, Chief Executive Officer and Class I Director
Henry P. Williams	63	Chief Financial Officer and Treasurer
Konstantinos Lytras	54	Chief Operating Officer and Secretary
Robin P. Das	45	Class III Director
Basil G. Mavroleon	70	Class III Director
Aristides J. Pittas	59	Class II Director

Biographical information with respect to each of our directors and executive officers is set forth below.

Eddie Valentis, a Class I director, has over 25 years of shipping industry experience, including owning, operating and managing tankers. He has served as Chief Executive Officer and Chairman of our board of directors since our inception. In 2007, Mr. Valentis founded and is the president of Maritime. In 2001, Mr. Valentis was appointed Managing Director of Konkar Shipping Agencies S.A., a drybulk operator based in Greece, which is a position he continues to hold. From 1998 to 2001, Mr. Valentis was the Commercial Manager for Loucas G. Matsas Salvage & Towage. From 1996 through 1998, Mr. Valentis worked as a dry cargo chartering broker for N. Cotzias Shipping. From 1989 to 1995, Mr. Valentis was involved in the operation of his family's drybulk vessels. Since 2013, Mr. Valentis has also served as a member of the Greek Committee of NKK Classification Society, and, since 2016, as a council member of the International Association of Independent Tanker Owners (INTERTANKO). Mr. Valentis has an MBA from Southern New Hampshire University and a B.Sc. from Landsdowne College, London. Mr. Valentis also holds a Captain's diploma from the Aspropyrgos Naval Academy in Greece.

**Henry P. Williams** was appointed as our Chief Financial Officer and Treasurer in August 2015. Mr. Williams has over 35 years of commercial, investment and merchant banking experience. From February 2015, he served as a financial consultant to and is employed by Maritime and its affiliates. From March 2014 to January 2015, Mr.

Williams was Managing Director, Head of Maritime, Energy Services & Infrastructure (U.S.) investment banking for Canaccord Genuity Inc. From August 2012 to February 2014, Mr. Williams was a Senior Advisor to North Sea Securities LLC, a boutique advisory firm in New York. From November 2010 to June 2012, Mr. Williams was Managing Director, Global Sector Head, Shipping of Nordea Markets in Oslo, Norway and Head of its U.S. Investment Banking division in New York. From 1992 until 2010, Mr. Williams was employed by Oppenheimer & Co. Inc., as Managing Director, Head of Energy & Transportation of its investment banking division. Mr. Williams has an MBA in Finance from New York University Leonard N. Stern School of Business and a BA in Economics and Business Administration from Rollins College.

Konstantinos Lytras, has served as our Chief Operating Officer since our inception and as our Secretary since October 15, 2018. Mr. Lytras has also served as Maritime's Financial Director since 2008. Prior to joining Maritime, from 2007 through 2008, Mr. Lytras served as Managing Director and Co-Founder of Navbulk Shipping S.A., a start-up shipping company focused on dry bulk vessels. From 2002 through 2007, Mr. Lytras worked as Financial Director of Neptune Lines Shipping and Managing Enterprises S.A. Mr. Lytras served as Financial Controller of Dioryx Maritime Corp. and Liquimar Tankers Management Inc. from 1996 through 2002. Mr. Lytras worked as a Financial Assistant from 1992 to 1994 at Inchcape Shipping Services Ltd. Mr. Lytras earned a B.A. in Business Administration from Technological Institute of Piraeus and a B.S. in Economics from the University of Athens.

Robin P. Das, serves as a Class III director. Mr. Das has worked in shipping finance and investment banking since 1995. He is the founder and has been a director of Auld Partners Ltd, a boutique shipping and finance focused advisory firm, since 2013. From 2011 to 2012, Mr. Das was Managing Director (partner) of Navigos Capital Management LLC, an asset management firm established to focus on the shipping sector. From 2005 until 2011, Mr. Das was Global Head of Shipping at HSH Nordbank AG, then the largest lender globally to the shipping industry. Before joining HSH Nordbank AG in 2005, he was Head of Shipping at WestLB and prior to that time, Mr. Das was joint Head of European Shipping at J.P. Morgan. Since October 2016, Mr. Das also serves as director of Nimrod Sea Assets Limited (LSE:NSA), which invests in marine assets associated with the offshore oil and gas industry. Mr. Das holds a BSc (Honours) degree from the University of Strathclyde.

Basil G. Mavroleon, serves as a Class III director. Mr. Mavroleon has been in the shipping industry for 45 years. Since 1970, Mr. Mavroleon has worked for Charles R. Weber Company, Inc., one of the oldest and largest tanker brokerages and marine consultants in the United States. Mr. Mavroleon was Managing Director of Charles R. Weber Company, Inc. for 25 years and Manager of the Projects Group for five years, from 2009 until 2013. Mr. Mavroleon currently serves as Managing Director of WeberSeas (Hellas) S.A., a comprehensive sale and purchase, newbuilding, marine projects and ship finance brokerage based in Athens, Greece. He is a Director of Genco Shipping and Trading Limited (NYSE: GNK), a company engaged in the shipping business focused on the drybulk industry spot market. Since its inception in 2003 through its liquidation in 2005, Mr. Mavroleon served as Chairman of Azimuth Fund Management (Jersey) Limited, a hedge fund that invested in tanker freight forward agreements and derivatives. Mr. Mavroleon is on the board of the Associate Membership Committee of INTERTANKO, is on the Advisory Board of NAMMA (North American Maritime Ministry Association), is Director Emeritus of NAMEPA (North American Marine Environmental Protection Association), and the Chairman of the New York World Scale Committee (NYC) INC. Mr. Mavroleon was educated at Windham College, Putney Vermont.

Aristides J. Pittas, serves as a Class II Director. Mr. Pittas has more than 30 years of shipping industry experience. Since 2005, he has been a member of the board of directors and the Chairman and Chief Executive Officer of Euroseas Ltd. (NASDAQ: ESEA) ("Euroseas"), an independent shipping company that operates in the drybulk and container shipping industry. Since 1997, Mr. Pittas has also been the President of Eurochart S.A., Euroseas' affiliate, which is a shipbroking company specializing in chartering, selling and purchasing ships. Since 1995, Mr. Pittas has been the President and Managing Director of Eurobulk Ltd., Euroseas' affiliated ship management company. Eurobulk Ltd. is a ship management company that provides ocean transportation services. Mr. Pittas has a B.Sc. in Marine Engineering from University of Newcastle Upon Tyne and a M.Sc. in both Ocean Systems Management and Naval Architecture and Marine Engineering from the Massachusetts Institute of Technology.

### **Family Relationships**

There are no family relationships among any of our executive officers or directors.

### B. Compensation of Directors, Executive Officers and Key Employees

We have no direct employees. The services of our executive officers, internal auditors and secretary are provided by Maritime. We have entered into a Head Management Agreement with Maritime, pursuant to which we pay approximately \$1.6 million per year for the services of these individuals, and for other administrative services associated with our being a public company and other services to our subsidiaries. Please see "Item 7. Major Shareholders and Related Party Transactions – B. Related Party Transactions".

Our non-executive directors receive in aggregate an annual compensation in the amount of \$125,000 per year, plus reimbursements for actual expenses incurred while acting in their capacity as a director. We may in the future also grant directors awards under our Pyxis Tankers Inc. 2015 equity incentive plan as compensation. We do not have a retirement plan for our officers or directors. There are no service contracts with our non-executive directors that provide for benefits upon termination of their services as director. Individuals serving as chairs of committees will be entitled to receive additional compensation from us as the board of directors may determine.

### **Equity Incentive Plan**

On October 28, 2015, we adopted the Pyxis Tankers Inc. 2015 equity incentive plan (the "EIP"), an equity incentive plan which entitles our and our subsidiaries' and affiliates' employees, officers and directors, as well as consultants and service providers to us (including persons who are employed by or provide services to any entity that is itself a consultant or service provider) and our subsidiaries (including employees of Maritime, our affiliated ship manager), to receive stock options, stock appreciation rights, restricted stock grants, restricted stock units, unrestricted stock grants, other equity-based or equity-related awards, and dividend equivalents. We summarize below the material terms of the EIP.

The nominating and corporate governance committee of our board of directors serves as the administrator under the EIP. Subject to adjustment for changes in capitalization as provided in the EIP, the maximum aggregate number of shares of common stock that may be delivered pursuant to awards granted under the EIP during the ten-year term of the EIP will be 15% of the then-issued and outstanding number of shares of our common stock. If an award granted under the EIP is forfeited, or otherwise expires, terminates or is cancelled or settled without the delivery of shares, then the shares covered by such award will again be available to be delivered pursuant to other awards under the EIP. Any shares that are held back to satisfy the exercise price or tax withholding obligation pursuant to any stock options or stock appreciation rights granted under the EIP will again be available for delivery pursuant to other awards under the EIP. No award may be granted under the EIP after the tenth anniversary of the date the EIP was adopted by our board of directors.

In the event that we are subject to a "change of control" (as defined in the EIP), the EIP administrator may, in accordance with the terms of the EIP, make such adjustments and other substitutions to the EIP and outstanding awards under the EIP as it deems equitable or desirable.

Except as otherwise determined by the EIP administrator in an award agreement, the exercise price for options shall be equal to the fair market value of a share of our common stock on the date of grant, but in no event can the exercise price be less than 100% of the fair market value on the date of grant. The maximum term of each stock option agreement may not exceed ten years from the date of the grant.

Stock appreciation rights ("SARs"), will provide for a payment of the difference between the fair market value of a share of our common stock on the date of exercise of the SAR and the exercise price of a SAR, which will not be less than 100% of the fair market value on the date of grant, multiplied by the number of shares for which the SAR is exercised. The SAR agreement will also specify the maximum term of the SAR, which will not exceed ten years from the date of grant. Payment upon exercise of the SAR may be made in the form of cash, shares of our common stock or any combination of both, as determined by the EIP administrator.

Restricted and/or unrestricted stock grants may be issued with or without cash consideration under the EIP and may be subject to such restrictions, vesting and/or forfeiture provisions as the EIP administrator may provide. The holder of a restricted stock grant awarded under the EIP may have the same voting, dividend and other rights as our other stockholders.

Settlement of vested restricted stock units may be in the form of cash, shares of our common stock or any combination of both, as determined by the EIP administrator. The holders of restricted stock units will have no voting rights.

Subject to the provisions of the EIP, awards granted under the EIP may include dividend equivalents. The EIP administrator may determine the amounts, terms and conditions of any such awards provided that they comply with applicable laws. We have not set aside any amounts to provide pension, retirement or similar benefits to persons eligible to receive awards under the EIP or otherwise.

On October 28, 2015, our board of directors approved the issuance of 33,222 restricted shares of our common stock to certain of our officers. As of December 31, 2015, all such shares had been vested, but were not issued until March 2016. On November 15, 2017, 200,000 restricted shares of our common stock were granted and issued to one of our senior officers, and were vested immediately upon issuance.

### C. Board Practices

Our board of directors consists of four directors, three of whom, Robin P. Das, Basil G. Mavroleon and Aristides J. Pittas, have been determined by our board of directors to be independent under the rules of NASDAQ and the rules and regulations of the SEC. Our audit committee consists of three independent, non-executive directors: Robin Das, Basil Mavroleon and Aristides Pittas. We believe that Robin Das qualifies as an audit committee "financial expert," as such term is defined in Regulation S-K promulgated by the SEC. The audit committee, among other things, reviews our external financial reporting, engages our external auditors, and oversees our financial reporting procedures and the adequacy of our internal accounting controls. The nominating and corporate governance committee consists of Basil G. Mavroleon, Aristides J. Pittas and Eddie Valentis. The nominating and corporate governance committee is responsible for recommending to the board of directors nominees for director and directors for appointment to board committees and advising the board with regard to corporate governance practices.

### D. Employees

We have no direct employees. The services of our executive officers, internal auditors and secretary are provided by Maritime. We have entered into a Head Management Agreement with Maritime, pursuant to which we pay approximately \$1.6 million per year for the services of these individuals, and for other administrative services associated with our being a public company and other services to our subsidiaries. Please see "Item 7. Major Shareholders and Related Party Transactions – B. Related Party Transactions."

# **Indemnification of Officers and Directors**

We have entered into agreements to indemnify our directors, executive officers and other employees as determined by the board of directors. These agreements provide for indemnification for related expenses, including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding except as contained in specified exceptions. We believe that the provisions in our bylaws and indemnification agreements described above are necessary to attract and retain talented and experienced officers and directors.

# E. Share Ownership

With respect to the total amount of common stock owned by all of our officers and directors as a group, please see "Item 7. Major Shareholders and Related Party Transactions – A. Major Shareholders."

#### ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

### A. Major Shareholders

The following table sets forth information regarding the beneficial owners of more than five percent of shares of our common stock, and the beneficial ownership of each of our directors and executive officers and of all of our directors and executive officers as a group as of March 18, 2019. All of our stockholders, including the stockholders listed in this table, are entitled to one vote for each share held.

Beneficial ownership is determined in accordance with the SEC's rules. In computing percentage ownership of each person, shares subject to options held by that person that are currently exercisable or convertible, or exercisable or convertible within 60 days of the date of this Annual Report, are deemed to be beneficially owned by that person. These shares, however, are not deemed outstanding for the purpose of computing the percentage ownership of any other person.

	Shares Beneficially		
	Owned		
Identity of person or group (1)	Number	Percentag	ge
Eddie Valentis (Maritime Investors Corp.) (2)	17,042,788	80.9	%
Henry P. Williams (3)	213,574	1	%
Konstantinos Lytras (3)	36,074	*	
Robin P. Das	_		
Basil G. Mavroleon	_		
Aristides J. Pittas	_	_	
All directors and executive officers as a group (8 person)	17,292,436	81.9	%

<sup>(1)</sup> Except as otherwise provided herein, each person named herein as a beneficial owner of securities has sole voting and investment power as to such securities and such person's address is c/o 59 K. Karamanli Street, Maroussi,

15125, Greece.

- (2) Eddie Valentis is a 100% stockholder of Maritime Investors and shares voting and investment power with Maritime Investors of the 17,042,788 shares of our common stock held by it.
  - Each of Messrs Lytras and Williams received 11,074 restricted shares of our common stock in March 2016 as an
- (3) award under our EIP. In addition, Mr. Williams also received 200,000 restricted shares of our common stock in November 2017 as an award under our EIP.
- \* Less than 1% of our outstanding shares of common stock.

As of March 18, 2019, we had 1,210 shareholders of record, 114 of which were located in the United States and held an aggregate of 9,024,527 shares of our common stock, representing 43% of our outstanding shares of common stock. However, one of the U.S. shareholders of record is CEDE & CO., a nominee of The Depository Trust Company, which held 9,022,776 shares of our common stock as of March 18, 2019. Accordingly, we believe that the shares held by CEDE & CO. include shares of common stock beneficially owned by both holders in the United States and non-U.S. beneficial owners.

### **B. Related Party Transactions**

### Amended and Restated Head Management Agreement with Maritime.

The operations of our vessels are managed by Maritime, an affiliated ship management company, under our Head Management Agreement dated August 5, 2015 and separate management agreements with each of our vessel-owning subsidiaries. Under the Head Management Agreement, Maritime is either directly responsible for or oversees all aspects of ship management for us and our fleet. Under that agreement, Maritime also provides administrative services to us, which include, among other things, the provision of the services of our Chief Executive Officer, Chief Financial Officer, Chief Operating Officer and Secretary, one or more internal auditor(s) and a secretary, as well as use of office space in Maritime's premises. As part of the ship management services, Maritime provides us and our vessels with the following services: commercial, sale and purchase, provisions, insurance, bunkering, operations and maintenance, dry-docking and newbuilding construction supervision. Maritime also supervises the crewing and technical management performed by ITM for all our vessels.

Maritime also currently manages one vessel, *Pyxis Lamda*, owned by a party affiliated with Mr. Valentis, our founder and Chief Executive Officer.

The term of the Head Management Agreement with Maritime commenced on March 23, 2015 and will continue until March 23, 2020. The Head Management Agreement can be terminated by Maritime only for cause or under other limited circumstances, such as upon a sale of us or Maritime or the bankruptcy of either party. The Head Management Agreement will automatically be extended after the initial period for an additional five year period unless terminated on or before the 90th day preceding the termination date. Pursuant to the Head Management Agreement, each of our new subsidiaries that acquires a vessel in the future will enter into a separate management agreement with Maritime with a rate set forth in the Head Management Agreement, Under the Head Management Agreement, we pay Maritime a cost of \$1.6 million annually for the services of our executive officers and other administrative services, including use of office space in Maritime's premises. In return for Maritime's ship management services, we pay to Maritime for each vessel while in operation, a fee per day of \$325, and for each vessel under construction, a fee of \$450 plus an additional daily fee, which is dependent on the seniority of the personnel, to cover the cost of the engineers employed to conduct the supervision. The fees payable to Maritime for the administrative and ship management services will be adjusted effective as of every January 1st for inflation in Greece or such other country where it is headquartered. On August 9, 2016, we amended the Head Management Agreement with Maritime to provide that in the event that the official inflation rate for any calendar year is deflationary, no adjustment shall be made to the Ship-management Fees and the administration fees, which will remain the same as per the previous calendar year. Effective January 1, 2019, the Ship-Management Fees and the Administration Fees were increased by 0.62% in line with the average inflation rate in Greece in 2018. In addition, Maritime will receive 1.0% of the purchase price of any sale and purchase transaction from the seller of the vessel, and 1.25% of all chartering, hiring and freight revenue procured by or through it. In the event the agreement is terminated without cause and a change of control (as defined therein) occurred within 12 months after such termination or the agreement is terminated due to a change of control, we will pay Maritime an amount equal to 2.5 times the administrative fee.

The following amounts were charged by Maritime to us during 2016, 2017 and 2018:

	Year Ended December		
	31,		
(In thousands of U.S. dollars)	2016	2017	2018
Charter hire commissions	\$316	\$368	\$354
Ship-Management Fees	631	712	720
Administration fees	1,600	1,600	1,618
Total	\$2,547	\$2,680	\$2,692

Promissory Note issued to Maritime Investors

On October 28, 2015, we issued a promissory note in the amount of \$2.5 million in favor of Maritime Investors in connection with its election to receive a portion of the merger true-up shares in the form of a promissory note. The promissory note also includes amounts due to Maritime Investors for the payment of \$0.6 million by Maritime Investors to LookSmart, representing the cash consideration of the merger, and the amounts that allowed us to pay miscellaneous transactional costs. The promissory note had a maturity of January 15, 2017 and an interest rate of 2.75% per annum. On August 9, 2016, we agreed with Maritime Investors to extend the maturity of the promissory note for one year, from January 15, 2017 to January 15, 2018, at the same terms and at no additional cost to us. In addition, on March 7, 2017, we agreed with Maritime Investors to further extend the maturity of the promissory note for one additional year, from January 15, 2018 to January 15, 2019, at the same terms and at no additional costs to us. On December 29, 2017, we entered into a third amendment to the promissory note ("Amended & Restated Promissory Note"), pursuant to which (i) the outstanding principal balance increased from \$2.5 million to \$5.0 million, (ii) the maturity date was extended to June 15, 2019, and (iii) the fixed interest rate was increased to 4.00% per annum, payable only in cash. In exchange for entering into the third amendment, we reduced the outstanding balance due to Maritime by \$2.5 million. On June 29, 2018, we entered into an amendment to the Amended & Restated Promissory Note pursuant to which (i) the maturity date was extended to March 31, 2020, and (ii) the interest rate was increased to 4.5% per annum until repayment in full.

Under the terms of the credit facility agreement of one of our subsidiaries, Eighthone Corp. with EntrustPermal, no repayment of principal under the Amended & Restated Promissory Note may be made while any PIK interest or Principal Deficiency Amount is outstanding under the credit facility.

### **Maritime Advances**

At December 31, 2018, Maritime had extended \$3.4 million of advances which we used to pay various operating costs, debt service and other obligations. During the quarter ended September 30, 2018, such advances increased to a highpoint of \$7.5 million.

Please also see Item 7.B. Compensation of Directors, Executive Officers and Key Employees – Equity Incenitve Plan.
C. Interests of Experts and Counsel
Not applicable.
ITEM 8. FINANCIAL INFORMATION
A. Consolidated Statements and Other Financial Information
Please see Item 18.
Legal Proceedings
We may, from time to time, be involved in litigation and claims arising out of our operations in the normal course of business. At this time, we are not aware of any proceedings against us or the vessels in our fleet or contemplated to be brought against us or the vessels in our fleet which could have significant effects on our financial position or profitability. We maintain insurance policies with insurers in amounts and with coverage and deductibles as our board of directors believes are reasonable and prudent. We expect that most claims arising in the normal course of business would be covered by insurance, subject to customary deductibles. Any such claims, however, even if lacking merit, could result in the expenditure of significant financial and managerial resources.
Dividend Policy
We do not intend to pay dividends in the near future and will make dividend payments to our stockholders in the future only if our board of directors, acting in its sole discretion, determines that such payments would be in our best interest and in compliance with relevant legal, fiduciary and contractual requirements, including our current and future

loan agreements. The payment of any dividends is not guaranteed or assured, and if paid at all in the future, may be

discontinued at any time at the discretion of the board of directors.

B. Significant Changes
Not applicable.
ITEM 9. THE OFFER AND LISTING
A. Offer and Listing Details
Our shares of common stock were approved for listing on the NASDAQ Capital Market on October 28, 2015 under the symbol "PXS" and the first reported trade on the NASDAQ Capital Market for our shares was in November 2015. Our shares continue to be listed on the NASDAQ Capital Market.
On September 6, 2018 we received a deficiency notice from The NASDAQ Stock Market, Inc. stating that, for a period of 30 consecutive trading days, our shares of common stock closed below the minimum price of \$1.00 per share as required for continued listing on the NASDAQ Capital Market. In accordance with the notice, we had until March 5, 2019 or 180 calendar days from the date of the notice, to regain compliance with NASDAQ's continued listing minimum closing bid price requirements (Marketplace Rule 5550(a)(2)). We received a written notification from the exchange on October 31, 2018 stating that the closing bid price of our shares had been \$1.00 per share or higher for 10 consecutive trading days, from October 15 to October 26, 2018, and, accordingly, we were again in compliance with the exchange's minimum closing bid price rule.
B. Plan of Distribution
Not applicable.
C. Markets
Shares of our common stock are trading on the NASDAQ Capital Market under the symbol "PXS".

