UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 20-F

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(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, 2019

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**
Date of event requiring this shell company report
For the transition period from to

Commission file number 001-31236

TSAKOS ENERGY NAVIGATION LIMITED

(Exact name of Registrant as specified in its charter)

Not Applicable
(Translation of Registrant's name into English)
Bermuda
(Jurisdiction of incorporation or organization)
367 Syngrou Avenue
175 64 P. Faliro
Athens, Greece
011-30210-9407710
(Address of principal executive offices)

Paul Durham
367 Syngrou Avenue
175 64 P. Faliro
Athens, Greece
Telephone: 011-30210-9407710
E-mail: ten@tenn.gr
Facsimile: 011-30210-9407716
(Name, Address, Telephone Number, E-mail and Facsimile Number of Company Contact Person)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Shares, par value $1.00 per share	TNP	New York Stock Exchange
Series C Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share	TNP.PRC	New York Stock Exchange
Series D Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share	TNP.PRD	New York Stock Exchange
Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share	TNP.PRE	New York Stock Exchange
Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share	TNP.PRF	New York Stock Exchange

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

As of December 31, 2019, there were 95,078,607 of the registrant's Common Shares, 2,000,000 Series C Preferred Shares, 3,424,803 Series D Preferred Shares, 4,600,000 Series E Preferred Shares, 6,000,000 Series F Preferred Shares and 2,625,000 Series G Redeemable Convertible Preferred Shares outstanding.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☒ Non-accelerated filer ☐ Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☒ International Financial Reporting Standards as issued by the International Accounting Standards Board ☐ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

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FORWARD-LOOKING INFORMATION

All statements in this Annual Report on Form 20-F that are not statements of historical fact are "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995. The disclosure and analysis set forth in this Annual Report on Form 20-F includes assumptions, expectations, projections, intentions and beliefs about future events in a number of places, particularly in relation to our operations, cash flows, financial position, plans, strategies, business prospects, changes and trends in our business and the markets in which we operate. These statements are intended as forward-looking statements. In some cases, predictive, future-tense or forward-looking words such as "believe," "intend," "anticipate," "estimate," "project," "forecast," "plan," "potential," "may," "should" and "expect" and similar expressions are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements.

Forward-looking statements include, but are not limited to, such matters as:

- future operating or financial results and future revenues and expenses;
- future, pending or recent business and vessel acquisitions, business strategy, areas of possible expansion and expected capital spending and our ability to fund such expenditures;
- operating expenses including the availability of key employees, crew, length and number of off-hire days, dry-docking requirements and fuel and insurance costs;
- general market conditions and shipping industry trends, including charter rates, vessel values and factors affecting supply and demand of crude oil, petroleum products and LNG, including the impact of the recent outbreak of the COVID-19 virus and the ongoing efforts throughout the world to contain it;
- our financial condition and liquidity, including our ability to make required payments under our credit facilities, comply with our loan covenants and obtain additional financing in the future to fund capital expenditures, acquisitions and other corporate activities;
- the overall health and condition of the U.S. and global financial markets, including the value of the U.S. dollar relative to other currencies and the impact of the COVID-19 pandemic;
- the carrying value of our vessels and the potential for any asset impairments;
- our expectations about the time that it may take to construct and deliver new vessels or the useful lives of our vessels;
- our continued ability to enter into period time charters with our customers and secure profitable employment for our vessels in the spot market;
- the ability and willingness of our counterparties, including our charterers and shipyards, to honor their contractual obligations;
- our expectations relating to dividend payments and ability to make such payments;
- our ability to leverage to our advantage the relationships and reputation of Tsakos Columbia Shipmanagement within the shipping industry;
- our anticipated general and administrative expenses;
- environmental and regulatory conditions, including changes in laws and regulations or actions taken by regulatory authorities;
- risks inherent in vessel operation, including terrorism, piracy and discharge of pollutants;
- potential liability from future litigation;
- global and regional political conditions;
- tanker, product carrier and LNG carrier supply and demand; and
- other factors discussed in the "Risk Factors" described in Item 3 of this Annual Report on Form 20-F.

We caution that the forward-looking statements included in this Annual Report on Form 20-F represent our estimates and assumptions only as of the date of this Annual Report on Form 20-F and are not intended to give any assurance as to future results. These forward-looking statements are not statements of historical fact and represent only our management's belief as of the date hereof, and involve risks and uncertainties that could cause actual results to differ materially and inversely from expectations expressed in or indicated by the forward-looking statements. Assumptions, expectations, projections, intentions and beliefs about future events may, and often do, vary from actual results and these differences can be material. There are a variety of factors, many of which are beyond our control, which affect our operations, performance, business strategy and results and could cause actual reported results and performance to differ materially from the performance and expectations expressed in these forward-looking statements. These factors include, but are not limited to, supply and demand for crude oil carriers, product tankers and LNG carriers, charter rates and vessel values, supply and demand for crude oil and petroleum products and liquefied natural gas, accidents, collisions and spills, environmental and other government regulation, the availability of debt financing, fluctuation of currency exchange and interest rates and the other risks and uncertainties that are outlined in this Annual Report on Form 20-F. As a result, the forward-looking events discussed in this Annual Report on Form 20-F might not occur and our actual results may differ materially from those anticipated in the forward-looking statements. Accordingly, you should not unduly rely on any forward-looking statements.

We undertake no obligation to update or revise any forward-looking statements contained in this Annual Report on Form 20-F, whether as a result of new information, future events, a change in our views or expectations or otherwise. New factors emerge from time to time, and it is not possible for us to predict all of these factors. Further, we cannot assess the impact of each such factor on our business or the extent to which any factor, or combination of factors, may cause actual results to be materially different from those contained in any forward-looking statement.

PART I

Tsakos Energy Navigation Limited is a Bermuda company that is referred to in this Annual Report on Form 20-F, together with its subsidiaries, as "Tsakos Energy Navigation," "the Company," "we," "us," or "our." This report should be read in conjunction with our consolidated financial statements and the accompanying notes thereto, which are included in Item 18 to this report.

Item 1. Identity of Directors, Senior Management and Advisers

Not Applicable.

Item 2. Offer Statistics and Expected Timetable

Not Applicable.

Item 3. Key Information

Selected Consolidated Financial Data and Other Data

The following table presents selected consolidated financial and other data of Tsakos Energy Navigation Limited for each of the five years in the five-year period ended December 31, 2019. The table should be read together with "Item 5. Operating and Financial Review and Prospects." The selected consolidated financial data of Tsakos Energy Navigation Limited is a summary of, is derived from and is qualified by reference to, our consolidated financial statements and notes thereto which have been prepared in accordance with U.S. generally accepted accounting principles ("US GAAP").

Our audited consolidated statements of comprehensive income (loss), other comprehensive income (loss), stockholders' equity and cash flows for the years ended December 31, 2019, 2018, and 2017, and the consolidated balance sheets at December 31, 2019 and 2018, together with the notes thereto, are included in "Item 18. Financial Statements" and should be read in their entirety.

Selected Consolidated Financial and Other Data
(In thousands of U.S. dollars, except for share and per share amounts and fleet data)

	2019	2018	2017	2016	2015
Income Statement Data					
Voyage revenues	$ 597,452	$ 529,879	$ 529,182	$ 481,790	$ 587,715
Expenses					
Voyage expenses	125,802	125,350	113,403	106,403	131,878
Charter hire expense	10,822	10,822	311	—	—
Vessel operating expenses(1)	180,233	181,693	173,864	146,546	142,117
Depreciation and amortization	139,424	146,798	139,020	113,420	105,931
General and administrative expenses	27,696	27,032	26,324	25,611	21,787
Net loss (gain) on sale of vessels	—	364	3,860	—	(2,078)
Impairment charges	27,613	65,965	8,922	—	—
Operating income (loss)	85,862	(28,145)	63,478	89,810	188,080
Other expenses (income):					
Interest and finance costs, net	74,723	76,809	56,839	35,873	30,019
Interest and investment income	(3,694)	(2,507)	(1,082)	(623)	(234)
Other, net	825	(1,405)	(1,464)	(1,935)	(128)
Total other expenses, net	71,854	72,897	54,293	33,315	29,657
Net income (loss)	14,008	(101,042)	9,185	56,495	158,423
Less: Net loss (income) attributable to non-controlling interest	1,118	1,839	(1,573)	(712)	(206)
Net income (loss) attributable to Tsakos Energy Navigation Limited	$ 15,126	$ (99,203)	$ 7,612	$ 55,783	$ 158,217
Effect of preferred dividends	(40,400)	(33,763)	(23,776)	(15,875)	(13,437)
Deemed dividend on Series B preferred shares	(2,750)	—	—	—	—
Net (loss) income attributable to Tsakos Energy Navigation Limited common stockholders	**$ (28,024)**	**$ (132,966)**	**$ (16,164)**	**$ 39,908**	**$ 144,780**
Per Share Data					
(Loss) Earnings per share, basic	$ (0.32)	$ (1.53)	$ (0.19)	$ 0.47	$ 1.69
(Loss) Earnings per share, diluted	$ (0.32)	$ (1.53)	$ (0.19)	$ 0.47	$ 1.69
Weighted average number of shares, basic	88,757,923	87,111,636	84,713,572	84,905,078	85,827,597
Weighted average number of shares, diluted	88,757,923	87,111,636	84,713,572	84,905,078	85,827,597
Dividends per common share, paid	**$ 0.10**	**$ 0.15**	**$ 0.20**	**$ 0.29**	**$ 0.24**
Cash Flow Data					
Net cash provided by operating activities	184,349	73,945	170,827	170,354	234,409
Net cash used in investing activities	(102,205)	(179)	(241,797)	(576,075)	(174,754)
Net cash (used in) provided by financing activities	**(104,900)**	**(55,913)**	**75,870**	**298,488**	**30,910**
Balance Sheet Data (at year end)					
Cash and cash equivalents	$ 184,835	$ 204,763	$ 189,763	$ 187,777	$ 289,676
Cash, restricted	12,935	15,763	12,910	9,996	15,330
Investments	—	1,000	1,000	1,000	1,000
Advances for vessels under construction	61,475	16,161	1,650	216,531	371,238
Vessels, net book value	2,633,251	2,829,447	3,028,404	2,677,061	2,053,286
Total assets	3,154,103	3,205,058	3,373,636	3,277,575	2,893,166
Long-term debt, including current portion	1,534,296	1,595,601	1,751,869	1,753,855	1,392,563
Total stockholders' equity	**1,472,319**	**1,506,777**	**1,508,138**	**1,417,450**	**1,415,072**
Fleet Data					
Average number of vessels	64.2	64.3	62.6	52.6	49.2
Number of vessels (at end of period)	65.0	64.0	65.0	58.0	49.0
Average age of fleet (in years)(2)	9.1	8.2	7.7	7.9	8.5
Earnings capacity days(3)	23,432	23,460	22,850	19,244	17,970
Off-hire days(4)	890	887	755	674	376
Net earnings days(5)	22,542	22,573	22,095	18,570	17,594
Percentage utilization(6)	96.2%	96.2%	96.7%	96.5%	97.9%
Average TCE per vessel per day(7)	$ 21,378	$ 18,226	$ 18,931	$ 20,412	$ 25,940
Vessel operating expenses per ship per day(8)	$ 7,716	$ 7,745	$ 7,688	$ 7,763	$ 7,933
Vessel overhead burden per ship per day(9)	$ 1,182	$ 1,152	$ 1,152	$ 1,331	$ 1,212

(1) Vessel operating expenses are costs that vessel owners typically bear, including crew wages and expenses, vessel supplies and spares, insurance, tonnage tax, routine repairs and maintenance, quality and safety costs and other direct operating costs.

(2) The average age of our fleet is the age of each vessel in each year from its delivery from the builder, weighted by the vessel's deadweight tonnage ("dwt") in proportion to the total dwt of the fleet for each respective year.

(3) Earnings capacity days are the total number of days in a given period that we own or control vessels.

(4) Off-hire days are days related to repairs, dry-dockings and special surveys, vessel upgrades and initial positioning after delivery of new vessels.
(5) Net earnings days are the total number of days in any given period that we own vessels less the total number of off-hire days for that period.
(6) Percentage utilization represents the percentage of earnings capacity days that the vessels were actually employed, i.e., net earnings days as a percentage of earnings capacity days.
(7) The shipping industry uses time charter equivalent, or TCE, to calculate revenues per vessel in dollars per day for vessels on voyage charters. The industry does this because it does not commonly express charter rates for vessels on voyage charters in dollars per day. TCE allows vessel operators to compare the revenues of vessels that are on voyage charters with those on time charters. TCE is a non-GAAP measure. For vessels on voyage charters, we calculate TCE by taking revenues earned on the voyage and deducting voyage expenses (bunker fuel, port expenses, canal dues, charter commissions) and dividing by the actual number of voyage days. For the year ended December 31, 2019 and 2018, TCE is calculated by taking voyage revenue less voyage costs divided by the number of revenue days less 446 days and 378 days, respectively, lost as a result of calculating revenue on a loading to discharge basis. For vessels on bareboat charter, for which we do not incur either voyage or operation costs, we calculate TCE by taking revenues earned on the charter and adding a representative amount for vessel operating expenses. TCE differs from average daily revenue earned in that TCE is based on revenues after voyage expenses and does not take into account off-hire days.

Derivation of time charter equivalent per day (amounts in thousands of U.S. dollars except for days and per day amounts):

	2019	2018	2017	2016	2015
Voyage revenues	$ 597,452	$ 529,879	$ 529,182	$ 481,790	$ 587,715
Less: Voyage expenses	(125,802)	(125,350)	(113,403)	(106,403)	(131,878)
Add: Representative operating expenses for bareboat charter ($10,000 daily)	720	—	2,500	3,660	560
Time charter equivalent revenues	472,370	404,529	418,279	379,047	456,397
Net earnings days	22,096	22,195	22,095	18,570	17,594
Average TCE per vessel per day	$ 21,378	$ 18,226	$ 18,931	$ 20,412	$ 25,940

(8) Vessel operating expenses per ship per day represents vessel operating expenses divided by the earnings capacity days of vessels incurring operating expenses. Earnings capacity days of vessels on bareboat charters have been excluded.
(9) Vessel overhead burden per ship per day is the total of management fees, management incentive awards, stock compensation expense and general and administrative expenses divided by the total number of earnings capacity days.

Capitalization

The following table sets forth our (i) cash and cash equivalents, (ii) restricted cash and (iii) consolidated capitalization as of December 31, 2019 on:

- an actual basis; and
- an as adjusted basis giving effect to (i) debt repayments of $58.0 million, (ii) the drawdown of $39.8 million for the refinancing of the aframax tanker *Marathon TS* and prepayment of $31.9 million debt, (iii) the debt prepayment of $26.8 million of *Archangel* and *Alaska* and the receipt of $49.3 million net proceeds for the sale and leaseback transaction, (iv) the debt prepayment of $10.7 million for *Silia T* and $15.5 million gross proceeds from the sale of vessel, (v) the drawdown of $25.9 million and the payment of $31.3 million to the shipbuilding yard for the aframax tanker *Caribbean Voyager*, (vi) the payment of $9.3 million to the shipbuilding yard for the LNG carrier, *Hull 3157,* (vii) the payment of $9.2 million of preferred share dividends, (viii) the declaration of $4.8 million common share dividends and $0.4 million of dividends on Series G Redeemable Convertible Preferred Shares (the "Series G Convertible Preferred Shares"), (ix) the declaration of $4.7 million preferred share dividends, (x) the capital contribution of $4.0 million from non-controlling owners to subsidiary, (xi) the issuance of 561,136 common shares for net proceeds of $2.4 million, (xii) the conversion of 10,000 Series G Convertible Preferred Shares into 33,333 common shares.

all of which occurred after December 31, 2019 and on or before April 10, 2020.

Other than these adjustments, there has been no material change in our capitalization from debt or equity issuances, re-capitalization or special dividends between December 31, 2019 and April 10, 2020.

This table should be read in conjunction with our consolidated financial statements and the notes thereto, and "Item 5. Operating and Financial Review and Prospects," included elsewhere in this Annual Report.

In thousands of U.S. Dollars	As of December 31, 2019		
	Actual	Adjustments (Unaudited)	Adjusted (Unaudited)
Cash			
Cash and cash equivalents	$ 184,835	(50,103)	134,732
Restricted cash	12,935	—	12,935
Total cash	197,770	(50,103)	147,667
Capitalization			
Debt:			
Long-term secured debt obligations (including current portion)	$1,544,551	(61,658)	1,482,893
Stockholders' equity:			
Preferred shares, $1.00 par value; 25,000,000 authorized, 2,000,000 Series C Preferred Shares, 3,424,803 Series D Preferred Shares, 4,600,000 Series E Preferred Shares, 6,000,000 Series F Preferred Shares and 2,625,000 Series G Convertible Preferred Shares issued and outstanding at December 31, 2019 on an actual basis and 2,000,000 Series C Preferred Shares, 3,424,803 Series D Preferred Shares, 4,600,000 Series E Preferred Shares, 6,000,000 Series F Preferred Shares and 2,615,000 Series G Convertible Preferred Shares issued and outstanding on an as adjusted basis.	18,650	(10)	18,640
Common shares, $1.00 par value; 175,000,000 shares authorized at December 31, 2019; 95,078,607 shares issued and outstanding on an actual basis and 95,673,076 shares issued and outstanding on an as adjusted basis	95,079	594	95,673
Additional paid-in capital	992,020	1,841	993,861
Accumulated other comprehensive loss	(18,353)	—	(18,353)
Retained earnings	364,000	(19,096)	344,904
Non-controlling interest	20,923	4,000	24,923
Total stockholders' equity	1,472,319	(12,671)	1,459,648
Total capitalization	$3,016,870	(74,329)	2,942,541

Reasons For the Offer and Use of Proceeds

Not Applicable.

Risk Factors

Risks Related To Our Industry

The tanker industry is cyclical, resulting in charter rates that can be volatile. Poor charter markets for crude oil and product tankers may adversely affect our future revenues and earnings.

The tanker industry is historically cyclical, resulting in volatility in charter rates, and, in turn, our revenue and earnings. The typical cycle is partially the result of fluctuations in the number of tankers available in the market, which determines the overall supply of tankers competing for charters. The number of tankers in the market changes as a result of new deliveries to the market, offset by vessels demolished or converted due to

technical obsolescence, as well as changes in the number of vessels occupied on long-distance travel or delayed by geopolitical events. The cycle is also impacted by demand for charter hires resulting from material changes in the supply of and demand for oil due primarily to fluctuations in the price of oil and to geopolitical factors. As of April 12, 2020, about half of the vessels owned by our subsidiary companies were employed under charters based upon prevailing market rates (including time charters with a profit share component), and the remaining vessels were employed on time charters which, if not extended, are scheduled to expire on various dates between April 2020 and June 2028. Tanker charter rates declined significantly in 2016 and 2017 and further declined through most 2018, which had an adverse effect on our revenues, profitability and cash flows. Freight rates improved significantly in the latter part of 2019 and continued strong entering the second quarter of 2020. The global economy and demand for oil and oil products, is, however, subject to substantial uncertainty due to the COVID-19 outbreak and related containment efforts through the world. If rates in the charter market were to revert to low levels for any significant period in 2020, it will have an adverse effect on our revenues, profitability and cash flows. Declines in prevailing charter rates also affect the value of our vessels, which are correlated to the trends of charter rates, and could affect our ability to comply with our loan covenants.

The current COVID-19 pandemic will have catastrophic consequences globally that will have a broad range of unavoidable consequences for the shipping industry, which could negatively affect our business, financial performance and our results of operations.

The impact of the current COVID-19 pandemic may have far-reaching repercussions on our business and industry that cannot be adequately determined at this stage. There will be many effects on the shipping industry, directly and indirectly, arising from the current pandemic. The most important issue to face the industry and our Company, given the dramatic number of fatalities since the beginning of the year, is the potential temporary or permanent loss of on-shore personnel and seafarers including individuals who have years of experience with the Company. Our suppliers, the yards that repair and build our vessels and the refineries that our vessels serve, may also suffer reductions in personnel, lost demand for their products and services and government-imposed restrictions on their operations.

The outbreak of the COVID-19 virus in early 2020 has led a number of countries, ports and organizations to take measures against its spread, such as quarantines and restrictions on travel. These measures have and will likely continue to cause severe trade disruptions due to, among other things, the unavailability of personnel, supply chain disruption, interruptions of production, delays in planned strategic projects and closure of businesses and facilities.

The recent COVID-19 virus outbreak has introduced uncertainty in a number of areas of our business, including our operational, commercial and financial activities. It has also negatively impacted, and may continue to impact negatively, global economic activity, which if it persists for an extended period of time may, in turn, eventually impact demand for energy including oil and oil products, as well as LNG, and funds flows and sentiment in the global financial markets. The global response to the outbreak, particularly if it persists, and the economic impact thereof, could also have a material adverse effect on our ability to secure charters at profitable rates, or at all, particularly for our vessels in the spot market or with charters expiring in 2020, as demand for additional charters could be significantly affected. These factors could also have a material adverse effect on the business of our charterers, which could adversely affect their ability and willingness to perform their obligations under our existing charters as well as decreasing demand for future charters. COVID-19 is also affecting oil major vetting processes, which could lead to the loss of oil major approvals to conduct business with us and in turn the loss of revenue under existing charters or future chartering opportunities.

Our business and the shipping industry as a whole is also likely to be impacted by a reduced workforce and delays of crew changes as a result of quarantines applicable in several countries and ports and delays of vessels as a result of port checks due to cases, or suspected cases, of the COVID-2019 amongst crew, as well as delays in the construction of newbuild vessels, scheduled drydockings, intermediate or special surveys of vessels and scheduled and unscheduled ship repairs and upgrades, including the installation of ballast water treatment equipment. In addition, the impact of COVID-19 on credit markets and financial institutions could result in

increased interest rate spreads and other costs of, and difficulty in obtaining, bank financing, including to refinance balloon payments due upon maturity of existing credit facilities and to finance the purchase price of vessel acquisitions, which could limit our ability to grow our business in line with our strategy.

The lockdowns and commitment by world governments to provide financial support to their populations during the pandemic may have serious adverse long-term effects on the economies and budgetary resources of these nations, which in turn may result in a decline in oil demand and a reduction of vessel utilization. Government-imposed lock-downs, curfews and other restrictions on businesses and personal activity in many countries may even lead to changes in prevailing governmental practices and relationships between governments and their citizens that may in turn lead to political turmoil and strife.

Failure of the continued spread of the virus to be controlled could significantly impact economic activity, and in turn eventually demand for crude oil and oil products which is currently being supported by recent declines to historically low oil prices, which could further negatively affect our business, financial condition, results of operations and cash flows.

Disruptions in world financial markets and economic conditions, including due to the COVID-19 outbreak, and protectionist trade measures and other governmental action in the United States and in other parts of the world could have a material adverse impact on our results of operations, financial condition, cash flows and share price.

Global financial markets and economic conditions have been disrupted and volatile at times over the past decade, including in March and April 2020 as a result of the COVID-19 outbreak, and remain subject to significant vulnerabilities, such as the deterioration of fiscal balances and the rapid accumulation of public debt, continued deleveraging in the banking sector and a limited supply of credit in the shipping industry, all of which are likely to be exacerbated by COVID-19. While the global economy had improved, it remained subject to downside risk, and the recent outbreak of COVID-19 has dramatically disrupted the global economy and is expected to cause a recession, the duration of which is unpredictable. This may also prolong tight credit markets and potentially cause such conditions to become more severe.

In addition, the process of the UK exiting the European Union, as well as continued turmoil and hostilities in the Middle East or potential hostilities elsewhere in the world and additional public health emergencies or natural disasters, could contribute to volatility in the global financial markets. These circumstances, along with the re-pricing of credit risk and the reduced participation of certain financial institutions from financing of the shipping industry, will likely continue to affect the availability, cost and terms of vessel financing. If financing is not available to us when it is needed, or is available only on unfavorable terms, our business may be adversely affected, with corresponding effects on our profitability, cash flows and ability to pay dividends.

Moreover, as a result of the slow recovery from the economic crisis in Greece and the related austerity measures implemented by the Greek government, our operations may be subjected to new regulations that may require us to incur new or additional compliance or other administrative costs and may require that we pay to the Greek government new taxes or other fees or that dividends we pay be subject to withholding taxes. Financial difficulties of the European Union resulting from the UK's exit from the European Union and challenges confronted by member states in addressing the COVID-19 pandemic, particularly Italy, may place additional pressure on the Eurozone and limit the flexibility of its leadership and member states in lending to the Greek government. Furthermore, the commitments by the Greek government to the nations' creditors and potential shift in its policies may potentially lead to Greece's exit from the Eurozone if not satisfied, which could affect our technical and commercial managers' operations located in Greece.

The implementation by the U.S. or other governments of protectionist trade measures, including tariffs or other trade restrictions such as those imposed by the U.S. and China, could also adversely affect the world oil and petroleum markets.

The tanker industry is highly dependent upon the crude oil and petroleum products industries.

The employment of our subsidiaries' vessels is driven by the availability of and demand for crude oil and petroleum products, the availability of modern tanker capacity and the scrapping, conversion or loss of older vessels. Historically, the world oil and petroleum markets have been volatile and cyclical as a result of the many conditions and events that affect the supply, price, production and transport of oil, including:

- increases and decreases in the demand and price for crude oil and petroleum products;
- availability of crude oil and petroleum products;
- demand for crude oil and petroleum product substitutes, such as natural gas, coal, hydroelectric power and other alternate sources of energy that may, among other things, be affected by environmental regulation;
- actions taken by OPEC and major oil producers and refiners;
- political turmoil in or around oil producing nations;
- global and regional political and economic conditions;
- developments in international trade;
- international trade sanctions;
- environmental factors;
- natural catastrophes;
- terrorist acts;
- weather; and
- changes in seaborne and other transportation patterns.

Despite turbulence in the world economy at times in recent years, worldwide demand for oil and oil products has continued to rise; however, the COVID-19 pandemic, particularly if the related downturn in global economic activity is sustained, would be likely to reduce demand for oil and oil products offsetting demand support from lower oil prices. In the event that this trend falters, the production of and demand for crude oil and petroleum products will again encounter pressure which could lead to a decrease in shipments of these products and consequently this would have an adverse impact on the employment of our vessels and the charter rates that they command. Also, if oil prices remain at low uneconomic levels for producers, it may lead to declining output. As a result of any reduction in demand or output, the charter rates that we earn from our vessels employed on charters related to market rates may decline and possibly remain at low levels for a prolonged period of time.

Our operating results are subject to seasonal fluctuations.

The tankers owned by our subsidiary companies operate in markets that have historically exhibited seasonal variations in tanker demand, which may result in variability in our results of operations on a quarter-by-quarter basis. Tanker markets are typically stronger in the winter months as a result of increased oil consumption in the northern hemisphere, but weaker in the summer months as a result of lower oil consumption in the northern hemisphere and refinery maintenance. As a result, revenues generated by the tankers in our fleet have historically been weaker during the fiscal quarters ended June 30 and September 30. However, there may be periods in the northern hemisphere when the expected seasonal strength does not materialize to the extent required to support sustainable profitable rates due to tanker overcapacity.

An increase in the supply of vessels without an increase in demand for such vessels could cause charter rates to decline, which could have a material adverse effect on our revenues and profitability.

Historically, the marine transportation industry has been cyclical. The profitability and asset values of companies in the industry have fluctuated based on certain factors, including changes in the supply and demand of vessels. The supply of vessels generally increases with deliveries of new vessels and decreases with the scrapping of older vessels and/or the removal of vessels from the competitive fleet either for storage purposes or for utilization in offshore projects. The newbuilding order book equaled approximately 7% of the existing world tanker fleet at February 1, 2020, by number of vessels, with a significant amount of these newbuilding vessels scheduled to be delivered in 2020. No assurance can be given that the order book will not increase further in proportion to the existing fleet. If supply increases, and demand does not match that increase, the charter rates for our vessels could decline significantly. In addition, any decline of trade on specific long-haul trade routes will effectively increase available capacity with a detrimental impact on rates. A decline in, or prolonged period of, already weak charter rates could have a material adverse effect on our revenues and profitability.

The global tanker industry is highly competitive.

We operate our fleet in a highly competitive market. Our competitors include owners of VLCC, suezmax, aframax, panamax, handymax and handysize tankers, as well as owners in the shuttle tanker and LNG markets, which are other independent tanker companies, as well as national and independent oil companies, some of which have greater financial strength and capital resources than we do. Competition in the tanker industry is intense and depends on price, location, size, age, condition, and the acceptability of the available tankers and their operators to potential charterers.

Acts of piracy on ocean-going vessels, although recently declining in frequency, could still adversely affect our business.

Despite a decline in the frequency of pirate attacks on seagoing vessels in the western part of the Indian Ocean, such attacks remain prevalent off the west coast of Africa and between Malaysia and Indonesia. If piracy attacks result in regions in which our vessels are deployed being characterized by insurers as “war risk” zones, as the Gulf of Aden has been, or Joint War Committee (JWC) “war and strikes” listed areas, premiums payable for such insurance coverage could increase significantly and such insurance coverage may be more difficult to obtain. Crew costs, including those due to employing onboard security guards, could increase in such circumstances. In addition, while we believe the charterer remains liable for charter payments when a vessel is seized by pirates, the charterer may dispute this and withhold charter hire until the vessel is released. A charterer may also claim that a vessel seized by pirates was not “on-hire” for a certain number of days and it is therefore entitled to cancel the charter party, a claim that we would dispute. We may not be adequately insured to cover losses from these incidents, which could have a material adverse effect on us. In addition, hijacking as a result of an act of piracy against our vessels, or an increase in cost, or unavailability of insurance for our vessels, could have a material adverse impact on our business, financial condition, results of operations and cash flows.

Terrorist attacks, international hostilities, economic and trade sanctions and the economic situation in the Eurozone can affect the tanker industry, which could adversely affect our business.

Major oil and gas producing countries in the Middle East have become involved militarily in conflicts in Iraq, Syria and Yemen. Armed conflicts with insurgents and others continue, as well, in Libya, and political unrest and instability have adversely affected the infrastructure and economic stability of Venezuela, each of which is a major oil exporting country. In addition, recent tension and instability in the Persian Gulf, including explosions on two oil tankers in June 2019 in the Strait of Hormuz, a vital passageway for international oil shipment, may adversely affect the future export of oil around the region. Any such hostility or instability could seriously disrupt the production of oil or LNG and endanger their export by vessel or pipeline, which could put our vessels at serious risk and impact our operations and our revenues, expenses, profitability and cash flows in varying ways that we cannot now project with any certainty.

The increasing number of terrorist attacks throughout the world, longer-lasting wars, international incidents or international hostilities, such as in the Ukraine, Afghanistan, Iraq, Syria, Libya, Yemen and the Korean peninsula, could damage the world economy and adversely affect the availability of and demand for crude oil and petroleum products and negatively affect our investment and our customers' investment decisions over an extended period of time. In addition, sanctions against oil exporting countries such as Iran, Sudan, Syria, Russia and Venezuela may also impact the availability of crude oil which would increase the availability of tankers, thereby negatively impacting charter rates. We conduct our vessel operations internationally and despite undertaking various security measures, our vessels may become subject to terrorist acts and other acts of hostility like piracy, either at port or at sea. Such actions could adversely impact our overall business, financial condition and results of operations. In addition, terrorist acts and regional hostilities around the world in recent years have led to increases in our insurance premium rates and the implementation of special "war risk" premiums for certain trading routes, although our charter party agreements provide for additional War Risks insurance costs to be for charterers' account.

Our charterers may direct one of our vessels to call on ports located in countries that are subject to restrictions imposed by the U.S. government, the UN or the EU, which could negatively affect the trading price of our common shares.

On charterers' instructions, our subsidiaries' vessels may be requested to call on ports located in countries subject to sanctions and embargoes imposed by the U.S. government, the UN or the EU and countries identified by the U.S. government, the UN or the EU as state sponsors of terrorism. The U.S., UN- and EU- 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.

On January 16, 2016, "Implementation Day" for the Iran Joint Comprehensive Plan of Action (JCPOA), the United States lifted its secondary sanctions against Iran which prohibited certain conduct by non-U.S. companies and individuals that occurred entirely outside of U.S. jurisdiction involving specified industry sectors in Iran, including the energy, petrochemical, automotive, financial, banking, mining, shipbuilding and shipping sectors. By lifting the secondary sanctions against Iran, the U.S. government effectively removed U.S. imposed restraints on dealings by non-U.S. companies, such as our Company, and individuals with these formerly targeted Iranian business sectors. Non-U.S. companies continued to be prohibited under U.S. sanctions from (i) knowingly engaging in conduct that seeks to evade U.S. restrictions on transactions or dealings with Iran or that causes the export of goods or services from the United States to Iran, (ii) exporting, reexporting or transferring to Iran any goods, technology, or services originally exported from the U.S. and / or subject to U.S. export jurisdiction and (iii) conducting transactions with the Iranian or Iran-related individuals and entities that remain or are placed in the future on OFAC's list of Specially Designated Nationals and Blocked Persons (SDN List), notwithstanding the lifting of secondary sanctions.

However, on August 6, 2018, the U.S. re-imposed an initial round of secondary sanctions and as of November 5, 2018, virtually all of the secondary sanctions the U.S. had suspended under the JCPOA have been re-imposed.

The U.S. government's primary Iran sanctions have remained in place throughout recent years and, as a consequence, U.S. persons continue to be broadly prohibited from engaging in transactions or dealings in or with Iran or its government. In addition, U.S. persons continue to be broadly prohibited from engaging in transactions or dealings with the Government of Iran and Iranian financial institutions, which effectively impacts the transfer of funds to, from, or through the U.S. financial system whether denominated in U.S. dollars or any other currency.

The U.S. also maintains embargoes on Cuba, North Korea and Syria. We can anticipate that some of our charterers may request our vessels to call on ports located in these countries. Although we believe that we are in

compliance with all applicable sanctions and embargo laws and regulations, and intend to maintain such compliance, there can be no assurance that we will be in compliance 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 or other penalties and could result in some investors deciding, or being required, to divest their interest, or not to invest, in us. Additionally, some investors may decide to divest their interest, or not to invest, in us simply because we do business with companies that do lawful business in sanctioned countries. 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. Investor perception of the value of our shares may also be adversely affected by the consequences of war, the effects of terrorism, civil unrest and governmental actions in these and surrounding countries.

Failure to comply with the U.S. Foreign Corrupt Practices Act and other anti-bribery legislation in other jurisdictions could result in fines, criminal penalties, contract terminations and an adverse effect on our business.

We operate in a number of countries throughout the world, including countries that may have a reputation for corruption. We are committed to doing business in accordance with applicable anti-corruption laws and have adopted policies consistent and in full compliance with the U.S. Foreign Corrupt Practices Act of 1977, or the "FCPA" and anti-bribery legislation in other jurisdictions. Brazilian authorities have charged certain shipbrokers with various offenses, including bribery, in connection with charters entered into between Petrobras and various shipowners, including us, and we are subject to the risk that the actions taken by these brokers, or actions of other persons and entities whom we engage or their agents, are determined to constitute a violation of such anti-corruption laws, including the FCPA, applicable to the Company. Any such violation could result in substantial fines, sanctions, civil and/or criminal penalties, or curtailment of operations in certain jurisdictions, and might adversely affect our business, results of operations or financial condition. In addition, actual or alleged violations could damage our 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 our senior management.

Efforts to take advantage of opportunities in pursuit of our growth strategy may result in financial or commercial difficulties.

A key strategy of management is to continue to renew and grow the fleet by pursuing the acquisition of additional vessels or fleets or companies that are complementary to our existing operations. If we seek to expand through acquisitions, we face numerous challenges, including:

- difficulties in raising the required capital;
- depletion of existing cash resources more quickly than anticipated;
- assumption of potentially unknown material liabilities or contingent liabilities of acquired companies; and
- competition from other potential acquirers, some of which have greater financial resources.

We cannot assure you that we will be able to integrate successfully the operations, personnel, services or vessels that we might acquire in the future, and our failure to do so could adversely affect our profitability.

We are subject to regulation and liability under environmental, health and safety laws that could require significant expenditures and affect our cash flows and net income.

Our business and the operation of our subsidiaries' vessels are subject to extensive international, national and local environmental and health and safety laws and regulations in the jurisdictions in which our vessels operate, as well as in the country or countries of their registration. In addition, major oil companies chartering our vessels impose, from time to time, their own environmental and health and safety requirements. To comply

with these requirements and regulations, including the new MARPOL Annex VI sulfur emission requirements instituting a global 0.5% sulfur cap on marine fuels from January 1, 2020 and the IMO ballast water management ("BWM") convention, which requires vessels to install expensive ballast water treatment systems ("BWTS") before the first MARPOL renewal survey conducted after September 8, 2019, for newly constructed vessels after September 8, 2017 to have a BWTS installed by delivery and for all vessels to be certified in accordance with the BWM convention by September 8, 2024, we may be required to incur additional costs to meet new maintenance and inspection requirements, develop contingency plans for potential spills, and obtain insurance coverage.

These and future environmental regulations, which may become stricter, may limit our ability to do business, increase our operating costs and/or force the early retirement of our vessels, all of which could have a material adverse effect on our financial condition and results of operations.

International, national and local laws imposing liability for oil spills are also becoming increasingly stringent. Some impose joint, several, and in some cases, unlimited liability on owners, operators and charterers regardless of fault. We could be held liable as an owner, operator or charterer under these laws. In addition, under certain circumstances, we could also be held accountable under these laws for the acts or omissions of Tsakos Shipping & Trading S.A. ("Tsakos Shipping"), Tsakos Columbia Shipmanagement Ltd. ("TCM") or Tsakos Energy Management Limited ("Tsakos Energy Management"), companies that provide technical and commercial management services for our subsidiaries' vessels and us, or others in the management or operation of our subsidiaries' vessels. Although we currently maintain, and plan to continue to maintain, for each of our subsidiaries' vessels' pollution liability coverage in the amount of $1 billion per incident (the maximum amount available), liability for a catastrophic spill could exceed the insurance coverage we have available and result in our having to liquidate assets to pay claims. In addition, we may be required to contribute to funds established by regulatory authorities for the compensation of oil pollution damage or provide financial assurances for oil spill liability to regulatory authorities.

Maritime disasters and other operational risks may adversely impact our reputation, financial condition and results of operations.

The operation of ocean-going vessels has an inherent risk of maritime disaster and/or accident, environmental mishaps, cargo and property losses or damage and business interruptions caused by, among others:

- mechanical failure;
- human error;
- labor strikes;
- adverse weather conditions;
- vessel off hire periods;
- regulatory delays; and
- political action, civil conflicts, terrorism and piracy in countries where vessel operations are conducted, vessels are registered or from which spare parts and provisions are sourced and purchased.

Any of these circumstances could adversely affect our operations, result in loss of revenues or increased costs and adversely affect our profitability and our ability to perform our charters.

Our subsidiaries' vessels could be arrested at the request of third parties.

Under general maritime law in many jurisdictions, crew members, tort claimants, vessel mortgagees, suppliers of goods and services and other claimants may lien a vessel for unsatisfied debts, claims or damages. In many jurisdictions a maritime lien holder may enforce its lien by arresting a vessel through court process. In

some jurisdictions, under the extended 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 under common ownership or control. While in some jurisdictions which have adopted this doctrine, liability for damages is limited in scope and would only extend to a company and its ship-owning subsidiaries, we cannot assure you that liability for damages caused by some other vessel determined to be under common ownership or control with our subsidiaries' vessels would not be asserted against us.

Risks Related To Our Business

Any significant future declines in the values of our vessels could affect our ability to comply with various covenants in our credit facilities unless waived or modified by our lenders.

Our credit facilities, which are secured by mortgages on our subsidiaries' vessels, require us to maintain specified collateral coverage ratios and satisfy financial covenants, including requirements based on the market value of our vessels, such as maximum corporate leverage levels. The appraised value of a vessel fluctuates depending on a variety of factors including the age of the vessel, its hull configuration, prevailing charter market conditions, supply and demand balance for vessels and new and pending legislation. The oversupply of tankers and depressed tanker charter market adversely affected tanker values from the middle of 2008 to the middle of 2019, and despite the relatively young age of our subsidiaries' fleet and extensive long-term charter employment on many of the vessels, resulted in a significant decline in the charter-free values of certain of our subsidiaries' vessels. Vessel values recovered from the end of 2013, but again declined during 2016 and 2017 and remained at relatively low levels through 2018 due primarily to global fleet overcapacity and lack of financing for potential buyers to acquire second-hand, charter free vessels. Values recovered in 2019 and continued to improve into early 2020. However, they may remain at current levels for a prolonged period, again decline or rise. Low values may result in our inability to comply with the financial covenants under our credit facilities which relate to our consolidated leverage and loan-to-asset value collateral requirements. If we were unable to obtain waivers in case of non-compliance or post additional collateral or prepay principal in the case of loan-to-asset value requirements, our lenders could accelerate our indebtedness. We have paid all of our scheduled loan installments and related loan interest consistently without delay or omission.

Charters at attractive rates may not be available when our current time charters expire.

During 2019, we derived approximately 64% of our revenues from time charters, as compared to 65% in 2018. As our current period charters on 15 of the vessels owned by our subsidiary companies expire in the remainder of 2020, considering the volatile nature of the tanker market, it may not be possible to re-charter these vessels on a period basis at attractive rates. . If attractive period charter opportunities are not available, we may seek to charter the vessels owned by our subsidiary companies on the spot market, which is subject to significant fluctuations. In the event a vessel owned by one of our subsidiary companies may not find employment at economically viable rates, management may opt to lay up the vessel until such time that rates become attractive again (an action which our subsidiary companies have never undertaken). During the period of any layup, the vessel would continue to incur expenditures such as debt service, insurance, reduced crew wages and maintenance costs.

We are dependent on the ability and willingness of our charterers to honor their commitments to us for substantially all of our revenues and the failure of our counterparties to meet their obligations under our charter agreements could cause us to suffer losses or otherwise adversely affect our business.

We derive substantially all of our revenues from the payment of charter hire by our charterers. 44 of our 65 vessels are currently employed under time charters including time charters with profit sharing provisions above specified minimum rate levels. We could lose a charterer or the benefits of a time charter if:

- the charterer fails to make charter payments to us because of its financial inability, liquidation, disagreements with us, defaults on a payment or otherwise;

- the charterer exercises certain specific limited rights to terminate the charter;
- we do not take delivery of a newbuilding vessel we may contract for at the agreed time; or
- the charterer terminates the charter because the vessel fails to meet certain guaranteed speed and fuel consumption requirements and we are unable to rectify the situation or otherwise reach a mutually acceptable settlement; or.
- a serious accident or explosion occurs at a client refinery.

If we lose a time charter, we may be unable to re-deploy the related vessel on terms as favorable to us or at all. We would not receive any revenues from such a vessel while it remained unchartered, but we may be required to pay expenses necessary to maintain the vessel in proper operating condition, insure it and service any indebtedness secured by such vessel.

If our charterers fail to meet their obligations to us or attempt to renegotiate our charter agreements, as part of a court-led restructuring or otherwise, we could sustain significant reductions in revenue and earnings which could have a material adverse effect on our business, financial condition, results of operations and cash flows, as well as our ability to pay dividends, if any, in the future, and comply with the covenants in our credit facilities.

If our exposure to the spot market increases, our revenues could suffer and our expenses could increase.

The spot market for crude oil and petroleum product tankers is highly competitive. Beginning in 2016, we modified our chartering strategy to place more of our subsidiaries' vessels on time-charter. As of April 2, 2020, 21 of the vessels owned by our subsidiary companies were employed under spot charters. If we were to increase participation in the spot market, we may experience a lower overall utilization of our fleet through waiting time or ballast voyages, leading to a decline in operating revenue. Moreover, to the extent our vessels are employed in the spot market, both our revenue from vessels and our operating costs, specifically our voyage expenses, will be significantly impacted by adverse movements in the cost of bunkers (fuel), including the price of low sulfur fuel certain of our vessels may be required to use beginning in 2020. See " —Fuel prices may adversely affect our profits." Unlike time charters in which the charterer bears all of the bunker costs, in spot market voyages we bear the bunker charges as part of our voyage costs. As a result, while historical movements in bunker charges are factored into the prospective freight rates for spot market voyages periodically announced by World Scale Association (London) Limited and similar organizations, increases in bunker charges in any given period could have a material adverse effect on our cash flow and results of operations for the period in which the increase occurs. In addition, to the extent we employ our vessels pursuant to contracts of affreightment or under pooling arrangements, the rates that we earn from the charterers under those contracts may be subject to reduction based on market conditions, which could lead to a decline in our operating revenue.

We depend on Tsakos Energy Management, Tsakos Shipping and TCM to manage our business.

We do not have the employee infrastructure to manage our operations and have no physical assets. In common with industry practice, our subsidiaries own the vessels in the fleet and any contracts to construct newbuildings. We have engaged Tsakos Energy Management to perform all of our executive and management functions. Tsakos Energy Management employees directly provide us with financial, accounting and other back-office services, including acting as our liaison with the New York Stock Exchange and the Bermuda Monetary Authority. Tsakos Energy Management, in turn, oversees and subcontracts part of commercial management (including treasury, chartering and vessel purchase and sale functions) to Tsakos Shipping, and day-to-day fleet technical management, such as vessel operations, repairs, supplies and crewing, to TCM. As a result, we depend upon the continued services provided by Tsakos Energy Management and Tsakos Energy Management depends on the continued services provided by Tsakos Shipping and TCM.

We derive significant benefits from our relationship with Tsakos Energy Management and its affiliated companies, including purchasing discounts to which we otherwise would not have access. We would be

materially adversely affected if any of Tsakos Energy Management, Tsakos Shipping or TCM becomes unable or unwilling to continue providing services for our benefit at the level of quality they have provided such services in the past and at comparable costs as they have charged in the past. If we were required to employ a ship management company other than Tsakos Energy Management, Tsakos Shipping or TCM, we cannot offer any assurances that the terms of such management agreements would be on terms as favorable to the Company in the long term.

Tsakos Energy Management, Tsakos Shipping and TCM are privately held companies and there is little or no publicly available information about them.