D.	Selling	Shareholders

Not applicable.

E. Dilution
Not applicable.
F. Expenses of the Issue
Not applicable.
ITEM 10. ADDITIONAL INFORMATION
A. Share Capital
Not applicable.
B. Memorandum and Articles of Association
Our Articles of Incorporation have been filed as Exhibit 3.1 to our Registration Statement on Form F-4 (File No. 333-203598) filed with the SEC on April 23, 2015. Our Bylaws have been filed as Exhibit 3.2 to our Registration Statement on Form F-4 (File No. 333-203598) filed with the SEC on April 23, 2015. The information contained in these exhibits is incorporated by reference herein.
We are a corporation organized under the laws of the Republic of the Marshall Islands and are subject to the provisions of Marshall Islands law. Given below is a summary of the material features of our common shares. This

summary is not a complete discussion of our charter documents and other instruments that create the rights of our shareholders. You are urged to read carefully those documents and instruments, which are included as exhibits to this

annual report.

Our authorized capital stock consists of 450,000,000 shares of common stock, par value \$0.001 per share, of which 21,060,190 shares are currently issued and outstanding and 50,000,000 shares of preferred stock, par value \$0.001 per share, none of which are outstanding. All of our shares of stock are in registered form. There are no limitations on the rights to own securities, including the rights of non-resident or foreign shareholders to hold or exercise voting rights on the securities, imposed by the laws of the Republic of The Marshall Islands or by our Articles of Incorporation or Bylaws.

#### Common Stock

Each outstanding share of common stock entitles the holder to one vote on all matters submitted to a vote of shareholders. Subject to preferences that may be applicable to any outstanding preferred shares, holders of our common stock are entitled to receive ratably all dividends, if any, declared by our board of directors out of funds legally available for dividends. Upon our dissolution or liquidation or the sale of all or substantially all of our assets, after payment in full of all amounts required to be paid to creditors and to the holders of preferred stock having liquidation preferences, if any, the holders of our common stock are entitled to receive pro-rata the remaining assets available for distribution. Holders of our common stock do not have preemptive, subscription or conversion rights or redemption or sinking fund provisions.

#### Preferred Stock

Our board of directors has the authority to authorize the issuance from time to time of one or more classes of preferred stock with one or more series within any class thereof, with such voting powers, full or limited, or without voting powers and with such designations, preferences and relative, participating, optional or special rights and qualifications, limitations or restrictions thereon as shall be set forth in the resolution or resolutions adopted by our board of directors providing for the issuance of such preferred stock. Issuances of preferred stock, while providing flexibility in connection with possible financings, acquisitions and other corporate purposes, could, among other things, adversely affect the voting power of the holders of our common stock.

#### **Directors**

Our directors are elected by a plurality of the votes cast at a meeting of stockholders entitled to vote. There is no provision for cumulative voting.

Directors are elected annually on a staggered basis. There are three classes of directors; each class serves a separate term length. Our board of directors has the authority to, in its discretion, fix the amounts which shall be payable to members of the board of directors and to members of any committee for attendance at the meetings of the board of directors or of such committee and for services rendered to us.

# **Shareholders Meetings**

Under our Bylaws, annual shareholder meetings will be held at a time and place selected by our board of directors. The meetings may be held in or outside of the Marshall Islands. Special shareholder meetings may be called at any time by the majority of our board of directors or the chairman of the board. No business may be conducted at the special meeting other than the business brought before the special meeting by the majority of our board of directors or the chairman of the board. Our board of directors may set a record date between 15 and 60 days before the date of any meeting to determine the shareholders that will be eligible to receive notice and vote at the meeting. One or more shareholders representing at least one-third of the total voting rights of our total issued and outstanding shares present in person or by proxy at a shareholder meeting shall constitute a quorum for the purposes of the meeting.

### **Interested Transactions**

Our Bylaws provide that no contract or transaction between us and one or more of our directors or officers, or between us and any other corporation, partnership, association or other organization in which one or more of its directors or officers are our directors or officers, or have a financial interest, will be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the board of directors or committee thereof which authorizes the contract or transaction or solely because his or her or their votes are counted for such purpose, if (i) the material facts as to the relationship or interest and as to the contract or transaction are disclosed or are known to our board of directors or its committee and the board of directors or the committee in good faith authorizes the contract or transaction by the affirmative vote of a majority of disinterested directors, or, if the votes of the disinterested directors are insufficient to constitute an act of the board of directors as provided in the BCA, by unanimous vote of the disinterested directors; (ii) the material facts as to the relationship or interest are disclosed to the shareholders, and the contract or transaction is specifically approved in good faith by the vote of the shareholders; or (iii) the contract or transaction is fair to us as of the time it is authorized, approved or ratified, by the board of directors, its committee or the shareholders.

Certain Provisions of Our Articles of Incorporation and Bylaws

Certain provisions of Marshall Islands law and our articles of incorporation and bylaws could make the acquisition of the Company by means of a tender offer, a proxy contest, or otherwise, and the removal of our incumbent officers and directors more difficult. These provisions are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of the Company to work with our management.

Our articles of incorporation and bylaws include provisions that:

allow our board of directors to issue, without further action by the shareholders, up to 50,000,000 shares of undesignated preferred stock;

providing for a classified board of directors with staggered, three year terms;

prohibiting cumulative voting in the election of directors;

prohibiting stockholder action by written consent unless consent is signed by all stockholders entitled to vote on the action;

authorizing the removal of directors only for cause and only upon the affirmative vote of the holders of two-thirds of the outstanding shares of our common stock cast at an annual meeting of stockholders;

require that special meetings of our shareholders be called only by a majority of our board of directors or the chairman of the board; and

establish an advance notice procedure for shareholder proposals to be brought before an annual meeting of shareholders.

Our articles of incorporation also prohibit us from engaging in any "Business Combination" with any "Interested Shareholder" (as such terms are explained further below) for a period of three years following the date the shareholder became an Interested Shareholder, unless:

prior to such time, our board of directors approved either the Business Combination or the transaction which resulted in the shareholder becoming an Interested Shareholder;

upon consummation of the transaction which resulted in the shareholder becoming an Interested Shareholder, the Interested Shareholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer;

at or subsequent to such time, the Business Combination is approved by our board of directors and authorized at an annual or special meeting of shareholders, and not by written consent, by the affirmative vote of at least two thirds of the outstanding voting stock that is not owned by the Interested Shareholder; or

the shareholder became an Interested Shareholder prior to March 23, 2015.

These restrictions shall not apply if:

a shareholder becomes an Interested Shareholder inadvertently and (i) as soon as practicable divests itself of ownership of sufficient shares so that the shareholder ceases to be an Interested Shareholder; and (ii) would not, at any time within the three-year period immediately prior to a Business Combination between the Company and such shareholder, have been an Interested Shareholder but for the inadvertent acquisition of ownership; or

the Business Combination is proposed prior to the consummation or abandonment of and subsequent to the earlier of the public announcement or the notice required of a proposed transaction which (i) constitutes one of the transactions described in the following sentence; (ii) is with or by a person who either was not an Interested Shareholder during the previous three years or who became an Interested Shareholder with the approval of the Board; and (iii) is approved or not opposed by a majority of the members of our board of directors then in office (but not less than one) who were directors prior to any person becoming an Interested Shareholder during the previous three years or were recommended for election or elected to succeed such directors by a majority of such directors. The proposed transactions referred to in the preceding sentence are limited to:

(a) a merger or consolidation of the Company (except for a merger in respect of which, pursuant to the BCA, no vote of our shareholders is required);

(b) a sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions), whether as part of a dissolution or otherwise, of assets of the Company or of any direct or indirect majority-owned subsidiary of the Company (other than to any direct or indirect wholly-owned subsidiary or to the Company) having an aggregate market value equal to 50% or more of either that aggregate market value of all of the assets of the Company determined on a consolidated basis or the aggregate market value of all the outstanding shares; or

(c) a proposed tender or exchange offer for 50% or more of our outstanding voting shares.

Our articles of incorporation define a "Business Combination" to include:

any merger or consolidation of the Company or any direct or indirect majority-owned subsidiary of the Company with (i) the Interested Shareholder or any of its affiliates, or (ii) with any other corporation, partnership, unincorporated association or other entity if the merger or consolidation is caused by the Interested Shareholder;

any sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions), except proportionately as a shareholder of the Company, to or with the Interested Shareholder, whether as part of a dissolution or otherwise, of assets of the Company or of any direct or indirect majority-owned subsidiary of the Company which assets have an aggregate market value equal to 10% or more of either the aggregate market value of all the assets of the Company determined on a consolidated basis or the aggregate market value of all the outstanding shares;

any transaction which results in the issuance or transfer by the Company or by any direct or indirect majority-owned subsidiary of the Company of any shares, or any share of such subsidiary, to the Interested Shareholder, except: (A) pursuant to the exercise, exchange or conversion of securities exercisable for, exchangeable for or convertible into shares, or shares of any such subsidiary, which securities were outstanding prior to the time that the Interested Shareholder became such; (B) pursuant to a merger with a direct or indirect wholly-owned subsidiary of the Company solely for purposes of forming a holding company; (C) pursuant to a dividend or distribution paid or made, or the exercise, exchange or conversion of securities exercisable for, exchangeable for or convertible into shares, or shares of any such subsidiary, which security is distributed, pro-rata to all holders of a class or series of shares subsequent to the time the Interested Shareholder became such; (D) pursuant to an exchange offer by the Company to purchase shares made on the same terms to all holders of said shares; or (E) any issuance or transfer of shares by the Company; provided however, that in no case under items (C)-(E) of this subparagraph shall there be an increase in the Interested Shareholder's proportionate share of the any class or series of shares;

any transaction involving the Company or any direct or indirect majority-owned subsidiary of the Company which has the effect, directly or indirectly, of increasing the proportionate share of any class or series of shares, or securities convertible into any class or series of shares, or shares of any such subsidiary, or securities convertible into such shares, which is owned by the Interested Shareholder, except as a result of immaterial changes due to fractional share adjustments or as a result of any purchase or redemption of any shares not caused, directly or indirectly, by the Interested Shareholder; or

any receipt by the Interested Shareholder of the benefit, directly or indirectly (except proportionately as a shareholder of the Company), of any loans, advances, guarantees, pledges or other financial benefits (other than those expressly permitted above) provided by or through the Company or any direct or indirect majority-owned subsidiary.

Our articles of incorporation define an "Interested Shareholder" as any person (other than the Company, Maritime Investors and any direct or indirect majority-owned subsidiary of the Company or Maritime Investors and its affiliates) that:

is the owner of 15% or more of our outstanding voting shares; or

is an affiliate or associate of the Company and was the owner of 15% or more of the outstanding voting shares of the Company at any time within the three-year period immediately prior to the date on which it is sought to be determined whether such person is an Interested Shareholder; and the affiliates and associates of such person; provided, however, that the term "Interested Shareholder" shall not include any person whose ownership of shares in excess of the 15% limitation set forth herein is the result of action taken solely by the Company; provided that such person shall be an Interested Shareholder if thereafter such person acquires additional shares of voting shares of the Company, except as a result of further Company action not caused, directly or indirectly, by such person.

### C. Material Contracts

Attached as exhibits to this annual report are the contracts we consider to be both material and not entered into in the ordinary course of business. Descriptions of such contracts are included in "Item 4. Information on the Company", "Item 5. Operating and Financial Review and Prospects", "Item 7. Major Shareholders and Related Party Transactions", and in Notes 3 (Transactions with Related Parties) and 7 (Long-term Debt) to our consolidated financial statements included in this Annual Report. Other than these contracts, we have not entered into any other material contracts in the two years immediately preceding the date of this Annual Report, other than contracts entered into in the ordinary course of business.

### D. Exchange Controls

Under Marshall Islands law, there are currently no restrictions on the export or import of capital, including foreign exchange controls or restrictions that affect the remittance of dividends, interest or other payments to non-resident holders of our common shares.

E. Taxation

# **Certain U.S. Federal Income Tax Considerations**

The following is a summary of certain material U.S. federal income tax consequences of an investment in our common stock. The discussion set forth below is based upon the Code, Treasury regulations and judicial and administrative rulings and decisions all as in effect and available on the date hereof and all of which are subject to change, possibly with retroactive effect. In addition, the application and interpretation of certain aspects of the PFIC rules, referred to below, and of new tax legislation enacted in December 2017 (commonly known as the "Tax Cuts and Jobs Act" or "TCJA") require the issuance of regulations and other guidance which in many instances have not been promulgated or provided and which may have retroactive effect. There can be no assurance that any of these regulations or other guidance will be enacted, promulgated or provided, and if so, the form they will take or the effect that they may have on this discussion. This discussion is not binding on the IRS or the courts and prospective investors should note that no rulings have been or are expected to be sought from the IRS with respect to any of the U.S. federal income tax consequences discussed below, and no assurance can be given that the IRS will not take contrary positions.

Further, the following summary does not deal with all U.S. federal income tax consequences applicable to any given investor, nor does it address the U.S. federal income tax considerations applicable to categories of investors subject to special taxing rules, such as brokers, expatriates, banks, real estate investment trusts, regulated investment companies, insurance companies, tax-exempt organizations, controlled foreign corporations, individual retirement or other tax-deferred accounts, dealers or traders in securities or currencies, traders in securities that elects to use a mark-to-market method of accounting for their securities holdings, partners and partnerships, S corporations, estates and trusts, investors required to recognize income for U.S. federal income tax purposes no later than when such income is reported on an "applicable financial statement", investors that hold their common stock as part of a hedge, straddle or an integrated or conversion transaction, investors whose "functional currency" is not the U.S. dollar or investors that own, directly or indirectly, 10% or more of our stock by vote or value. Furthermore, the discussion does not address alternative minimum tax consequences or estate or gift tax consequences or any state tax consequences, and is generally limited to investors that hold our common stock as "capital assets" within the meaning of Section 1221 of the Code. Each investor is strongly urged to consult, and depend on, his or her own tax advisor in analyzing the U.S. federal, state, local and non-U.S. tax consequences particular to him or her of an investment in our common stock.

THIS DISCUSSION SHOULD NOT BE VIEWED AS TAX ADVICE. YOU SHOULD CONSULT YOUR OWN TAX ADVISERS CONCERNING THE U.S. FEDERAL TAX CONSEQUENCES TO YOU IN LIGHT OF YOUR OWN PARTICULAR CIRCUMSTANCES, AS WELL AS ANY OTHER TAX CONSEQUENCES ARISING UNDER THE LAWS OF ANY STATE, LOCAL, FOREIGN OR OTHER TAXING JURISDICTION, THE EFFECT OF ANY CHANGES IN APPLICABLE TAX LAW, AND YOUR ENTITLEMENT TO BENEFITS UNDER AN APPLICABLE INCOME TAX TREATY.

U.S. Federal Income Taxation of the Company

Operating Income

Unless exempt from U.S. federal income taxation under Section 883 of the Code or under an applicable U.S. income tax treaty, a foreign corporation that earns only shipping income is generally subject to U.S. federal income taxation under one of two alternative tax regimes: (i) the 4% gross basis tax or (ii) the net basis tax and branch profits tax. For this purpose, shipping income includes income from (i) the use of a vessel, (ii) hiring or leasing of a vessel for use on a time, operating or bareboat charter basis or (iii) the performance of services directly related to the use of a vessel (and thus includes spot, time and bareboat charter income). We anticipate that we will earn substantially all our shipping income from the chartering or employment of vessels for use on a spot or time charter basis; we may also, in the future, place one or more of our vessels in pooling arrangements or on bareboat charters.

The U.S.-source portion of shipping income is 50% of the income attributable to voyages that begin or end, but not both begin and end, in the United States. Generally, no amount of the income from voyages that begin and end outside the United States is treated as U.S. source, and consequently none of the shipping income attributable to such voyages is subject to the 4% gross basis tax. Although the entire amount of shipping income from voyages that both begin and end in the United States would be U.S. source, we are not permitted by United States law to engage in voyages that both begin and end in the United States and therefore we do not expect to have any U.S.-source shipping income.

The Republic of Malta has an income tax treaty with the United States, but the Republic of the Marshall Islands does not have an income tax treaty with the United States. Accordingly, income earned by our subsidiaries organized under the laws of the Republic of Malta, but not by us or our subsidiaries organized under the laws of the Republic of the Marshall Islands, may qualify for a treaty-based exemption.

The 4% Gross Basis Tax

The United States imposes a 4% U.S. federal income tax on a foreign corporation's gross U.S.- source shipping income to the extent such income is not treated as effectively connected with the conduct of a U.S. trade or business. As a result of the 50% sourcing rule discussed above, the effective tax is 2% of the gross income attributable to voyages beginning or ending in the United States.

The Net Basis Tax and Branch Profits Tax

We do not expect to engage in any activities in the United States or otherwise have a fixed place of business in the United States. Nonetheless, if this situation were to change or if we were to be treated as engaged in a U.S. trade or business, all or a portion of our taxable income, including gain from the sale of vessels, could be treated as effectively connected with the conduct of this U.S. trade or business (or "effectively connected income"). Any effectively connected income, net of allowable deductions, would be subject to U.S. federal corporate income tax (with the statutory rate currently being 21%). In addition, we also may be subject to a 30% "branch profits" tax on earnings effectively connected with the conduct of the U.S. trade or business (as determined after allowance for certain adjustments), and on certain interest paid or deemed paid that is attributable to the conduct of our U.S. trade or business. The 4% gross basis tax described above is inapplicable to income that is treated as effectively connected income. Our U.S.-source shipping income would be considered to be effectively connected income only if we have or are treated as having a fixed place of business in the United States involved in the earning of U.S.-source shipping income and substantially all of our U.S.-source shipping income is attributable to regularly scheduled transportation (such as the operation of a vessel that follows a published schedule with repeated sailings at regular intervals between the same points for voyages that begin or end in the United States). Based on our intended mode of shipping operations and other activities, we do not expect to have any effectively connected income. In the absence of exemption from tax under Section 883 of the Code (and/or, only in the case of income earned by our subsidiaries organized under the laws of the Republic of Malta, the applicable exemption, under the income tax treaty between the United States and the Republic of Malta), our gross U.S. source shipping income would be subject to the 4% U.S. federal income tax imposed, described above.

The Section 883 Exemption

The 4% gross basis tax, the net basis tax and the branch profits tax described above are inapplicable to shipping income that qualifies for exemption under Section 883 of the Code (the "Section 883 Exemption"). A foreign corporation will qualify for the Section 883 Exemption if:

it is organized in a "qualified foreign country," which is a country outside the United States that grants an equivalent exemption from tax to corporations organized in the United States (an "equivalent exemption");

it satisfies one of the following two ownership tests (discussed in more detail below): (A) more than 50% of the value of its shares is beneficially owned, directly or indirectly, by "qualified shareholders" (the "50% Ownership Test"); or (B) its shares are "primarily and regularly traded on an established securities market" in a qualified foreign country or in the United States (the "Publicly-Traded Test."); and

it meets certain substantiation, reporting and other requirements (which include the filing of U.S. income tax returns).

For our 2018 taxable year, we and three of our subsidiaries that earn shipping income were organized under the laws of the Republic of the Marshall Islands. Effective March 1, 2018, three of our subsidiaries that earn shipping income domiciled to the Republic of Malta. We and three of our subsidiaries that earn shipping income are organized under the laws of the Republic of the Marshall Islands. The U.S. Treasury recognizes each of the Republic of the Marshall Islands and the Republic of Malta as a country that grants an equivalent exemption and thus is a qualified foreign country. Therefore, if we and our subsidiaries satisfy the 50% Ownership Test or Publicly-Traded Test for a taxable year, and otherwise comply with applicable substantiation and reporting requirements, we will be exempt from U.S. federal income tax for that taxable year with respect to our U.S.-source shipping income.

In respect of our subsidiaries organized under the laws of the Republic of Malta, we believe in any case that we may rely on the applicable treaty exemption provided for in the tax treaty in place between the U.S. and the Republic of Malta and thus need not satisfy the aforementioned criteria for exemption as set out in Section 883 of the Code

The 50% Ownership Test

For purposes of the 50% Ownership Test, "qualified shareholders" include: (i) individuals who are "residents" (as defined in the Treasury regulations promulgated under Section 883 of the Code (the "Section 883 Regulations") of qualified foreign countries, (ii) corporations organized in qualified foreign countries that meet the Publicly Traded Test (discussed below), (iii) governments (or subdivisions thereof) of qualified foreign countries, (iv) non-profit organizations organized in qualified foreign countries, and (v) certain beneficiaries of pension funds organized in

qualified foreign countries, in each case, that do not beneficially own the shares in the foreign corporation claiming the Section 883 Exemption, directly or indirectly (at any point in the chain of ownership), in the form of bearer shares (as described in the Section 883 Regulations). For this purpose, certain constructive ownership rules under the Section 883 Regulations require looking through the ownership of entities to the owners of the interests in those entities. The foreign corporation claiming the Section 883 Exemption based on the 50% Ownership Test must obtain all the facts necessary to satisfy the IRS that the 50% Ownership Test has been satisfied (as detailed in the Section 883 Regulations) and must meet certain substantiation and reporting requirements.

The Publicly Traded Test

The Section 883 Regulations provide, in pertinent part, that shares of a foreign corporation will be considered to be "primarily traded" on an established securities market in a country if the number of shares of each class of stock that are traded during any taxable year on all established securities markets in that country exceeds the number of shares in each such class that are traded during that year on established securities markets in any other single country. Our common shares, which constitute our sole class of issued and outstanding stock, are "primarily traded" on the NASDAQ Capital Market, which is an established market for these purposes.