The ability of Tsakos Energy Management, Tsakos Shipping and TCM to continue providing services for our and our subsidiaries' benefit will depend in part on their own financial strength. Circumstances beyond our control could impair their financial strength and, because each of these companies is privately held, it is unlikely that information about their financial strength would become public. Any such problems affecting these organizations could have a material adverse effect on us.

Tsakos Energy Management has the right to terminate its management agreement with us and Tsakos Shipping and TCM have the right to terminate their respective contracts with Tsakos Energy Management.

Tsakos Energy Management may terminate its management agreement with us at any time upon one year's notice. In addition, if even one director were to be elected to our board without having been recommended by our existing board, Tsakos Energy Management would have the right to terminate the management agreement on 10 days' notice. If Tsakos Energy Management terminates the agreement for this reason, we would be obligated to pay Tsakos Energy Management the present discounted value of all payments that would have otherwise become due under the management agreement until June 30 in the tenth year following the date of the termination plus the average of the incentive awards previously paid to Tsakos Energy Management multiplied by 10. A termination as of December 31, 2019 would have resulted in a payment of approximately $172.7 million. Tsakos Energy Management's contracts with Tsakos Shipping and with TCM may be terminated by either party upon six months' notice and would terminate automatically upon termination of our management agreement with Tsakos Energy Management.

Our ability to pursue legal remedies against Tsakos Energy Management, Tsakos Shipping and TCM is very limited.

In the event Tsakos Energy Management breaches its management agreement with us, we or our subsidiaries could bring a lawsuit against it. However, because neither we nor they are ourselves party to a contract with Tsakos Shipping or TCM, it may be difficult to sue Tsakos Shipping and TCM for breach of their obligations under their contracts with Tsakos Energy Management, and Tsakos Energy Management may have no incentive to sue Tsakos Shipping and TCM. Tsakos Energy Management is a company with no substantial assets and no income other than the income it derives under the management agreement with us. Therefore, it is unlikely that we or our subsidiaries would be able to obtain any meaningful recovery if we or they were to sue Tsakos Energy Management, Tsakos Shipping or TCM on contractual grounds.

Tsakos Shipping provides chartering services to other tankers and TCM manages other tankers and could experience conflicts of interests in performing obligations owed to us and the operators of other tankers.

In addition to the vessels that it manages for our fleet, TCM technically manages a fleet of privately owned vessels and wishes to acquire third-party clients. These vessels are operated by the same group of TCM employees that manage our vessels, and we are advised that its employees manage these vessels on an "ownership neutral" basis; that is, without regard to who owns them. It is not impossible that Tsakos Shipping, which provides chartering services for nearly all vessels technically managed by TCM, might allocate charter or spot opportunities to other TCM managed vessels when our subsidiaries' vessels are unemployed. It is also possible that TCM could in the future agree to manage more tankers that might directly compete with the fleet.

Clients of Tsakos Shipping have acquired and may acquire additional vessels that may compete with our fleet.

Tsakos Shipping and we have an arrangement whereby it affords us a right of first refusal on any opportunity to purchase a tanker which is 10 years of age or younger or contract to construct a tanker that is referred to or developed by Tsakos Shipping. Were we to decline any opportunity offered to us, or if we do not have the resources or desire to accept it, other clients of Tsakos Shipping might decide to accept the opportunity. In this context, Tsakos Shipping clients have in the past acquired modern tankers and have ordered the construction of vessels. They may acquire or order tankers in the future, which, if we decline to buy from them, could be entered into charters in competition with our vessels. These charters and future charters of tankers by Tsakos Shipping could result in conflicts of interest between their own interests and their obligations to us.

Our chief executive officer has affiliations with Tsakos Energy Management, Tsakos Shipping and TCM which could create conflicts of interest.

Nikolas Tsakos is the president, chief executive officer and a director of our company and the director and sole shareholder of Tsakos Energy Management. Nikolas Tsakos is also the son of the founder of Tsakos Shipping. These responsibilities and relationships could create conflicts of interest that could result in losing revenue or business opportunities or increase our expenses.

Our commercial arrangements with Tsakos Energy Management and Argosy may not always remain on a competitive basis.

We pay Tsakos Energy Management a management fee for its services pursuant to our management agreement. We also place our hull and machinery insurance, increased value insurance and loss of hire insurance through Argosy Insurance Company, Guernsey, a captive insurance company affiliated with Tsakos interests. We believe that the management fees that we pay Tsakos Energy Management compare favorably with management compensation and related costs reported by other publicly traded shipping companies and that our arrangements with Argosy are structured at arm's-length market rates. Our board reviews publicly available data periodically in order to confirm this. However, we cannot assure you that the fees charged to us are or will continue to be as favorable to us as those we could negotiate with third parties and our board could determine to continue transacting business with Tsakos Energy Management and Argosy even if less expensive alternatives were available from third parties.

We depend on our key personnel.

Our future success depends particularly on the continued service of Nikolas Tsakos, our president and chief executive officer and the sole shareholder of Tsakos Energy Management. The loss of Mr. Tsakos's services or the services of any of our key personnel could have a material adverse effect on our business. We do not maintain key man life insurance on any of our executive officers.

Because the market value of our vessels may fluctuate significantly, we may incur impairment charges or losses when we sell vessels which may adversely affect our earnings.

The fair market value of tankers may increase or decrease depending on any of the following:

- general economic and market conditions affecting the tanker industry;
- supply and demand balance for ships within the tanker industry;
- competition from other shipping companies;
- types and sizes of vessels;

- other modes of transportation;
- cost of newbuildings;
- governmental or other regulations;
- prevailing level of charter rates; and
- technological advances.

The global economic downturn that commenced in 2008 and the consequences thereof, resulted in a decrease in vessel values. Since then valuations have fluctuated, falling whenever there was excess fleet capacity and falling freight rates, as in 2013, and recovering when tanker market conditions improved as in 2015. Valuations declined again in 2016 and remained low through 2017 and 2018 but recovered in 2019.Although our subsidiaries currently own a relatively modern fleet, with an average age of 9.0 years as of April 2, 2020, as vessels grow older, they generally decline in value.

We have a policy of considering the disposal of tankers periodically. If our subsidiaries' tankers are sold at a time when tanker prices have fallen, the sale may be at less than the vessel's carrying value on our financial statements, with the result that we will incur a loss.

In addition, accounting standards require that we periodically review long-lived assets and certain identifiable intangibles for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. An impairment charge for an asset held for use should be recognized when the estimate of undiscounted cash flows, excluding interest charges, expected to be generated by the use of the asset is less than its carrying amount. Measurement of the impairment charge is based on the fair value of the asset as provided by third parties. Such reviews may from time to time result in asset write-downs, which could adversely affect our results of operations, such as we did in the fourth quarter of 2017, 2018 and 2019, with respect to two, five and seven of our subsidiaries' tankers, respectively.

If TCM is unable to attract and retain skilled crew members, our reputation and ability to operate safely and efficiently may be harmed.

Our continued success depends in significant part on the continued services of the officers and seamen whom TCM provides to crew the vessels owned by our subsidiary companies. The market for qualified, experienced officers and seamen is extremely competitive and has grown more so in recent periods as a result of the growth in world economies and other employment opportunities. Although TCM has manning management arrangements with a number of accredited manning agencies in Philippines, Ukraine, Romania, Georgia, Latvia, Greece and Russia and sponsors various academies in the relevant regions, we cannot assure you that TCM will be successful in its efforts to recruit and retain properly skilled personnel at commercially reasonable salaries. Any failure to do so could adversely affect our ability to operate cost-effectively and our ability to increase the size of the fleet.

Labor interruptions could disrupt our operations.

Substantially all of the seafarers and land-based employees of TCM are covered by industry-wide collective bargaining agreements that set basic standards. We cannot assure you that these agreements will prevent labor interruptions. In addition, like many other vessels internationally, some of our subsidiaries' vessels operate under so-called "flags of convenience" and may be vulnerable to unionization efforts by the International Transport Federation and other similar seafarer organizations which could be disruptive to our operations. Any labor interruption or unionization effort which is disruptive to our operations could harm our financial performance.

Contracts for newbuilding vessels present certain economic and other risks.

As of April 2, 2020, our subsidiaries have contracts for the construction of two suezmax crude carriers and one LNG carrier for delivery in 2020 and 2021. Our subsidiaries may also order additional newbuildings. During

the course of construction of a vessel, we are typically required to make progress payments. While we typically have refund guarantees from banks to cover defaults by the shipyards and our construction contracts would be saleable in the event of our payment default, we can still incur economic losses in the event that we or the shipyards are unable to perform our respective obligations. Shipyards may periodically experience financial difficulties.

Delays in the delivery of these vessels, or any newbuilding or secondhand vessels our subsidiaries may agree to acquire, could delay our receipt of revenues generated by these vessels and, to the extent we have arranged charter employment for these vessels, could possibly result in the cancellation of those charters, and therefore adversely affect our anticipated results of operations. The delivery of newbuilding vessels could be delayed because of, among other things: work stoppages or other labor disturbances; bankruptcy or other financial crisis of the shipyard building the vessel; hostilities or political or economic disturbances in the countries where the vessels are being built, including any escalation of tensions involving North Korea; weather interference or catastrophic events, such as a major earthquake, tsunami or fire; our requests for changes to the original vessel specifications; requests from our customers, with whom our commercial managers arrange charters for such vessels, to delay construction and delivery of such vessels due to weak economic conditions and shipping demand or a dispute with the shipyard building the vessel.

Credit conditions internationally might impact our ability to raise debt financing.

Global financial markets and economic conditions have been disrupted and volatile for periods in recent years. At times, the credit markets as well as the debt and equity capital markets were distressed, and it was difficult for many shipping companies to obtain adequate financing. The cost of available financing also increased significantly, but for leading shipping companies has since declined. The global financial markets and economic conditions could again experience volatility and disruption in the future.

We have traditionally financed our vessel acquisitions or constructions with our own cash (equity) and bank debt from various reputable national and international commercial banks. In relation to newbuilding contracts, the equity portion usually covers all or part of the pre-delivery obligations while the debt portion covers the outstanding amount due to the shipyard on delivery. More recently, however, we have arranged pre-delivery bank financing to cover much of the installments due before delivery, and, therefore, we would be required to provide the remainder of our equity investment at delivery. In addition, several of our existing loans will mature over the next few years, including one in the current year. In the event that the related vessels are not sold, or we do not wish to use existing cash for paying the final balloon payments, then re-financing of the loans for an extended period beyond the maturity date will be necessary. Current and future terms and conditions of available debt financing, especially for older vessels without time charter could be different from terms obtained in the past and could result in a higher cost of capital, if available at all. Any adverse development in the credit markets could materially alter our current and future financial and corporate planning and growth and have a negative impact on our balance sheet.

The future performance of our subsidiaries' LNG carriers depends on continued growth in LNG production and demand for LNG and LNG shipping.

The future performance of our subsidiaries' LNG carriers will depend on continued growth in LNG production and the demand for LNG and LNG shipping. A complete LNG project includes production, liquefaction, storage, re-gasification and distribution facilities, in addition to the marine transportation of LNG. Increased infrastructure investment has led to an expansion of LNG production capacity in recent years, but material delays in the construction of new liquefaction facilities could constrain the amount of LNG available for shipping, reducing ship utilization. The rate of growth in global LNG demand has fluctuated due to several factors, including global economic conditions and economic uncertainty, fluctuations in the price of natural gas and other sources of energy, growth in natural gas production from unconventional sources in regions such as

North America and the highly complex and capital intensive nature of new or expanded LNG projects, including liquefaction projects. Growth in LNG production and demand for LNG and LNG shipping could be negatively affected by a number of factors, including:

- increases in the cost of natural gas derived from LNG relative to the cost of natural gas generally;
- increases in the production levels of low-cost natural gas in domestic natural gas consuming markets, which could further depress prices for natural gas in those markets and make LNG uneconomical;
- increases in the production of natural gas 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-natural gas pipelines to natural gas pipelines in those markets;
- decreases in the consumption of natural gas due to increases in its price, decreases in the price of alternative energy sources or other factors making consumption of natural gas less attractive;
- any significant explosion, spill or other incident involving an LNG facility or carrier;
- infrastructure constraints such as delays in the construction of liquefaction facilities, the inability of project owners or operators to obtain financing or governmental approvals to construct or operate LNG facilities, as well as community or political action group resistance to new LNG infrastructure due to concerns about the environment, safety and terrorism;
- labor or political unrest or military conflicts affecting existing or proposed areas of LNG production or re-gasification;
- decreases in the price of LNG, which might decrease the expected returns relating to investments in LNG projects;
- technological advances render existing LNG carriers obsolete or non-viable; or •negative global or regional economic or political conditions, particularly in LNG consuming regions, which could reduce energy consumption or its growth.

Reduced demand for LNG or LNG shipping, or any reduction or limitation in LNG production capacity, could have a material adverse effect on our ability to secure future multi-year time charters for the LNG carriers, or for any new LNG carriers our subsidiaries may acquire, which could harm our business, financial condition, results of operations and cash flows, including cash available for dividends to our shareholders.

Demand for LNG shipping could be significantly affected by volatile natural gas prices and the overall demand for natural gas.

Gas prices are volatile and are affected by numerous factors beyond our control, including but not limited to the following:

- the supply and cost of crude oil and petroleum products;
- worldwide demand for natural gas;
- the cost of exploration, development, production, transportation and distribution of natural gas;
- expectations regarding future energy prices for both natural gas and other sources of energy;
- the level of worldwide LNG production and exports;
- government laws and regulations, including but not limited to environmental protection laws and regulations;
- local and international political, economic and weather conditions;
- political and military conflicts; and
- the availability and cost of alternative energy sources, including alternate sources of natural gas in gas importing and consuming countries.

Any decline in oil prices, which can be very volatile and have recently declined to very low levels, can depress natural gas prices and lead to a narrowing of the gap in pricing in different geographic regions, which can adversely affect the length of voyages in the spot LNG shipping market and the spot rates and medium-term charter rates for charters which commence in the near future. Any continued period of low oil prices could adversely affect both the competitiveness of gas as a fuel for power generation and the market price of gas, to the extent that gas prices are benchmarked to the price of crude oil. Some production companies have announced delays or cancellations of certain previously announced LNG projects, which, unless offset by new projects coming on stream, could adversely affect demand for LNG charters over the next few years, while the amount of tonnage available for charter is expected to increase. The recent dramatic decline in the price of oil, in part due to the COVID-19 outbreak and production increases by Saudi Arabia and other oil producing countries, could make LNG a less attractive alternative for some uses and generally lead to reduced production of LNG. Reduced demand for LNG and LNG shipping could have an adverse effect on our future growth and would harm our business, results of operations and financial condition.

An oversupply of LNG carriers may lead to a reduction in the charter hire rates we are able to obtain when seeking charters in the future.

Driven in part by an increase in LNG production capacity and the expectation of further future capacity, the construction and delivery of new LNG carriers has been increasing. Any future expansion of the global LNG carrier fleet that cannot be absorbed by existing or future LNG projects may have a negative impact on charter rates, vessel utilization and vessel values. Such impact could be amplified if the expansion of LNG production capacity does not keep pace with fleet growth.

Hire rates for LNG carriers may fluctuate substantially and if rates are low, as is currently the case, when we are seeking a new charter, our revenues and cash flows may decline.

The COVID-19 outbreak and the significant fall in oil prices since early March 2020 has contributed to substantial declines in the price of LNG, as it did in 2014 and subsequent years as well, which coupled with delays in the completion of liquefaction and regasification facilities around the world and a high order book, particularly with vessels ordered on speculation, have led to significant declines in average rates for new spot and shorter-term LNG charters, which may persist for an extended period. If LNG charter market conditions remain weak or decline over the next eighteen months, we may have difficulty in securing new charters at attractive rates and durations for our two LNG carriers when their current charters expire and our newbuilding LNG carrier, for which we have not yet arranged employment, is delivered in 2021.

We depend upon Hyundai Ocean Services to manage our subsidiaries' LNG carriers.

Tsakos Energy Management has subcontracted all technical management of our LNG operations to Hyundai Ocean Services Co., Ltd ("HOS") for a fee. Neither Tsakos Energy Management nor TCM has the dedicated personnel for running LNG operations nor can we guarantee that they will employ an adequate number of employees to conduct LNG operations in the future. As such, we are currently dependent on the reliability and effectiveness of third-party managers for whom we cannot guarantee that their employees, both onshore and at-sea are sufficient in number or capability for their assigned role. We also cannot assure you that we will be able to continue to receive such services from HOS on a long-term basis on acceptable terms or at all.

Our growth in shuttle tankers depends partly on continued growth in demand for offshore oil transportation, processing and storage services.

Our growth strategy includes expansion in the shuttle tanker sector. Growth in this sector depends on continued growth in world and regional demand for these offshore services, which could be negatively affected by a number of factors, such as:

- decreases in the actual or projected price of oil, which could lead to a reduction in or termination of production of oil at certain offshore fields our shuttle tankers will service or a reduction in exploration for or development of new offshore oil fields;

- increases in the production of oil 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 oil pipelines in those markets;
- decreases in the consumption of oil due to increases in its price relative to other energy sources, other factors making consumption of oil less attractive or energy conservation measures;
- availability of new, alternative energy sources;
- negative global or regional economic or political conditions, particularly in oil consuming regions, which could reduce energy consumption or its growth; and
- fall in the price of oil leading to cut-backs in the offshore industry.

Oil prices declined substantially in the second half of 2014, which resulted in oil companies announcing reductions in oil production and exploration activities, including in offshore fields. Oil prices recovered since that time, before declining dramatically in March 2020 due in large part to production increases by Saudi Arabia and other oil producing countries. Oil prices may continue to decline including due to any demand effects resulting from the consequences of the COVID-19 outbreak. Continued volatility in oil prices may exist depending on the policies of oil production countries and cartels.

Fuel prices may adversely affect our profits.

While we do not bear the cost of fuel (bunkers) under time and bareboat charters, fuel is the largest expense in our shipping operations when vessels are under spot charters. Increases in the price of fuel may, as a result, adversely affect our profitability. The marine fuel with low sulfur content required to comply with the 0.5% sulfur cap on marine fuels became effective on January 1, 2020, for vessels without scrubbers. Initially, low sulfur fuel was substantially more expensive compared to the existing widely used marine fuel. If this price differential continues, it could increase our fuel costs for vessels employed in the spot market. In addition, the price of fuel is an important factor in negotiating charters with customers, and rising costs of fuel could make older and less fuel efficient vessels less competitive compared to the more fuel efficient newer vessels or compared with vessels which can utilize less expensive fuel. The price and supply of fuel is unpredictable and fluctuates based on events outside our control, including geopolitical developments.

If our counterparties were to fail to meet their obligations under a charter agreement, we could suffer losses or our business could be otherwise adversely affected.

As of April 2, 2020, 44 of our subsidiaries' vessels were employed under time charters and time charters with profit share. The ability and willingness of each of the counterparties to perform their obligations under their charters will depend on a number of factors that are beyond our control and may include, among other things, general economic conditions, the condition of the oil and energy industries and of the oil and oil products shipping industry as well as the overall financial condition of the counterparties and prevailing charter rates. There can be no assurance that some of our subsidiaries' customers would not fail to pay charter hire or attempt to renegotiate charter rates and, if the charterers fail to meet their obligations or attempt to renegotiate charter agreements, we could sustain significant losses which could have a material adverse effect on our business, financial condition, results of operations and cash flows, as well as our ability to pay dividends in the future.

The shipping industry has inherent operational risks that may not be adequately covered by our insurance.

We believe that we maintain as much insurance on the vessels in the fleet, through insurance companies, including Argosy, a related party company, and P&I clubs, as is appropriate and consistent with industry practice. While we endeavor to be adequately insured against all known risks related to the operation of our subsidiaries' vessels, there remains the possibility that a liability may not be adequately covered and we may not

be able to obtain adequate insurance coverage for the fleet in the future. The insurers may also not pay particular claims. Even if our insurance coverage is adequate, we may not be able to obtain a replacement vessel in a timely manner in the event of a loss. Our insurance policies contain deductibles for which we will be responsible and limitations and exclusions which may increase our costs or lower our revenue. In addition, some of our insurance coverage 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 make an excessive impact on association reserves. The Company's P&I renewals as of February 20, 2020 saw an increase in costs of 4.96% partly due to the International Group of P&I Clubs' need to increase their income after several years of premium reductions and partly due to the claim on the Group reinsurance contract resulting from the collision between the tanker "*Sola TS*" and the Norwegian frigate "HELGE INGSTAD" in November 2018. The International Group of P&I Clubs continues to provide its members with $1 billion of oil pollution liability coverage and more than $4 billion of coverage for other liabilities. P&I, Hull and Machinery and War Risk insurance premiums are accounted for as part of operating expenses in our consolidated financial statements; accordingly, any changes in insurance premiums directly impact our operating results.

Failure to protect our information systems against security breaches could adversely affect our business and financial results. Additionally, if these systems fail or become unavailable for any significant period of time, our business could be harmed.

The efficient operation of our business 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 cybersecurity breaches, the access, capture or alteration of information by criminals, the exposure or exploitation of potential security vulnerabilities, the installation of malware or ransomware, acts of vandalism, computer viruses, misplaced data or data loss. In addition, the unavailability of the information systems or the failure of these systems to perform as anticipated for any reason could disrupt our business and could result in decreased performance and increased operating costs, causing our business and results of operations to suffer. Any significant interruption or failure of our information systems or any significant breach of security could adversely affect our business and financial results, as well as our cash flows available for distribution to our shareholders

Our degree of leverage and certain restrictions in our financing agreements impose constraints on us.

We incur substantial debt to finance the acquisition of our vessels. At December 31, 2019, our debt to capital ratio was 51.2% (debt / debt plus equity), with $1.5 billion in debt outstanding. We are required to apply a substantial portion of our cash flow from operations to the payment of principal and interest on this debt. In 2019, a substantial portion of our cash flow derived from operations was dedicated to debt service, voluntary early debt prepayments and balloon payments to be refinanced. This limits the funds available for working capital, capital expenditures, dividends and other purposes. Our degree of leverage could have important consequences for us, including the following:

- a substantial decrease in our net operating cash flows or an increase in our expenses could make it difficult for us to meet our debt service requirements and force us to modify our operations;
- we may be more highly leveraged than our competitors, which may make it more difficult for us to expand our fleet; and
- any significant amount of leverage exposes us to increased interest rate risk and makes us vulnerable to a downturn in our business or the economy in general.

In addition, our financing arrangements, which we secured by mortgages on our vessels, impose operating and financial restrictions on us that restrict our ability to:

- incur additional indebtedness;
- create liens;
- sell the capital of our subsidiaries or other assets;
- make investments;
- engage in mergers and acquisitions;
- make capital expenditures;
- repurchase or redeem common or preferred shares; and
- pay cash dividends.

We have a holding company structure which depends on dividends from our subsidiaries and interest income to pay our overhead expenses and otherwise fund expenditures. As a result, restrictions contained in our financing arrangements and those of our subsidiaries, including any preferred shares issued by our subsidiary upon any exchange of our Series G Convertible Preferred Shares, on the payment of dividends may restrict our ability to fund our various activities.

We are exposed to volatility in LIBOR and selectively enter into derivative contracts, which can result in higher than market interest rates and charges against our income.

Over the past 15 years we have selectively entered into derivative contracts both for investment purposes and to hedge our overall interest expense and, more recently, our bunker expenses. Our board of directors monitors the status of our derivatives in order to assess whether such derivatives are within reasonable limits and reasonable in light of our particular investment strategy at the time we entered into the derivative contracts.

Loans advanced under our secured credit facilities are, generally, advanced at a floating rate based on the London interbank offered rate ("LIBOR"), which increased in recent years after a long period of stability at historically low levels, and has been volatile in past years, which can affect the amount of interest payable on our debt, and which, in turn, could have an adverse effect on our earnings and cash flow. LIBOR rates were at historically low levels for an extended period of time and may continue to increase from these low levels. Our financial condition could be materially adversely affected at any time that we have not entered into interest rate hedging arrangements to hedge our interest rate exposure and the interest rates applicable to our credit facilities and any other financing arrangements we may enter into in the future, including those we enter into to finance a portion of the amounts payable with respect to newbuildings, increase. Moreover, even if we have entered into interest rate swaps or other derivative instruments for purposes of managing our interest rate or bunker cost exposure, our hedging strategies may not be effective, and we may incur substantial loss.

We have a risk management policy and the Audit Committee oversees all our derivative transactions. It is our policy to monitor our exposure to business risk, and to manage the impact of changes in interest rates, foreign exchange rate movements and bunker prices on earnings and cash flows through derivatives. Derivative contracts are executed when management believes that the action is not likely to significantly increase overall risk. Entering into swaps and derivatives transactions is inherently risky and presents various possibilities for incurring significant expenses. The derivatives strategies that we employ in the future may not be successful or effective, and we could, as a result, incur substantial additional interest costs. See "Item 11. Quantitative and Qualitative Disclosures About Market Risk" for a description of our current interest rate swap arrangements.

Uncertainty relating to the LIBOR calculation process and potential phasing out of LIBOR after 2021 may adversely affect the amounts payable under our credit facilities and our preferred shares.

On July 27, 2017, the United Kingdom Financial Conduct Authority ("FCA"), which regulates LIBOR, announced that it intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR to the administrator of LIBOR after 2021 ("FCA Announcement"). The FCA Announcement indicates that the continuation of LIBOR on the current basis is not guaranteed after 2021.

Our credit facilities bear interest costs at a floating rate based on LIBOR. Uncertainties surrounding changes to the basis of which LIBOR is calculated or the phase-out of LIBOR, which may cause a sudden and prolonged increase or decrease in LIBOR, could adversely affect our operating results and financial condition, as well as our cash flows, including cash available for dividends to our shareholders. While we use interest rate swaps to reduce our exposure to interest rate risk and to hedge a portion of our outstanding indebtedness, there is no assurance that our derivative contracts will provide adequate protection against adverse changes in interest rates or that our bank counter parties will be able to perform their obligations.

If a three-month LIBOR rate is not available, the terms of our various credit facilities, and to the extent applicable, our preferred shares will require alternative determination procedures which may result in an interest and/or a dividend rate differing from expectations and could materially affect the value of the such instruments.

Our subsidiaries' vessels may suffer damage and we may face unexpected dry-docking costs which could affect our cash flow and financial condition.

If our vessels suffer damage, they may need to be repaired at a dry-docking facility. The costs of dry-dock repairs can be both substantial and unpredictable. We may have to pay dry-docking costs that our insurance does not cover. This would result in decreased earnings.

If we were to be subject to corporate income tax in jurisdictions in which we operate, our financial results would be adversely affected.

Under current Bermuda law, there is no income, corporate or profits tax or withholding tax, capital gains tax or capital transfer tax, estate or inheritance tax payable by us or our shareholders, other than shareholders ordinarily resident in Bermuda, if any. We have received from the Minister of Finance under The Exempted Undertaking Tax Protection Act 1966, as amended of Bermuda, an assurance that, in the event that Bermuda enacts legislation imposing tax computed on profits, income, any capital asset, gain or appreciation, or any tax in the nature of estate duty or inheritance, then the imposition of any such tax shall not be applicable to us or to any of our operations or shares, debentures or other obligations, until March 23, 2035. We believe that we should not be subject to tax under the laws of various countries, other than the United States, in which our subsidiaries' vessels conduct activities or in which our subsidiaries' customers are located. However, our belief is based on our understanding of the tax laws of those countries, and our tax position is subject to review and possible challenge by taxing authorities and to possible changes in law or interpretation. We cannot determine in advance the extent to which certain jurisdictions may require us to pay corporate income tax or to make payments in lieu of such tax. In addition, payments due to us from our subsidiaries' customers may be subject to tax claims. As a result of the continuing economic crisis in Greece, our operations in Greece may be subjected to new regulations that may require us to incur new or additional compliance or other administrative costs, which may include requirements that we pay to the Greek government new taxes or other fees. In addition, China has enacted a new 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, including any stevedore, warehousing and other services connected with the transportation. The new regulation broadens the range of international transportation companies which may find themselves liable for Chinese enterprise income tax on profits generated from international transportation services passing through Chinese ports.

If we or our subsidiaries are not entitled to exemption under Section 883 of the United States Internal Revenue Code of 1986, as amended, for any taxable year, we or our subsidiaries would be subject for those years to a 4% United States federal income tax on our gross U.S.-source shipping revenue, without allowance for deductions, under Section 887 of the Internal Revenue Code. The imposition of such tax could have a negative effect on our business and would result in decreased earnings and cash flows available for distribution to our shareholders.

See "Item 10. Additional Information—Tax Considerations—United States federal income tax considerations" for additional information about the requirements of this exemption.

If we were treated as a passive foreign investment company, a U.S. investor in our shares would be subject to disadvantageous rules under the U.S. tax laws.

If we were treated as a passive foreign investment company (a "PFIC") in any year, our U.S. shareholders would be subject to unfavorable U.S. federal income tax treatment. We do not believe that we will be a PFIC in 2019 or in any future year. However, PFIC classification is a factual determination made annually and we could become a PFIC if the portion of our income derived from bareboat charters or other passive sources were to increase substantially or if the portion of our assets that produce or are held for the production of passive income were to increase substantially. Moreover, the IRS may disagree with our position that time and voyage charters do not give rise to passive income for purposes of the PFIC rules. Accordingly, we can provide no assurance that we will not be treated as a PFIC for 2019 or for any future year. Please see "Tax Considerations—United States federal income tax considerations—Passive Foreign Investment Company Considerations" herein for a description of the PFIC rules.

Distributions on shares of non-U.S. companies that are treated as dividends for U.S. federal income tax purposes and are received by individuals generally will be eligible for taxation at capital gain rates if the shares with respect to which the dividends are paid are readily tradable on an established securities market in the United States. This treatment will not be available to dividends we pay, however, if we qualify as a PFIC for the taxable year of the dividend or the preceding taxable year, or to the extent that (i) the shareholder does not satisfy a holding period requirement that generally requires that the shareholder hold the shares on which the dividend is paid for more than 60 days during the 121-day period that begins 60 days before the date on which the shares become ex-dividend with respect to such dividend, (ii) the shareholder is under an obligation to make related payments with respect to substantially similar or related property or (iii) such dividend is taken into account as investment income under Section 163(d)(4)(B) of the Internal Revenue Code. We do not believe that we qualified as a PFIC for our last taxable year and, as described above, we do not expect to qualify as a PFIC for our current or future taxable years.

Because some of our subsidiaries' vessels' expenses are incurred in foreign currencies, we are exposed to exchange rate risks.

The charterers of the vessels owned by our subsidiary companies pay in U.S. dollars. While most of the expenses incurred by our managers or by us on our subsidiaries' behalf are paid in U.S. dollars, certain of these expenses are in other currencies, most notably the Euro. In 2019, Euro expenses accounted for approximately 32% of our total operating expenses, including dry dockings. Declines in the value of the U.S. dollar relative to the Euro, or the other currencies in which we incur expenses, would increase the U.S. dollar cost of paying these expenses and thus would adversely affect our results of operations.

The Tsakos Holdings Foundation and the Tsakos family can exert considerable control over us, which may limit your ability to influence our actions.

As of April 2, 2020, companies controlled by the Tsakos Holdings Foundation or affiliated with the Tsakos Group own approximately 33.3% of our outstanding common shares. The Tsakos Holdings Foundation is a

Liechtenstein foundation whose beneficiaries include persons and entities affiliated with the Tsakos family, charitable institutions and other unaffiliated persons and entities. The council which controls the Tsakos Holdings Foundation consists of five members, two of whom are members of the Tsakos family. As long as the Tsakos Holdings Foundation and the Tsakos family beneficially own a significant percentage of our common shares, each will have the power to influence the election of the members of our board of directors and the vote on substantially all other matters, including significant corporate actions.

Risks Related To Our Common and Preferred Shares

Future sales of our common shares could cause the market price of our common shares to decline.

Sales of a substantial number of our common shares in the public market, or the perception that these sales could occur, may depress the market price for our common shares. These sales could also impair our ability to raise additional capital through the sale of our equity securities in the future. We may issue additional common shares in the future, including upon conversion of our currently outstanding Series G Convertible Preferred Shares, which are convertible into an aggregate of 8,716,667 of our common shares, and our shareholders may elect to sell large numbers of shares held by them from time to time.

The market price of our common shares and preferred shares may be unpredictable and volatile.

The market price of our common shares and Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares may fluctuate due to factors such as actual or anticipated fluctuations in our quarterly and annual results and those of other public companies in our industry, mergers and strategic alliances in the tanker industry, market conditions in the tanker industry, changes in government regulation, shortfalls in our operating results from levels forecast by securities analysts, announcements concerning us or our competitors, our sales of our common shares or of additional preferred shares, changes in prevailing interest rates and the general state of the securities market. The tanker industry has been highly unpredictable and volatile. The market for common stock and preferred stock in this industry may be equally volatile. Therefore, we cannot assure you that you will be able to sell any of our common shares and preferred shares you may have purchased, or will purchase in the future, at a price greater than or equal to the original purchase price.

If the market price of our common shares remains below $5.00 per share, under stock exchange rules, our shareholders will not be able to use such shares as collateral for borrowing in margin accounts. This inability to use common shares as collateral may depress demand and certain institutional investors are restricted from investing in or holding shares priced below $5.00, which could lead to sales of such shares creating further downward pressure on and increased volatility in the market price of our common shares.

We may not be able to pay cash dividends on our common shares or preferred shares as intended if market conditions change.

During 2019, we paid dividends on our common shares totaling $0.10 per common share, or $8.9 million. On March 24, 2020, the Company announced a common share dividend of $0.05 per common share to be paid in June 2020. In addition, during 2019, the Company redeemed all of its Series B Preferred Shares, amounting to $50.0 million, and paid dividends on preferred shares totaling $40.4 million and in 2020 we have paid $9.2 million in dividends on preferred shares, between January 1 and April 1. A further $4.8 million in common share dividends, and $0.4 million payable on Series G Convertible Preferred Shares, have been declared for payment in June 2020 and $4.7 million in preferred share dividends have been declared for payment on April 30, 2020. Subject to the limitations discussed below, we currently intend to continue to pay cash dividends on our common shares and preferred shares. However, there can be no assurance that we will pay dividends or as to the amount of any dividend. The payment and the amount will be subject to the discretion of our board of directors and will depend, among other things, on restrictions in the Companies Act of 1981 of Bermuda, as amended, or

the Companies Act, on our available cash balances, anticipated cash needs, our results of operations, our financial condition, and any loan agreement restrictions binding us or our subsidiaries, including a prohibition of dividend distribution should there be an event of default in existence relating to any loan, as well as other relevant factors. In addition, dividends on our common shares are subject to the priority of our dividend obligations relating to our Series C, Series D, Series E and Series F Preferred Shares and Series G Convertible Preferred Shares. We may have insufficient cash to pay dividends on or redeem our Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares or pay dividends on our common shares. Depending on our operating performance for a particular year, this could result in no dividend at all despite the existence of net income, or a dividend that represents a lower percentage of our net income.

Because we are a holding company with no material assets other than the stock of our subsidiaries, our ability to pay dividends will depend on the earnings and cash flow of our subsidiaries and their ability to pay us dividends. In addition, the financing arrangements for indebtedness we incur in connection with our newbuilding program may further restrict our ability to pay dividends. In the event of any insolvency, bankruptcy or similar proceedings of a subsidiary, creditors of, and holders of preferred shares issued by, such subsidiary would generally be entitled to priority over us with respect to assets of the affected subsidiary. Investors in our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares or Series G Convertible Preferred Shares may be adversely affected if we are unable to or do not pay dividends as intended.

Market interest rates may adversely affect the value of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares.

One of the factors that influences the price of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares is the dividend yield on these preferred shares (as a percentage of the price thereof) relative to market interest rates. An increase in market interest rates, which are currently at low levels relative to historical rates and have recently been increasing, may lead to lower prices for our shares when valued using their dividend yields. Higher interest rates would likely increase our borrowing costs and potentially decrease funds available for dividends. Accordingly, higher interest rates could cause the market prices of our preferred shares to decrease.

Our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares represent perpetual equity interests and holders of such shares will have no right to receive any greater payment than the liquidation preference regardless of the circumstances.

The preferred shares represent perpetual equity interests in us and, unlike our indebtedness, will not give rise to a claim for payment of a principal amount at a particular date. As a result, holders of the preferred shares may be required to bear the financial risks of an investment in the preferred shares for an indefinite period of time.

The payment due to a holder of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares upon a liquidation is fixed at the redemption preference of $25.00 per share plus accumulated and unpaid dividends to the date of liquidation. If, in the case of our liquidation, there are remaining assets to be distributed after payment of this amount, you will have no right to receive or to participate in these amounts. Furthermore, if the market price for your preferred stock is greater than the liquidation preference, you will have no right to receive the market price from us upon our liquidation.

Holders of our Preferred Shares have extremely limited voting rights.

The voting rights of holders of Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares are extremely limited. The holders of the Series G Convertible Preferred Shares generally do not have voting rights. Our common shares are the only class or series of our shares carrying

full voting rights. The voting rights of holders of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares are limited to the ability, subject to certain exceptions, to elect, voting together as a class with all other classes or series of parity securities upon which like voting rights have been conferred and are exercisable, one director if dividends for six quarterly dividend periods (whether or not consecutive) payable thereon are in arrears and certain other limited protective voting rights described in "Item 10. Additional Information—Description of Share Capital—Preferred Shares."

Provisions in our Bye-laws and our management agreement with Tsakos Energy Management would make it difficult for a third party to acquire us, even if such a transaction is beneficial to our shareholders.

Our Bye-laws provide for a staggered board of directors, blank check preferred stock, super majority voting requirements and other anti-takeover provisions, including restrictions on business combinations with interested persons and limitations on the voting rights of shareholders who acquire more than 15% of our common shares. In addition, Tsakos Energy Management would have the right to terminate our management agreement and seek liquidated damages if a board member were elected without having been approved by the current board. These provisions could deter a third party from tendering for the purchase of some or all of our shares. These provisions may have the effect of delaying or preventing changes of control of the ownership and management of our company.

Because we are a foreign corporation, you may not have the same rights as a shareholder in a U.S. corporation.

We are a Bermuda company. Our Memorandum of Association and Bye-laws and the Companies Act govern our affairs. While many provisions of the Companies Act resemble provisions of the corporation laws of a number of states in the United States, Bermuda law may not as clearly establish your rights and the fiduciary responsibilities of our directors as do statutes and judicial precedent in some U.S. jurisdictions. In addition, apart from three non-executive directors, our directors and officers are not resident in the United States and all or substantially all of our assets are located outside of the United States. As a result, investors may have more difficulty in protecting their interests and enforcing judgments in the face of actions by our management, directors or controlling shareholders than would shareholders of a corporation incorporated in a U.S. jurisdiction.

In addition, you should not assume that courts in the country in which we are incorporated or where our assets are located would enforce judgments of U.S. courts obtained in actions against us based upon the civil liability provisions of applicable U.S. federal and state securities laws or would enforce, in original actions, liabilities against us based on those laws.

We are a "foreign private issuer" under NYSE rules, and as such we are entitled to exemption from certain NYSE corporate governance standards, and you may not have the same protections afforded to shareholders of companies that are subject to all of the NYSE corporate governance requirements.

We are a "foreign private issuer" under the securities laws of the United States and the rules of the NYSE. Under the securities laws of the United States, "foreign private issuers" are subject to different disclosure requirements than U.S. domiciled registrants, as well as different financial reporting requirements. Under the NYSE rules, a "foreign private issuer" is subject to less stringent corporate governance requirements. Subject to certain exceptions, the rules of the NYSE permit a "foreign private issuer" to follow its home country practice in lieu of the listing requirements of the NYSE, including (i) the requirement that a majority of the board of directors consist of independent directors, (ii) the requirement that the nominating/corporate governance committees be composed entirely of independent directors and have a written charter addressing the committee's purpose and responsibilities, (iii) the requirement that the compensation committee be composed entirely of independent directors and have a written charter addressing the committee's purpose and responsibilities, and (iv) the requirement of an annual performance evaluation of the nominating/corporate governance and compensation committees.

Nonetheless, a majority of our directors are independent, all of the members of our compensation, nominating and corporate governance committee are independent directors, and all of our board committees have written charters addressing their respective purposes and responsibilities.

Item 4. Information on the Company

Tsakos Energy Navigation Limited is a leading provider of international seaborne crude oil and petroleum product transportation services. In 2007, it also started to transport liquefied natural gas. It was incorporated in 1993 as an exempted company under the laws of Bermuda under the name Maritime Investment Fund Limited and in 1996 was renamed MIF Limited. Our common shares were listed in 1993 on the Oslo Stock Exchange (OSE) and the Bermuda Stock Exchange, although we de-listed from the OSE in March 2005 due to limited trading. The Company's shares are no longer actively traded on the Bermuda exchange. In July 2001, the Company's name was changed to Tsakos Energy Navigation Limited to enhance our brand recognition in the tanker industry, particularly among charterers. In March 2002, we completed an initial public offering of our common shares in the United States and our common shares began trading on the New York Stock Exchange under the ticker symbol "TNP." Since incorporation, the Company has owned and operated 99 vessels and has sold 37 vessels (of which five had been chartered back and three of these eventually repurchased at the end of their charters; all three have since been sold again).

Our principal offices are located at 367 Syngrou Avenue, 175 64 P. Faliro, Athens, Greece. Our telephone number at this address is 011 30 210 9407710. Our website address is http://www.tenn.gr.

For additional information on the Company, see "Item 5. Operating and Financial Review and Prospects."

Business Overview

As of April 2, 2020, we operated a fleet of 60 modern crude oil and petroleum product tankers (including four vessels chartered-in) that provide world-wide marine transportation services for national, major and other independent oil companies and refiners under long, medium and short-term charters. Our fleet also includes two LNG carriers and three suezmax shuttle tankers with advanced dynamic positioning technology (DP2), bringing our total operating fleet to 65 vessels representing approximately 7.0 million dwt.

We believe that we have established a reputation as a safe, high quality, cost efficient operator of modern and well-maintained tankers. We also believe that these attributes, together with our strategy of proactively working towards meeting our customers' chartering needs, has contributed to our ability to attract world-class energy producers as customers and to our success in obtaining charter renewals generating strong fleet utilization.

Our fleet is managed by Tsakos Energy Management, a company owned by our chief executive officer. Tsakos Energy Management provides us with strategic advisory, financial, accounting and administrative services, while subcontracting the commercial management of our business to Tsakos Shipping. In its capacity as commercial manager, Tsakos Shipping provides various services for our vessels, including charterer relations, obtaining insurance and vessel sale and purchase, supervising newbuilding construction and vessel financing. Tsakos Energy Management subcontracts the technical and operational management of our fleet to Tsakos Columbia Management ("TCM"). TCM was formed in February 2010 by Tsakos family interests and a German private company, the owner of the ship management company Columbia Shipmanagement Ltd., or CSM, as a joint-venture ship management company on an equal partnership basis to provide technical and operational management services to owners of vessels, primarily within the Greece-based market. TCM, which formally commenced operations on July 1, 2010, now manages the technical and operational activities of all of our operating vessels apart from the LNG carriers *Neo Energy* and *Maria Energy*, the VLCCs *Ulysses* and *Hercules I*, the suezmax tanker *Eurochampion 2004* and the aframax tankers *Maria Princess* and *Sapporo Princess* which are technically managed by a non-affiliated ship manager. TCM is based in Athens, Greece. TCM and CSM

cooperate in the purchase of certain supplies and services on a combined basis. By leveraging the purchasing power of CSM, which currently provides full technical management services for 298 vessels and crewing services for an additional 64 vessels, we believe TCM is able to procure services and supplies at lower prices than Tsakos Shipping could alone, thereby reducing overall operating expenses for us. In its capacity as technical manager, TCM manages our day-to-day vessel operations, including provision of supplies, maintenance and repair, and crewing. Members of the Tsakos family are involved in the decision-making processes of Tsakos Energy Management, Tsakos Shipping and TCM.

As of April 2, 2020, our operational fleet consisted of the following 65 vessels:

Number of Vessels	Vessel Type
2	VLCC
12	Suezmax
19	Aframax
3	Aframax LR2
11	Panamax LR1
6	Handymax MR2
7	Handysize MR1
2	LNG carrier
3	Shuttle DP2
Total 65	

Twenty-five of the operating vessels are of ice-class specification. This fleet diversity, which includes a number of sister ships, provides us with the capability to be one of the more versatile operators in the market. The current operating fleet totals 7.0 million dwt, all of which are double-hulled. As of April 2, 2020, the average age of the tankers in our current operating fleet was 9.0 years, compared with the industry average of 11.1 years.

We believe the following factors distinguish us from other public tanker companies:

- ***Modern, high-quality, fleet.*** We own a fleet of modern, versatile, high-quality tankers that are designed for enhanced safety and low operating costs. Since inception, we have committed to investments of approximately $5.2 billion, including investments of approximately $4.2 billion in newbuilding constructions, in order to maintain and improve the quality of our fleet. We believe that increasingly stringent environmental regulations and heightened concerns about liability for oil pollution have contributed to a significant demand for our vessels by leading oil companies, oil traders and major government oil entities. TCM, the technical manager of our fleet, has ISO 14001 environmental certification and ISO 9001 quality certification, ISO 45001 occupational health & safety certification and ISO 50001 energy management system certification, based in part upon audits conducted on our vessels and on technical manager's management system.

- ***Diversified fleet.*** Our diversified fleet, which includes VLCC, suezmax, aframax, panamax, handysize, and handymax tankers, LNG carriers and DP2 shuttle tankers, allows us to better serve our customers' international petroleum product and crude oil transportation needs. 25 of our tankers are ice-class, so may access ice-bound ports depending on accumulation of brash ice. We entered the LNG market with the delivery of our first LNG carrier in 2007 and took delivery of a second LNG carrier in 2016. We entered the shuttle tanker market with two DP2 suezmax shuttle tankers *Rio 2016* and *Brasil 2014* delivered in March and April 2013, respectively, each of which immediately entered into a 15-year time charter with Petrobras. A third DP2 suezmax shuttle tanker, *Lisboa*, was delivered on May 4, 2017 for charter to a European state-owned oil major.