Under the Section 883 Regulations, our common shares would be considered to be "regularly traded" on an established securities market if one or more classes of our shares representing more than 50% of our outstanding stock, by both total combined voting power of all classes of stock entitled to vote and total value, are listed on such market, to which we refer as the "listing threshold." Our common shares, which constitutes our sole class of issued and outstanding stock, are listed on the NASDAQ Capital Market. Accordingly, we will satisfy the listing threshold.

The Section 883 Regulations also require that with respect to each class of stock relied upon to meet the listing threshold, (i) such class of stock is traded on the market, other than in minimal quantities, on at least 60 days during the taxable year or one-sixth of the days in a short taxable year (the "trading frequency test"); and (ii) the aggregate number of shares of such class of stock traded on such market during the taxable year must be at least 10% of the average number of shares of such class of stock outstanding during such year or as appropriately adjusted in the case of a short taxable year (the "trading volume test"). Even if this were not the case, the Section 883 Regulations provide that the trading frequency and trading volume tests will be deemed satisfied if such class of stock is traded on an established securities market in the United States and such shares are regularly quoted by dealers making a market in such shares; for this purpose, a dealer makes a market in a stock only if the dealer regularly and actively offers to, and in fact does, purchase the stock from, and sell the stock to, customers who are not related to the dealer in the ordinary course.

Notwithstanding the foregoing, the Section 883 Regulations also provide, in pertinent part, that a class of shares will not be considered to be "regularly traded" on an established securities market for any taxable year in which 50% or more of the vote and value of the outstanding shares of such class are owned, actually or constructively under specified share attribution rules, on more than half the days during the taxable year by one or more persons who each own 5% or more of the vote and value of such class of outstanding stock (the "5% Override Rule").

For purposes of being able to determine the persons who actually or constructively own 5% or more of the vote and value of our common shares (or "5% shareholders") the Section 883 Regulations permit us to rely on those persons that are identified on Schedule 13G and Schedule 13D filings with the SEC, as owning 5% or more of our common shares. The Section 883 Regulations further provide that an investment company which is registered under the Investment Company Act of 1940, as amended, will not be treated as a 5% shareholder for such purposes. Consistent with the Schedule 13D/A filed with the SEC on January 2, 2018, Mr. Valentis beneficially owned more than 5% of our common stock for all of the 2018 taxable year. Thus, we believe that the 5% Override Rule is triggered for the 2018 taxable year.

However, even if the 5% Override Rule is triggered, the Treasury regulations provide that the 5% Override Rule will nevertheless not apply if we can establish that within the group of 5% shareholders, qualified shareholders (as defined generally under the Section 883 Regulations and discussed above) own sufficient number of shares to preclude non-qualified shareholders in such group from owning 50% or more of our common shares for more than half the number of days during the taxable year. In this case, Mr. Valentis was the sole 5% shareholder for the 2018 taxable year and is a qualified shareholder for purposes of the Section 883 Regulations. Thus, we believe that the 5% Override Rule would be inapplicable.

Based on the foregoing, we intend to take the position that we and our subsidiaries satisfy both the 50% Ownership Test and the Publicly-Traded Test for the 2018 taxable year and intend to comply with the substantiation and reporting requirements that are applicable under Section 883 of the Code to claim the Section 883 Exemption. If in the 2019 or any future taxable year, the ownership of our shares of common stock changes, because, among other things, we can give no assurance that such shareholders are qualified shareholders or that a sufficient number of qualified

shareholders will cooperate with us in respect of the applicable substantiation and reporting requirements, there can be no assurance that we will satisfy either the 50% Ownership Test or the Publicly Traded Test, in which case we and our subsidiaries would not qualify for the Section 883 Exemption for that taxable year and would be subject to U.S. federal tax as set forth in the above discussion (subject to only in the case of income earned by our subsidiaries organized under the laws of the Republic of Malta, the applicable exemption, , under the income tax treaty between the United States and the Republic of Malta.

Gain on Sale of Vessels

In general, regardless of whether we qualify for the Section 883 Exemption, we will not be subject to U.S. federal income tax with respect to gain realized on a sale of a vessel, provided the sale is considered to occur outside of the United States under U.S. federal income tax principles. A sale of a vessel will generally be considered to occur outside of the U.S. for this purpose if title to the vessel, and risk of loss with respect to the vessel, pass to the buyer outside of the United States. To the extent possible, we will attempt to structure any sale of a vessel so that it is considered to occur outside of the United States.

#### U.S. Federal Income Taxation of U.S. Holders

As used herein, "U.S. Holder" means a beneficial owner of common stock that is an individual citizen or resident of the United States for U.S. federal income tax purposes, a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States or any state thereof (including the District of Columbia), an estate the income of which is subject to U.S. federal income taxation regardless of its source or a trust where a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons (as defined in the Code) have the authority to control all substantial decisions of the trust (or a trust that has made a valid election under Treasury regulations to be treated as a domestic trust). A "Non-U.S. Holder" generally means any owner (or beneficial owner) of common stock that is not a U.S. Holder, other than a partnership. If a partnership holds common stock, the tax treatment of a partner will generally depend upon the status of the partner and upon the activities of the partnership. Partners of partnerships holding common stock should consult their own tax advisors regarding the tax consequences of an investment in the common stock (including their status as U.S. Holders or Non-U.S. Holders).

#### Distributions on Common Stock

Subject to the discussion of PFICs below, any distributions made by us with respect to our shares of common stock to a U.S. Holder of common stock will generally constitute dividends, which may be taxable as ordinary income or qualified dividend income as described in more detail below, to the extent of our current or accumulated earnings and profits as determined under U.S. federal income tax principles. Distributions in excess of our earnings and profits will be treated as a nontaxable return of capital to the extent of the U.S. Holder's tax basis in its common stock and, thereafter, as capital gain.

U.S. Holders that are corporations generally will not be entitled to claim a dividends received deduction with respect to any distributions they receive from us, except that certain U.S. Holders that are corporations and that directly, indirectly or constructively own 10% or more of our voting power or value may be entitled to a 100% dividends received deduction under certain circumstances. The rules with respect to the dividends received deduction are complex and involve the application of rules that depend on a U.S. Holder's particular circumstances and on whether we are a PFIC, CFC or both, among other things. You should consult your own tax advisor to determine the effect of the dividends received deduction on your ownership of our common stock.

Dividends paid with respect to our common stock generally will be treated as non-U.S. source income and generally will constitute "passive category income" for purposes of computing allowable foreign tax credits for U.S. federal foreign tax credit purposes. The rules with respect to foreign tax credits are complex and involve the application of rules that depend on a U.S. Holder's particular circumstances. You should consult your own tax advisor to determine the foreign tax credit implications of owning our common stock, including rules regarding the ability to utilize foreign tax credits against income recognized currently by a U.S. Stockholder under the TCJA.

Dividends paid on the shares of a non-U.S. corporation to an individual U.S. Holder generally will not be treated as qualified dividend income that is taxable at preferential tax rates. However, dividends paid in respect of our common stock to an individual U.S. Holder may qualify as qualified dividend income if: (i) our common stock is readily tradable on an established securities market in the United States; (ii) we are not a PFIC for the taxable year during which the dividend is paid or in the immediately preceding taxable year; (iii) the individual U.S. Holder has owned the common stock for more than 60 days in the 121-day period beginning 60 days before the "ex dividend date" and (iv) the individual U.S. Holder is not under an obligation to make related payments with respect to positions in substantially similar or related property. Thus, we can give no assurance that any dividends paid on our common shares will be eligible for these preferential rates in the hands of such individual U.S. Holders. Any dividends paid by us which are not eligible for these preferential rates will be taxed as ordinary income to an individual U.S. Holder.

Further, special rules may apply to any "extraordinary dividend"—generally, a dividend in an amount which is equal to or in excess of 10% of a shareholder's adjusted tax basis in a common share—paid by us to a U.S. Holder that is a corporation for U.S. federal income tax purposes. If we pay an "extraordinary dividend" on our common shares that is treated as "qualified dividend income," then any loss derived by certain U.S. Holders that are corporations for U.S. federal income tax purposes from the sale or exchange of such common shares will be treated as long-term capital loss to the extent of such dividend.

Sale, Exchange or Other Disposition of Common Stock

Subject to the discussion of PFICs below, a U.S. Holder generally will recognize taxable gain or loss upon a sale, exchange or other disposition of common stock in an amount equal to the difference between the amount realized by the U.S. Holder from such sale, exchange or other disposition and the U.S. Holder's tax basis in such common stock. Assuming we do not constitute a PFIC for any taxable year, this gain or loss will generally be treated as long-term capital gain or loss if the U.S. Holder's holding period is greater than one year at the time of the sale, exchange or other disposition. A U.S. Holder's ability to deduct capital losses is subject to certain limitations.

#### 3.8% Tax on Net Investment Income

A U.S. Holder that is an individual, estate, or, in certain cases, a trust, will generally be subject to a 3.8% tax on the lesser of, in the case of a U.S. Holder that is an individual, (i) the U.S. Holder's net investment income for the taxable year and (ii) the excess of the U.S. Holder's modified adjusted gross income for the taxable year over a certain threshold (which in the case of individuals will be between \$125,000 and \$250,000). A U.S. Holder's net investment income will generally include distributions we make on the common stock which are treated as dividends for U.S. federal income tax purposes and capital gains from the sale, exchange or other disposition of the common stock. This tax is in addition to any income taxes due on such investment income.

PFIC Status and Significant Tax Consequences

Special U.S. federal income tax rules apply to a U.S. Holder that holds shares in a foreign corporation classified as a PFIC, for U.S. federal income tax purposes. In general, we will be treated as a PFIC with respect to a U.S. Holder if, for any taxable year in which such holder holds our common shares, either:

- (i) at least 75% of our gross income for such taxable year consists of passive income (e.g., dividends, interest, capital gains and rents derived other than in the active conduct of a rental business), which we refer to as the income test; or
- (ii) at least 50% of the average value of our assets during such taxable year produce, or are held for the production of, passive income, which we refer to as the asset test.

For purposes of determining whether we are a PFIC, cash will be treated as an asset which is held for the production of passive income. In addition, we will be treated as earning and owning our proportionate share of the income and assets, respectively, of any of our subsidiary corporations in which we own at least 25% of the value of the subsidiary's stock. Income earned, or deemed earned, by us in connection with the performance of services would not constitute passive income. By contrast, rental income would generally constitute "passive income" unless we were treated under specific rules as deriving our rental income in the active conduct of a trade or business.

Based on our current and projected operations, we do not believe that we (or any of our subsidiaries) were a PFIC in the 2017 taxable year, nor do we expect (or any of our subsidiaries) to become a PFIC with respect to the 2018 or any later taxable year. In making the determination as to whether we are a PFIC, we intend to treat the gross income that we derive or that are deemed to derive from the spot and time chartering activities of us or any of our subsidiaries as services income, rather than rental income. Correspondingly, such income should not constitute passive income, and

the assets that we or our wholly-owned subsidiaries own and operate in connection with the production of such income should not constitute passive assets for purposes of determining whether we are a PFIC. We believe that there is substantial legal authority supporting our position consisting of case law and IRS pronouncements concerning the characterization of income derived from spot and time charters as services income for other tax purposes. However, there is also authority which characterizes time charter income as rental income rather than services income for other tax purposes. In the absence of any legal authority specifically relating to the statutory provisions governing PFICs, the IRS or a court could disagree with our position. In addition, although we intend to conduct our affairs in a manner to avoid being classified as a PFIC with respect to any taxable year, we cannot assure you that the nature of our operations will not change in the future.

As discussed more fully below, if we were to be treated as a PFIC for any taxable year, a U.S. Holder would be subject to different taxation rules depending on whether the U.S. Holder makes an election to treat us as a "qualified electing fund" (a "QEF election"). As an alternative to making a QEF election, a U.S. Holder should be able to make a "mark-to-market" election with respect to our common shares, as discussed below. If we were treated as a PFIC, a U.S. Holder will generally be required to file IRS Form 8621 with respect to its ownership of our common shares.

#### Taxation of U.S. Holders Making a Timely QEF Election

If a U.S. Holder makes a timely QEF election (an "electing holder") the electing holder must report for U.S. federal income tax purposes its pro-rata share of our ordinary earnings and net capital gain, if any, for each of our taxable years during which we are a PFIC that ends with or within the taxable year of the electing holder, regardless of whether distributions were received from us by the electing holder. No portion of any such inclusions of ordinary earnings will be treated as "qualified dividend income." Net capital gain inclusions of certain non-corporate U.S. Holders may be eligible for preferential capital gains tax rates. The electing holder's adjusted tax basis in the common shares will be increased to reflect any income included under the QEF election. Distributions of previously taxed income will not be subject to tax upon distribution but will decrease the electing holder's tax basis in the common shares. An electing holder would not, however, be entitled to a deduction for its pro-rata share of any losses that we incur with respect to any taxable year. An electing holder would generally recognize capital gain or loss on the sale, exchange or other disposition of our shares of common stock. A U.S. Holder would make a timely QEF election for our shares of common stock by filing IRS Form 8621 with his U.S. federal income tax return for the first year in which he held such shares when we were a PFIC. If we determine that we are a PFIC for any taxable year, we intend to provide each U.S. Holder with information necessary for the U.S. Holder to make the QEF election described above. If we were treated as a PFIC for our 2019 taxable year, we anticipate that, based on our current projections, we would not have a significant amount of taxable income or gain that would be required to be taken into account by U.S. Holders making a QEF election effective for such taxable year.

Taxation of U.S. Holders Making a "Mark-to-Market" Election

Alternatively, if we were to be treated as a PFIC for any taxable year and, as we anticipate will be the case, our shares are treated as "marketable stock," a U.S. Holder would be allowed to make a "mark-to-market" election with respect to our shares of common stock, provided the U.S. Holder completes and files IRS Form 8621 in accordance with the relevant instructions and related Treasury regulations. If that election is made, the U.S. Holder generally would include as ordinary income in each taxable year the excess, if any, of the fair market value of the shares at the end of the taxable year over such Holder's adjusted tax basis in the shares. The U.S. Holder would also be permitted an ordinary loss in respect of the excess, if any, of the U.S. Holder's adjusted tax basis in the shares over its fair market value at the end of the taxable year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. A U.S. Holder's tax basis in his shares of our common stock would be adjusted to reflect any such income or loss amount recognized. Any gain realized on the sale, exchange or other disposition of the shares would be treated as ordinary income, and any loss realized on the sale, exchange or other disposition of the shares would be treated as ordinary loss to the extent that such loss does not exceed the net mark-to-market gains previously included by the U.S. Holder.

Taxation of U.S. Holders Not Making a Timely QEF or Mark-to-Market Election

If we were to be treated as a PFIC for any taxable year, a U.S. Holder who does not make either a QEF election or a "mark-to-market" election for that year (a "non-electing holder") would be subject to special rules with respect to (i) any excess distribution (i.e., the portion of any distributions received by the non-electing holder on the shares in a taxable year in excess of 125% of the average annual distributions received by the non-electing holder in the three preceding taxable years, or, if shorter, the non-electing holder's holding period for the shares), and (ii) any gain realized on the sale, exchange or other disposition of our shares of common stock. Under these special rules:

- (i) the excess distribution or gain would be allocated rateably over the non-electing holder's aggregate holding period for the shares;
- (ii) the amount allocated to the current taxable year, and any taxable year prior to the first taxable year in which we were a PFIC, would be taxed as ordinary income and would not be "qualified dividend income"; and
- (iii) the amount allocated to each of the other taxable years would be subject to tax at the highest rate of tax in effect for the applicable class of taxpayer for that year, and an interest charge for the deemed tax deferral benefit would be imposed with respect to the resulting tax attributable to each such other taxable year.

U.S. HOLDERS ARE URGED TO CONSULT THEIR TAX ADVISORS AS TO OUR STATUS AS A PFIC, AND, IF WE (AND/OR ONE OR MORE OF OUR SUBSIDIARIES) ARE TREATED AS A PFIC, AS TO THE EFFECT ON THEM OF, AND THE REPORTING REQUIREMENTS WITH RESPECT TO, THE PFIC RULES AND THE DESIRABILITY OF MAKING, AND THE AVAILABILITY OF, EITHER A QEF ELECTION OR A MARK-TO-MARKET ELECTION WITH RESPECT TO OUR SHARES OF COMMON STOCK. WE PROVIDE NO ADVICE ON TAXATION MATTERS.

U.S. Federal Income Taxation of Non-U.S. Holders
Dividends on Common Stock
A Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax on dividends received from us with respect to our shares of common stock, unless that income is effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States. In general, if the Non-U.S. Holder is entitled to the benefits of an applicable U.S. income tax treaty with respect to those dividends, that income is taxable only if it is attributable to a permanent establishment maintained by the Non-U.S. Holder in the United States.
Sale, Exchange or Other Disposition of Common Stock
A Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax on any gain realized upon the sale, exchange or other disposition of our shares of common stock, unless:
(i) the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business in the United States; or
(ii) the Non-U.S. Holder is an individual who is present in the United States for 183 days or more during the taxable year of disposition and who also meets other conditions.
Income or Gains Effectively Connected with a U.S. Trade or Business
If the Non-U.S. Holder is engaged in a U.S. trade or business for U.S. federal income tax purposes, dividends on the common shares and gain from the sale, exchange or other disposition of our shares of common stock, that is effectively connected with the conduct of that trade or business, will generally be subject to regular U.S. federal

income tax in the same manner as discussed in the previous section relating to the taxation of U.S. Holders. In addition, in the case of a corporate Non-U.S. Holder, its earnings and profits that are attributable to the effectively connected income, which are subject to certain adjustments, may be subject to an additional U.S. federal branch profits tax at a rate of 30%, or at a lower rate as may be specified by an applicable U.S. income tax treaty.

Backup Withholding and Information Reporting

Information reporting to the IRS may be required with respect to payments on our shares of common stock and with respect to proceeds from the sale of the shares of common stock. With respect to Non-U.S. Holders, copies of such information returns reporting may be made available to the tax authorities in the country in which the Non-U.S. Holder resides under the provisions of any applicable income tax treaty or exchange of information agreement. A "backup" withholding tax (currently at a 24% rate) may also apply to those payments if a non-corporate holder of the shares of common stock fails to provide certain identifying information (such as the holder's taxpayer identification number or an attestation to the status of the holder as a Non-U.S. Holder), such holder is notified by the IRS that he or she has failed to report all interest or dividends required to be shown on his or her federal income tax returns or, in certain circumstances, such holder has failed to comply with applicable certification requirements.

Non-U.S. Holders may be required to establish their exemption from information reporting and backup withholding by certifying under penalties of perjury their status on IRS Form W-8BEN, W-8BEN-E, W-8ECI or W-8IMY, as applicable. A Non-U.S. Holder should consult his or her own tax advisor as to the qualifications for exemption from backup withholding and the procedures for obtaining the exemption.

U.S. Holders of our shares of common stock may be required to file forms with the IRS under the applicable reporting provisions of the Code. For example, such U.S. Holders may be required, under Sections 6038, 6038B and/or 6046 of the Code, to supply the IRS with certain information regarding the U.S. Holder, other U.S. Holders and us if (i) such person owns at least 10% of the total value or 10% of the total combined voting power of all classes of shares entitled to vote or (ii) the acquisition, when aggregated with certain other acquisitions that may be treated as related under applicable regulations, exceeds \$100,000. In the event a U.S. Holder fails to file a form when required to do so, the U.S. Holder could be subject to substantial tax penalties.

If a shareholder is a Non-U.S. Holder and sells his or her shares of common stock to or through a U.S. office of a broker, the payment of the proceeds is subject to both U.S. backup withholding and information reporting unless the shareholder certifies that he or she is not a U.S. person, under penalty of perjury, or he or she otherwise establishes an exemption. If our shareholder is a Non-U.S. Holder and sells his or her common stock through a non-U.S. office of a non-U.S. broker and the sales proceeds are paid to such shareholder outside the United States, then information reporting and backup withholding generally will not apply to that payment. However, U.S. information reporting requirements, but not backup withholding, will apply to a payment of sales proceeds, even if that payment is made to a shareholder outside the United States, if the shareholder sells his or her shares of common stock through a non-U.S. office of a broker that is a U.S. person or has some other contacts with the United States. Such information reporting requirements will not apply, however, if the broker has documentary evidence in its records that the shareholder is not a U.S. person and certain other conditions are met, or the shareholder otherwise establishes an exemption.

Backup withholding is not an additional tax and may be refunded (or credited against the holder's U.S. federal income tax liability, if any), provided that appropriate returns are filed with and certain required information is furnished to the IRS in a timely manner.

In addition, individuals who are U.S. Holders (and to the extent specified in applicable Treasury regulations, Non-U.S. Holders and certain U.S. entities) who hold "specified foreign financial assets" (as defined in Section 6038D of the Code) are required to file IRS Form 8938 with information relating to the asset for each taxable year in which the aggregate value of all such assets exceeds \$75,000 at any time during the taxable year or \$50,000 on the last day of the taxable year (or such higher dollar amount as prescribed by applicable Treasury regulations). Specified foreign financial assets would include, among other assets, our shares of common stock, unless the shares are held in an account maintained with a U.S. financial institution. Substantial penalties apply to any failure to timely file IRS Form 8938, unless the failure is shown to be due to reasonable cause and not due to willful neglect. Additionally, in the event an individual U.S. Holder (and to the extent specified in applicable Treasury regulations, a Non-U.S. Holder or a U.S. entity) that is required to file IRS Form 8938 does not file such form, the statute of limitations on the assessment and collection of U.S. federal income taxes of such holder for the related tax year may not close until three years after the date that the required information is filed. U.S. Holders (including U.S. entities) and Non-U.S. Holders are encouraged consult their own tax advisors regarding their reporting obligations in respect of our shares of common stock.