- ***Stability throughout industry cycles.*** Historically, we have employed a high percentage of our fleet on long and medium-term employment with fixed rates or minimum rates plus profit sharing agreements. We believe this approach has resulted in high utilization rates for our vessels, reflecting our industrial

shipping model. At the same time, we maintain flexibility in our chartering policy to allow us to take advantage of favorable rate trends through spot market employment and contract of affreightment charters with periodic adjustments. Over the last five years, our overall average fleet utilization rate was 96.7%.

- ***High-Quality, sophisticated clientele.*** For 50 years, Tsakos entities have maintained relationships with and achieved acceptance by national, major and other independent oil companies and refiners. Several of the world's major oil companies and traders, including Equinor (formerly Statoil), BP, ExxonMobil, Flopec Petrolera Ecuatoriana ("Flopec"), Hyundai Merchant Marine, Petrobras, Chevron, Shell and Vitol are among the regular customers of Tsakos Energy Navigation.
- ***Developing LNG and offshore shuttle tanker platform.*** We believe we are well positioned to capitalize on demand for LNG sea transport as well as offshore shuttle tanker transport because of our extensive relationships with existing customers, strong safety track record, superior technical management capabilities and financial flexibility. We already operate two LNG carriers (with a further one on order) and three DP2 suezmax shuttle tankers, in these high-end markets.
- ***Significant leverage from our relationship with Tsakos Shipping and TCM.*** We believe the expertise, scale and scope of TCM, which spreads costs over a vessel base much larger than our fleet, are key components in maintaining low operating costs, efficiency, quality and safety. We leverage Tsakos Shipping's reputation and longstanding relationships with leading charterers to foster charter renewals.

As of April 2, 2020, our fleet consisted of the following 65 vessels:

Vessel	Year Built	Deadweight Tons	Year Acquired	Charter Type(1)	Expiration of Charter	Hull Type(2) (all double hull)	Cargoes
VLCC							
1. Hercules	2017	300,000	2017	time charter	November 2021		Crude
2. Ulysses	2016	300,000	2016	spot	—		Crude
SUEZMAX							
1. Eurovision(3)	2013	158,000	2014	time charter	September 2020		Crude
2. Euro(3)	2012	158,000	2014	time charter	August 2021		Crude
3. Decathlon(3)	2012	162,710	2016	time charter	April 2020		Crude
4. Spyros K(4)	2011	157,648	2011	time charter	May 2022		Crude
5. Dimitris P(4)	2011	157,740	2011	time charter	August 2023		Crude
6. Pentathlon	2009	158,475	2015	time charter	October 2020		Crude
7. Arctic(3)	2007	163,216	2007	time charter	March 2021	ice-class 1A	Crude
8. Antarctic(3)	2007	163,216	2007	time charter	April 2020	ice-class 1A	Crude
9. Archangel(3)(10)	2006	163,216	2006	time charter	May 2020	ice-class 1A	Crude
10. Alaska(3)(10)	2006	163,250	2006	time charter	September 2020	ice-class 1A	Crude
11. Eurochampion 2004)(10)	2005	164,608	2005	spot	—	ice-class 1C	Crude
12. Euronike(10)	2005	164,565	2005	spot	—	ice-class 1C	Crude
SUEZMAX DP2 SHUTTLE							
1. Lisboa	2017	157,000	2017	time charter	May 2025		Crude/Products
2. Rio 2016	2013	155,709	2013	time charter	May 2028		Crude/Products
3. Brasil 2014	2013	155,721	2013	time charter	June 2028		Crude/Products
AFRAMAX							
1. Caribbean Voyager	2020	115,000	2020	bareboat charter	January 2025(7)		Crude
2. Mediterranean Voyager	2019	115,000	2019	bareboat charter	October 2024(7)		Crude
3. Bergen TS	2017	112,108	2017	time charter	October 2022(7)	ice-class 1B	Crude
4. Stavanger TS	2017	113,004	2017	time charter	July 2022(7)	ice-class 1B	Crude
5. Oslo TS	2017	112,949	2017	time charter	May 2022(7)	ice-class 1B	Crude
6. Marathon TS	2017	113,651	2017	time charter	February 2022(7)	ice-class 1B	Crude
7. Sola TS	2017	112,700	2017	time charter	April 2022(7)		Crude
8. Elias Tsakos	2016	113,737	2016	time charter	June 2023(8)		Crude
9. Thomas Zafiras	2016	113,691	2016	time charter	August 2023(8)		Crude
10. Leontios H	2016	113,611	2016	time charter	October 2023(8)		Crude

Vessel	Year Built	Deadweight Tons	Year Acquired	Charter Type[1]	Expiration of Charter	Hull Type[2] (all double hull)	Cargoes
11. Parthenon TS	2016	113,554	2016	time charter	November 2021[7]		Crude
12. Sapporo Princess	2010	105,354	2010	spot	—	DNA	Crude
13. Uraga Princess	2010	105,344	2010	CoA	—	DNA	Crude
14. Ise Princess	2009	105,361	2009	spot	—	DNA	Crude
15. Asahi Princess	2009	105,372	2009	time charter	April 2020	DNA	Crude
16. Maria Princess	2008	105,346	2008	spot	—	DNA	Crude
17. Nippon Princess	2008	105,392	2008	spot	—	DNA	Crude
18. Izumo Princess	2007	105,374	2007	time charter	August 2020	DNA	Crude
19. Sakura Princess	2007	105,365	2007	spot	—	DNA	Crude
20. Proteas	2006	117,055	2006	spot	—	ice-class 1A	Crude/Products
21. Promitheas	2006	117,055	2006	spot	—	ice-class 1A	Crude/Products
22. Propontis	2006	117,055	2006	spot	—	ice-class 1A	Crude
PANAMAX							
1. Sunray[3]	2016	74,039	2016	time charter	February 2021[9]		Crude/Products
2. Sunrise[3]	2016	74,043	2016	time charter	March 2021[9]		Crude/Products
3. World Harmony[4]	2009	74,200	2010	time charter	March 2021[5]		Crude/Products
4. Chantal[4]	2009	74,329	2010	time charter	May 2021[5]		Crude/Products
5. Selini[4][6]	2009	74,296	2010	time charter	February 2022		Crude/Products
6. Salamina[4][6]	2009	74,251	2010	time charter	April 2022		Crude/Products
7. Selecao[4]	2008	74,296	2008	time charter	June 2021		Crude/Products
8. Socrates[4]	2008	74,327	2008	time charter	June 2021		Crude/Products
9. Andes	2003	68,439	2003	time charter	April 2020		Crude/Products
10. Maya[6]	2003	68,439	2003	time charter	May 2020		Crude/Products
11. Inca[6]	2003	68,439	2003	spot	—		Crude/Products
HANDYMAX							
1. Artemis	2005	53,039	2006	time charter	April 2020	ice-class 1A	Products
2. Afrodite	2005	53,082	2006	time charter	August 2020	ice-class 1A	Products
3. Ariadne	2005	53,021	2006	time charter	June 2020	ice-class 1A	Products
4. Aris	2005	53,107	2006	time charter	May 2020	ice-class 1A	Products
5. Apollon	2005	53,149	2006	spot	—	ice-class 1A	Products
6. Ajax	2005	53,095	2006	time charter	September 2020	ice-class 1A	Products
HANDYSIZE							
1. Andromeda	2007	37,061	2007	spot	—	ice-class 1A	Products
2. Aegeas	2007	37,061	2007	spot	—	ice-class 1A	Products
3. Byzantion	2007	37,275	2007	spot	—	ice-class 1B	Products
4. Bosporos	2007	37,275	2007	spot	—	ice-class 1B	Products
5. Arion	2006	37,061	2006	spot	—	ice-class 1A	Products
6. Amphitrite	2006	37,061	2006	spot	—	ice-class 1A	Products
7. Didimon	2005	37,432	2005	spot	—		Products
LNG							
1. Maria Energy	2016	93,301	2016	time charter	March 2021	Membrane (161,870 cbm)	LNG
2. Neo Energy	2007	85,602	2007	time charter	March 2021	Membrane (150,000 cbm)	LNG
Total Vessels	**65**	**7,002,872**					

(1) Certain of the vessels are operating in the spot market under contracts of affreightment ("CoA").

(2) Ice-class classifications are based on ship resistance in brash ice channels with a minimum speed of 5 knots for the following conditions ice-1A: 1m brash ice, ice-1B: 0.8m brash ice, ice-1C: 0.6m brash ice. DNA- design new aframax with shorter length overall allowing greater flexibility in the Caribbean and the United States.

(3) The charter rate for these vessels is based on a fixed minimum rate for the Company plus different levels of profit sharing above the minimum rate, determined and settled on a calendar month basis.

(4) These vessels are chartered under fixed and variable hire rates. The variable portion of hire is recognized to the extent the amount becomes fixed and determinable at the reporting date. Determination is every six months.

(5) Charterers have the option to terminate the charter party after at least 12 months with three months' notice.

(6) 49% of the holding company of these vessels is held by a third party.

(7) The charterer of each of these vessels has options to extend the term of the charter for up to seven additional years.

(8) The charterer of each of these vessels has the option to extend the term of the charter for up to five additional years.

(9) The charterer of each of these vessels has the option to extend the term of the charter for up to two additional years.

(10) Vessels are chartered-in on a bare-boat basis by a subsidiary company. Vessel's *Eurochampion 2004* and *Euronike* until 2022, *Archangel* and *Alaska* until 2025.

Our newbuildings under construction, as of April 2, 2020, consisted of the following:

Vessel Type	Expected Delivery	Shipyard	Deadweight Tons	Purchase Price[1] (in millions of U.S. dollars)
Suezmaxes				
1. HN 8041	Q3 2020	Hyundai Samho	158,000	71.22
2. HN 8042	Q4 2020	Hyundai Samho	158,000	68.75
LNG				
1. HN 3157	Q4 2021	Hyundai Heavy Industries	81,500	190.04
Total			**397,500**	**330.01**

(1) Including any extra costs agreed as of April 2, 2020

We have arranged charters from the delivery of our two suezmax tanker newbuildings for periods from five to eleven years, including charterer options for extension. The newbuildings have a double hull design compliant with all classification requirements and prevailing environmental laws and regulations. Tsakos Shipping works closely with the shipyards in the design of the newbuildings and TCM provides supervisory personnel present during the construction.

Fleet Deployment

Depending on management's view of the state of the current spot market and future prospects for the market, we aim to optimize the financial performance of our fleet by deploying at least two-thirds of our vessels on either time charters or period employment with variable rates, as we take proactive steps to meet any potential negative impact of the expanding world fleet on freight rates. As at April 2, 2020, the percentage of the fleet that is in employment at fixed rates (including time charters with a profit share component) was approximately 68%. In the event that the prospects for the spot market appear to management to generate sustainable positive returns, management may decide to deploy immediately to the spot market vessels coming off time-charter. We believe that our fleet deployment strategy and flexibility provide us with the ability to benefit from increases in tanker rates while at the same time maintaining a measure of stability through cycles in the industry. The following table details the respective employment basis of our fleet during 2019, 2018 and 2017 as a percentage of operating days.

	Year Ended December 31,		
Employment Basis	2019	2018	2017
Time Charter—fixed rate	43%	43%	41%
Time Charter—variable rate	29%	29%	29%
Period Employment at variable rates	4%	5%	5%
Spot Voyage	24%	23%	25%
Total Net Earnings Days	22,542	22,573	22,095

Tankers operating on time charters may be chartered for several months or years whereas tankers operating in the spot market typically are chartered for a single voyage that may last up to several weeks. Vessels on period employment at variable rates related to the market are operating under contract of affreightment for a specific charterer. Tankers operating in the spot market may generate increased profit margins during improvements in tanker rates, while tankers operating on time charters generally provide more predictable cash flows. Accordingly, we actively monitor macroeconomic trends and governmental rules and regulations that may affect tanker rates in an attempt to optimize the deployment of our fleet. Our fleet has 21 tankers currently operating on spot voyages.

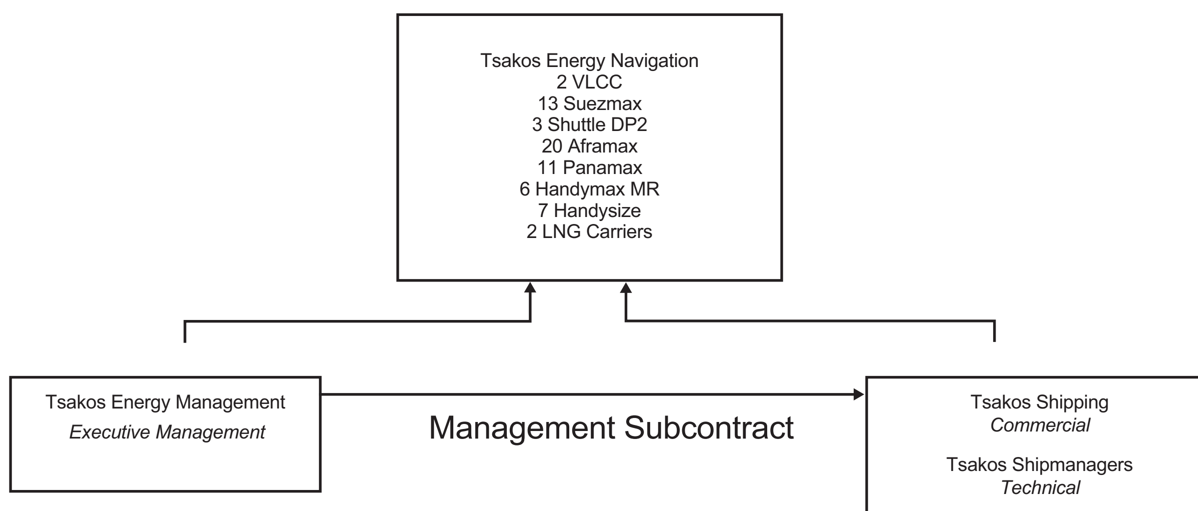
We have also secured charters from the delivery of our two suezmax tanker newbuildings for periods from five to eleven years, including charterer options for extension.

Operations and Ship Management

Our operations

Management policies regarding our fleet that are formulated by our Board of Directors are executed by Tsakos Energy Management under a management contract. Tsakos Energy Management's duties, which are performed exclusively for our benefit, include overseeing the purchase, sale and chartering of vessels, supervising day-to-day technical management of our vessels and providing strategic, financial, accounting and other services, including investor relations. Our tanker fleet's technical management, including crewing, maintenance and repair, and voyage operations, have been subcontracted by Tsakos Energy Management to TCM. Tsakos Energy Management also engages Tsakos Shipping to arrange chartering of our vessels, provide sales and purchase brokerage services, procure vessel insurance and arrange bank financing. The technical management of seven vessels was sub-contracted to third-party ship managers during 2019**.**

The following chart illustrates the management of our fleet as of April 2, 2020:



Technical management of the LNG carriers *Neo Energy* and *Maria Energy*, the VLCCs *Hercules I* and *Ulysses*, the suezmax *Eurochampion 2004* and the aframaxes *Maria Princess* and *Sapporo Princess*, is subtracted to unaffiliated third-party ship managers.

Management Contract

Executive and Commercial Management

Pursuant to our management agreement with Tsakos Energy Management, our subsidiaries' operations are executed and supervised by Tsakos Energy Management, based on the strategy devised by our Board of Directors and subject to the approval of our Board of Directors as described below. In accordance with the management agreement, we pay Tsakos Energy Management monthly management fees for its management of our subsidiaries' vessels.

The monthly fee may be adjusted annually in accordance with the terms of the agreement with Tsakos Energy Management, if both parties agree. There has not been an adjustment to fees relating to the conventional oil tankers payable to Tsakos Energy Management since 2012. In 2019 and 2018, the monthly fees for operating

conventional vessels were $27,500 and $20,400 for vessels chartered in or chartered out on a bare-boat basis or for vessels under construction and $35,000 for the DP2 shuttle tankers. In 2019 and 2018, the monthly fees for LNG carriers amounted to $36,877. From the above fees, fees are also paid to third-party managers for the LNG carriers, *Maria Energy* and *Neo Energy*, the suezmax *Eurochampion 2004,* the aframaxes *Maria Princess* and *Sapporo Princess*, and the VLCCs *Ulysses* and *Hercules I* and VLCC *Millennium* until April 11, 2018, the date of vessel's sale.

The management fee starts to accrue for a vessel at the point a newbuilding contract is executed. To help ensure that these fees are competitive with industry standards, our management has periodically made presentations to our Board of Directors in which the fees paid to Tsakos Energy Management are compared against the publicly available financial information of other listed tanker companies. We paid Tsakos Energy Management aggregate management fees of $20.1 million in 2019, $20.2 million in 2018 and $19.5 million in 2017. From these amounts, Tsakos Energy Management paid a technical management fee to Tsakos Columbia Shipmanagement. For additional information about the management agreement, including the calculation of management fees, see "Item 7. Major Shareholders and Related Party Transactions" and our consolidated financial statements which are included as Item 18 to this Annual Report.

Chartering. Our board of directors formulates with management our overall chartering strategy for our subsidiaries' vessels and Tsakos Shipping, under the supervision of Tsakos Energy Management, implements the strategy by:

- evaluating the short, medium, and long-term opportunities available for each type of vessel;
- balancing short, medium, and long-term charters in an effort to achieve optimal results for our fleet; and
- positioning such vessels so that, when possible, re-delivery occurs at times when Tsakos Shipping expects advantageous charter rates to be available for future employment.

Tsakos Shipping utilizes the services of various charter brokers to solicit, research, and propose charters for our vessels. The charter brokers' role involves researching and negotiating with different charterers and proposing charters to Tsakos Shipping for cargoes to be shipped in our subsidiaries' vessels. Tsakos Shipping negotiates the exact terms and conditions of charters, such as delivery and re-delivery dates and arranges cargo and country exclusions, bunkers, loading and discharging conditions and demurrage. Tsakos Energy Management is required to obtain our approval for charters in excess of six months and is required to obtain the written consent of the administrative agents for the lenders under our secured credit facilities for charters in excess of thirteen months. There are frequently two or more brokers involved in fixing a vessel on a charter. Brokerage fees typically amount to 2.5% of the value of the freight revenue or time charter hire derived from the charters. A chartering commission of 1.25% is paid to Tsakos Shipping for every charter involving the vessels in the fleet. In addition, Tsakos Shipping may charge a brokerage commission on the sale of a vessel. In 2018, the Company sold the VLCC tanker *Millennium* and for this service, Tsakos Shipping charged a brokerage commission 0.5% of the sale price of the vessel. In 2019 and 2017 there was no such commission. The total amount paid for these chartering and acquisition brokerage commissions was $7.4 million in 2019, $6.7 million in 2018 and $6.5 million in 2017. Tsakos Shipping may also charge a fee of $200,000 (or such other sum as may be agreed) on delivery of each newbuilding vessel in payment for the cost of design and supervision of the newbuilding by Tsakos Shipping. In 2017, $3.1 million in aggregate was charged for supervision fees on fifteen vessels which were delivered in the five months to October 2017. No such fee was paid in 2019 or 2018.

Tsakos Shipping supervises the post fixture business of our vessels, including:

- monitoring the daily geographic position of such vessels in order to ensure that the terms and conditions of the charters are fulfilled by us and our charterers;
- collection of monies payable to us; and
- resolution of disputes through arbitration and legal proceedings.

In addition, Tsakos Shipping appoints superintendents to supervise the construction of newbuildings and the loading and discharging of cargoes when necessary. Tsakos Shipping also participates in the monitoring of vessels' operations that are under TCM management and TCM's performance under the management contract.

General Administration. Tsakos Energy Management provides us with general administrative, office and support services necessary for our operations and the fleet, including technical and clerical personnel, communication, accounting, and data processing services.

Sale and Purchase of Vessels. Tsakos Energy Management advises our Board of Directors when opportunities arise to purchase, including through newbuildings, or to sell any vessels. All decisions to purchase or sell vessels require the approval of our Board of Directors.

Any purchases or sales of vessels approved by our Board of Directors are arranged and completed by Tsakos Energy Management. This involves the appointment of superintendents to inspect and take delivery of vessels and to monitor compliance with the terms and conditions of the purchase or newbuilding contracts.

In the case of a purchase of a vessel, each broker involved will receive commissions from the seller generally at the industry standard rate of one percent of the purchase price, but subject to negotiation. In the case of a sale of a vessel, each broker involved will receive a commission generally at the industry standard rate of one percent of the sale price, but subject to negotiation. In accordance with the management agreement, Tsakos Energy Management is entitled to charge for sale and purchase brokerage commission, but to date has not done so.

Technical Management

Pursuant to a technical management agreement, Tsakos Energy Management employs TCM to manage the day-to-day aspects of vessel operations, including maintenance and repair, provisioning and crewing of the vessels in the fleet. We benefit from the economies of scale of having our subsidiaries' vessels managed as part of the TCM managed fleet. On occasion, TCM subcontracts the technical management and manning responsibilities of our subsidiaries' vessels to third parties. The executive and commercial management of our subsidiaries' vessels, however, is not subcontracted to third parties. TCM, which is privately held, is one of the largest independent tanker managers with a total of 66 operating vessels under management (including 58 of our subsidiaries' vessels) at April 2, 2020, totaling approximately 6.3 million dwt. TCM employs full-time superintendents, technical experts and marine engineers and has expertise in inspecting second-hand vessels for purchase and sale, and in fleet maintenance and repair. They have approximately 179 employees engaged in ship management and approximately 3,668 seafaring employees, of whom approximately 2,016 are employed at sea and the remainder is on leave at any given time. Their principal office is in Athens, Greece. The fleet managed by TCM consists of tankers.

Tsakos Energy Management pays TCM a fee per vessel per month for technical management of operating vessels and vessels under construction. This fee was determined by comparison to the rates charged by other major independent vessel managers. We generally pay all monthly operating requirements of our fleet in advance.

TCM performs the technical management of the vessels under the supervision of Tsakos Energy Management. Tsakos Energy Management approves the appointment of fleet supervisors and oversees the establishment of operating budgets and the review of actual operating expenses against budgeted amounts. Technical management of the LNG carriers *Neo Energy* and *Maria Energy*, the VLCCs *Hercules I* and *Ulysses*, the suezmax *Eurochampion 2004* and the aframaxes *Maria Princess* and *Sapporo Princess*, is subcontracted to unaffiliated third-party ship managers.

Maintenance and Repair. Each of the vessels is dry-docked once every five years in connection with special surveys and, after the vessel is fifteen years old, the vessel is dry-docked every two and one-half years after a special survey (referred to as an intermediate survey), or as necessary to ensure the safe and efficient operation of such vessels and their compliance with applicable regulations. TCM arranges dry-dockings and repairs under instructions and supervision from Tsakos Energy Management. We believe that the continuous maintenance program we conduct results in a reduction of the time periods during which our vessels are in dry-dock.

TCM routinely employs on each vessel additional crew members whose primary responsibility is the performance of maintenance while the vessel is in operation. Tsakos Energy Management awards and, directly or through TCM, negotiates contracts with shipyards to conduct such maintenance and repair work. They seek competitive tender bids in order to minimize charges to us, subject to the location of our vessels and any time constraints imposed by a vessel's charter commitments. In addition to dry-dockings, TCM, where necessary, utilizes superintendents to conduct periodic physical inspections of our vessels.

Crewing and Employees

We do not employ personnel to run our business on a day-to-day basis. We outsource substantially all of our executive, commercial and technical management functions.

TCM arranges employment of captains, officers, engineers and other crew who serve on the vessels. TCM ensures that all seamen have the qualifications and licenses required to comply with international regulations and shipping conventions and that experienced and competent personnel are employed for the vessels.

Customers

Several of the world's major oil companies are among our regular customers. The table below shows the approximate percentage of revenues we earned from some of our customers in 2019.

Customer	Year Ended December 31, 2019
Equinor (ex-Statoil)	13.0%
Petrobras	11.5%
Koch	9.8%
Shell	8.5%
Flopec	7.0%
Litasco	6.3%
Vitol	5.0%
Seariver	4.0%
Cheniere	3.8%
CSSA	3.4%
HMM	3.3%
Sinopec	3.1%
Glovis	2.9%
BP Shipping	2.3%
Chevron	2.1%
ST Shipping	1.5%
Trafigura	1.3%
ENI	1.3%
Prime	1.1%
PMI	0.8%

Regulation

Our business and the operation of our vessels are materially affected by government regulation in the form of international conventions and national, state and local laws and regulations in force in the jurisdictions in which our vessels operate, as well as in the country or countries of their registration. Because these conventions, laws, and regulations are often revised, we cannot predict the ultimate cost of complying with them or their impact on the resale price and/or the useful lives of our vessels. Additional conventions, laws and regulations may be adopted which could limit our ability to do business or increase the cost of our doing business and which may have a material adverse effect on our operations. Various governmental and quasi-governmental agencies require us to obtain permits, licenses, certificates, and financial assurances with respect to our operations. Subject to the discussion below and to the fact that the kinds of permits, licenses, certificates and financial assurances required for the operation of our vessels will depend upon a number of factors, we believe that we have been and will be able to obtain all permits, licenses, certificates and financial assurances material to the conduct of our operations.

The heightened environmental and quality concerns of classification societies, insurance underwriters, regulators and charterers has led to the imposition of increased inspection and safety requirements on all vessels in the tanker market and the scrapping of older vessels throughout the industry has been accelerated.

IMO. The International Maritime Organization ("IMO") has adopted international conventions that impose liability for oil pollution in international waters and in a signatory's territorial waters, including amendments to Annex I of the 1973 International Convention for the Prevention of Pollution from Ships ("MARPOL") which set forth upgraded requirements for oil pollution prevention for tankers. These regulations are effective in relation to tankers in many of the jurisdictions in which our tanker fleet operates. They provide that: (1) tankers 25 years old and older must be of double-hull construction and (2) all tankers will be subject to enhanced inspections. All of the vessels in our fleet are of double hull construction. The regulations are intended to reduce the likelihood of oil pollution in international waters. These amendments became effective on April 5, 2005.

On January 1, 2007, Annex I of MARPOL was revised to incorporate all amendments since the MARPOL Convention entered into force in 1983 and to clarify the requirements for new and existing tankers.

Regulation 12A of MARPOL Annex I came into force on August 1, 2007 and governs oil fuel tank protection. The requirements apply to oil fuel tanks on all ships with an aggregate capacity of 600 cubic meters and above which are delivered on or after August 1, 2010, and all ships for which shipbuilding contracts were placed on or after August 1, 2007. Since March 1, 2018, Form B of the Supplement to the International Oil Pollution Prevention Certificate contained in MARPOL Annex I has been amended to simplify its completion with respect to segregated ballast tanks. Segregated ballast tanks use ballast water that is completely separate from the cargo oil and oil fuel system. Segregated ballast tanks are currently required by the IMO on crude oil tankers of 20,000 tons deadweight or more constructed after 1982.

MARPOL Annex IV entered into force on September 27, 2003, and requires ships engaged in international voyages and certified to carry more than 15 persons to have systems and controls in place to deal with human sewage, for governments to have port reception facilities and a requirement for survey and certification. Annex IV prohibits the discharge of sewage into the sea, except when the ship has an approved sewage treatment plant in operation or when the ship is discharging comminuted and disinfected sewage using an approved system at a distance of three nautical miles from the nearest land.

In September 1997, the IMO adopted Annex VI to MARPOL to address air pollution from ships. Annex VI came into force on May 19, 2005. It set limits on sulfur oxide and nitrogen oxide ("NOx") emissions from ship exhausts and prohibited deliberate emissions of ozone depleting substances, such as chlorofluorocarbons. Annex VI also included a global cap on the sulfur content of fuel oil and allowed for the designation of special areas known as Emission Control Areas ("ECAs") where more stringent controls on sulfur emissions would apply. Annex VI has been ratified by some, but not all IMO member states. All vessels subject to Annex VI and built

after May 19, 2005 must carry an International Air Pollution Prevention Certificate evidencing compliance with Annex VI. In October 2008, the Marine Environment Protection Committee ("MEPC") of the IMO adopted amendments to Annex VI regarding particulate matter, NOx and sulfur oxide emissions standards. These amendments, which entered into force in July 2010, seek to reduce air pollution from vessels by establishing a series of progressive standards to further limit the sulfur content in fuel oil, which were fully phased in at the beginning of 2020, and by establishing three tiers of NOx emission standards for new marine diesel engines, depending on their date of installation. Additionally, more stringent emission standards could apply in ECAs. The U.S. ratified the amendments in October 2008. Annex VI was implemented in the U.S. through the Act to Prevent Pollution from Ships ("APPS"). Annex VI, APPS and implementing regulations promulgated by the U.S. Environmental Protection Agency ("EPA") under the Clean Air Act ("CAA") impose engine-based and fuel-based standards that apply to U.S. flagged ships wherever located, and to non-U.S. flagged ships operating in U.S. waters, as well as ships operating within the 200 nautical mile border around the U.S., including the North American ECA and the U.S. Caribbean ECA, which encompasses waters around Puerto Rico and the U.S. Virgin Islands. The APPS statute requires engine manufacturers, owners and operators of vessels, and other persons to comply with Annex VI of MARPOL. The EPA and the U.S. Coast Guard (the "USCG") enforce these requirements pursuant to authority under APPS, the CAA and a 2011 Memorandum of Understanding between the EPA and the USCG setting forth the terms by which the EPA and the USCG mutually cooperate in enforcement and implementation.

Amendments to Annex VI to address greenhouse gas ("GHG") emissions from shipping came into force on January 1, 2013. New vessels of 400 tons or greater are required to meet minimum energy efficiency levels per capacity mile (the Energy Efficient Design Index ("EEDI")), while existing vessels were required to implement Ship Energy Efficiency Management Plans ("SEEMPs"). All our vessels have SEEMPs. The EEDI requirements do not apply to a liquefied natural gas ("LNG") carrier unless the construction contract for the carrier was placed on or after September 1, 2015. Our LNG carriers comply with EEDI requirements.

We have obtained International Air Pollution Prevention certificates for all of our vessels. Implementing the requirements of Annex VI may require modifications to vessel engines or the addition of post combustion emission controls, or both, as well as the use of lower sulfur fuels. In April 2016, the IMO adopted an amendment to Annex VI regarding requirements for recording operational compliance with NOx Tier III emission control areas (discussed in further detail below) and a further amendment to the NOx Technical Code 2008 to facilitate the testing of gas and dual fuel engines. This amendment entered into force on September 1, 2017. We believe that maintaining compliance with Annex VI will not have a significantly adverse financial impact on the operation of our vessels.

Further amendments to Annex VI of MARPOL were adopted by the MEPC in October 2016. Beginning on January 1, 2019, the new Regulation 22A of chapter 4 of Annex VI added a requirement for ships of 5,000 gross tons and above to collect consumption data for each type of fuel oil used as well as other specified data. The collection method should be set out in the SEEMP and this information must have been submitted to the flag state no later than March 31, 2020. The flag state in turn must submit data to an IMO Ship Fuel Oil Consumption Database. Other regulations were amended to cater to this new requirement, including those related to certificates, surveys and port state control. The MEPC also adopted amendments to Annex VI setting the global limit for sulfur content of ships' fuel oil to 0.5% mass by mass ("m/m") as opposed to the current global limit of 3.5% m/m. The new sulfur limit entered into effect on January 1, 2020. From March 1, 2020, ships are not permitted to transport fuels containing more than 0.5% m/m sulfur content for use on board, unless the ship has an approved exhaust cleaning system or "scrubber" fitted. We do not believe compliance with such regulations will have a material effect on the operation or financial viability of our business.

In April 2016, a revised annex to the Convention on Facilitation of International Maritime Traffic ("FAL") was adopted by the IMO. It contains revised mandatory requirements for the electronic exchange of information on cargo and crew. This electronic exchange of information was mandatory beginning April 9, 2019, with a transition period of no less than 12 months. Other revised standards cover discrimination in respect to shore leave and access to shore-side facilities and updates to recommended practice in relation to stowaways. The revised annex entered into force on January 1, 2018. We comply with these regulations.

In 2001, the IMO adopted the International Convention on the Control of Harmful Anti-fouling Systems on Ships (the "Anti-fouling Convention") which prohibits the use of organotin compound coatings to prevent the attachment of mollusks and other sea life to the hulls of vessels. The Anti-fouling Convention came into force on September 17, 2008 and applies to vessels constructed prior to January 1, 2003 that have not been in dry-dock since that date. Since January 1, 2008, under the Anti-fouling Convention, exteriors of vessels have had to be either free of the prohibited compounds or have had coatings that act as a barrier to the leaching of the prohibited compounds applied. Vessels of over 400 gross tons engaged in international voyages must obtain an International Anti-fouling System Certificate and must undergo a survey before the vessel is put into service or when the anti-fouling systems are altered or replaced. We have obtained International Anti-fouling System Certificates for all of our vessels that are subject to the Anti-fouling Convention and do not believe that maintaining such certificates will have an adverse financial impact on the operation of our vessels.

In addition, our LNG carriers meet IMO requirements for liquefied gas carriers, including those contained in the International Code for the Construction and Equipment of Ships carrying Liquefied Gases in Bulk ("ICG Code"), the Existing Ships Carrying Liquefied Gases in Bulk ("EGC Code") and the Code of the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk ("GC Code"). In order to operate in the navigable waters of the IMO's member states, liquefied gas carriers must have an IMO Certificate of Fitness demonstrating compliance with construction codes for liquefied gas carriers. These codes, and similar regulations in individual member states, address fire and explosion risks posed by the transport of liquefied gases. Collectively, these standards and regulations impose detailed requirements relating to the design and arrangement of cargo tanks, vents, and pipes; construction materials and compatibility; cargo pressure; and temperature control. Liquefied gas carriers are also subject to international conventions that regulate pollution in international waters and a signatory's territorial waters. Under the IMO regulations, gas carriers that comply with the IMO construction certification requirements are deemed to satisfy the requirements of Annex II of MARPOL applicable to transportation of chemicals at sea, which would otherwise apply to certain liquefied gases. With effect from January 1, 2007, the IMO revised the Annex II regulations that restrict discharges of "noxious liquid substances" during cleaning or de-ballasting operations. The revisions include significantly lower permitted discharge levels of noxious liquid substances for vessels constructed on or after the effective date, made possible by improvements in vessel technology. These discharge requirements apply to the Company's LNG carriers. With effect from January 1, 2021, Annex II MARPOL will impose stricter controls on the discharge of noxious liquid substances residues in specified areas (North West European waters, Baltic Sea area, Western European waters and the Norwegian Sea). In these areas prewash and discharge to a port reception facility will be required for cargo residues and tank washings containing persistent floating products (for example, certain vegetable oils and paraffin-like cargoes).

On January 1, 2013, MARPOL Annex V regulations came into force with regard to the disposal of garbage from ships at sea. These regulations prohibit the disposal of garbage at sea other than certain defined permitted discharges or when outside one of the MARPOL Annex V "special areas" in which, for reasons relating to their oceanographical and ecological condition and/or their sea traffic, the adoption of special mandatory methods for the prevention of sea pollution is required. Under MARPOL, these special areas are provided with a higher level of protection than other areas of the sea. These areas are the: (i) Mediterranean Sea; (ii) Baltic Sea; (iii) Black Sea; (iv) Red Sea; (v) Gulfs area; (vi) North Sea; (vii) Antarctic sea; and (viii) Wider Caribbean region including the Gulf of Mexico and the Caribbean Sea. The regulations do not only impact the disposal of "traditional garbage" but also the disposal of harmful hold washing water and cargo residues. Products considered suitable for discharge are those not defined as harmful by the criteria set out in MARPOL Annex III and which do not contain carcinogenic, mutagenic or reprotoxic components. We have a protocol in place to ensure that (i) garbage is disposed of in accordance with the Annex V regulations and that the vessels in our fleet maintain records showing that any cleaning agent or additive used was not harmful to the marine environment and (ii) the supplier provides a signed and dated statement to this effect, either as part of a Material Safety Data Sheet ("MSDS") or as a stand-alone document. Our protocol addresses the Annex V special areas and we do not consider them likely to adversely affect our ability to operate our vessels.

In October 2016, the IMO adopted amendments to Annex V which place responsibility on shippers to determine whether or not their cargo is hazardous to the marine environment (with such categorization to be carried out in accordance with the UN Globally Harmonized System of Classification and Labelling of Chemicals) and introduced a two-part garbage record book which splits cargo residues from garbage other than cargo residues. These amendments entered into force on March 1, 2018. We have policies and procedures in place to ensure compliance with these amendments to Annex V.

Tsakos Columbia Shipmanagement S.A., or TCM, our technical manager, is ISO 14001 compliant. ISO 14001 requires companies to commit to the prevention of pollution as part of the normal management cycle. Additional or new conventions, laws and regulations may be adopted that could adversely affect our ability to manage our vessels.

In addition, the European Union and countries elsewhere have considered stricter technical and operational requirements for tankers and legislation that would affect the liability of tanker owners and operators for oil pollution. Any additional laws and regulations that are adopted could limit our ability to do business or increase our costs. The results of these or other potential future regulations could have a material adverse effect on our operations.

Under the current regulations, the vessels of our existing fleet will be able to operate for substantially all of their respective economic lives. However, compliance with the regulations regarding inspections of all vessels may adversely affect our operations. We cannot at the present time evaluate the likelihood or magnitude of any such adverse effect on our operations due to uncertainty of interpretation of the IMO regulations.

The operation of our vessels is also affected by the requirements set forth in the IMO's International Safety Management Code for the Safe Operation of Ships and for Pollution Prevention ("ISM Code") which came into effect in relation to oil tankers in July 1998 and which was further amended on July 1, 2010. The ISM Code requires ship owners, ship managers and bareboat (or demise) charterers to develop and maintain an extensive "safety management system" that includes the adoption of a safety and environmental protection policy setting forth instructions and procedures for safe operation and describing procedures for dealing with emergencies. The failure of a shipowner, ship manager or bareboat charterer to comply with the ISM Code may subject that 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, some ports. All of our vessels are ISM Code certified.

The International Convention for the Safety of Life at Sea ("SOLAS") was amended in November 2012 to incorporate mandatory maximum noise level limits for machinery spaces, control rooms, accommodation and other spaces on board vessels. The amendments came into force on July 1, 2014 and require ships of 1,600 gross tons or more, for which the building contract was placed on or after July 1, 2014 or were constructed on or after January 1, 2015 or will be delivered on or after July 1, 2018 to be constructed to reduce on-board noise and to protect personnel from noise on board ships. All of our vessels comply with existing guidelines, and our new buildings will meet the applicable requirements.

SOLAS Regulations II-2/4.5 and II-2/11.6 have been amended to clarify the provisions relating to the secondary means of venting cargo tanks in order to ensure adequate safety against over and under pressurization. SOLAS Regulation II-2/20 relating to the performance of ventilation systems was also amended. These changes apply to all tankers constructed on or after January 1, 2017. All of our tankers constructed on or after January 1, 2017 comply with, and our new buildings will meet, these requirements.

SOLAS Regulation II-2 10.10.1 and 10.10.3 have been amended and require ships constructed on or after July 1, 2014 to be fitted with the following by July 1, 2019: a) compressed air breathing apparatus fitted with an audible alarm and a visual or other device which will alert the user before the volume of the air in the cylinder has been reduced to no less than 200 liters; b) a minimum of two two-way portable radiotelephone apparatus for each fire party for fire-fighter's communication. The two-way portable radiotelephone apparatus must be explosion-proof or intrinsically safe. Fire parties are individuals or groups listed on the muster list.

Performance standards for Enhanced Group Call ("EGC") and NAVTEX Equipment have also been amended. Such equipment installed after July 1, 2019 must comply with SOLAS IV/7 and SOLAS IV/14.

SOLAS Regulations III/3 and III/20 were amended effective January 1, 2020. From this time all ships must comply with requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear contained in SOLAS Chapter III.

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers ("STCW Convention") and its associated Code was amended in June 2010 (the "Manila Amendments") with such amendments entering into force on January 1, 2012, with a five-year transitional period until January 1, 2017. As of 2018 all seafarers are required to meet the STCW standards and be fully certified in accordance with the revised STCW amendments. 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. From January 1, 2017, all of our crew STCW Convention certificates have been issued, renewed and revalidated in accordance with the provisions of the Manila Amendments.

The Nairobi Wreck Removal Convention 2007 ("Wreck Convention") entered into force on April 14, 2015. The Wreck Convention provides a legal basis for sovereign states to remove, or have removed, shipwrecks that may have the potential to affect adversely the safety of lives, goods and property at sea, as well as the marine and coastal environment. Further, the Wreck Convention makes ship owners financially liable for wreck removal and requires them to take out insurance or provide other financial security to cover the costs of wreck removal. All of our fleet has complied with the certification requirements stipulated by the Wreck Convention with regards to financial security.

OPA 90. The U.S. Oil Pollution Act of 1990 ("OPA 90") established an extensive regulatory and liability regime for the protection and cleanup of the environment from oil spills. OPA 90 affects all owners and operators whose vessels trade to the U.S. or its territories or possessions or whose vessels operate in U.S. waters, which include the U.S.'s territorial sea and its two hundred nautical mile exclusive economic zone. The USCG is the lead federal agency that enforces OPA 90.

Under OPA 90, vessel owners, operators and bareboat charterers 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. Tsakos Shipping and Tsakos Energy Management would not qualify as "third parties" because they perform under contracts with us. OPA 90 follows a "polluter pays" principle, and as such, the responsible party is liable for damages under OPA 90 up to statutory liability limits. OPA 90 does allow the responsible party to recover against a third party based on contractual indemnity or via contribution.

OPA 90 allows for the recovery of a broad category of damages, which are defined broadly to include (1) natural resources damages and the costs of assessing them, (2) real and personal property damages, (3) net loss of taxes, royalties, rents, fees and other lost revenues, (4) lost profits or impairment of earning capacity due to property or natural resources damage, (5) net cost of public services necessitated by a spill response, such as protection from fire, safety or health hazards, and (6) loss of subsistence use of natural resources. OPA 90 also expressly excludes the economic loss rule that would normally require a proprietary interest in property before allowing for recovery of economic losses.

OPA 90 incorporates limits on the liability of responsible parties for a spill. OPA 90 adjusts the limits of liability, based on increases in the Consumer Price Index ("CPI") at least every three years. The limits of liability for a double-hulled tanker over 3,000 gross tons are currently the greater of $2,300 per gross ton or $19,943,400.

These limits of liability would not apply if the incident was proximately caused by violation of applicable U.S. federal safety, construction or operating regulations or by the responsible party (or its agents or employees

or any person acting pursuant to a contractual relationship with the responsible party) or by gross negligence or willful misconduct, or if the responsible party fails or refuses to report the incident or to cooperate and assist in connection with the oil removal activities. We continue to maintain, for each of our vessels, pollution liability coverage in the amount of $1 billion per incident. A catastrophic spill could exceed the insurance coverage available, in which case there could be a material adverse effect on us.

Under OPA 90, with some limited exceptions, all newly built or converted tankers operating in U.S. waters must be built with double-hulls, and existing vessels which do not comply with the double-hull requirement should have been phased out by December 31, 2014. All of our fleet is of double-hull construction.

OPA 90 requires owners and operators of vessels to establish and maintain with the USCG evidence of financial responsibility sufficient to meet their potential liabilities under OPA 90. Under the regulations, evidence of financial responsibility may be demonstrated by insurance, surety bond, letter of credit, self-insurance, guaranty or other satisfactory evidence. Under the self-insurance provisions, the ship owner or operator must have a net worth and working capital, measured in assets located in the U.S. against liabilities located anywhere in the world, that exceeds the applicable amount of financial responsibility. OPA 90 requires an owner or operator of a fleet of tankers only to demonstrate evidence of financial responsibility in an amount sufficient to cover the tanker in the fleet having the greatest maximum liability under OPA 90.

OPA 90 specifically permits individual U.S. coastal states to impose their own liability regimes with regard to oil pollution incidents occurring within their boundaries, and some states have enacted legislation providing for unlimited liability for oil spills.

Owners or operators of tankers operating in U.S. waters are required to file vessel response plans with the USCG for approval, and their tankers are required to operate in compliance with such approved plans. These response plans must, among other things, (1) address a “worst case” scenario and identify and ensure, through contract or other approved means, the availability of necessary private response resources to respond to a “worst case discharge,” (2) describe crew training and drills, and (3) identify a qualified individual with full authority to implement removal actions. All our vessels have approved vessel response plans.

We intend to comply with all applicable USCG and state regulations in the ports where our vessels call.

Environmental Regulation

The U.S. Comprehensive Environmental Response, Compensation, and Liability Act. The U.S. Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”) applies to spills or releases of hazardous substances other than petroleum or petroleum products, whether on land or at sea. CERCLA imposes joint and several liability, without regard to fault, on the owner or operator of a ship, vehicle or facility from which there has been a release, and on other specified parties. Liability under CERCLA is generally limited to the greater of $300 per gross ton or $500,000 per vessel carrying non-hazardous substances ($5.0 million for vessels carrying hazardous substances), unless the incident is caused by gross negligence, willful misconduct or a violation of certain regulations, in which case liability is unlimited.

U.S. Clean Water Act. The U.S. Clean Water Act of 1972 (“CWA”) prohibits the discharge of oil or hazardous substances in navigable waters 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 90. Additionally, the CWA provides for the potential application of civil or criminal penalties for a pollution incident. Under EPA regulations, vessels must obtain CWA permits for the discharge of ballast water and other substances incidental to normal operation in U.S. territorial or inland waters. Commercial vessels greater than 79 feet in length are required to obtain coverage under the National Pollutant Discharge Elimination System (“NPDES”) Vessel General Permit (the “VGP”) to discharge ballast water and other wastewater into U.S. waters by submitting a Notice of Intent (a “NOI”). The

most recent VGP (the “2013 VGP”) became effective in December 2013 and then expired on December 18, 2018, although its provisions remain in force, as described below. The 2013 VGP requires vessel owners and operators to comply with a range of best management practices, reporting, record keeping and other requirements for a number of incidental discharge types and incorporates current USCG requirements for ballast water management, as well as supplemental ballast water requirements. The 2013 VGP included ballast water numeric discharge limits and best management practices for certain discharges. On June 11, 2012 the USCG and the EPA published a memorandum of understanding which provides for collaboration on the enforcement of the VGP requirements, and the USCG routinely includes the VGP as part of its normal Port State Control inspections.