Material Marshall Islands, Maltese and Greek Tax Law Considerations

The following is a summary of certain material tax consequences of our activities to us and our shareholders.

We are incorporated in the Marshall Islands and Malta and some of our operations are located in Greece.

Under current Marshall Islands law, we are not subject to tax on income or capital gains, and no Marshall Islands withholding tax will be imposed upon payments of dividends by us to our shareholder.

Under Maltese law, the subsidiary companies Secondone Corporation Ltd., Thirdone Corporation Ltd. and Fourthone Corporation Ltd., being Maltese registered companies, are deemed by the Income Tax Act to be resident in Malta for tax purposes. However such companies, being the respective registered owners and operators of the Maltese registered vessels *Northsea Alpha, Northsea Beta* and *Pyxis Malou*, are not subject to Malta income tax on any profits derived by them, including tax on any gains of a capital nature as may be derived from the sale or other transfer of the vessels concerned, to the extent that (1) such profits are derived from 'shipping activities' (being in particular the international carriage of goods or passengers by sea in terms of the EU Maritime State Aid Guidelines and such other activities that have been approved or considered as eligible for tonnage tax purposes by the European Commission) and (2) such vessels have been declared by the Minister responsible for Shipping to be and continue to qualify as 'tonnage tax ships' under the Merchant Shipping (Taxation And Other Matters Relating to Shipping Organisations) Regulations 2018; provided that for the year in respect of which exemption from tax is applied (i) all applicable tonnage taxes have been paid and (ii) separate accounts were kept clearly distinguishing the payments and receipts by the companies concerned in respect of shipping activities, including the ownership, operation, administration or management of the vessels as tonnage tax ships, and payments and receipts in respect of any other business.

No Maltese withholding tax will be imposed upon payment of dividends by any one of Secondone Corporation Ltd., Thirdone Corporation Ltd. and Fourthone Corporation Ltd., being the three (3) Maltese registered companies concerned, to their shareholder.

The subsidiary companies Seventhone Corp. and Eightone Corp., being companies registered under the laws of the Marshall Islands, are not considered to be tax resident in Malta and are therefore not subject to any income tax in Malta, including tax on any gains of a capital nature as may be derived from the sale or other transfer of the Maltese registered vessels *Pyxis Theta* and *Pyxis Epsilon* which are respectively owned by them. The appointment by these companies of a Resident Agent in Malta in connection with their registration with the registrar of Shipping as 'International Owners' does not constitute a permanent establishment in Malta for tax purposes.

Under Greek Law, the shipmanagement companies which have established an office in Greece under the so called "Law 89" regime, currently legislated by Law 27/1975 as in force, are not subject to any income tax. The same applies to the shipowning companies of the vessels which are managed by such shipmanagement companies and to their holding companies, provided the latter are exclusively holding companies of such shipowning companies, without other activities. There is, however, an annual tonnage levy over the vessels managed by such companies, for which the respective shipowning company and shipmanagement company are jointly and severally liable to pay to the Greek State; also, the tax residents of Greece who receive dividends from such shipowning or their holding companies, (pursuant to a very recent agreement between the Union of Greek Shipowners and the Greek State, which is expected to come in force shortly) are taxed at 10% on the dividends which they receive and which they import into Greece, not being liable to any other taxation for these, which include those dividends which either remain with the holding company or are paid to the individual Greek tax resident abroad.

F. Dividends and Paying Agents
Not applicable.
G. Statement by Experts
Not applicable.
H. Documents on Display
We file reports and other information with the SEC. These materials, including this Annual Report and the accompanying exhibits, may be inspected and copied at the public facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549, or from the SEC's website http://www.sec.gov. You may obtain information on the operation of the public reference room by calling 1 (800) SEC-0330 and you may obtain copies at prescribed rates.
I. Subsidiary Information
Not applicable.

# ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Please see Note 10 "Risk Management and Fair Value Measurements" to our consolidated financial statements included in this Annual Report for a further description of our risk management.
(a) Quantitative Information about Market Risk
Interest Rate Risk
The shipping industry is a capital intensive industry, requiring significant amounts of investment. Much of this investment is provided in the form of long-term debt. Our amortizing bank debt usually contains interest rates that fluctuate with the financial markets. Increasing interest rates could adversely impact future earnings and our ability to service debt.
Our interest expense is affected by changes in the general level of interest rates, particularly LIBOR. As an indication of the extent of our sensitivity to interest rate changes, an increase of 100 basis points would have decreased our net income and cash flows during the years ended December 31, 2017 and 2018 by approximately \$0.7 million and \$0.6 million, respectively, based upon our average debt level during 2017 and 2018.
Foreign Currency Exchange Risk
We generate most of our revenue in U.S. dollars, but a portion of our expenses, are in currencies other than U.S. dollars (mainly in Euro), and any gain or loss we incur as a result of the U.S. dollar fluctuating in value against those currencies is included in vessel operating expenses and in general and administrative expenses. As of December 31, 2017 and 2018, approximately 9% and 6%, respectively, of our outstanding accounts payable were denominated in currencies other than the U.S. dollar (mainly in Euro). We hold cash and cash equivalents mainly in U.S. dollars.
Inflation
We do not consider inflation to be a significant risk to our business in the current environment and foreseeable future.

(b) Qualitative Information about Market Risk

Interest Rate Exposure

Our debt obligations under each of our subsidiaries' loan agreements bear interest at LIBOR plus a fixed margin. Increasing interest rates could adversely affect our future profitability. Lower interest rates lower the returns on cash investments. We regularly monitors interest rate exposure and will enter into swap arrangements with acceptable financial counterparties to hedge exposure where it is considered economically advantageous to do so. However, there may be certain incremental costs incurred if we enter into such arrangements. In order to hedge our variable interest rate exposure, on January 19, 2018, Seventhone entered into an interest rate cap agreement with one of its lenders for a notional amount of \$10.0 million and a cap rate of 3.5%. The interest rate cap will terminate on July 18, 2022.

Operational Risk

We are exposed to operating costs risk arising from various vessel operations. The key areas of operating risk include dry-dock, repair costs, insurance and piracy. Our risk management includes various strategies for technical management of dry-dock and repairs coordinated with a focus on measuring cost and quality. Our relatively young fleet helps to minimize the risk. Given the potential for accidents and other incidents that may occur in vessel operations, the fleet is insured against various types of risk. Finally, we have established a set of countermeasures in order to minimize this risk of piracy attacks during voyages, which include hiring third party security to protect the crew and make navigation safer for the vessels.

Foreign Exchange Rate Exposure

Our vessel-owning subsidiaries generate revenues in U.S. dollars but incur a portion of their vessel operating expenses, and we incur a majority of our general and administrative costs, in other currencies, primarily Euros. The amount and frequency of some of these expenses (such as vessel repairs, supplies and stores) may fluctuate from period to period, while other of these expenses, such as the compensation paid to Maritime for the administrative services, remain relatively fixed. Depreciation in the value of the U.S. dollar relative to other currencies will increase the U.S. dollar cost to us of paying such expenses and, as a result, an adverse or positive movement could increase or decrease operating expenses. The portion of our business conducted in other currencies could increase in the future, which could expand our exposure to losses arising from currency fluctuations. We believe these adverse effects to be immaterial and have not entered into any derivative contracts for either transaction or translation risk during the year.

#### Credit Risk

There is a concentration of credit risk with respect to cash and cash equivalents to the extent that substantially all of our amounts are held across four banks. While we believe this risk of loss is low, we keep this under review and will revise our policy for managing cash and cash equivalents if we consider it advantageous and prudent to do so. We limit our credit risk with trade accounts receivable by performing ongoing credit evaluations of our customers' financial condition. We generally do not acquire collateral for trade accounts receivable.

We may have a credit risk in relation to vessel employment and at times may have multiple vessels employed by one charterer. We consider and evaluate concentration of credit risk regularly and perform on-going evaluations of these charterers for credit risk. As of December 31, 2018 and March 26, 2019, two and four of our vessels, respectively, were employed with the same charterer.

#### Commodity Risk Exposure

The price and supply of bunker is unpredictable and fluctuates as a result of events outside our control, including geo-political developments, supply and demand for oil and gas, actions by members of the Organization of Petroleum Exporting Countries, or OPEC, and other oil and gas producers, war and unrest in oil producing countries and regions, regional production patterns and environmental concerns and regulations. Because we do not hedge our bunker costs, an increase in the price of bunker beyond our expectations may adversely affect our profitability and cash flows.

#### Liquidity Risk

The principal objective in relation to liquidity is to ensure that we have access at minimum cost to sufficient liquidity to enable us to meet our obligations as they come due and to provide adequately for contingencies. Our policy is to manage our liquidity by strict forecasting of cash flows arising from time charter revenue, vessel operating expenses, general and administrative overhead and servicing of debt. We maintain limited cash balances in financial institutions operating in Greece.

Inflation
We do not expect inflation to be a significant risk in the current and foreseeable economic environment. In the event that inflation becomes a significant factor in the global economy, inflationary pressures would result in increased operating, voyage and finance costs.
ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES
A. Debt Securities
Not applicable.
B. Warrants and Rights
Not applicable.
C. Other Securities
Not applicable.
D. American Depositary Shares
Not applicable.
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PART II
ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES
Not applicable.
ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS
Not applicable.
ITEM 15. CONTROLS AND PROCEDURES
A. Disclosure Controls and Procedures
The management of Pyxis Tanker Inc., with the participation of the Chief Executive Officer ( <i>principal executive officer</i> ) and Chief Financial Officer ( <i>principal financial officer</i> ), after evaluating the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) as of December 31, 2018, has concluded that, as of such date, our disclosure controls and procedures were effective and ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer ( <i>principal executive officer</i> ) and Chief Financial Officer ( <i>principal financial officer</i> ), to allow timely decisions regarding required disclosure and is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and forms.

In accordance with Rule 13a-15(f) of the Exchange Act, our management is responsible for the establishment and maintenance of adequate internal controls over our financial reporting. Pyxis Tankers Inc.'s internal control system was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Our system of internal control over financial

B. Management's Annual Report on Internal Control over Financial Reporting

reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management performed an assessment of the effectiveness of our internal controls over financial reporting as of December 31, 2018 using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control, Integrated Framework (2013). Based on its assessment, management has determined that our internal control over financial reporting was effective as of December 31, 2018.

determined that our internal control over financial reporting was effective as of December 31, 2018.
C. Attestation Report of the Registered Public Accounting Firm
Not applicable.
D. Changes in Internal Control over Financial Reporting
There were no changes in our internal control over financial reporting that occurred during the period covered by this annual report that have materially affected, or that are reasonably likely to materially affect, our internal control over financial reporting.
ITEM 15T. CONTROLS AND PROCEDURES
Not applicable.
ITEM 16. RESERVED
Not applicable.

#### ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our Board has determined that Mr. Robin Das is an audit committee financial expert as defined by the SEC rules and that he has the requisite financial sophistication under the applicable rules and regulations of the NASDAQ Stock Market. Mr. Das is independent as such term is defined in Rule 10A-3 under the Exchange Act and under the listing standards of the NASDAQ Stock Market.

ITEM 16B. CODE OF ETHICS

Our board of directors has approved and adopted a Code of Business Conduct and Ethics for all officers and employees, a copy of which is available on our website at http://www.pyxistankers.com.

#### ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Ernst & Young (Hellas) Certified Auditors Accountants S.A. ("Ernst & Young"), has served as our independent registered public accounting firm for the years ended December 31, 2017 and 2018. Our audit committee was established October 28, 2015. Our accountants billed the following fees to us for professional services (amounts in thousands of U.S. dollars):

(a) Audit Fees

The audit fees for the audit of each of the years ended December 31, 2017 and 2018 were \$190 and \$214, respectively.

(b) Audit-Related Fees

Audit-related fees charged for the years ended December 31, 2017 and 2018 were \$91 and \$72, respectively.

(c) Tax Fees

Tax fees charged for the years ended December 31, 2017 and 2018 were \$14 and \$1, respectively.
(d) All Other Fees
No other fees were charged for the years ended December 31, 2017 and 2018.
(e) Audit and Non-Audit Services Pre-Approval Policy
(1) Our audit committee is responsible for the appointment, compensation, retention and oversight of the work of the independent auditors. As part of this responsibility, the audit committee pre-approves the audit and non-audit fees, terms and services performed by the independent auditors in order to assure that they do not impair the auditors' independence. Our audit committee has not adopted a detailed policy which sets forth the procedures and the conditions pursuant to which services proposed to be performed by the independent auditors may be pre-approved.
(2) Our audit committee has separately pre-approved all engagements and fees paid to our principal accountants since October 28, 2015.
(f) Audit Work Performed by Other Than Principal Accountant if Greater Than 50%
Not applicable.
ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES
Not applicable.
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# ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

Period	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced programs	Maximum amount in US\$ that may yet be expected on share repurchases under programs
May 2018	21,265	1.15	N/A	N/A
August 2018 October 2018	2,500	0.88	N/A	N/A
	16,578	0.98	N/A	N/A

(1) Between May and October 2018 Maritime Investors purchased 40,343 shares of our outstanding shares of common stock through private affiliate entities of ours, in one or more open market or privately negotiated purchases at times and prices considered to be appropriate using cash on hand. The purchases of the shares were made for investment purposes.

# ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

Not applicable.

#### ITEM 16G. CORPORATE GOVERNANCE

We believe that our corporate governance practices are in compliance with, and are not prohibited by, the laws of the Marshall Islands. Therefore, we believe we are exempt from many of NASDAQ's corporate governance practices other than the requirements regarding the disclosure of a going concern audit opinion, submission of a listing agreement, notification of material non-compliance with NASDAQ corporate governance practices, and the establishment and composition of an audit committee and a formal written audit committee charter.

The practices that we follow in lieu of NASDAQ's corporate governance rules include:

instead of obtaining an independent review of related party transactions for conflicts of interests by our audit committee or another independent body of our board of directors, consistent with Marshall Islands law requirements, no transaction between us and one or more of our directors or officers, or between us and any other entity in which one or more of our directors or officers are directors or officers, or have a financial interest, shall be void or voidable for this reason alone or solely because such director or officer is present at or participates in the meeting of our board of directors that authorized the contract or transaction or solely because the vote of such director or officer are counted for such purposes if: (i) the material facts as to such director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to our board of directors, and our board of directors in good faith authorizes such contract or transaction by the affirmative votes of a majority of the disinterested directors, or, if the votes of the disinterested directors are insufficient to constitute an act of our board of directors as defined in Section 55 of the BCA, by unanimous vote of our disinterested directors; (ii) the material facts as to the director's or officer's relationship or interest and as to such contract or transaction are disclosed and the contract or transaction is specifically approved in good faith by a vote of the stockholders entitled to vote thereon; or (iii) the contract or transaction is fair to us as of the time it is authorized, and is approved or ratified by our board of directors, a committee thereof or our stockholders. Interested directors may be counted in determining the presence of a quorum at a meeting of our board of directors or of a committee that authorizes the aforementioned contract or transaction;

as a foreign private issuer, we will not be required to solicit proxies or provide proxy statements to NASDAQ pursuant to NASDAQ corporate governance rules or Marshall Islands law. Consistent with Marshall Islands law, we intend to notify our stockholders of meetings between 15 and 60 days before the meeting. This notification will contain, among other things, information regarding business to be transacted at the meeting. In addition, our bylaws provide that stockholders must give us advance notice to properly introduce any business at a meeting of the stockholders and that stockholders may designate in writing a proxy to act on their behalf;

in place of a compensation committee and consistent with Marshall Islands law requirements, our entire board of directors, a majority of whom are currently independent, reviews and approves executive compensation and performance awards as well as the policies and procedures to determine such payments;

instead of holding regular meetings at which only independent directors are present, our entire board of directors, a majority of whom are currently independent, will hold regular meetings as is consistent with Marshall Islands law;

stockholder approval is not required to amend or terminate our equity incentive plan or to establish a new equity incentive plan since Marshall Islands law permits the board of directors to take these actions;

as a foreign private issuer, we will not be required to obtain stockholder approval prior to the issuance of securities in connection with an acquisition of the stock or assets of another company; and

in lieu of obtaining stockholder approval prior to the issuance of designated securities, we intend to comply with provisions of the BCA and obtain the approval of our board of directors for such share issuances.

ITEM	16H	MINE	SA	FETY	DISCI	OSURE

Not applicable.

# **PART III**

1	ITEN	1	17	$F\Pi$	VΑ	N	CI	A1	[.S]	ГΑ	TEN	MEN.	JTS	1

Not applicable.

# ITEM 18. FINANCIAL STATEMENTS

Please see Financial Statements beginning on page F-1 of this Annual Report.

# ITEM 18.1 SCHEDULE I – CONDENSED FINANCIAL INFORMATION OF PYXIS TANKERS INC. (PARENT COMPANY ONLY)

Please see Schedule I beginning on page F-27 of this Annual Report.

# ITEM 19. EXHIBITS

The following exhibits are filed as part of this Annual Report:

Exhibit Number	Description of Exhibit	Schedule / Form	File Number	Exhibit	File Date
1.1#	Articles of Incorporation of the Company	F-4	333-203598	3.1	April 23, 2015
1.2#	Bylaws of the Company	F-4	333-203598	3.2	April 23, 2015
2.1#	Agreement and Plan of Merger, dated April 23, 2015, by and among Pyxis Tankers Inc., Maritime Technologies	F-4	333-203598	2.1	April 23, 2015

# Corp., LookSmart, Ltd. and LookSmart Group, Inc.

2.2#	Amendment to Agreement and Plan of Merger, dated as of September 22, 2015, by and among Pyxis Tankers Inc., Maritime Technologies Corp., LookSmart Ltd. and LookSmart Group, Inc.	20-F	001-37611 2.2	March 23, 2016
2.3#	Form of Lock-Up Agreement	F-4	333-203598 10.1	April 23, 2015
2.4#	Specimen Stock Certificate of Pyxis Tankers Inc.	F-4	333-203598 4.2	September 28, 2015
3.1#	Voting Agreement between LookSmart, Ltd, Pyxis Tankers Inc. and Michael Onghai	F-4	333-203598 10.2	August 6, 2015
4.1#	Amended and Restated Head Management Agreement, dated August 5, 2015, by and between Pyxis Tankers Inc. and Pyxis Maritime Corp.	F-4	333-203598 10.3	September 4, 2015
4.1.1#	First Amendment dated August 9, 2016, to the Amended and Restated Head Management Agreement, dated August 5, 2015, by and between Pyxis Tankers Inc. and Pyxis Maritime Corp.	20-F	001-37611 4.1.1	March 28, 2017
4.2#	Form of Ship Management Agreement with International Tanker Management Ltd.	F-4	333-203598 10.4	September 4, 2015
4.3#	Form of Commercial Ship Management Agreement with North Sea Tankers BV	F-4	333-203598 10.5	September 4, 2015
4.4#	Loan Agreement, dated as of September 26, 2007, by and between Secondone Corp. and Thirdone Corp., as borrowers, and Deutsche Schiffsbank Aktiengesellschaft, as lender	F-4	333-203598 10.6	August 6, 2015

Exhibit Number	Description of Exhibit	Schedule / Form	File Number	Exhibit	File Date
4.4.1#	Supplemental Agreement relating to a term loan facility dated September 26, 2007, dated as of May 28, 2010, by and between Secondone Corp. and Thirdone Corp., as joint and several borrowers, and Deutsche Schiffsbank Aktiengesellschaft, as lender	20-F	001-37611	4.4.1	March 23, 2016
4.4.2#	Supplemental Agreement in relation to a Loan Agreement dated September 26, 2007, dated as of December 1, 2010, by and between Secondone Corp. and Thirdone Corp., as joint and several borrowers, and Deutsche Schiffsbank Aktiengesellschaft, as lender	20-F	001-37611	4.4.2	March 23, 2016
4.4.3#	Supplemental Agreement in relation to a Loan Agreement dated September 26, 2007, dated as of October 23, 2015, by and between Secondone Corp. and Thirdone Corp., as joint and several borrowers, and Commerzbank Aktiengesellschaft, as lender	20-F	001-37611	4.4.3	March 23, 2016
4.4.4#	Guarantee relating to a Loan Agreement dated September 26, 2007, dated as of October 23, 2015, by and between Pyxis Tankers Inc., as guarantor, and Commerzbank Aktiengesellschaft, as lender	20-F	001-37611	4.4.4	March 23, 2016
4.5#	Loan Agreement, dated as of December 12, 2008, between Fourthone Corp., as borrower, and Deutsche Schiffsbank Aktiengesellschaft, as lender	F-4	333-203598	10.7	August 6, 2015
4.5.1#	Supplemental Agreement in relation to a Loan Agreement dated December 12, 2008, dated as of October 23, 2015, by and between Fourthone Corp., as borrower, and Commerzbank Aktiengesellschaft, as lender	20-F	001-37611	4.5.1	March 23, 2016
4.5.2#	Guarantee related to a Loan Agreement dated December 12, 2008, dated as of October 23, 2015, by and between Pyxis Tankers Inc., as guarantor, and Commerzbank Aktiengesellschaft, as lender	20-F	001-37611	4.5.2	March 23, 2016
4.6#	Loan Agreement, dated October 12, 2012, by and among Sixthone Corp. and Seventhone Corp., as borrowers, the banks and financial institutions listed therein, as lenders, and HSH Nordbank AG, as agent	F-4	333-203598	10.8	August 6, 2015
4.6.1#	Supplemental Agreement to the Loan Agreement dated October 12, 2012, dated February 13, 2013, by and among Sixthone Corp. and Seventhone Corp., the lenders and HSH Nordbank AG, as agent	F-4	333-203598	10.9	August 6, 2015

4.6.2#	Second Supplemental Agreement to the Loan Agreement dated October 12, 2012, dated October 23, 2015, by and among Sixthone Corp., and Seventhone Corp., the lenders, and HSH Nordbank AG, as agent	20-F	001-37611	4.6.2	March 23, 2016
4.6.3#	Guarantee relating to a Loan Agreement dated October 12, 2012, dated as of October 26, 2015, by and between Pyxis Tankers Inc., as guarantor, and HSH Nordbank AG, as security trustee	20-F	001-37611	4.6.3	March 23, 2016