On December 4, 2018, the Vessel Incident Discharge Act (“VIDA”) was signed into law establishing a new framework for the regulation of vessel incidental discharges under the CWA. VIDA requires the EPA to develop performance standards for those discharges within two years of enactment and requires the USCG to develop implementation, compliance, and enforcement regulations within two years of EPA’s promulgation of standards. Under VIDA, all provisions of the 2013 VGP will remain in force and effect until the USCG regulations are finalized, which the regulators advise are expected to be issued in 2022.

We intend to comply with the VGP and the record keeping requirements and we do not believe that the costs associated with obtaining such permits and complying with the associated obligations will have a material impact on our operations.

The Clean Air Act. The CAA requires the EPA to promulgate standards applicable to emissions of volatile organic compounds and other air contaminants. Our vessels are subject to CAA vapor control and recovery standards for cleaning fuel tanks and conducting other operations in regulated port areas and emissions standards for so-called “Category 3” marine diesel engines operating in U.S. waters. On December 22, 2009, the EPA adopted final emission standards for Category 3 marine diesel engines equivalent to those adopted in the amendments to Annex VI to MARPOL. As a result, the most stringent engine emissions and marine fuel sulfur requirements of Annex VI will apply to all vessels regardless of flag entering U.S. ports or operating in U.S. waters, and to all U.S. flagged vessels regardless of location. The emission standards apply in two stages: near-term standards for newly-built engines, which have applied since the beginning of 2011, and long-term standards requiring an 80% reduction in NOx by 2030, which has applied from the beginning of 2016, requiring the use of emission control technology.

IMO Emission Control Areas. All vessels operating in the North American and Caribbean ECAs discussed above must use fuel with a sulfur content of 0.1%. Since January 1, 2016, NOx after-treatment requirements have also applied. California implemented a 24 nautical mile zone within which fuel must have a sulfur content of 0.1% or less on January 1, 2014. Currently, the California regulations run in parallel with the emissions requirements in the North American and Caribbean ECAs. Compliance with the North American and Caribbean ECA emission requirements, as well as the possibility that more stringent emissions requirements for marine diesel engines or port operations by vessels will be adopted by the EPA or the states where we operate, could entail significant capital expenditures or otherwise increase the costs of our operations. Similarly, the EU has ECAs in place in the Baltic Sea and the North Sea and English Channel, within which fuel with a sulfur content in excess of 0.1% has not been permitted since January 1, 2015. The EU Commission is currently investigating the possibility of placing ECAs in the Mediterranean Sea and Black Sea. In addition, the EU Sulphur directive has since January 1, 2010 banned inland waterway vessels and ships berthing in EU ports from using marine fuels with a sulfur content exceeding 0.1% by mass. The prohibition applies to use in all equipment including main and auxiliary engines and boilers. Some EU Member States also require vessels to record the times of any fuel-changeover operations in the ship’s logbook.

The MEPC in May 2013 voted to postpone the implementation of MARPOL Annex VI Tier III standards until 2021. However, as the MEPC subsequently agreed that Tier III standards shall apply to marine diesel engines that are installed on a ship constructed on or after January 1, 2016 which operate in the North American ECA or the Caribbean ECA, Tier III standards do apply now. In July 2017, the IMO adopted additional

amendments to MARPOL Annex VI to introduce the Baltic Sea and the North Sea as ECAs in respect of the sulfur content of fuels. Both ECAs will be enforced for ships constructed on or after January 1, 2021, or existing ships which replace an engine with "non-identical" engines or install an "additional" engine. On January 1, 2019, the Baltic Sea and North Sea ECAs were extended to cover NOx. Regulation 13 of MARPOL Annex VI requires engines with a power output of more than 130 kilowatts installed or replaced on or after January 1, 2021 to be Tier III certified if operated in the Baltic Sea and North Sea NOx ECAs. There is an exemption to the Tier III requirement to allow ships fitted with dual-fuel engines or only Tier II engines to be built, converted, repaired or maintained at shipyards located inside NOx ECAs if there is not an available, feasible Tier III engine and retrofitting the Tier II engine is not feasible. Regulation 18.5 of MARPOL Annex VI requires ships of 400 gross tons and above to have on board a Bunker Delivery Note ("BDN") which records details (as set forth in Appendix V) of fuel oil delivered and used on board for combustion purposes. The BDN also provides the designation requirements for refiners, importers and distributors. The BDN now includes a selection box obliging the purchaser to obtain a notification from the fuel supplier's representative that fuel is intended to be used in compliance with MARPOL, if the fuel supplied exceeds the 0.5% sulfur limit.

HNS Convention. Our vessels also may become subject to the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, created in 1996 and as amended by the Protocol adopted in April 2010 (as amended, the "HNS Convention") if enters into force. The HNS Convention would create a regime of liability and compensation for damage from hazardous and noxious substances ("HNS"), including a two-tier system of compensation composed of compulsory insurance taken out by shipowners and an HNS fund which comes into play when the insurance is insufficient to satisfy a claim or does not cover an incident. To date, the HNS Convention has not been ratified by a sufficient number of countries to enter into force. In March 2020, EU ministers signed a declaration highlighting the importance of the ratification of international maritime conventions, including the 2010 HNS Convention. This may hasten the HNS Convention's entry into force.

The Maritime Labour Convention. The International Labour Organization's Maritime Labour Convention was adopted in 2006 ("MLC 2006"). The basic aims of the MLC 2006 are to ensure comprehensive worldwide protection of the rights of seafarers (the MLC 2006 is sometimes called the Seafarers' Bill of Rights) and to establish a level playing field for countries and ship owners committed to providing decent working and living conditions for seafarers, protecting them from unfair competition on the part of substandard ships. The MLC 2006 was ratified on August 20, 2012, and all our vessels were certified by August 2013, as required. Since January 18, 2017, all ships which are subject to the MLC have been required to carry and display on board two certificates confirming that financial security is in place for a) shipowners' liabilities in the event of abandonment and b) contractual payments for death or long-term disability, as set out in relevant the employment agreement. As of December 26, 2020, shipowners will be obliged to pay wages and other entitlements to seafarers where the seafarer is held captive as a result of piracy or armed robbery. The MLC 2006 requirements have not had, and we do not expect that the MLC 2006 requirements will have, a material effect on our operations.

European Union Initiatives. In September 2005, the European Union adopted legislation to incorporate international standards for ship-source pollution into European Community law and to establish penalties for discharge of polluting substances from ships (irrespective of flag). Since April 1, 2007, Member States of the European Union have had to ensure that illegal discharges of polluting substances, participation in and incitement to carry out such discharges are penalized as criminal offences and that sanctions can be applied against any person, including the master, owner and/or operator of the polluting ship, found to have caused or contributed to ship-source pollution "with intent, recklessly or with serious negligence" (this is a lower threshold for liability than that applied by MARPOL, upon which the ship-source pollution legislation is partly based). In the most serious cases, infringements will be regarded as criminal offences (where sanctions include imprisonment) and will carry fines of up to Euro 1.5 million. On November 23, 2005 the European Commission published its Third Maritime Safety Package, commonly referred to as the Erika III proposals, and two bills (dealing with the obligation of Member States to exchange information among themselves and to check that vessels comply with

international rules, and with the allocation of responsibility in the case of accident) were adopted in March 2007. The Treaty of Lisbon entered into force on December 1, 2009 following ratification by all 27 European Union member states and identifies protection and improvement of the environment as an explicit objective of the European Union. The European Union adopted its Charter of Fundamental Rights at the same time, declaring high levels of environmental protection as a fundamental right of European Union citizens. Additionally, the sinking of the *Prestige* in 2002 has led to the adoption of other environmental regulations by certain European Union Member States. It is impossible to predict what legislation or additional regulations, if any, may be promulgated by the European Union or any other country or authority.

The EU has also adopted legislation that (1) requires member states to refuse access to their ports by certain substandard vessels, according to vessel type, flag and number of previous detentions; (2) obliges member states to inspect at least 25.0% of vessels using their ports annually and increase surveillance of vessels posing a high risk to maritime safety or the marine environment; (3) provides the EU with greater authority and control over classification societies, including the ability to seek to suspend or revoke the authority of negligent societies; and (4) requires member states to impose criminal sanctions for certain pollution events, such as the unauthorized discharge of tank washings. It is also considering legislation that will affect the operation of vessels and the liability of owners for oil pollution.

The Council of the EU has approved the implementation of its 2013 strategy for integrating maritime transport emissions into the EU's GHG reduction policies, and Regulation (EU) 2015/757 of the European Parliament and of the Council on the monitoring, reporting and verification of carbon dioxide ("CO_2") emissions from maritime transport was adopted on April 29, 2015. It obliges owners of vessels over 5,000 gross tons to monitor emissions for each ship on a per voyage and annual basis, from January 1, 2018. There are provisions for monitoring, reporting and verifying ("MRV") of CO_2 emissions from vessels using EU ports, to apply from January 1, 2018. From 2019, by April 30 each year all ships above 5,000 gross tons, regardless of flag, calling at EU ports must submit a verified emissions report annually to the European Commission and the vessel's flag state. From 2019, by June 30 each year vessels must carry a valid Document of Compliance ("DOC") confirming compliance with Regulation (EU) 2015/757 for the prior reporting period. This DOC must be made available for inspection at EU ports. Individual Member States have started to introduce CO_2 emissions legislation for vessels. The French Transport Code has required vessel operators to record and disclose the level of CO_2 emitted during the performance of voyages to or from a destination in France since October 1, 2013. The European Green Deal, details of which were issued in December 2019, included proposals to include emissions from the shipping sector into the EU Emissions Trading Scheme ("ETS"). In March 2020 the European Commission proposed a draft European Climate Law which sets out a proposed framework to implement the EU's aim of being climate neutral by 2050. Although the situation is still developing, proposals include extending emissions trading to the maritime sector.

Vessel Recycling Regulations. The EU has introduced the European Ship Recycling Regulation, aimed at minimizing adverse effects on health and the environment caused by ship recycling, as well as enhancing safety, protecting the marine environment and ensuring the sound management of hazardous waste. The Regulation entered into force on November 20, 2013, and anticipates the international ratification of the IMO's Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships 2009 ("Hong Kong Convention"). The Hong Kong Convention will enter into force 24 months after the following conditions are met: (1) not less than 15 IMO member states have become signatories, (2) the signatories represent at least 40% of the gross tonnage of the world's merchant shipping, and (3) the combined maximum annual ship recycling volume of the signatories during the preceding 10 years constitutes at least 3% of the gross tonnage of the combined merchant shipping of the signatories. The Hong Kong Convention has not yet been adopted by the necessary number of member states, but after India's recent adoption, the current member states represent approximately 29.42% of the gross tonnage of the world's merchant tonnage.

By December 31, 2020, the Ship Recycling Regulation requires vessels flying the flag of EU Member States to maintain detailed records of hazardous materials on board, with some materials such as asbestos being

restricted or prohibited. This obligation is extended to all non-EU flagged vessels calling at a port or anchorage in an EU Member State. A certified inventory of hazardous materials ("IHM") first requires a survey carried out by the shipowner or a hazardous materials experts, and then the relevant flag state administration will issue a statement of compliance to the vessel after verifying the IHM. The IHM will be subject to periodic checks during renewal surveys every five years and during port state control inspections. The European Ship Recycling Regulation also requires EU-flagged vessels to be scrapped only in approved recycling facilities and grants an EU Member State the right to detain, dismiss or exclude non-compliant vessels from their ports or offshore terminals.

Other Environmental Initiatives. Many countries have ratified and follow the liability scheme adopted by the IMO and set out in the International Convention on Civil Liability for Oil Pollution Damage, 1969, as amended ("CLC"), and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage of 1971, as amended ("Fund Convention"). The U.S. is not a party to these conventions. Under these conventions, a vessel's registered owner is strictly liable for pollution damage caused in the territorial waters of a contracting state by discharge of persistent oil, subject to certain complete defenses. The liability regime was increased (in limit and scope) in 1992 by the adoption of Protocols to the CLC and Fund Convention which became effective in 1996. The Fund Convention was terminated in 2002, but the Supplementary Fund Protocol was adopted in 2003 and entered into force in March 2005. The liability limit in the countries that have ratified the 1992 CLC Protocol is tied to a unit of account which varies according to a basket of currencies. Under an amendment to the 1992 CLC Protocol that became effective on November 1, 2003, for vessels of 5,000 to 140,000 gross tons, liability is limited to approximately $6,155,248 plus approximately $861 for each additional gross ton over 5,000. For vessels of over 140,000 gross tons, liability is limited to approximately $122,518,096. As the Convention calculates liability in terms of IMF Special Drawing Rights, these figures are based on currency exchange rates on March 31, 2020. From May 1998, parties to the 1992 CLC Protocol ceased to be parties to the CLC due to a mechanism established in the 1992 CLC Protocol for compulsory denunciation of the "old" regime; however, the two regimes will co-exist until the 1992 CLC Protocol has been ratified by all original parties to the CLC. The right to limit liability is forfeited under the CLC where the spill is caused by the owner's actual fault and under the 1992 CLC Protocol where the spill is caused by the owner's intentional or reckless conduct. The 1992 CLC Protocol channels more of the liability to the owner by exempting other groups from this exposure. Vessels trading to states that are parties to these conventions must provide evidence of insurance covering the liability of the owner. In jurisdictions where the CLC has not been adopted, various legislative schemes or common law govern, and liability is imposed either on the basis of fault or in a manner similar to that convention. We believe that our protection and indemnity insurance will cover the liability under the plan adopted by IMO.

The U.S. National Invasive Species Act ("NISA") was enacted in 1996 in response to growing reports of harmful organisms being released into U.S. ports through ballast water taken on by ships in foreign ports. Under NISA, the USCG adopted regulations in July 2004 establishing a national mandatory ballast water management program for all vessels equipped with ballast water tanks that enter or operate in U.S. waters. These regulations require vessels to maintain a specific ballast water management plan. The requirements can be met by performing mid-ocean ballast exchange, by retaining ballast water on board the ship, or by using environmentally sound alternative ballast water management methods approved by the USCG. However, mid-ocean ballast exchange is mandatory for ships heading to the Great Lakes or Hudson Bay, or vessels engaged in the foreign export of Alaskan North Slope crude oil. Mid-ocean ballast exchange is the primary method for compliance with the USCG regulations, since holding ballast water can prevent ships from performing cargo operations upon arrival in the U.S., and alternative methods are still under development. Vessels that are unable to conduct mid-ocean ballast exchange due to voyage or safety concerns may discharge minimum amounts of ballast water (in areas other than the Great Lakes and the Hudson River), provided that they comply with record keeping requirements and document the reasons they could not follow the required ballast water management requirements. The USCG adopted allowable concentration limits for living organisms in ballast water discharges in U.S. waters, effective June 21, 2012. All newly constructed vessels must be compliant on delivery. All existing vessels must be compliant at their first scheduled drydock after January 1, 2016 or, in the case of vessels with

ballast water capacity of 1,500 – 5,000 cubic meters , their first scheduled drydock after January 1, 2014. The USCG must approve any ballast water management technology before it can be placed on a vessel, and a list of approved equipment can be found on the Coast Guard Maritime Information Exchange ("CGMIX") web page. As of April 2020, there are 29 approved treatment systems which have obtained USCG type approval and 10 are under review. Several U.S. states, such as California, have also adopted more stringent legislation or regulations relating to the permitting and management of ballast water discharges compared to EPA regulations.

At the international level, the IMO adopted an International Convention for the Control and Management of Ships' Ballast Water and Sediments in February 2004 (the "BWM Convention"). The BWM Convention entered into force on September 8, 2017. Under the BWM Convention, all ships in international traffic are required to manage their ballast water on every voyage by either exchanging it or treating it using an approved ballast water treatment system. All ships have to carry an approved Ballast Water Management Plan and a Ballast Water Record Book, and all ships of 400 gross tons and above have to be surveyed and issued with an International Ballast Water Management Certificate. The BWM Convention sets out two standards of compliance, D1 and D2. The D1 standard requires ships to exchange ballast water in open seas away from coastal areas. The D2 standard in Regulation D-2 of the BWM Convention outlines the standard that ballast water treatment systems must meet. The standards involve maximum levels of certain microorganisms, such as plankton and intestinal enterococci, for given amounts of ballast water. All ships must maintain the D1 standard until required to comply with the D2 standard. All ships constructed after entry into force of the BWM Convention (September 8, 2017) will have to be compliant on delivery with the D2 standard. Existing ships are required to be compliant with the D2 standard by their first International Oil Pollution Prevention ("IOPP") renewal survey on or after September 8, 2017. Ships constructed before September 8, 2017 are required to comply with the D2 standard at the first IOPP renewal survey on or after September 8, 2019. All ships must have installed a ballast water treatment system which is compliant with the D2 standard by September 8, 2024. The IOPP renewal survey refers to the renewal survey associated with the IOPP Certificate required under MARPOL Annex I. The BWM Convention does not apply to ships not carrying ballast water, domestic ships, ships that only operate in waters under the jurisdiction of one party to the BWM Convention and on the high seas, warships, naval auxiliary or other ships owned or operated by a state, or permanent ballast water in sealed tanks on ships. Furthermore, flag administrators may issue exemptions from the BWM Convention for ships engaged on occasional or one-off voyages between specified ports or locations, or ships that operate exclusively between specified ports or locations, such as ferries.

Our vessels will comply with the BWM Convention in accordance with its terms, though the cost of compliance may result in us incurring costs to install approved ballast water treatment systems on our vessels.

Polar Regulations. In November 2014 the IMO adopted the International Code for Ships Operating in Polar Waters (the "Polar Code") and related amendments to SOLAS to make it mandatory. The Polar Code comprises of detailed requirements relating to safety, design, construction, operations, training and the prevention of environmental pollution. The Polar Code applies to all shipping and maritime operations, apart from fishing boats, ships under 500 tons and fixed structures. The Polar Code entered into force on January 1, 2017 and applies to new ships constructed after that date. Ships constructed before January 1, 2017 are required to meet the relevant requirements of the Polar Code by their first intermediate or renewal survey, whichever occurs first, after January 1, 2018. The Polar Code brings with it numerous requirements and necessities for all ships trading in the polar regions and therefore a great deal of investment will be needed to operate in this region. It is our intention to comply with the Polar Code as implemented through MARPOL and SOLAS and with the applicable training requirements of the STCW Convention.

MARPOL Annex I regulation 43 concerning special requirements for the use or carriage of oils in the Antarctic area to prohibit ships from carrying heavy grade oil on board as ballast, came into force on March 1, 2016. Our vessels comply with it.

Greenhouse Gases. In February 2005, the Kyoto Protocol to the United Nations Framework Convention on Climate Change entered into force. Although the Kyoto Protocol requires adopting countries to implement

national programs to reduce emissions of GHGs, emissions of GHGs from international shipping are not subject to the Kyoto Protocol. No new treaty was adopted at the United Nations' climate change conference in Cancun in December 2010. The Kyoto Protocol was extended to 2020 at the 2012 United Nations Climate Change Conference, with the hope that a new treaty would be adopted in 2015 to come into effect in 2020. There is pressure to include shipping in any new treaty. We refer to the discussion above of the regulation of GHG emissions from ocean-going vessels under the CAA and EU GHG emissions regulations. The IMO, the EU or individual countries in which we operate could pass climate control legislation or implement other regulatory initiatives to control GHG emissions from vessels that could require us to make significant financial expenditures or otherwise limit our operations. Even in the absence of climate control legislation and regulations, our business may be materially affected to the extent that climate change may result in sea level changes or more intense weather events.

The Hong Kong Air Pollution Control (Marine Light Diesel) Regulations, which entered into force on April 1, 2014, provide that the sulfur content of marine light diesel supplied to vessels in Hong Kong must contain 0.05% sulfur content or less. From January 1, 2019, the Hong Kong Air Pollution Control (Fuel for Vessels) Regulation has required all vessels, irrespective of whether they are sailing or berthing, to use fuel containing 0.5% sulfur content or less or any other fuel approved by the Director of Environment Protection. Vessels equipped with scrubbers may apply for an exemption.

From January 1, 2019, vessels must switch to fuel with a sulfur content not exceeding 0.5% prior to entering China's territorial sea. From March 1, 2020 vessels in Chinese waters must not carry fuel oil with a sulfur content exceeding 0.5%. From July 1, 2019, vessels other than tankers capable of receiving shore power must use shore power whilst in China's coastal and inland ECAs (the Yangtze and Xi Jiang Rivers) if berthing for more than 3 hours and 2 hours, respectively. While in China's coastal and inland ECAs, vessels may not discharge effluent from open loop exhaust gas cleaning systems. From January 1, 2020, vessels entering China's inland ECAs must use fuel with a sulfur content not exceeding 0.1% while operating within the inland ECA. From January 1, 2022, vessels must use fuel with a sulfur content not exceeding 0.1% while operating within the Hainan Coastal ECA. Ships of over 400 gross tons or more or powered by engines of 750 kilowatts or more calling at a port in China must report the energy consumption data of their last voyage to the China Maritime Safety Administration before leaving port.

From January 1, 2019, ships not fitted with scrubbers are required to burn fuel with a sulfur content not exceeding 0.5% when entering Taiwan's international commercial port areas.

In December 2015, representatives of 195 countries met at the Paris Climate Conference ("COP 21") and adopted a universal and legally binding climate deal commonly known as the Paris Agreement. The Paris Agreement contemplates commitments from each nation party thereto to take action to reduce GHG emissions and limit increases in global temperatures but did not include any restrictions or other measures specific to shipping emissions. The governments agreed to the goal of keeping the increase in global average temperature to below 2 degrees Celsius and to aim, if possible, to limit the increase to 1.5 degrees Celsius. Governments also agreed to reconvene every 5 years to reassess the targets. Governments will be required to report to each other on their progress and the steps they have taken to reach their targets. The Paris Agreement came into force on November 4, 2016, and as of April 2, 2020, 189 of the 197 countries who were party to the Paris Agreement have ratified it. On June 1, 2017, the U.S. President announced that the U.S. intended to withdraw from the Paris Agreement. On November 4, 2019, the U.S. submitted formal notification of its withdrawal from the Paris Agreement, which will take effect on November 4, 2020. The shipping industry was not included in emissions controls; however, with growing pressure being placed on the IMO to implement measures to aid the objectives agreed at the COP 21, it is possible that the shipping industry may be subject to further regulation as a result of COP 21.

In April 2018 the IMO's MEPC adopted an initial strategy on the reduction of GHG emissions from ships. The initial strategy aims to reduce the total GHG emissions from ships, based upon emissions in 2008, by at least 50% by 2050, while at the same time pursuing efforts towards phasing them out entirely. A follow up program

approved by the MEPC in October 2018 is intended to act as a three-stage planning tool in meeting the timelines identified in the initial strategy. The January 1, 2019 amendments to Regulation 22A of chapter 4 of MARPOL Annex VI, discussed above, requiring ships of 5,000 gross tons and above to collect consumption data for each type of fuel oil they use is part of these initiatives.