Exhibit Number	Description of Exhibit	Schedule / Form	File Number	Exhibit	File Date
4.6.4#	Third Supplemental Agreement to the Loan Agreement dated October 12, 2012, dated September 29, 2016, by and among Sixthone Corp. and Seventhone Corp., the lenders, and HSH Nordbank AG, as agent	20-F	001-37611	4.6.4	March 28, 2017
4.6.5#	Fourth Supplemental Agreement to the Loan Agreement dated October 12, 2012, dated June 6, 2017, by and among Sixthone Corp. and Seventhone Corp., the lenders, and HSH Nordbank AG, as agent	F-1/A	333-217498	10.20	June 6, 2017
4.7#	Facility Agreement for a \$21,000,000 Term Loan Facility, dated January 12, 2015, by and among Eighthone Corp., as borrower, and DVB Bank SE, as lender and as agent and security trustee	F-4	333-203598	10.10	August 6, 2015
4.7.1#	Supplemental Agreement in relation to a Loan Agreement dated January 12, 2015, dated October 23, 2015, by and among Eighthone Corp., DVB Bank SE, as lender and DVB Bank SE, as agent and security trustee	20-F	001-37611	4.7.1	March 23, 2016
4.7.2#	Corporate Guarantee, dated as of October 26, 2015, by and between Pyxis Tankers Inc., as guarantor, and DVB Bank SE, as security trustee	20-F	001-37611	4.7.2	March 23, 2016
4.7.3#	Pledge over Shares in Eighthone Corp., dated as of October 26, 2015, by and between Pyxis Tankers Inc. and DVB Bank SE, as security trustee	20-F	001-37611	4.7.3	March 23, 2016
4.8#	Facility Agreement dated February 23, 2018, by and among Secondone Corp., Thirdone Corp. and Fourthone Corp., as borrowers, and Amsterdam Trade Bank N.V. as arranger, facility agent and security agent	20-F	001-37611	4.8	March 23, 2018
4.9#	Promissory Note in favor of Maritime Investors Corp. issued by Pyxis Tankers Inc. as of April 23, 2015	F-4	333-203598	10.11	August 6, 2015
4.10#	Pledge Agreement, dated as of April 23, 2015, by and among Michael Onghai, LookSmart Group Inc. and Pyxis Tankers Inc.	20-F	001-37611	4.9	March 23, 2016
4.11#	Form of 2015 Equity Incentive Plan	F-4	333-203598	10.12	September 4, 2015
4.12#	Form of Indemnification Agreement	F-4	333-203598	10.13	September 4, 2015

4.13#	Promissory Note in favor of Maritime Investors Corp. issued by Pyxis Tankers Inc. as of October 28, 2015	20-F	001-37611	4.12	March 23, 2016
4.13.1#	First Amendment dated August 9, 2016, to the Promissory Note in favor of Maritime Investors Corp. issued by Pyxis Tankers Inc. as of October 28, 2015	20-F	001-37611	4.12.1	March 28, 2017
4.13.2#	Second Amendment dated March 7, 2017, to the Promissory Note in favor of Maritime Investors Corp. issued by Pyxis Tankers Inc. as of October 28, 2015	20-F	001-37611	4.12.2	March 28, 2017

Exhibit Number	Description of Exhibit	Schedule / Form	File Number	Exhibit	File Date
4.13.3#	Amended and Restated Promissory Note in favor of Maritime Investors Corp. issued by Pyxis Tankers Inc. dated December 29, 2017	SC 13D/A		1	January 2, 2018
4.13.4*	Amendment No. 1 dated June 29, 2018 to the Amended & Restated Promissory Note in favor of Maritime Investors Corp. issued by Pyxis Tankers Inc. as of December 29, 2017	2			
4.14#	Stock Purchase Agreement, effective as of June 13, 2017, by and between Pyxis Tankers Inc. and Pyxis Holdings Inc.	F-3	333-222160	10.32	December 19, 2017
4.15#	Securities Purchase Agreement, dated December 6, 2017, among Pyxis Tankers Inc. and the purchaser identified on the signature pages thereto	6-K	001-37611	10.1	December 8, 2017
4.16#	Registration Rights Agreement, dated December 6, 2017, among Pyxis Tankers Inc. and the purchasers identified on the signature pages thereto	6-K	001-37611	10.3	December 8, 2017
4.17*	Facility Agreement dated September 27, 2018, by and among Eighthone Corp. as borrower, Pyxis Tankers Inc. as guarantor and Wilmington Trust, National Association as facility agent and security agent.				
4.17.1*	Deferred Fee Agreement dated September 28, 2018, by and among Eighthone Corp. as borrower and Wilmington Trust, National Association as facility agent				
4.18	Equity Distribution Agreement, dated March 30, 2018 between Pyxis Tankers Inc. and Noble Capital Markets	6K	001-37611	1.1	March 30, 2018
4.18.1#	Amendment No. 1 to the Equity Distribution Agreement dated November 19, 2018 between Pyxis Tankers Inc. and Noble Capital Markets	<u>l</u> 6K	001-37611	1.1	November 20, 2018
8.1*	List of Subsidiaries				
12.1*	Certification by the Principal Executive Officer pursuant to Securities Exchange Act Rules 13a-14(a) / 15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	ì			

12.2*	Certification by the Principal Financial Officer pursuant to Securities Exchange Act Rules 13a-14(a) / 15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1*	Certification by the Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
13.2*	Certification by the Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1*	Consent of Independent Registered Public Accounting Firm (Ernst & Young (Hellas) Certified Auditors Accountants S.A.)
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Exhibit Number 15.2*	Description of Exhibit  Consent of Drewry Shipping Consultants Ltd.	Schedule / Form	File Number	Exhibit File Date
	The following materials from the Company's Annual Report on Form 20-F for the fiscal year ended December 31, 2018, formatted in eXtensible Business Reporting Language (XBRL):			
	(i) Consolidated Balance Sheets as at December 31, 2017 and 2018;			
101*	(ii) Consolidated Statements of Comprehensive Income / (Loss) for the years ended December 31, 2016, 2017 and 2018;			
	(iii) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2016, 2017 and 2018;			
	(iv) Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2017 and 2018;			
	(v) Notes to the Consolidated Financial Statements; and			
	(vi) Schedule I.			

#Indicates a document previously filed with the Commission, incorporated by reference herein.

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\*Filed herewith.

# **SIGNATURES**

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

### PYXIS TANKERS INC.

By: /s/ Valentios Valentis Name: Valentios Valentis

Title: Chairman, Chief Executive Officer and Director

Date: March 29, 2019

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### **Report of Independent Registered Public Accounting Firm**

To the Stockholders and the Board of Directors of Pyxis Tankers Inc.

### **Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Pyxis Tankers Inc. (the Company) as of December 31, 2018 and 2017, the related consolidated statements of comprehensive loss, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and the financial statement schedule listed in the Index at Item 18.1 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

# **Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis

for our opinion.
/s/ Ernst & Young (Hellas) Certified Auditors Accountants S.A.
We have served as the Company's auditor since 2015.
Athens, Greece
March 29, 2019

# **Consolidated Balance Sheets**

As at December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

ASSETS	Notes	2017	2018
CURRENT ASSETS: Cash and cash equivalents Restricted cash, current portion Inventories Trade accounts receivable, net Prepayments and other assets Total current assets	4	\$1,693 141 1,016 703 342 3,895	\$545 255 807 2,585 115 4,307
FIXED ASSETS, NET: Vessels, net Total fixed assets, net	5, 10	115,774 115,774	107,992 107,992
OTHER NON-CURRENT ASSETS: Restricted cash, net of current portion Financial derivative instrument Deferred charges, net Prepayments and other assets Total other non-current assets Total assets	6	4,859 — 285 — 5,144 \$124,813	3,404 28 740 146 4,318 \$116,617
LIABILITIES AND STOCKHOLDERS' EQUITY			
CURRENT LIABILITIES: Current portion of long-term debt, net of deferred financing costs Trade accounts payable Due to related parties Hire collected in advance Accrued and other liabilities	7	\$7,304 2,293 2,125 — 809	\$4,333 4,746 3,402 422 642
Total current liabilities		12,531	13,545
NON-CURRENT LIABILITIES: Long-term debt, net of current portion and deferred financing costs, non-current Promissory note Total non-current liabilities	7 3	59,126 5,000 64,126	58,129 5,000 63,129

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COMMITMENTS AND CONTINGENCIES	11	_	_
STOCKHOLDERS' EQUITY:			
Preferred stock (\$0.001 par value; 50,000,000 shares authorized; none issued)	8	_	
Common stock (\$0.001 par value; 450,000,000 shares authorized;			
20,877,893 and 21,060,190 shares issued and outstanding	8	21	21
as of December 31, 2017 and 2018, respectively)			
Additional paid-in capital	8	74,766	74,767
Accumulated deficit		(26,631)	(34,845)
Total stockholders' equity		48,156	39,943
Total liabilities and stockholders' equity		\$124,813	\$116.617

The accompanying notes are an integral part of these consolidated financial statements.

# **Consolidated Statements of Comprehensive Loss**

For the years ended December 31, 2016, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

Revenues, net	Notes 2	2016 \$30,387	2017 \$29,579	2018 \$28,457
Expenses:				
Voyage related costs and commissions	3	(6,288	) (8,463	) (11,817 )
Vessel operating expenses		(12,871	) (12,761	) (12,669 )
General and administrative expenses	3, 8	(2,574	) (3,188	) (2,404 )
Management fees, related parties	3	(631	) (712	) (720
Management fees, other		(1,024	) (930	) (930
Amortization of special survey costs	6	(236	) (73	) (133
Depreciation	5	(5,768	) (5,567	) (5,500 )
Vessel impairment charge	5, 10	(3,998	) —	(2,282)
Bad debt provisions			(231	) (13
Operating loss		(3,003	) (2,346	) (8,011 )
Other income / (expenses):				
Gain from debt extinguishment	7			4,306
Loss from financial derivative instrument				(19)
Interest and finance costs, net	3, 12	(2,810	) (2,897	) (4,490 )
Total other expenses, net		(2,810	) (2,897	) (203 )
Net loss		\$(5,813	) \$(5,243	) \$(8,214 )
Loss per common share, basic and diluted	9	\$(0.32	) \$(0.28	) \$(0.39
Weighted average number of shares, basic and diluted	9	18,277,89	93 18,461,45	5 20,894,202

The accompanying notes are an integral part of these consolidated financial statements.

# Consolidated Statements of Stockholders' Equity

For the years ended December 31, 2016, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

			Additional		Total
	<b>Common Stock</b>		Paid-in	Paid-in Accumulated	
	# of Shares	Par value	Capital	Deficit	Equity
BALANCE, January 1, 2016	18,244,671	\$ 18	\$ 70,123	\$ (15,575	\$ 54,566
Issuance of common stock - EIP	33,222			_	_
Net loss	_			(5,813	) (5,813 )
BALANCE, December 31, 2016	18,277,893	\$ 18	\$ 70,123	\$ (21,388	\$ 48,753
Issuance of common stock	2,400,000	3	4,288	_	4,291
Issuance of common stock - EIP	200,000		_	_	_
Stock compensation	_		355		355
Net loss	_			(5,243	) (5,243 )
BALANCE, December 31, 2017	20,877,893	\$ 21	\$ 74,766	\$ (26,631	\$ 48,156
Net proceeds from the issuance of common stock	182,297		1	_	1
Net loss	_			(8,214	(8,214)
BALANCE, December 31, 2018	21,060,190	\$ 21	\$ 74,767	\$ (34,845	\$ 39,943

The accompanying notes are an integral part of these consolidated financial statements.

# **Consolidated Statements of Cash Flows**

For the years ended December 31, 2016, 2017 and 2018

(Expressed in thousands of U.S. dollars)

	2016	2017	2018	
Cash flows from operating activities:				
Net loss	\$(5,813)	\$(5,243)	\$(8,214	)
Adjustments to reconcile net loss to net cash from operating activities:				
Depreciation	5,768	5,567	5,500	
Amortization of special survey costs	236	73	133	
Amortization and write-off of financing costs	164	153	386	
Vessel impairment charge	3,998		2,282	
Gain from debt extinguishment			(4,306	)
Loss from financial derivative instrument			19	
Stock compensation	_	355		
Bad debt provisions	_	231	13	
Changes in assets and liabilities:				
Inventories	(590)	157	209	
Trade accounts receivable, net	(1,226)	747	(1,895	)
Prepayments and other assets	321	62	227	
Special surveys cost	(364)		(588	)
Trade accounts payable	2,012	(858)	2,499	
Due to related parties	1,832	2,672	1,277	
Hire collected in advance	(1,714)	(415)	422	
Accrued and other liabilities	(178)	176	(167	)
Net cash provided by / (used in) operating activities	\$4,446	\$3,677	\$(2,203	
Cash flows from investing activities:				
Advances for ballast water treatment system			(99	)
Net cash used in investing activities	<b>\$</b> —	<b>\$</b> —	\$(99	)
Cash flows from financing activities:				
Proceeds from long-term debt			44,500	
Repayment of long-term debt	(7,263)	(6,963)	(43,640	))
Gross proceeds from issuance of common stock	_	4,800	315	
Common stock offerings costs	_	(414)	(407	)
Payment of financial derivative instrument			(47	)
Payment of financing costs	(22)	(190)	(908	)
Net cash used in financing activities	\$(7,285)	\$(2,767)	\$(187	)
Net (decrease) / increase in cash and cash equivalents and restricted cash	(2,839)	910	(2,489	)

Cash and cash equivalents and restricted cash at the beginning of the year	8,622	5,783	6,693
Cash and cash equivalents and restricted cash at end of the year	\$5,783	\$6,693	\$4,204
SUPPLEMENTAL INFORMATION:			
Cash paid for interest	\$2,779	\$2,549	\$4,283
Non-cash financing activities – increase in promissory note	_	2,500	_

The accompanying notes are an integral part of these consolidated financial statements.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

#### 1. Basis of Presentation and General Information

PYXIS TANKERS INC. ("Pyxis") is a corporation incorporated in the Republic of the Marshall Islands on March 23, 2015. Pyxis currently owns 100% ownership interest in the following six vessel-owning companies:

SECONDONE CORPORATION LTD, established under the laws of the Republic of Malta ("Secondone"); THIRDONE CORPORATION LTD, established under the laws of the Republic of Malta ("Thirdone"); FOURTHONE CORPORATION LTD, established under the laws of the Republic of Malta ("Fourthone"); SIXTHONE CORP., established under the laws of the Republic of the Marshall Islands ("Sixthone"); SEVENTHONE CORP., established under the laws of the Republic of the Marshall Islands ("Seventhone"); and EIGHTHONE CORP., established under the laws of the Republic of the Marshall Islands ("Eighthone," and collectively with Secondone, Thirdone, Fourthone, Sixthone and Seventhone, the "Vessel-owning companies").

All of the Vessel-owning companies are engaged in the marine transportation of liquid cargoes through the ownership and operation of tanker vessels, as listed below:

Vessel-owning	g Incorporation			Year	Acquisition
		Vessel	DWT		
company	date			built	date
Secondone	05/23/2007	Northsea Alpha	8,615	2010	05/28/2010
Thirdone	05/23/2007	Northsea Beta	8,647	2010	05/25/2010
Fourthone	05/30/2007	Pyxis Malou	50,667	2009	02/16/2009
Sixthone	01/15/2010	Pyxis Delta	46,616	2006	03/04/2010
Seventhone	05/31/2011	Pyxis Theta	51,795	2013	09/16/2013
Eighthone	02/08/2013	Pyxis Epsilon	50,295	2015	01/14/2015

Secondone, Thirdone and Fourthone were initially established under the laws of the Republic of the Marshall Islands, under the names SECONDONE CORP., THIRDONE CORP. and FOURTHONE CORP., respectively. In March and April 2018, these vessel-owning companies completed their re-domiciliation under the jurisdiction of the Republic of Malta and were renamed as mentioned above. For further information, please refer to Note 7.

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and include the accounts of Pyxis and its wholly-owned subsidiaries (collectively the "Company"), as of December 31, 2017 and 2018 and for the years ended December 31, 2016, 2017 and 2018.

All of the Company's vessels are double-hulled and are engaged in the transportation of refined petroleum products and other liquid bulk items, such as, organic chemicals and vegetable oils. The vessels *Northsea Alpha* and *Northsea Beta* are smaller tanker sister ships and *Pyxis Malou*, *Pyxis Delta*, *Pyxis Theta* and *Pyxis Epsilon*, are medium-range tankers.

Prior to the consummation of the transactions discussed below, Mr. Valentios ("Eddie") Valentis was the sole ultimate stockholder of Pyxis and the Vessel-owning companies, holding all of their issued and outstanding share capital through MARITIME INVESTORS CORP. ("Maritime Investors"). Maritime Investors owned directly 100% of Pyxis, Secondone and Thirdone, and owned indirectly (through the intermediate holding company PYXIS HOLDINGS INC. ("Holdings")) 100% of Fourthone, Sixthone, Seventhone and Eighthone.

On March 25, 2015, Pyxis caused MARITIME TECHNOLOGIES CORP., a Delaware corporation ("Merger Sub"), to be formed as its wholly-owned subsidiary and to be a party to the agreement and plan of merger discussed below.

On April 23, 2015, Pyxis and Merger Sub entered into an agreement and plan of merger (the "Agreement and Plan of Merger") (further amended on September 22, 2015) with among others, LOOKSMART LTD. ("LS"), a digital advertising solutions company listed on NASDAQ. Merger Sub served as the entity into which LS was merged in accordance with the Agreement and Plan of Merger (the "Merger"). Upon execution of the Agreement and Plan of Merger, Pyxis paid LS a cash consideration of \$600.

Prior to the Merger, on October 26, 2015, Holdings and Maritime Investors transferred all of their shares in the Vessel-owning companies to Pyxis as a contribution in kind, at no consideration. Since there was no change in ultimate ownership or control of the business of the Vessel-owning companies, the transaction constituted a reorganization of companies under common control and has been accounted for in a manner similar to a pooling of interests. Accordingly, upon the transfer of the assets and liabilities of the Vessel-owning companies, the financial statements of the Company were presented using combined historical carrying amounts of the assets and liabilities of the Vessel-owning companies.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

#### 1. Basis of Presentation and General Information - Continued

On October 28, 2015, in accordance with the terms of the Agreement and Plan of Merger, LS, after having divested of its business and all of its assets and liabilities, merged with and into the Merger Sub, with Merger Sub surviving the Merger and continuing to be a wholly-owned subsidiary of Pyxis.

On October 28, 2015, the Merger was consummated and the Company's shares commenced their listing on the NASDAQ Capital Markets thereafter.

Pyxis was both the legal and accounting acquirer of LS. The acquisition by Pyxis of LS was not an acquisition of an operating company as the business, assets and liabilities of LS were spun-off prior to the Merger. As such, for accounting purposes, the Merger between Merger Sub and LS was accounted for as a capital transaction rather than as a business combination.

PYXIS MARITIME CORP. ("Maritime"), a corporation established under the laws of the Republic of the Marshall Islands, which is beneficially owned by Mr. Valentis, provides certain ship management services to the Vessel-owning companies (Note 3).

With effect from the delivery of each vessel, the crewing and technical management of the vessels were contracted to INTERNATIONAL TANKER MANAGEMENT LTD. ("ITM") with permission from Maritime. ITM is an unrelated third party technical manager, represented by its branch based in Dubai, UAE. Each ship-management agreement with ITM is in force until it is terminated by either party. The ship-management agreements can be cancelled either by the Company or ITM for any reason at any time upon three months' advance notice.

In September 2010, Secondone and Thirdone entered into commercial management agreements with NORTH SEA TANKERS BV ("NST"), an unrelated company established in the Netherlands. Pursuant to these agreements, NST

provided chartering services to *Northsea Alpha* and *Northsea Beta*. On March 16, 2016 and on June 28, 2016, the Company sent notices of termination of the commercial management agreements between NST and Thirdone and Secondone, respectively. In June and November 2016, Maritime assumed full commercial management of the *Northsea Beta* and the *Northsea Alpha*, respectively.

As of December 31, 2018, Mr. Valentis beneficially owned approximately 80.9% of the Company's common stock.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

#### 2. Significant Accounting Policies:

(a) Changes in accounting policies: The same accounting policies have been followed in these consolidated financial statements as were applied in the preparation of the Company's consolidated financial statements for the year ended December 31, 2017, except as discussed below:

**Revenues**, **net**: The Company generates its revenues from charterers. The vessels are chartered using either spot charters, where a contract is made in the spot market for the use of a vessel for a specific voyage for a specified charter rate, or time charters, where a contract is entered into for the use of a vessel for a specific period of time and a specified daily charter hire rate.

The following table presents the Company's revenue disaggregated by revenue source, net of commissions, for the years ended December 31, 2016, 2017 and 2018:

	December 31,	December 31,	December 31,
	2016	2017	2018
Voyage revenues derived from spot charters, net	\$ 9,295	\$ 16,668	\$ 16,990
Voyage revenues derived from time charters, net	21,092	12,911	11,467
Revenues, net	\$ 30,387	\$ 29,579	\$ 28,457

As of January 1, 2018, the Company adopted Accounting Standard Update ("ASU") 2014-09 "Revenue from Contracts with Customers (Topic 606)". The core principle is that a company should recognize revenue when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. The Company analyzed its contracts with charterers at the adoption date and has determined that its spot charters fall under the provisions of ASC 606, while its time charter agreements are lease agreements that contain certain non-lease components.

The Company elected to adopt ASC 606 by applying the modified retrospective transition method, recognizing the cumulative effect of adopting this guidance as an adjustment to the 2018 opening balance of accumulated deficit. As of December 31, 2017, there were no vessels employed under spot charters and as a result, the Company has not included any adjustments to the 2018 opening balance of accumulated deficit and prior periods were not retrospectively adjusted.

The Company assessed its contracts with charterers for spot charters during the year ended December 31, 2018 and concluded that there is one single performance obligation for its spot charter, which is to provide the charterer with a transportation service within a specified time period. In addition, the Company has concluded that a spot charter meets the criteria to recognize revenue over time as the charterer simultaneously receives and consumes the benefits of the Company's performance. The adoption of this standard resulted in a change whereby the Company's method of revenue recognition changed from discharge-to-discharge (assuming a new charter has been agreed before the completion of the previous spot charter) to load-to-discharge. This resulted in no revenue being recognized from discharge of the prior spot charter to loading of the current spot charter and all revenue being recognized from loading of the current spot charter to discharge of the current spot charter. This change results in revenue being recognized later in the voyage, which may cause additional volatility in revenues and earnings between periods. Demurrage income represents payments by a charterer to a vessel owner when loading or discharging time exceeds the stipulated time in the spot charter. The Company has determined that demurrage represents a variable consideration and estimates demurrage at contract inception. Demurrage income estimated, net of address commission, is recognized over the time of the charter as the performance obligation is satisfied.

Under a spot charter, the Company incurs and pays for certain voyage expenses, primarily consisting of brokerage commissions, port and canal costs and bunker consumption, during the spot charter (load-to-discharge) and during the ballast voyage (date of previous discharge to loading, assuming a new charter has been agreed before the completion of the previous spot charter). Before the adoption of ASC 606, all voyage expenses were expensed as incurred, except for brokerage commissions. Brokerage commissions are deferred and amortized over the related voyage period in a charter to the extent revenue has been deferred since commissions are earned as the Company's revenues are earned. Under ASC 606 and after the implementation of ASC 340-40 "Other assets and deferred costs" for contract costs, incremental costs of obtaining a contract with a customer and contract fulfillment costs, should be capitalized and amortized as the performance obligation is satisfied, if certain criteria are met. The Company assessed the new guidance and concluded that voyage costs during the ballast voyage represented costs to fulfil a contract which give rise to an asset and should be capitalized and amortized over the spot charter, consistent with the recognition of voyage revenues from spot charter from load-to-discharge, while voyage costs incurred during the spot charter should be expensed as incurred. With respect to incremental costs, the Company has selected to adopt the practical expedient in the guidance and any costs to obtain a contract will be expensed as incurred, for the Company's spot charters that do not exceed one year. Vessel operating expenses are expensed as incurred. The Company's adoption of the new revenue standard, did not have a material effect on the consolidated statement of comprehensive loss for the year ended December 31, 2018 and the consolidated balance sheet as of December 31, 2018, since only one vessel was under spot charter as of December 31, 2018.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

## 2. Significant Accounting Policies – Continued:

#### (a) Changes in accounting policies – Continued:

In addition, pursuant to this standard and the new Leases standard (discussed below), as of January 1, 2018, the Company elected to present Revenues net of address commissions. Address commissions represent a discount provided directly to the charterers based on a fixed percentage of the agreed upon charter. Since address commissions represent a discount (sales incentive) on services rendered by the Company and no identifiable benefit is received in exchange for the consideration provided to the charterer, these commissions are presented as a reduction of revenue in the accompanying consolidated statements of comprehensive loss. In this respect, for the year ended December 31, 2016 and 2017, Revenues, net and Voyage related costs and commissions each decreased by \$323 and \$247, respectively. This reclassification has no impact on the Company's consolidated financial position and results of operations for any of the periods presented.

The Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less, in accordance with the optional exception in ASC 606.

Revenues for the years ended December 31, 2016, 2017 and 2018, deriving from significant charterers individually accounting for 10% or more of revenues (in percentages of total revenues), were as follows:

Charterer	2016		2017	2018	
A			15 9	% —	
В	12	2 %	_	_	
C	20	%	16	% —	
D	14	%	_	_	
E	10	%	_		
F			18 9	% —	
G	_		_	23 %	

H — — 15 % 56 % 49 % 38 %

Leases: In February 2016, Financial Accounting Standards Board ("FASB") issued ASU 2016-02, "Leases (Topic 842)", which was amended and supplemented by ASU 2017-13, ASU 2018-01 and ASU 2018-11. The new lease standard does not substantially change lessor accounting. ASC 842 is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early application is permitted. Lessees and lessors will be required to apply the new standard at the beginning of the earliest period presented in the financial statements in which they first apply the new guidance, using a modified retrospective transition method. Entities are also provided with practical expedients that allow entities to not (i) reassess whether any expired or existing contracts are considered or contain leases; (ii) reassess the lease classification for any expired or existing leases; and (iii) reassess initial direct costs for any existing leases. In addition, the new standard (i) provides entities with an additional (and optional) transition method to adopt the new leases standard, under which an entity initially applies the new leases standard at the adoption date and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption consistent with preparers' requests and (ii) provide lessors with a practical expedient, by class of underlying asset, to not separate non-lease components from the associated lease component and, instead, to account for those components as a single component if both of the following are met: (a) The timing and pattern of transfer of the non-lease component(s) and associated lease component are the same and (b) The lease component, if accounted for separately, would be classified as an operating lease. If the non-lease component or components associated with the lease component are the predominant component of the combined component, an entity is required to account for the combined component in accordance with ASC 606. Otherwise, the entity should account for the combined component as an operating lease in accordance with ASC 842.

The Company elected to early adopt ASC 842 as of September 30, 2018 with adoption reflected as of January 1, 2018. The Company adopted the standard by using the modified retrospective method and selected the additional optional transition method. The Company also selected to apply all the practical expedients discussed above. In this respect no cumulative-effect adjustment was recognized to the 2018 opening balance of accumulated deficit. The Company assessed its new time charter contracts at the adoption date under the new guidance and concluded that these contracts contain a lease with the related executory costs (insurance), as well as non-lease components to provide other services related to the operation of the vessel, with the most substantial service being the crew cost to operate the vessel. The Company concluded that the criteria for not separating the lease and non-lease components of its time charter contracts are met, since (i) the time pattern of recognizing revenues for crew and other services for the operation of the vessels, is similar to the time pattern of recognizing rental income, (ii) the lease component of the time charter contracts, if accounted for separately, would be classified as an operating lease, and (iii) the predominant component in its time charter agreements is the lease component. Brokerage and address commissions on time charter revenues are deferred and amortized over the related voyage period, to the extent revenue has been deferred, since commissions are earned as revenues earned, and are presented in voyage expenses and as a reduction to voyage revenues (see above), respectively. Vessel operating expenses are expensed as incurred. By taking the practical expedients, existing time charters at January 1, 2018 continue to be accounted for under ASC 840 while new time charters commenced in 2018 are accounted for under ASC 842. The early adoption of ASC 842 had no effect on the Company's consolidated financial position and results of operations for the year ended December 31, 2018.

### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

## 2. Significant Accounting Policies – Continued:

#### (a) Changes in accounting policies – Continued:

Restricted Cash: As of January 1, 2018, the Company adopted the ASU 2016-18 "Statement of Cash Flows (Topic 230): Restricted Cash", which requires that the statement of cash flows explain the change in the total of cash and cash equivalents and restricted cash. ASU 2016-18 was adopted retrospectively for the years ended December 31, 2016, 2017 and 2018, and restricted cash of \$5,000, \$5,000 and \$3,659, respectively, has been aggregated with cash and cash equivalents in both the beginning-of-period and end-of-period line items of the consolidated statements of cash flows for each of the periods presented. The implementation of this update has no impact on the Company's consolidated balance sheet and consolidated statement of comprehensive loss.

The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the accompanying consolidated balance sheets that are presented in the accompanying consolidated statement of cash flows for the years ended December 31, 2016, 2017 and 2018.

	December 31,	December 31,	December 31,	
	2016	2017	2018	
Cash and cash equivalents	\$ 783	\$ 1,693	\$ 545	
Restricted cash, current portion	143	141	255	
Restricted cash, net of current portion	4,857	4,859	3,404	
Total cash and cash equivalents and restricted cash	\$ 5,783	\$ 6,693	\$ 4,204	

**Business combinations:** As of January 1, 2018, the Company adopted the ASU No. 2017-01, "Business Combinations" (Topic 805) which clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisition (or disposals) of assets or businesses. Under current implementation guidance, the existence of an integrated set of acquired activities (inputs and processes that

generate outputs) constitutes an acquisition of business. This ASU provides a screen to determine when a set of assets and activities does not constitute a business. The screen requires that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. The following assets are considered as a single asset for the purposes of the evaluation: (i) a tangible asset that is attached to and cannot be physically removed and used separately from another tangible assets (or an intangible asset representing the right to use a tangible asset) and (ii) in place lease intangibles, including favorable and unfavorable intangible assets or liabilities, and the related leased assets. The implementation of this update had no effect on the Company's consolidated financial position and results of operations for the year ended December 31, 2018.

(b) Principles of Consolidation: The accompanying consolidated financial statements have been prepared in accordance with U.S. GAAP. The consolidated financial statements include the accounts of Pyxis and its wholly-owned subsidiaries (the Vessel-owning companies and Merger Sub). All intercompany balances and transactions have been eliminated upon consolidation.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

- 2. Significant Accounting Policies Continued:
- (b) Principles of Consolidation Continued:

Pyxis, as the holding company, determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity. Under Accounting Standards Codification ("ASC") 810 "Consolidation" a voting interest entity is an entity in which the total equity investment at risk is sufficient to enable the entity to finance itself independently and provides the equity holders with the obligation to absorb losses, the right to receive residual returns and the right to make financial and operating decisions. Pyxis consolidates voting interest entities in which it owns all, or at least a majority (generally, greater than 50%), of the voting interest. Variable interest entities ("VIE") are entities as defined under ASC 810-10, that in general either do not have equity investors with voting rights or that have equity investors that do not provide sufficient financial resources for the entity to support its activities. A controlling financial interest in a VIE is present when a company absorbs a majority of an entity's expected losses, receives a majority of an entity's expected residual returns, or both. The company with a controlling financial interest, known as the primary beneficiary, is required to consolidate the VIE. Pyxis evaluates all arrangements that may include a variable interest in an entity to determine if it may be the primary beneficiary, and would be required to include assets, liabilities and operations of a VIE in its consolidated financial statements. As of December 31, 2018, no such interest existed.

- (c) Use of Estimates: The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ from these estimates.
- (d) Comprehensive Income / (Loss): The Company follows the provisions of ASC 220 "Comprehensive Income", which requires separate presentation of certain transactions which are recorded directly as components of equity. The Company had no transactions which affect comprehensive loss during the years ended December 31, 2016, 2017 and 2018 and, accordingly, comprehensive loss was equal to net income loss.

- (e) Foreign Currency Translation: The functional currency of the Company is the U.S. dollar as the Company's vessels operate in international shipping markets and, therefore, primarily transact business in U.S. dollars. The Company's accounting records are maintained in U.S. dollars. Transactions involving other currencies during the year are converted into U.S. dollars using the exchange rates in effect at the time of the transactions. At the balance sheet dates, monetary assets and liabilities, which are denominated in other currencies, are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Resulting gains or losses are included in Vessel operating expenses in the accompanying consolidated statements of comprehensive loss. All amounts in the financial statements are presented in thousand U.S. dollars rounded at the nearest thousand.
- (f) Commitments and Contingencies: Provisions are recognized when: the Company has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and a reliable estimate of the amount of the obligation can be made. Provisions are reviewed at each balance sheet date.
- (g) Insurance Claims Receivable: The Company records insurance claim recoveries for insured losses incurred on damage to fixed assets and for insured crew medical expenses. Insurance claim recoveries are recorded, net of any deductible amounts, at the time the Company's fixed assets suffer insured damages or when crew medical expenses are incurred, recovery is probable under the related insurance policies and the claim is not subject to litigation.
- (h) Concentration of Credit Risk: Financial instruments, which potentially subject the Company to significant concentrations of credit risk, consist principally of cash and cash equivalents and trade accounts receivable. The Company places its cash and cash equivalents, consisting mostly of deposits, with qualified financial institutions with high creditworthiness. The Company performs periodic evaluations of the relative creditworthiness of those financial institutions that are considered in the Company's investment strategy. The Company limits its credit risk with accounts receivable by performing ongoing credit evaluations of its customers' financial condition and generally does not require collateral for its accounts receivable.
- (i) Cash and Cash Equivalents and Restricted Cash: The Company considers highly liquid investments such as time deposits and certificates of deposit with an original maturity of three months or less to be cash equivalents. Restricted cash is associated with pledged retention accounts in connection with the loan repayments and minimum liquidity requirements under the loan agreements discussed in Note 7 and is presented separately in the accompanying consolidated balance sheets.
- (j) Income Taxation: Under the laws of the Republic of the Marshall Islands, the country of incorporation of the Vessel-owning companies, and/or the vessels' registration, the Vessel-owning companies are not liable for any income tax on their income derived from shipping operations. Instead, a tax is levied depending on the countries where the vessels trade based on their tonnage, which is included in Vessel operating expenses in the accompanying consolidated statements of comprehensive loss. The Vessel-owning companies with vessels that have called on the United States during the relevant year of operation are obliged to file tax returns with the Internal Revenue Service. The applicable tax is 50% of 4% of U.S. related gross transportation income unless an exemption applies. The Company believes that based on current legislation the relevant Vessel-owning companies are entitled to an

exemption because they satisfy the relevant requirements, namely that (i) the related Vessel-owning companies are incorporated in a jurisdiction granting an equivalent exemption to U.S. corporations and (ii) over 50% of the ultimate stockholders of the vessel-owning companies are residents of a country granting an equivalent exemption to U.S. persons.

Notes	to the	Cons	olidate	d Fins	ancial	Statem	ents

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

- 2. Significant Accounting Policies Continued:
- (j) Income Taxation Continued:

Under the laws of the Republic of Malta, the country of incorporation of the Vessel-owning companies, and/or the vessels' registration, the Vessel-owning companies are not liable for any income tax on their income derived from shipping operations. The Republic of Malta is a country that has an income tax treaty with the United States. Accordingly, income earned by our subsidiaries organized under the laws of Malta may qualify for a treaty-based exemption. In fact Article 8 (Shipping and Air Transport) of that Treaty sets out the relevant rule to the effect that profits of an enterprise of a Contracting State from the operation of ships in international traffic shall be taxable only in that State.

- (k) Inventories: Inventories consist of lubricants and bunkers (where applicable) on board the vessels, which are stated at the lower of cost and net realizable value. Cost is determined by the first-in, first-out ("FIFO") method.
- (*l*) *Trade Accounts Receivable*, *Net:* Under spot charters, the Company normally issues its invoices to charterers at the completion of the voyage. Invoices are due upon issuance of the invoice. Since the Company satisfies its performance obligation over the time of the spot charter, the Company recognizes its unconditional right to consideration in trade accounts receivable, net of a provision for doubtful accounts, if any. Trade accounts receivable from spot charters as of December 31, 2017 and 2018 amounted to \$689 and \$2,581, respectively. The allowance for doubtful accounts at December 31, 2017 and 2018, was \$96 and nil, respectively. Under time charter contracts, the Company normally issues invoices on a monthly basis 30 days in advance of providing its services. Trade accounts receivable from time charters as of December 31, 2017 and 2018 amounted to \$14 and \$4, respectively. Hire collected in advance includes cash received prior to the balance sheet date and is related to revenue earned after such date.
- (m) Vessels, Net: Vessels are stated at cost, which consists of the contract price and any material expenses incurred in connection with the acquisition (initial repairs, improvements, delivery expenses and other expenditures to prepare the vessel for her initial voyage, as well as professional fees directly associated with the vessel acquisition). Subsequent

expenditures for major improvements are also capitalized when they appreciably extend the life, increase the earning capacity or improve the efficiency or safety of the vessels; otherwise, these amounts are expensed as incurred.

The cost of each of the Company's vessels is depreciated from the date of acquisition on a straight-line basis over the vessels' remaining estimated economic useful life, after considering the estimated residual value. A vessel's residual value is equal to the product of its lightweight tonnage and estimated scrap rate of \$0.300 per ton. The Company estimates the useful life of the Company's vessels to be 25 years from the date of initial delivery from the shipyard. In the event that future regulations place limitations over the ability of a vessel to trade on a worldwide basis, its remaining useful life will be adjusted at the date such regulations are adopted.

(n) Impairment of Long Lived Assets: The Company reviews its long lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable.

In developing estimates of future undiscounted cash flows, the Company makes assumptions and estimates about the vessels' future performance, with the significant assumptions relating to time charter equivalent rates by vessel type, vessels' operating expenses, vessels' capital expenditures, vessels' residual value, fleet utilization and the estimated remaining useful life of each vessel. The assumptions used to develop estimates of future undiscounted cash flows are based on historical trends as well as future expectations.

To the extent impairment indicators are present, the projected net operating cash flows are determined by considering the charter revenues from existing time charters for the fixed days and an estimated daily time charter rate for the unfixed days (based on recent market estimates for the first year and the most recent seven year historical average rates, where available thereafter, over the remaining estimated useful life of the vessels), expected outflows for vessels' operating expenses, planned dry-docking and special survey expenditures, management fees expenditures which are adjusted every year, pursuant to the Company's existing group management agreement, and fleet utilization of 85.0% to 98.6% (depending on the type of the vessel) for the first year and 98.0% or 93.0%, including scheduled off-hire days for planned dry-dockings and vessel surveys, for the years thereafter, based on historical experience. The residual value used in the impairment test is estimated to be approximately \$0.3 per lightweight ton in accordance with the vessels' depreciation policy.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

## 2. Significant Accounting Policies – Continued:

#### (n) Impairment of Long Lived Assets – Continued:

As of December 31, 2016, the Company obtained market valuations for all its vessels from reputable marine appraisers. Based on these valuations, the Company identified impairment indications for all of its vessels, except for the *Pyxis Epsilon*. More specifically, the market values of these vessels were, in aggregate, \$15,751 lower than their carrying values, including any unamortized deferred charges relating to special survey costs, as of December 31, 2016. In this respect, the Company performed an impairment analysis to estimate the future undiscounted cash flows for each of these vessels. The analysis resulted in higher undiscounted cash flows than each vessel's carrying value as of December 31, 2016, except for the *Northsea Alpha* and the *Northsea Beta* for which a total Vessel impairment charge of \$3,998 was recorded as of December 31, 2016, of which \$3,392 was charged against Vessels, net and \$606 against Deferred charges, net (Notes 5, 6 and 10).

As of December 31, 2017, the Company obtained market valuations for all its vessels from reputable marine appraisers. Based on these valuations, the Company identified impairment indications for certain of its vessels. More specifically, the market values of these vessels were, in aggregate, \$8,299 lower than their carrying values, including any unamortized deferred charges relating to special survey costs, as of that date. In this respect, the Company performed an impairment analysis to estimate the future undiscounted cash flows for each of these vessels. The analysis resulted in higher undiscounted cash flows than each vessel's carrying value as of December 31, 2017 and, accordingly, no adjustment to the vessels' carrying values was required.

As of December 31, 2018, the Company obtained market valuations for all its vessels from reputable marine appraisers. Based on these valuations, the Company identified impairment indications for all of its vessels, except for the *Pyxis Epsilon*. More specifically, the market values of these vessels were, in aggregate, \$9,987 lower than their carrying values, including any unamortized deferred charges relating to special survey costs, as of that date. In this respect, the Company performed an impairment analysis to estimate the future undiscounted cash flows for each of these vessels. The analysis resulted in higher undiscounted cash flows than each vessel's carrying value as of December 31, 2018, except for the *Northsea Alpha* and the *Northsea Beta*, for which a total Vessel impairment charge of \$2,282 was recorded as of December 31, 2018, against Vessels, net.

(o) Financial Derivative Instruments: The Company enters into interest rate derivatives to manage its exposure to fluctuations of interest rate risk associated with its borrowings. All derivatives are recognized in the consolidated financial statements at their fair value. The fair value of the interest rate derivatives is based on a discounted cash flow analysis. When such derivatives do not qualify for hedge accounting, the Company recognizes their fair value changes in current period earnings. When the derivatives qualify for hedge accounting, the Company recognizes the effective portion of the gain or loss on the hedging instrument directly in other comprehensive income / (loss), while the ineffective portion, if any, is recognized immediately in current period earnings. The Company, at the inception of the transaction, documents the relationship between the hedged item and the hedging instrument, as well as its risk management objective and the strategy of undertaking various hedging transactions. The Company also assesses at hedge inception whether the hedging instruments are highly effective in offsetting changes in the cash flows of the hedged items.

The Company discontinues cash flow hedge accounting if the hedging instrument expires and it no longer meets the criteria for hedge accounting or its designation is revoked by the Company. At that time, any cumulative gain or loss on the hedging instrument recognized in equity is kept in equity until the forecasted transaction occurs. When the forecasted transaction occurs, any cumulative gain or loss on the hedging instrument is recognized in consolidated statement of comprehensive loss. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognized in equity is transferred to current period consolidated statement of comprehensive loss as financial income or expense.

(p) Accounting for Special Survey and Dry-docking Costs: The Company follows the deferral method of accounting for special survey and dry-docking costs, whereby actual costs incurred at the yard and parts used in the dry-docking or special survey, are deferred and are amortized on a straight-line basis over the period through the date the next survey is scheduled to become due. Costs deferred are limited to actual costs incurred at the shipyard and costs incurred in the dry-docking or special survey. If a dry-dock or a survey is performed prior to the scheduled date, any remaining unamortized balances of the previous dry-dock and survey are immediately written-off. Unamortized dry-dock and survey balances of vessels that are sold are written-off and included in the calculation of the resulting gain or loss in the period of the vessel's sale.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

# 2. Significant Accounting Policies – Continued:

- (q) Financing Costs: Costs associated with new loans or refinancing of existing loans, including fees paid to lenders or required to be paid to third parties on the lender's behalf for obtaining new loans or refinancing existing loans, are recorded as a direct deduction from the carrying amount of the debt liability. Such costs are deferred and amortized to Interest and finance costs in the consolidated statements of comprehensive loss during the life of the related debt using the effective interest method. Unamortized costs relating to loans repaid or refinanced, meeting the criteria of debt extinguishment, are expensed in the period the repayment or refinancing is made. Commitment fees relating to undrawn loan principal are expensed as incurred.
- (r) Fair Value Measurements: The Company follows the provisions of Accounting Standard Update ("ASU") 2015-07 "Fair Value Measurements and Disclosures", Topic 820, which defines and provides guidance as to the measurement of fair value. This standard creates a hierarchy of measurement and indicates that, when possible, fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The fair value hierarchy gives the highest priority (Level 1) to quoted prices in active markets and the lowest priority (Level 3) to unobservable data, for example, the reporting entity's own data. Under the standard, fair value measurements are separately disclosed by level within the fair value hierarchy (Note 10).
- (s) Segment Reporting: The Company reports financial information and evaluates its operations by charter revenues and not by the length of ship employment for its customers, i.e., spot or time charters. The Company does not use discrete financial information to evaluate the operating results for each such type of charter. Although revenue can be identified for these types of charters, management cannot and does not identify expenses, profitability or other financial information for these charters. Furthermore, when the Company charters a vessel to a charterer, the charterer is free to trade the vessel worldwide (subject to certain agreed exclusions) and, as a result, the disclosure of geographic information is impracticable. As a result, management, reviews operating results solely by revenue per day and operating results of the fleet and thus the Company has determined that it operates under one reportable segment.
- (t) Earnings / (loss) per Share: Basic earnings / (loss) per share are computed by dividing net income / (loss) attributable to common equity holders by the weighted average number of shares of common stock outstanding. The computation of diluted earnings / (loss) per share reflects the potential dilution that could occur if securities or other

contracts to issue common stock were exercised and is performed using the treasury stock method.

(u) Stock Compensation: The Company has a stock based incentive plan that covers directors and officers of the Company and its affiliates and its consultants and service providers. Awards granted are valued at fair value and compensation cost is recognized on a straight line basis, net of estimated forfeitures, over the requisite service period of each award. The fair value of restricted stock awarded to directors and officers of the Company at the grant date is equal to the closing stock price on that date and is amortized over the applicable vesting period using the straight-line method. The fair value of restricted stock awarded to non-employees is equal to the closing stock price at the grant date adjusted by the closing stock price at each reporting date and is amortized over the applicable performance period.

(v) Going Concern: The Company performs on a regular basis cash flow projections to evaluate whether it will be in a position to cover its liquidity needs for the next 12-month period and in compliance with the financial and security collateral cover ratio covenants under its existing debt agreements. In developing estimates of future cash flows, the Company makes assumptions about the vessels' future performance, with significant assumptions relating to time charter equivalent rates by vessel type, vessels' operating expenses, vessels' capital expenditures, fleet utilization, the Company's management fees and general and administrative expenses, and cash flow requirements for debt servicing. The assumptions used to develop estimates of future cash flows are based on historical trends as well as future expectations.

As of December 31, 2018 the Company had a working capital deficit of \$9,238, defined as current assets minus current liabilities. As of the filing date of the consolidated financial statements, the Company expects that it will be in a position to cover its liquidity needs for the next 12-month period through cash generated from operations and by managing its working capital requirements. In addition, the Company may consider the raising of capital including, debt, equity securities, joint ventures and / or sale of assets. Furthermore, the Company expects to be in compliance with the financial covenants under its existing debt agreements as discussed in Note 7 for the following 12-month period following the filing date if the consolidated financial statements.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

# 2. Significant Accounting Policies – Continued:

### (w) New Accounting Pronouncements:

**Financial Instruments:** In June 2016, the FASB issued ASU No. 2016-13– Financial Instruments – Credit Losses (ASC 326): Measurement of Credit Losses on Financial Instruments. ASU 2016-13 amends guidance on reporting credit losses for assets held at amortized cost basis and available for sale debt securities. For public entities, the amendments of this update are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early application is permitted. The Company is in the process of assessing the impact of the provisions of this guidance on the Company's consolidated financial position and performance.

Fair Value Measurement: In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (ASC 820) - Disclosure Framework- Changes to the Disclosure Requirements for Fair Value Measurement that eliminates certain disclosure requirements for fair value measurements for all entities, requires public entities to disclose certain new information and modifies some disclosure requirements. The guidance on fair value disclosures eliminates the following requirements for all entities: (i) the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; (ii) the entity's policy for the timing of transfers between levels of the fair value hierarchy; and (iii) the entity's valuation processes for Level 3 fair value measurements. The following disclosure requirements were added to ASC 820 for public companies: (i) the changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements of instruments held at the end of the reporting period and (ii) for recurring and nonrecurring Level 3 fair value measurements, the range and weighted average used to develop significant unobservable inputs and how the weighted average was calculated, with certain exceptions. For certain unobservable inputs, an entity may disclose other quantitative information (such as the median or arithmetic average) in lieu of the weighted average if the entity determines that other quantitative information would be a more reasonable and rational method to reflect the distribution of unobservable inputs used to develop Level 3 fair value measurements.

The guidance makes the following modifications for public entities: (i) entities are required to provide information about the measurement uncertainty of Level 3 fair value measurements as of the reporting date rather than a point in the future (the FASB also deleted the word "sensitivity," which it said had caused confusion about whether the

disclosure is intended to convey changes in unobservable inputs at a point in the future) and (ii) entities that use the practical expedient to measure the fair value of certain investments at their net asset values are required to disclose (1) the timing of liquidation of an investee's assets and (2) the date when redemption restrictions will lapse, but only if the investee has communicated this information to the entity or announced it publicly. The amendments in this Update are effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019, although early adoption is permitted. The Company is in the process of assessing the impact of the provisions of this guidance on the Company's consolidated financial position and performance.

#### 3. Transactions with Related Parties:

The Company uses the services of Maritime, a ship management company with its principal office in Greece and an office in the U.S.A. Maritime is engaged under separate management agreements directly by the Company's respective subsidiaries to provide a wide range of shipping services, including but not limited to, chartering, sale and purchase, insurance, operations and dry-docking and construction supervision, all provided at a fixed daily fee per vessel. For the ship management services, Maritime charges a fee payable by each subsidiary of \$0.325 per day per vessel while the vessel is in operation including any pool arrangements (or \$0.160 per day for as long as the chartering services for the *Northsea Alpha* and the *Northsea Beta* were subcontracted to NST) and \$0.450 per day per vessel while the vessel is under construction, as well as an additional daily fee (which is dependent on the seniority of the personnel) to cover the cost of engineers employed to conduct the supervision of the newbuilding (collectively the "Ship-management Fees"). As discussed in Note 1, in June and November 2016, Maritime assumed full commercial management of the *Northsea Beta* and the *Northsea Alpha*, respectively. In addition, Maritime charges the Company a commission rate of 1.25% on all charter hire agreements arranged by Maritime.

The management agreements for the vessels have an initial term of five years. For the *Northsea Alpha*, *Northsea Beta* and *Pyxis Delta* the base term expired on December 31, 2015, for *Pyxis Theta* it expired on December 31, 2017 and for the *Pyxis Epsilon* and the *Pyxis Malou* it expired on December 31, 2018. Following their initial expiration dates, the management agreements will automatically be renewed for consecutive five year periods, or until terminated by either party on three months' notice.

### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

#### 3. Transactions with Related Parties - Continued:

Under a Head Management Agreement (the "Head Management Agreement") with Maritime that commenced on March 23, 2015 and will continue until March 23, 2020 (unless terminated by either party on 90 days' notice), Maritime provides administrative services to the Company, which include, among other, the provision of the services of the Company's Chief Executive Officer, Chief Financial Officer, Senior Vice President of Corporate Development, General Counsel and Corporate Secretary, Chief Operating Officer, one or more internal auditor(s) and a secretary, as well as the use of office space in Maritime's premises. Following the initial expiration date, the Head Management Agreement will automatically be renewed for a five year period. Under the Head Management Agreement, the Company pays Maritime a fixed fee of \$1,600 annually (the "Administration Fees"). In the event of a change of control of the Company during the management period or within 12 months after the early termination of the Head Management Agreement, then the Company will pay to Maritime an amount equal to 2.5 times the then annual Administration Fees.

The Ship-management Fees and the Administration Fees are adjusted annually according to the official inflation rate in Greece or such other country where Maritime was headquartered during the preceding year. On August 9, 2016, the Company amended the Head Management Agreement with Maritime to provide that in the event that the official inflation rate for any calendar year is deflationary, no adjustment shall be made to the Ship-management Fees and the Administration Fees, which will remain, for the particular calendar year, as per the previous calendar year. Effective January 1, 2018 and 2019, the Ship-management Fees and the Administration Fees were increased by 1.12% and 0.62%, respectively in line with the average inflation rate in Greece in 2017 and 2018, respectively.

The following amounts were charged by Maritime pursuant to the head management and ship-management agreements with the Company, and are included in the accompanying consolidated statements of comprehensive loss:

	Year Ended December		
	31,		
	2016	2017	2018
Included in Voyage related costs and commissions			
Charter hire commissions	\$316	\$368	\$354

Included in Management fees, related parties Ship-management Fees	631	712	720
Included in General and administrative expenses Administration Fees	1,600	1,600	1,618
Total	\$2,547	\$2,680	\$2,692

On October 28, 2015, the Company issued a promissory note in the amount of \$2.5 million in favor of Maritime Investors in connection with its election to receive a portion of the merger true-up shares in the form of a promissory note. The promissory note also includes amounts due to Maritime Investors for the payment of \$0.6 million by Maritime Investors to LookSmart, representing the cash consideration of the merger, and the amounts that allowed the Company to pay miscellaneous transactional costs. The promissory note had a maturity of January 15, 2017 and an interest rate of 2.75% per annum. On August 9, 2016, the Company agreed with Maritime Investors to extend the maturity of the promissory note for one year, from January 15, 2017 to January 15, 2018, at the same terms and at no additional cost to us. In addition, on March 7, 2017, the Company agreed with Maritime Investors to further extend the maturity of the promissory note for one additional year, from January 15, 2018 to January 15, 2019, at the same terms and at no additional costs to the Company. On December 29, 2017, the Company entered into a third amendment to the promissory note ("Amended & Restated Promissory Note"), pursuant to which (i) the outstanding principal balance increased from \$2.5 million to \$5.0 million, (ii) the maturity date was extended to June 15, 2019, and (iii) the fixed interest rate was increased to 4.00% per annum, payable only in cash. In exchange for entering into the third amendment, the Company reduced the outstanding balance due to Maritime by \$2.5 million. On June 29, 2018, the Company entered into an amendment to the Amended & Restated Promissory Note pursuant to which (i) the maturity date was extended to March 31, 2020, and (ii) the interest rate was increased to 4.5% per annum until repayment in full. Total interest expense on promissory note for the years ended December 31, 2016, 2017 and 2018, amounted to \$69, \$70 and \$213, respectively, and is included in Interest and finance costs, net (Note 12) in the accompanying consolidated statements of comprehensive loss.

### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

#### 3. Transactions with Related Parties - Continued:

Under the terms of the credit facility agreement of one of the Company's subsidiaries, Eighthone Corp. with EntrustPermal, no repayment of principal under the Amended & Restated Promissory Note may be made while any Paid In Kind ("PIK") interest or Principal Deficiency Amount (as defined in the credit facility agreement) is outstanding under the credit facility.

As of December 31, 2017 and 2018, the balances due to Maritime were \$2,125 and \$3,402, respectively and are reflected in Due to related parties in the accompanying consolidated balance sheets. The balance with Maritime is interest free and with no specific repayment terms.

#### 4. Inventories:

The amounts in the accompanying consolidated balance sheets are analyzed as follows:

	December	December
	31, 2017	31, 2018
Lubricants	\$ 404	\$ 428
Bunkers	612	379
Total	\$ 1,016	\$ 807

### 5. Vessels, net:

The amounts in the accompanying consolidated balance sheets are analyzed as follows:

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	Vessel	Accumulated	Net Book
	Cost	Depreciation	Value
Balance January 1, 2016	\$147,789	\$ (17,288)	\$130,501
Depreciation		(5,768)	(5,768)
Vessel impairment charge	(9,729)	6,337	(3,392)
Balance December 31, 2016	138,060	(16,719 )	121,341
Depreciation		(5,567)	(5,567)
Balance December 31, 2017	138,060	(22,286)	115,774
Depreciation	_	(5,500)	(5,500)
Vessel impairment charge	(3,750)	1,468	(2,282)
Balance December 31, 2018	\$134,310	\$ (26,318 )	\$107,992

As of December 31, 2016, the Company reviewed the carrying amount in connection with the estimated recoverable amount for each of its vessels. This review indicated that such carrying amount was not fully recoverable for the Company's vessels *Northsea Alpha* and *Northsea Beta*. Consequently the carrying value of these vessels was written down resulting in a total impairment charge of \$3,998, of which \$3,392 was charged against Vessels, net, based on level 2 inputs of the fair value hierarchy, as discussed in Notes 2 and 10 and \$606 was charged against Deferred charges, net, as discussed in Note 6.

As of December 31, 2018, the Company reviewed the carrying amount in connection with the estimated recoverable amount for each of its vessels. This review indicated that such carrying amount was not fully recoverable for the Company's vessels *Northsea Alpha* and *Northsea Beta*. Consequently the carrying value of these vessels was written down resulting in a total impairment charge of \$2,282 that was charged against Vessels, net, based on level 2 inputs of the fair value hierarchy, as discussed in Notes 2 and 10.

All of the Company's vessels have been pledged as collateral to secure the bank loans discussed in Note 7.

### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

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### 6. Deferred charges, net:

The movement in the deferred charges, net in the accompanying consolidated balance sheets are as follows:

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The amortization of the dry docking costs is separately reflected in the accompanying consolidated statements of comprehensive loss.

The impairment charge of \$606 relates to the impairments of the *Northsea Alpha* and the *Northsea Beta* as of December 31, 2016, discussed in Notes 2, 5 and 10.

# 7. Long-term Debt:

The amounts shown in the accompanying consolidated balance sheets at December 31, 2017 and 2018, are analyzed as follows:

Vessel (Borrower)	December 31, 2017	<b>December</b> 31, 2018
(a) Northsea Alpha (Secondone)	\$ 4,348	\$ 4,055
(a) Northsea Beta (Thirdone)	4,348	4,055
(b) Pyxis Malou (Fourthone)	18,210	11,190
(c) Pyxis Delta (Sixthone)	7,087	5,400
(c) Pyxis Theta (Seventhone)	15,975	14,722
(d) Pyxis Epsilon (Eighthone)	16,900	24,000
Total	\$ 66,868	\$ 63,422
Current portion	\$ 7,440	\$ 4,503
Less: Current portion of deferred financing costs	(136)	(170)
Current portion of long-term debt, net of deferred financing costs, current	\$ 7,304	\$ 4,333
Long-term portion	\$ 59,428	\$ 58,919
Less: Non-current portion of deferred financing costs	(302)	(790)
Long-term debt, net of current portion and deferred financing costs, non-current	\$ 59,126	\$ 58,129

On September 26, 2007, Secondone and Thirdone jointly entered into a loan agreement with a financial institution (a) for an amount of up to \$24,560, in order to partly finance the acquisition cost of the vessels *Northsea Alpha* and *Northsea Beta*.

<sup>(</sup>b) Based on a loan agreement concluded on December 12, 2008, Fourthone borrowed \$41,600 in February 2009 in order to partly finance the acquisition cost of the *Pyxis Malou*.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

## 7. Long-term Debt - Continued:

On February 28, 2018, the Company refinanced the then existing indebtedness of \$26,906 under the Secondone, Thirdone and Fourthone loan agreements with a new 5-year secured loan of \$20,500 and cash of \$2,100. The remaining balance of \$4,306 was written-off by the previous lender at closing, which was recorded as gain from debt extinguishment in the 2018 consolidated statement of comprehensive loss.

Each of Secondone's and Thirdone's outstanding loan balance at December 31, 2018, amounting to \$4,055, is repayable in 17 remaining quarterly installments amounting to \$1,665 in the aggregate, the first falling due in February 2019, and the last installment accompanied by a balloon payment of \$2,390 falling due in February 2023. The first installment, amounting to \$65 each, is followed by 16 amounting to \$100 each.

As of December 31, 2018, the outstanding balance of Fourthone loan of \$11,190 is repayable in 17 remaining quarterly installments amounting to \$5,790, the first falling due in February 2019, and the last installment accompanied by a balloon payment of \$5,400 falling due in February 2023. The first installment, amounting to \$270, is followed by four amounting to \$300 each, four amounting to \$360 each and four amounting to \$390 each.

The new loan bears interest at LIBOR plus a margin of 4.65% per annum.

As a condition subsequent to the execution of this loan agreement, the borrowers, Secondone, Thirdone and Fourthone, were required to re-domicile to the jurisdiction of the Republic of Malta. In March and April 2018, these vessel-owning companies completed their re-domiciliation and were renamed to SECONDONE CORPORATION LTD., THIRDONE CORPORATION LTD. and FOURTHONE CORPORATION LTD., respectively.

Standard loan covenants include, among others, a minimum liquidity and a minimum required Security Cover Ratio ("MSC").

#### **Covenants:**

The Company undertakes to maintain minimum deposits with the bank of \$1,450 at all times, plus Maintenance Account of \$145 per quarter (\$85 for Fourthone and \$30 for each of Secondone and Thirdone) until next special survey.

MSC is to be at least 140% of the respective outstanding loan balance until February 2020, at least 150% until February 2022 and at least 155% thereafter.

On October 12, 2012, Sixthone and Seventhone concluded as joint and several borrowers a loan agreement with a financial institution in order to partly finance the acquisition and construction cost of the *Pyxis Delta* and the *Pyxis Theta*, respectively. In February 2013, Sixthone drew down an amount of \$13,500, while in September 2013, Seventhone drew down an amount of \$21,300 ("Tranche A" and "Tranche B", respectively). On September 29, 2016, the Company agreed with the lender of Sixthone to extend the maturity of Tranche A from May 2017 to September 2018, under the same amortization schedule and applicable margin. In addition, on June 6, 2017, the lender of Sixthone and Seventhone agreed to further extend the maturity of its respective loans from September 2018 to September 2022 under the same applicable margin, but with an extended amortization schedule.

The outstanding balance of the loan under Tranche A at December 31, 2018, of \$5,400, is repayable in 15 quarterly installments of \$338 each, the first falling due in March 2019, and the last installment accompanied by a balloon payment of \$330 falling due in September 2022. In addition, the outstanding balance of the loan under Tranche B at December 31, 2018, of \$14,722, is repayable in 15 quarterly installments of \$313 each, the first falling due in March 2019, and the last installment accompanied by a balloon payment of \$10,027 falling due in September 2022.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

#### 7. Long-term Debt - Continued:

The main terms and conditions of the loan agreement dated October 12, 2012, as subsequently amended, are as follows:

The loan bears interest at LIBOR, plus a margin of 3.35% per annum.

#### **Covenants:**

The Company undertakes to maintain minimum deposits with the bank of \$1,000 at all times.

The ratio of the Company's total liabilities to market value adjusted total assets is not to exceed 65%. This requirement is only applicable in order to assess whether the two Vessel-owning companies are entitled to distribute dividends to Pyxis. As of December 31, 2017, the requirement was met as such ratio was marginally lower than 65%. As of December 31, 2018, the relevant ratio was 68%, or 3% higher than the required threshold.

MSC is to be at least 130% of the respective outstanding loan balance.

Based on a loan agreement concluded on January 12, 2015, Eighthone borrowed \$21,000 on the same date in order (d) to partly finance the construction cost of the *Pyxis Epsilon*. The outstanding balance of the loan at December 31, 2017, was \$16,900.

On September 27, 2018, Eighthone entered into a new \$24,000 loan agreement, for the purpose of refinancing the outstanding indebtedness of \$16,000 under the previous loan facility and for general corporate purposes. The new facility matures in September 2023 and is secured by a first priority mortgage over the vessel, general assignment covering earnings, insurances and requisition compensation, an account pledge agreement and a share pledge agreement concerning the respective vessel-owning subsidiary and technical and commercial managers' undertakings.

The new loan facility bears an interest rate of 11% of which 1.0% can be paid as PIK interest per annum for first two years, and 11.0% per annum thereafter and incurs fees due upfront and upon early prepayment or final repayment of outstanding principal.

The principal obligation amortizes in 18 quarterly installments starting in March 29, 2019, equal to the lower of \$400 and excess cash computed through a cash sweep mechanism, plus a balloon payment due at maturity. As of December 31, 2018, the Company has assessed that no excess cash will be available to proceed with any debt repayment within the next twelve months, therefore no principal amortization will occur through December 31, 2019.

The facility also imposes certain customary covenants and restrictions with respect to, among other things, the borrower's ability to distribute dividends, incur additional indebtedness, create liens, change its share capital, engage in mergers, or sell the vessel and a minimum collateral value to outstanding loan principal.

#### **Covenants:**

The Company undertakes to maintain minimum deposits with the bank of \$750 at all times, plus an additional Dry Docking and Special Survey Reserve of \$0.25 per day accumulated quarterly.

MSC is to be at least 115% of the respective outstanding loan balance until September, 2020 and at least 125% thereafter.

Under the facility, a deferred fee may be payable on the occurrence of certain events including, among others, the sale of the vessel or on repayment or maturity of the loan. If payable, the amount due is calculated as the lesser of (a) 15% of the amount of the loan borrowed under the facility agreement and (b) 15% of the difference between (i) the charter-free fair market value of the vessel plus any dry dock reserve account balance and (ii) any outstanding loan amount at the time of the repayment or maturity of the facility. In the event that the deferred fee and the prepayment fee become simultaneously payable, only the higher of the prepayment fee or the deferred fee will be payable. Management has assessed this deferred fee as a contingent liability under ASC 450 and concluded that such loss contingency shall not be accrued by a charge in the consolidated statements of comprehensive loss, since information available does not indicate that is probable that the liability has been incurred as of the balance sheet date at December 31, 2018 and cannot be estimated.

### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

## 7. Long-term Debt - Continued:

Each loan is secured by a first priority mortgage over the respective vessel and a first priority assignment of the vessel's insurances and earnings. Each loan agreement contains customary ship finance covenants including restrictions as to changes in management and ownership of the vessel and in dividend distributions when certain financial ratios are not met.

As of December 31, 2018, the Company was in compliance with all of its financial and MSC covenants with respect to its loan agreements, other than the ratio of total liabilities over the market value of the Company's adjusted total assets with one of its lenders, which only restricts the ability of two vessel-owning companies to distribute dividends to Pyxis as discussed above in 7(c). In addition, as of December 31, 2018, there was no amount available to be drawn down by the Company under its existing loan agreements.

Assuming no principal repayments under the new loan of Eighthone discussed above, the annual principal payments required to be made after December 31, 2018, are as follows:

To December 31,	Amount
2019	\$4,503
2020	4,693
2021	4,813
2022	14,643
2023	34,770
2024 and thereafter	-
Total	\$63,422

Total interest expense on long-term debt for the years ended December 31, 2016, 2017 and 2018, amounted to \$2,577, \$2,674 and \$3,835, respectively, and is included in Interest and finance costs, net (Note 12) in the accompanying consolidated statements of comprehensive loss. The Company's weighted average interest rate (including the margin) for the years ended December 31, 2016, 2017 and 2018, was 3.27%, 3.74% and 6.00% per annum, including the

promissory note discussed in Note 3, respectively.

### 8. Equity Capital Structure and Equity Incentive Plan:

The Company's authorized common and preferred stock consists of 450,000,000 common shares and 50,000,000 preferred shares with a par value of USD 0.001 per share.

The amounts shown in the accompanying consolidated balance sheets as Additional paid-in capital represent contributions made by the stockholders at various dates to finance vessel acquisitions in excess of the amounts of bank loans obtained and advances for working capital purposes, net of subsequent distributions primarily from re-imbursement of certain payments to shipyards in respect to the construction of new-built vessels. There was no paid-in capital re-imbursement for the years ended December 31, 2017 and 2018.

On October 28, 2015, the Company's board of directors approved an equity incentive plan (the "EIP"), providing for the granting of share-based awards to directors, officers and employees of the Company and its affiliates and to its consultants and service providers. The maximum aggregate number of shares of common stock of the Company that may be delivered pursuant to awards granted under the EIP, shall be equal to 15% of the then issued and outstanding number of shares of common stock. On the same date the Company's board of directors approved the issuance of 33,222 restricted shares of the Company's common stock to certain of its officers that were issued later in 2016. On November 15, 2017, 200,000 restricted shares of the Company's common stock were granted and issued to a senior officer of the Company, which were vested immediately upon issuance. The fair value of such restricted shares based on the average of the high-low trading price of the shares on November 15, 2017, was \$355, which was recorded as a non-cash stock compensation and included in the consolidated statement of comprehensive loss under General and administrative expenses for the year ended December 31, 2017. During the year ended December 31, 2018, no additional shares were granted under the EIP and as of December 31, 2018, there was no unrecognized compensation cost.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

## 8. Equity Capital Structure and Equity Incentive Plan - Continued:

On December 6, 2017, the Company entered into a securities purchase agreement (the "Purchase Agreement") with certain accredited investors (the "Investors"), pursuant to which the Company, in a private placement, agreed to issue and sell to the Investors an aggregate of 2,400,000 shares of its common stock at a price per share of \$2.00 (the "Private Placement"). As a condition of the Purchase Agreement, the Company, Maritime Investors and each of the Company's directors and executive officers entered into lock-up agreements pursuant to which they could not, among other things, offer or sell shares of the Company's common stock until the earlier of i) 30 days after effective date (as defined therein) and ii) the disposition by the Investors of all of the shares of common stock they received in the Private Placement. In connection with the Private Placement, the Company also entered into a registration rights agreement with the Investors, pursuant to which the Company was obligated to prepare and file with the Securities and Exchange Commission ("SEC") a registration statement to register for resale the registrable securities (as defined therein) on or prior to December 21, 2017. The Private Placement closed on December 8, 2017, resulting in gross proceeds of \$4,800, before deducting offering expenses of approximately \$509, which were used for general corporate purposes, including the repayment of outstanding indebtedness. On December 19, 2017, the Company filed with the SEC a registration statement on Form F-3 to register for resale the shares of common stock issued under the Purchase Agreement, which was declared effective on January 3, 2018.

On February 2, 2018, the Company filed with the SEC a registration statement on Form F-3, under which it may sell from time to time common stock, preferred stock, debt securities, warrants, purchase contracts and units, each as described therein, in any combination, in one or more offerings up to an aggregate dollar amount of \$100,000. In addition, the selling stockholders referred to in the registration statement may sell in one of more offerings up to 5,233,222 shares of the Company's common stock from time to time as described therein. The registration statement was declared effective by the SEC on February 12, 2018.

As of December 31, 2017 and following the issuance of the 200,000 shares of common stock under the EIP, as well as the issuance of the 2,400,000 shares of common stock pursuant to the Private Placement, both discussed above, the Company's outstanding common shares increased from 18,277,893 to 20,877,893. As of December 31, 2018 following the issuance and sale of 182,297 shares of common stock under the At The Market ("ATM") Program, the Company's outstanding common shares increased from 20,877,893 to 21,060,190.

### 9. Loss per Common Share:

For the years ended December 31, 2016 2017 2018 Net loss available to common stockholders \$(5,813 ) \$(5,243 ) \$(8,214 ) Weighted average number of common shares, basic and diluted 18,277,893 18,461,455 20,894,202 Loss per common share, basic and diluted \$(0.32 ) \$(0.28) ) \$(0.39) )

## 10. Risk Management and Fair Value Measurements:

The principal financial assets of the Company consist of cash and cash equivalents and trade accounts receivable due from charterers. The principal financial liabilities of the Company consist of long-term bank loans, trade accounts payable, amounts due to related parties and a promissory note.

*Interest rate risk*: The Company's interest rates are calculated at LIBOR plus a margin, as discussed in Note 7 and hence the Company is exposed to movements in LIBOR. In order to hedge its variable interest rate exposure, on January 19, 2018, the Company, via one of its vessel-ownings subsidiaries, entered into an interest rate cap agreement with one of its lenders for a notional amount of \$10,000 and a cap rate of 3.5%. The interest rate cap will terminate on July 18, 2022.

*Credit risk*: Credit risk is minimized since trade accounts receivable from charterers are presented net of the relevant provision for uncollectible amounts, whenever required. On the balance sheet date there were no significant concentrations on credit risk. The maximum exposure to credit risk is represented by the carrying amount of each financial asset on the balance sheet.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

## 10. Risk Management and Fair Value Measurements - Continued:

*Currency risk*: The Company's transactions are denominated primarily in U.S. dollars; therefore overall currency exchange risk is limited. Balances in foreign currency other than U.S. dollars are not considered significant.

*Fair value:* The Management has determined that the fair values of the assets and liabilities as of December 31, 2018 are as follows:

	Carrying	Fair
	Value	Value
Cash and cash equivalents	\$4,204	\$4,204
Trade accounts receivable, net	\$ 2,585	\$2,585
Trade accounts payable	\$4,746	\$4,746
Long-term debt with variable interest rates, net	\$ 39,422	\$39,422
Long-term loans and promissory note with non-variable interest rates, net	\$ 29,000	\$29,000

Assets measured at fair value on a recurring basis: Interest rate cap

The Company's interest rate cap does not qualify for hedge accounting. The Company adjusts its interest rate cap contract to fair market value at the end of every period and records the resulting gain or loss during the period in the consolidated statements of comprehensive loss. Information on the classification, the derivative fair value and the loss from financial derivative instrument included in the consolidated financial statements is shown below:

Consolidated Balance Sheets – Location	Decei	mber	Decei	mber
Consolidated Balance Sheets – Location	31, 20	<b>)17</b>	31, 20	)18
Financial derivative instrument – Other non-current assets	\$	_	\$	28

Consolidated Statements of Comprehensive Loss - Location	December	Decembe	er
Consolidated Statements of Complehensive Loss - Location	31, 2017	31, 2018	
Financial derivative instrument – Initial cost	\$ -	\$ (47	)
Financial derivative instrument – Fair value as at period end	-	28	
Loss from financial derivative instrument	\$ -	\$ (19	)

Assets measured at fair value on a recurring basis: Interest rate cap

The fair value of the Company's interest rate cap agreement is determined based on market-based LIBOR rates. LIBOR rates are observable at commonly quoted intervals for the full term of the cap and therefore, are considered Level 2 items in accordance with the fair value hierarchy.

Assets measured at fair value on a non-recurring basis: Long lived assets held and used

As of December 31, 2016, the Company reviewed the carrying amount in connection with the estimated recoverable amount for each of its vessels. This review indicated that such carrying amount was not fully recoverable for the Company's vessels *Northsea Alpha* and *Northsea Beta*. Consequently, the carrying value of these vessels was written-down as presented in the table below.

	Significant Other	Impairr Loss	nent	Impa Loss	irment	Ves	sel
Vessel	Observable Inputs (Level 2)	ervable charged		charged against Deferred charges, net		Impairment Charge	
Northsea Alpha	\$ 8,000	\$ 1,	770	\$	292	\$	2,062
Northsea Beta	8,000	1,622		314		1,9	936
TOTAL	\$16,000	\$3,392		\$ 606		\$3,9	998

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

### 10. Risk Management and Fair Value Measurements – Continued:

The fair value is based on level 2 inputs of the fair value hierarchy and reflects the Company's best estimate of the value of each vessel on a time charter free basis, and is supported by a vessel valuation of an independent shipbroker as of December 31, 2016, which is mainly based on recent sales and purchase transactions of similar vessels.

The Company recognized the total Vessel impairment charge of \$3,998, which is included in the accompanying consolidated statements of comprehensive loss for the year ended December 31, 2016.

No impairment loss was recognized for the year ended December 31, 2017.

As of December 31, 2018, the Company reviewed the carrying amount in connection with the estimated recoverable amount for each of its vessels. This review indicated that such carrying amount was not fully recoverable for the Company's vessels *Northsea Alpha* and *Northsea Beta*. Consequently the carrying value of these vessels was written-down to their respective fair values as presented in the table below.

		Vessel
	Significant	Impairment
	Other	Charge
Vessel	Observable	(charged
	Inputs	against
	(Level 2)	Vessels,
		net)
Northsea Alpha	\$ 6,125	\$ 1,142
Northsea Beta	6,125	1,140
TOTAL	\$ 12,250	\$2,282

The fair value is based on level 2 inputs of the fair value hierarchy and reflects the Company's best estimate of the value of each vessel on a time charter free basis, and is supported by a vessel valuation of an independent shipbroker as of March 31, 2018 and December 31, 2018, respectively, which is mainly based on recent sales and purchase transactions of similar vessels.

The Company recognized the total Vessel impairment charge of \$2,282 which is included in the accompanying consolidated statements of comprehensive loss for the year ended December 31, 2018.

The Company performs an impairment exercise whenever there are indicators of impairment. As of December 31, 2017 and 2018, the Company did not have any other assets or liabilities measured at fair value on a non-recurring basis.

### 11. Commitments and Contingencies:

#### Minimum contractual charter revenues:

The Company employs certain of its vessels under lease agreements. Time charters typically may provide for variable lease payments, charterers' options to extend the lease terms at higher rates and termination clauses. The Company's contracted time charters as of December 31, 2018, range from one to three months, with varying extension periods at the charterers' option and do not provide for variable lease payments. Our time charters contain customary termination clauses which protect either the Company or the charterers from material adverse situations.

Future minimum contractual charter revenues, gross of 1.25% address commission and 1.25% brokerage commissions to Maritime and of any other brokerage commissions to third parties, based on the vessels' committed, non-cancelable, long-term time charter contracts as of December 31, 2018, are as follows:

Year ending December 31, Amount 2019 \$ 2,813 \$ 2.813

*Make-Whole and Put Right:* The Make-Whole Right is defined in Section 4.12(a) of the Agreement and Plan of Merger, dated as of April 23, 2015 and as thereafter amended between the Company, Merger Sub, LS and LookSmart Group, Inc. (the "Merger Agreement" and the transactions contemplated therein, the "Merger"). Pursuant to the Make-Whole Right, if Pyxis conducts an offering of its common stock or a sale of Pyxis and/or substantially all of its

assets (either, a "Future Pyxis Offering") at a price per share (the "New Offering Price") that is less than \$4.30 following the Merger, then a LS stockholder of record on April 29, 2015, who on the date of the consummation of a Future Pyxis Offering continues to hold Pyxis common shares that the LS stockholder received in connection with the Merger (the "MWR Holder"), is entitled to receive in Pyxis common shares the difference between the New Offering Price and \$4.30 (i.e., the Make-Whole Right) per Pyxis common share still held by such MWR Holder. Under Section 4.12(d) of the Merger Agreement, the Make-Whole Right applies only to the first Future Pyxis Offering following the closing of the Merger, provided that such Future Pyxis Offering results in gross proceeds to Pyxis of at least \$5 million (excluding the proceeds from any shares purchased by certain affiliates). In December 2017, Pyxis completed a common stock offering (the "Offering"), which resulted in gross proceeds of \$4.8 million. The Offering qualified as Future Pyxis Offering and thus, the Make-Whole Right is no longer available. The Put Right is defined in Section 4.12(c) of the Merger Agreement. Pursuant to the Put Right, if a Future Pyxis Offering has not occurred within three (3) years of the closing date of the Merger (i.e., by October 28, 2018), each MWR Holder may, at its option following written notice to Pyxis, require that Pyxis purchase a pro rata amount of Pyxis common stock from such MWR Holder (based on the total amount of shares of Pyxis common stock held by all MWR Holders) that will result in, among other things, an amount of gross proceeds not to exceed an aggregate of \$2 million (i.e., the Put Right). As discussed above, in December 2017 Pyxis completed the Offering, which qualified as a Future Pyxis Offering and accordingly, the Put Right is no longer available to MWR Holders.

#### **Notes to the Consolidated Financial Statements**

December 31, 2017 and 2018

(Expressed in thousands of U.S. dollars, except for share and per share data)

## 11. Commitments and Contingencies - Continued:

*Other*: Various claims, suits and complaints, including those involving government regulations and environmental liability, arise in the ordinary course of the shipping business. In addition, losses may arise from disputes with charterers, agents, insurance and other claims with suppliers relating to the operations of the Company's vessels. Currently, management is not aware of any such claims not covered by insurance or contingent liabilities, which should be disclosed, or for which a provision has not been established in the accompanying consolidated financial statements.

The Company accrues for the cost of environmental and other liabilities when management becomes aware that a liability is probable and is able to reasonably estimate the probable exposure. Currently, management is not aware of any other claims or contingent liabilities, which should be disclosed or for which a provision should be established in the accompanying consolidated financial statements. The Company is covered for liabilities associated with the individual vessels' actions to the maximum limits as provided by Protection and Indemnity (P&I) Clubs, members of the International Group of P&I Clubs.

### 12. Interest and Finance Costs, net:

The amounts in the accompanying consolidated statements of comprehensive loss are analyzed as follows:

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	For the years ended		
	December 31,		
	2016	2017	2018
Interest on long-term debt (Note 7)	\$2,577	\$2,674	\$3,835
Interest on promissory note (Note 3)	69	70	213
Long-term debt prepayment fees	_	_	56
Amortization and write-off of financing costs	164	153	386
Total	\$2,810	\$2,897	\$4,490

# 13. Subsequent Events:

The Company evaluated subsequent events up to March 29, 2019 and assessed that there are no subsequent events that should be disclosed.

# **Balance Sheets**

As at December 31, 2017 and 2018

(Expressed in thousands of U.S. Dollars, except for share and per share data)

AGGETTO	2017	2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$—	\$17
Due from related parties	572	9,578
Prepayments and other assets	42	29
Total current assets	614	9,624
NON-CURRENT ASSETS:		
Restricted cash	2,695	
Investment in subsidiaries*	50,082	35,598
Total non-current assets	52,777	35,598
Total assets	\$53,391	\$45,222
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	\$72	\$162
Accrued and other liabilities	163	117
Total current liabilities	235	279
NON-CURRENT LIABILITIES:		
Promissory note	5,000	5,000
Total non-current liabilities	5,000	5,000
COMMITMENTS AND CONTINGENCIES	_	_
STOCKHOLDERS' EQUITY:		
Preferred stock (\$0.001 par value; 50,000,000 shares authorized; none issued)	_	
Common stock (\$0.001 par value; 450,000,000 shares authorized; 20,877,893 and 21,060,190	21	21
shares issued and outstanding as of December 31, 2017 and 2018, respectively)	Δ1	41
Additional paid-in capital	74,766	74,767
Accumulated deficit	(26,631)	(34,845)
Total stockholders' equity	48,156	39,943
Total liabilities and stockholders' equity	\$53,391	\$45,222

\* Eliminated on consolidation

# **Statements of Comprehensive Loss**

For the years ended December 31, 2016, 2017 and 2018

(Expressed in thousands of U.S. Dollars, except for share and per share data)

	2016	2017	2018	
Expenses:				
General and administrative expenses	\$(2,344	) \$(3,121	) \$(2,314	)
Operating loss	(2,344	) (3,121	) (2,314	)
Other expenses:				
Interest and finance costs, net	(72	) (73	) (215	)
Total other expenses, net	(72	) (73	) (215	)
Equity in loss of subsidiaries*	(3,397	) (2,049	) (5,685	)
Net loss	\$(5,813	) \$(5,243	) \$(8,214	)
Loss per common share, basic and diluted	\$(0.32	) \$(0.28	) \$(0.39	)
Weighted average number of shares, basic and diluted	18,277,89	93 18,461,45	55 20,894,2	202

<sup>\*</sup> Eliminated on consolidation

# Statements of Stockholders' Equity

For the years ended December 31, 2016, 2017 and 2018

(Expressed in thousands of U.S. Dollars, except for share and per share data)

	Common Sto	ock	Additional Paid-in	Accumulated	Total Stockholders'
	# of Shares	Par value	Capital	Deficit	Equity
BALANCE, January 1, 2016	18,244,671	\$ 18	\$ 70,123	\$ (15,575	\$ 54,566
Issuance of common stock – EIP	33,222		_	_	_
Net loss			_	(5,813	(5,813)
BALANCE, December 31, 2016	18,277,893	\$ 18	\$ 70,123	\$ (21,388	\$ 48,753
Issuance of common stock	2,400,000	3	4,288	_	4,291
Issuance of common stock – EIP	200,000	_			-
Stock compensation	_	_	355	_	355
Net loss	_	_		(5,243	(5,243)
BALANCE, December 31, 2017	20,877,893	\$ 21	\$ 74,766	\$ (26,631	48,156
Net proceeds from the issuance of common stock	182,297	_	1	_	1
Net loss		_		(8,214	(8,214)
BALANCE, December 31, 2018	21,060,190	\$ 21	\$ 74,767	\$ (34,845	\$ 39,943

# **Statements of Cash Flows**

For the years ended December 31, 2016, 2017 and 2018

(Expressed in thousands of U.S. Dollars)

	2016	2017	2018
Cash flows from operating activities:			
Net loss	\$(5,813)	\$(5,243)	\$(8,214)
Adjustments to reconcile net loss to net cash from operating activities:			
Stock compensation		355	
Equity in loss of subsidiaries, net of dividends received*	5,647	2,049	5,685
Changes in assets and liabilities:			
Due from related parties	-	(572)	(206)
Prepayments and other assets	2	(77 )	
Accounts payable	(121)	(34)	182
Due to related parties	(4,087)	` /	
Accrued and other liabilities	(71)		(46)
Net cash used in operating activities	` /		\$(2,586)
Cash flows from investing activities:			
Net cash provided by investing activities	\$	\$	<b>\$</b> —
rect cash provided by investing activities	Ψ	Ψ	Ψ
Cash flows from financing activities:			
Gross proceeds from issuance of common stock	_	4,800	315
Common stock offering costs		(414)	(407)
Net cash provided by / (used in) financing activities	\$—	\$4,386	\$(92)
Net (decrease) / increase in cash and cash equivalents and restricted cash	(4,443)	2,564	(2,678)
Cash and cash equivalents and restricted cash at the beginning of the year	4,574	131	2,695
Cash and cash equivalents and restricted cash at the end of the year	\$131	\$2,695	\$17

<sup>\*</sup> Eliminated in consolidation

For years ended December 31, 2016, 2017 and 2018

(Expressed in thousands of U.S. Dollars, except for share and per share data)

In the condensed financial information of Pyxis, Pyxis' investment in subsidiaries is stated at cost plus equity in undistributed earnings / losses of subsidiaries. In May 2016, Pyxis received dividend distributions from Sixthone and Seventhone amounting to \$2,250, in the aggregate, based on the respective vessel-owning companies' financial position as of and for the year ended December 31, 2015. During the years ended December 31, 2017 and 2018, Pyxis did not receive any dividend distributions from its subsidiaries.

The lender of Sixthone and Seventhone requires the ratio of the Company's total liabilities to market value adjusted total assets not to exceed 65%. This requirement is only applicable in order to assess whether the two Vessel-owning companies are entitled to distribute dividends to Pyxis. As of December 31, 2017, the requirement was met as such ratio was marginally lower than 65%. As of December 31, 2018, the relevant ratio was 68%, or 3% higher than the required threshold. As discussed in Note 7, until the Company cures such non-compliance, neither Sixthone nor Seventhone will be permitted to make dividend distributions. Other than the above, there are no legal or regulatory restrictions on Pyxis' ability to obtain funds from its subsidiaries through dividends, loans or advances.

The condensed financial information of Pyxis, as parent company only, should be read in conjunction with the Company's consolidated financial statements.