On June 29, 2017, the Global Industry Alliance (the "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. The GIA includes 18 members including, but not limited to, shipowners, operators, classification societies, and oil companies. The GIA has been extended until 2023.

In June 2017, the IMO's Maritime Safety Committee adopted requirements for cyber-risk management systems to be incorporated by ship owners and managers by 2021. U.S. agencies have indicated that cybersecurity regulations for the maritime industry are likely to be further developed in the near future in an attempt to combat cybersecurity threats. Compliance might require companies to cultivate additional procedures for monitoring cybersecurity, which could require additional expenses and/or capital expenditures. However, the impact of such IMO requirements or potential regulations is hard to predict at this time.

Trading Restrictions. The Company is aware of the restrictions applicable to it on trading with Crimea, Cuba, Iran, North Korea, Syria, Venezuela and, in prior periods, Sudan and it has complied with those restrictions and intends to continue to so comply in all respects. The Company has not, nor does it intend to, provide any goods, fees or services to the referenced countries and has had no contacts with governmental entities in these countries nor does it intend to have any in the future.

Its vessels are not chartered to any Crimean, Cuban, Iranian, North Korean, Sudanese, Syrian or Venezuelan companies. The voyage charter parties and all but the oldest time-charter agreements relating to the vessels in the fleet generally preclude Iran from the vessels' trading unless agreed between owner and charterer after taking into account all relevant sanctions legislation.

Between January 1, 2019 and April 2, 2020, the Company's vessels made 2,886 port calls around the world, none of which were to those countries.

None of the vessels the Company owns, operates or charters have provided, or are anticipated to provide, any U.S.-origin goods to these countries, or involve employees who are U.S. nationals in operations associated with these countries. No U.S. companies or U.S. dollar payments are involved in any operations associated with these countries. The Company has no relationships with governmental entities in those countries, nor does it charter its vessels to companies based in those countries. The Company derives its revenue directly from the charterers.

The Company is also aware of the less onerous restrictions on trading with other countries, including but not limited to Libya and Russia. It has complied with those restrictions and intends to continue to so comply in all respects.

Competition

We operate in markets that are highly competitive and where no owner controlled more than 5% of the world tanker fleet as of April 2, 2020. Ownership of tankers is divided among independent tanker owners and national and independent oil companies. Many oil companies and other oil trading companies, the principal charterers of our fleet, also operate their own vessels and transport oil for themselves and third-party charterers in direct competition with independent owners and operators. We compete for charters based on price, vessel location, size, age, condition and acceptability of the vessel, as well as our reputation as a tanker operator and our managers reputation for meeting the standards required by charterers and port authorities. Currently we compete

primarily with owners of tankers in the ULCCs, VLCCs, suezmax, suezmax shuttle tankers, aframax, panamax, handymax and handysize class sizes, and we also compete with owners of LNG carriers.

Although we do not actively trade to a significant extent in Middle East trade routes, disruptions in those routes as a result of international hostilities, including those in Syria and Iraq, economic sanctions, including those with respect to Iran, and terrorist attacks such as those made in various international locations (Somalia, Kenya, Yemen, Nigeria) and pirate attacks repeatedly made upon shipping in the Indian Ocean, off West Africa and in South East Asia, may affect our business. We may face increased competition if tanker companies that trade in Middle East trade routes seek to employ their vessels in other trade routes in which we actively trade. Other significant operators of multiple aframax and suezmax tankers in the Atlantic basin that compete with us include Euronav, Teekay Shipping Corporation, Frontline, International Seaways, Inc., DHT, Ardmore and Nordic American Tankers. There are also numerous smaller tanker operators in the Atlantic basin.

Employees

We have no salaried employees. See "—Management Contract—Crewing and Employees."

Properties

We operate out of Tsakos Energy Management offices in the building also occupied by Tsakos Shipping at Megaron Makedonia, 367 Syngrou Avenue, Athens, Greece.

Legal proceedings

We are involved in litigation from time to time in the ordinary course of business. In our opinion, the litigation in which we were involved as of April 2, 2020, individually and in the aggregate, was not material to us.

Item 4A. Unresolved Staff Comments

None.

Item 5. Operating and Financial Review and Prospects

Company Overview

As of April 2, 2020, the fleet consisted of 65 double-hull vessels with an average age of 9.0 years, comprised of 60 conventional tankers, two LNG carriers and three suezmax DP2 shuttle tankers providing world-wide marine transportation services for national, major and other independent oil companies and refiners under long, medium and short-term charters. We also had two suezmax tankers and one LNG carrier under construction with expected deliveries in 2020 and 2021. The current operational fleet consists of two VLCCs, fifteen suezmaxes (including three DP2 shuttle tankers), seventeen aframaxes, three aframax LR2s, eleven panamax LR1s, six handymax tankers, seven handysize tankers and two LNG carriers. All vessels are owned by our subsidiaries, other than four suezmax tankers which are bareboat chartered-in by our subsidiaries. The charter rates that we obtain for these services are determined in a highly competitive global tanker charter market. The tankers operate in markets that have historically exhibited both cyclical and seasonal variations in demand and corresponding fluctuations in charter rates. Tanker markets are typically stronger in the winter months as a result of increased oil consumption in the northern hemisphere. In addition, unpredictable weather conditions in the winter months in various regions around the world tend to disrupt vessel scheduling. The oil price volatility resulting from these factors has historically led to increased oil trading activities. Changes in available vessel supply are also a contributing factor in affecting the cyclicality and overall volatility present in the tanker sector which is reflected both in charter rates and asset values.

Results from Operations—2019

The following discussion of our financial condition and results of operations should be read in conjunction with the financial statements and the notes to those statements included elsewhere in this Annual Report. This discussion includes forward-looking statements that involve risks and uncertainties. As a result of many factors, such as those set forth under "Risk Factors" and elsewhere in this Annual Report our actual results may differ materially from those anticipated in these forward-looking statements.

A slowdown in global economic growth in 2019 contributed to certain countries and industrial sectors, already enfeebled by poor economic direction, suffering more stress than they could afford. This was the backdrop as to how the tanker sector would fare throughout the year. An important exception was the United States which enjoyed a particularly strong economy during this period; however, even the U.S. was subject to vulnerabilities and downside risks that have occurred in early 2020 as a result of the COVID-19 pandemic and related policy decisions.

For a large part of 2019, apart from a slight recovery in the middle, there remained uncertainty largely caused by actual and threatened trade wars between two of the largest world economies, China and the United States. In this environment a slowdown in investments in capital goods and spending on consumer goods resulted. While this hurt dry ships more than tankers, owners of tankers were embroiled in their own dilemma of how to renew their fleet in light of looming environmental regulations and in particular whether to invest in upgrading their vessels to install sulphur exhaust gas cleaning systems or to accept the risk of dependency on available low sulphur fuel.

Fortunately, lower interest rates, brought about by the determination by central banks, including the US Federal Reserve, to boost consumer expenditure and maintain employment levels, also helped ship owners to secure the financing that they sought to make such investments, made easier if the owner had a strong reputation and a charter in place with a renowned oil major. While lower interest rates were a welcome blessing to cash starved shipping companies, especially those companies that had adopted a chartering policy based on spot voyages, the continuous threat of trade wars and actual imposition of higher tariffs also had a damaging effect on the shipping sector albeit less so for tanker companies with fixed lucrative time-charters.

The crude oil tanker market became more difficult by mid-2Q19 as production cuts by OPEC continued and exports from Venezuela and Iran were hampered by US sanctions. Refinery maintenance started earlier than expected in anticipation of forthcoming regulations in the new year, but some recovery occurred later in the year, first as a result of growing U.S.oil exports, with Brazil also contributing, then with U.S. sanctions against Cosco, and finally with completion of refinery maintenance.

After a strong end to 2018 and a relatively strong beginning to 2019, LNG carrier spot rates weakened, due to a restart of nuclear facilities in Japan and warmer weather than expected, though strengthening moderately later in the year before softening in the latter part of 2019. In the longer run, new liquefaction projects are expected to start up that should give a lift to the sector in terms of long-haul voyages and ultimately to rates. However, to date this year there has not been a significant recovery. On the contrary, a sharp increase in newbuildings and delays in completion of LNG projects, as well as pandemic and oil price concerns, has put a damper on rate expectations for the near future.

Before the possibility of a pandemic in 2020 had even been taken into consideration in 2020 forecasts, most predictions relating to the world economy and, more specifically, the shipping sector, and for tankers in particular, focused on the major concerns and uncertainties related to how the new IMO regulations would impact the sector. However, most market observers and tanker company managements felt confident that 2020 would mark a significant turnaround in fortunes, a sentiment that was given considerable support by the results of the fourth quarter and by the relative smoothness of the implementation of the regulations, and by faith in the strong fundaments that continued to exist; adequate oil supply, fewer vessels entering the arena and reasonable growing demand.

However, growth prospects in leading economies were still a cause for concern, the lingering impact of trade barriers still giving rise to uncertainty. The German economy, heavily dependent on exports, remains lethargic, with GDP expectations low, albeit higher than most other major economies. India's GDP growth forecasts have also seen a significant reduction, after a strong 2019, with more reforms still needed in several key sectors, but remaining a star within the rankings of leading economies and important to the shipping sector. The other BRIC countries also suffered slower activity and continue to do so. The one nation that was showing real strength through most of 2019 and entering 2020 has been the United States with determined efforts to ensure that the financial system is healthy enough to withstand any major disruption, by reducing interest rates and purchasing government debt.

Looking forward, it appears clear that the U.S. will continue to dominate growth of oil supply in the coming years ahead, due to the tremendous availability of supply from shale oil, to the extent that in a number of years it is expected that U.S. oil exports will surpass Russia and possibly Saudi Arabia. This growth of oil supply will be supplemented from other, non-OPEC, sources including Brazil and Canada, pushed by demand from China and India, although it remains to be seen as to what extent the COVID-19 pandemic and its consequences may stymie demand growth in the near future.

In addition, from the beginning of 2020, tankers are obliged to adhere to the new environmental regulations imposed by the IMO. Expectations that this would result in major disruptions would appear not to have occurred, while both crude and product carriage trades have benefitted due to heavier throughput at the refineries producing available compliant fuels and the need to ensure that appropriate fuel is made available world-wide. To date it would appear that serious absence of compliant fuel has not occurred and that instances of supply of damaging contaminated fuel have been limited.

The global fleet overcapacity that has contributed so much to suppressing freight rates over the past two years now appears to have largely dissipated, starting from late 2018 with rates beginning to improve as Asian demand increased, fed by U.S. exports, and as the orderbook has shrunk to levels well under 10% of the existing fleet, while those newbuildings that have been delivered in recent months appear to have been comfortably absorbed by the fleet without causing significant negative impact. As far as future ordering is concerned, it appears that many owners are hesitant to make significant commitments in new tonnage without having a clearer picture of the impact of further environmental regulations and what new technology will be required or available.

The impact of the pandemic has negatively impacted demand for oil within the first quarter of 2020, but has since been overshadowed by the lack of ability for OPEC and Russia to agree on significant oil production cuts, leading Saudi Arabia to cut prices and increase production. This in turn has given rise to on-shore storage facilities becoming full, resulting in a significant increase in off-shore storage and in longer-haul voyages, reducing the number of vessels available for trade. As a consequence, freight rates and charter hire on renewal of time-charters have increased to historically high levels. This is likely to last throughout the remainder of 2020, unless the major producers decide to implement production cuts, or, extensive de-stocking takes place, or the pandemic impacts demand to an even greater extent as a result of the stringent measures around the world to contain the spread of the virus. Such efforts are likely to deter energy consumption, leading to a significant drop in demand for oil in mid-2020, which will potentially impact second and third quarter results negatively. In the longer run, however, the lack of orders for tanker newbuildings, the expectation of increased scrapping of tankers as the global fleet, now at an average age of about 11 years, continues to age, and the fact that about 7% of the fleet is over 20 years, suggests that prospects for the tanker market are likely to remain positive for the foreseeable future with the possibility of a positive rebound once the pandemic is under control and expires.

Our fleet achieved voyage revenues of $597.5 million in 2019, an increase of 12.8% from $529.9 million in 2018. The average size of our fleet decreased slightly in 2019 to 64.2 vessels from 64.3 vessels in 2018, and fleet utilization was 96.2% during 2019 and during 2018. The market remained strong in the first quarter of 2019, followed by a reasonable decline in the second and third quarter mainly due to seasonality and improved significantly in the fourth quarter of the year due to higher oil production. Our average daily time charter rate per

vessel, after deducting voyage expenses, increased to $21,378 in 2019 from $18,226 in 2018, mainly due to the strong freight market. Operating expenses decreased by 0.8% to $180.2 million in 2019 from $181.7 million in 2018 with almost the same average number of vessels between respective periods.

Depreciation and amortization totaled $139.4 million in 2019 compared to $146.8 million in 2018 due to the classification of three vessels as held for sale in April 2019. General and administrative expenses, which include management fees and incentive awards were $27.7 million in 2019 and $27.0 million in 2018, the increase mainly due to increased consultant fees and new project costs.

In 2019, the review of the carrying amounts in connection with the estimated recoverable amount and the probability of sale for certain of the Company’s vessels and vessels under construction as of December 31, 2019 indicated the need for a $26.6 million impairment charge. Management performed a qualitative assessment considering impairment indicators and evaluated the need of $1.0 million impairment on its investment in 2019.

There was operating income of $85.9 million in 2019 compared to an operating loss of $28.1 million in 2018. Interest and finance costs, net, decreased by 2.7% in 2019 to $74.7 million, mainly due to decreased level of average debt during the year. Net income attributable to the Company was $15.1 million in 2019 compared to a net loss of $99.2 million in 2018. The effect of preferred dividends in 2019 was $43.2 million compared to $33.8 million in 2018. Net loss per share (basic and diluted) was $0.32 in 2019, including the effect of preferred dividends, based on 88.8 million weighted average shares outstanding (basic and diluted), compared to a net loss of $1.53 per share in 2018 based on 87.1 million weighted average shares outstanding (basic and diluted).

Some of the more significant developments for the Company during 2019 were:

- the redemption of all of its 2,000,000 Series B Preferred Shares, at $25.00 per share;
- the private placement of 3,500,000 Series G Convertible Perpetual Preferred Shares, at $10.00 per share*;*
- the dry-docking of *Selini, Salamina, Pentathlon, World Harmony, Chantal, Ise Princess* and *Asahi Princess* for their mandatory special or intermediate survey;
- the delivery of the *Mediterranean Voyager;*
- the payment to holders of Series B preferred shares of dividends totaling $3.0 million in aggregate;
- the payment to holders of Series C preferred shares of dividends totaling $4.4 million in aggregate;
- the payment to holders of Series D preferred shares of dividends totaling $7.5 million in aggregate;
- the payment to holders of Series E preferred shares of dividends totaling $10.6 million in aggregate;
- the payment to holders of Series F preferred shares of dividends totaling $14.3 million in aggregate;
- the payment to holders of Series G Convertible Preferred Shares of dividends totaling $0.6 million in aggregate; and
- dividends to holders of common shares totaling $0.10 per share with total cash paid out amounting to $8.9 million.

The Company operated the following types of vessels during and at the end of 2019:

Vessel Type	**LNG carrier**	**VLCC**	**Suezmax**	**Suezmax DP2 shuttle**	**Aframax**	**Panamax**	**Handymax MR2**	**Handysize MR1**	**Total Fleet**
Average number of vessels	2.0	2.0	13.0	3.0	20.2	11.0	6.0	7.0	64.2
Number of vessels at end of year	2.0	2.0	13.0	3.0	21.0	11.0	6.0	7.0	65.0
Dwt at end of year (in thousands)	178.9	600.0	2,098	468.4	2,328	799.1	318.5	260.2	7,051
Percentage of total fleet (by dwt at year end)	2.5%	8.5%	29.8%	6.6%	33%	11.3%	4.6%	3.7%	100.0%
Average age, in years, at end of year	7.9	3.3	11.6	5.4	7.3	11.1	13.2	14.6	9.1

We believe that the key factors which determined our financial performance in 2019, within the given freight rate environment in which we operated, were:

- the diversified aspect of the fleet, including purpose-built vessels to access ice-bound ports, carry LNG and operate shuttle tankers between offshore installations and on-shore terminals, which allowed us to take advantage of all tanker sectors;
- the benefits of the new vessels acquired in recent years in terms of operating efficiencies and desirability on the part of charterers;
- our balanced chartering strategy (discussed further below), which ensured a stable cash flow while allowing us to take advantage of the upside in the freight market;
- the long-established relationships with our chartering clients and the development of new relationships with renowned oil-majors;
- a high level of utilization for our vessels;
- the continued control over costs by our technical managers despite pressures caused by rising operating costs;
- our ability to mitigate financial costs by negotiating competitive terms with reputable banks;
- our ability to manage leverage levels through cash generation and repayment/prepayment of debt;
- our ability to comply with the terms of our financing arrangements, including addressing loan-to-value requirements;
- our ability to reward our shareholders through cash dividends;
- our ability to raise new financing through bank debt at competitive terms despite a generally tight credit environment;
- our ability to access the capital markets and raise new financing on competitive terms; and
- the sale of vessels when attractive opportunities arise.

We believe that the above factors will also influence our future financial performance and will play a significant role in the current world economic climate as we proceed through 2020 and into 2021. To these may be added:

- any recovery of the product and crude oil tanker charter markets during the year;
- any additional vessel acquisitions or newbuildings;
- the appetite of oil majors to fix vessels on medium to long term charters at attractive rates; and
- our ability to build our cash reserves through operations, vessel sales and capital market products.

Chartering Strategy

We typically charter our subsidiaries' vessels to third parties in any of five basic types of charter. First are "voyage charters" or "spot voyages," under which a shipowner is paid freight on the basis of moving cargo from a loading port to a discharging port at a given rate per ton or other unit of cargo. Port charges, bunkers and other voyage expenses (in addition to normal vessel operating expenses) are the responsibility of the shipowner.

Second are "time charters," under which a shipowner is paid hire on a per day basis for a given period of time. Normal vessel operating expenses, such as stores, spares, repair and maintenance, crew wages and insurance premiums, are incurred by the shipowner, while voyage expenses, including charter commissions, bunkers and port charges, are the responsibility of the charterer. The time charterer decides the destination and types of cargoes to be transported, subject to the terms of the charter. Time charters can be for periods of time

ranging from one or two months to more than three years. The agreed hire may be for a fixed daily rate throughout the period or may be at a guaranteed minimum fixed daily rate plus a share of a determined daily rate above the minimum, based on a given variable charter index or on a decision by an independent brokers' panel for a defined period. Many of our charters have been renewed on this time charter with profit share basis over the past three years. Time charters can also be "evergreen," which means that they automatically renew for successive terms unless the shipowner or the charterer gives notice to the other party to terminate the charter.

Third are "bareboat charters" under which the shipowner is paid a fixed amount of hire for a given period of time. The charterer is responsible for substantially all the costs of operating the vessel including voyage expenses, vessel operating expenses, dry-docking costs and technical and commercial management. Longer-term time charters and bareboat charters are sometimes known as "period charters."

Fourth are "contracts of affreightment" which are contracts for multiple employments that provide for periodic market related adjustments, sometimes within prescribed ranges, to the charter rates.

Fifth are "pools". Where one of our subsidiaries' vessel may also operate within a pool of similar vessels for part of the year whereby all income (less voyage expenses) is earned on a market basis and shared between pool participants on the basis of a formula which takes into account the vessel's age, size and technical features. During 2019, 2018 and 2017, none of our subsidiaries had vessels operating in a pool.

Our chartering strategy continues to be one of fixing the greater portion of our fleet on medium to long-term employment in order to secure a stable income flow, but one which also ensures a satisfactory return. This strategy has enabled us to smooth the effects of the cyclical nature of the tanker industry, achieving almost optimal utilization of the fleet. In order to capitalize on possible upturns in rates, we have chartered out several of our vessels at a fixed minimum rate plus an extra agreed percentage of an amount based on market spot or time-charter rates ("profit-share").

Our Board of Directors, through its Business Development and Capital Markets Committee, formulates our chartering strategy and our commercial manager Tsakos Energy Management implements this strategy through the Chartering Department of Tsakos Shipping. They evaluate the opportunities for each type of vessel, taking into account the strategic preference for medium and long-term charters and ensure optimal positioning to take account of redelivery opportunities at advantageous rates.

The cooperation with Tsakos Shipping, which provides the fleet with chartering services, enables us to take advantage of the long-established relationships Tsakos Shipping has built with many of the world's major oil companies and refiners over 49 years of existence and high quality commercial and technical service.

Since July 1, 2010, through our cooperation with TCM, our technical managers, we are able to take advantage of the inherent economies of scale associated with two large fleet operators working together and its commitment to contain running costs without jeopardizing the vessels' operations. TCM provides top grade officers and crew for our vessels and first-class superintendent engineers and port captains to ensure that the vessels are in prime condition.

Critical Accounting Estimates

The consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles. Significant accounting policies are described in Note 1 of the consolidated financial statements included elsewhere in this annual report. The application of such policies may require management to make estimates and assumptions. We believe that the following are the more critical accounting estimates used in the preparation of our consolidated financial statements that involve a higher degree of judgment and could have a significant impact on our future consolidated results of operations and financial position:

Accounting for Leases. On January 1, 2019 we adopted ASC 842 – Leases, using the optional transition method, along with the package of practical expedients that allows companies not to reassess whether any

expired or expiring contracts are or contain leases, lease classification for any expired or expiring leases and initial direct costs for any expired or expiring leases. Following the adoption and based on our analysis, there was no cumulative effect adjustment to the opening balance of retained earnings. The adoption of ASC 842 resulted in a change in the accounting method for the lease portion of the daily charter hire for our chartered-in vessels accounted for as operating leases with firm periods of greater than one year.

Sale and Leaseback Transactions. We have entered into two sale and leaseback transactions accounted for as operating leases. As a result of adopting ASC 842, as at January 1, 2019, we recognized on our balance sheet a right-of-use asset of $29.4 million based on the present value of the future minimum lease payments and an obligation under operating leases of $29.4 million. According to the provisions of ASC 842-20-30-1, at the commencement date, a lessee shall measure both of the following: a) The lease liability at the present value of the lease payments not yet paid, discounted using the discount rate for the lease at lease commencement and b) The right-of-use asset, which shall consist of all of the following: i) The amount of the initial measurement of the lease liability, ii) Any lease payments made to the lessor at or before the commencement date, minus any lease incentives received and iii) Any initial direct costs incurred by the lessee.

Revenue from Contracts with Customers. On January 1, 2018, the Company adopted ASC 606 – Revenue from Contracts with Customers, using the modified retrospective method. The effect of the adoption of the new accounting standard resulted in a cumulative adjustment of $1.3 million in the opening balance of the retained earnings for the fiscal year 2018, as a result of the change in the recognition method of revenues related to voyage charters and their fulfillment costs. The prior period comparative information has not been restated and continues to be reported under the accounting guidance in effect for those periods. The adoption of the new standard has changed the method of recognizing revenue over time for voyage charters from the discharge-to-discharge method to the loading-to-discharge method. The Company has decided to apply the optional exemption not to disclose the value of the undelivered performance obligations for contracts with an original expected length of one year or less.

Accounting for Revenue and Related Expenses. The Company's subsidiaries' vessels are employed under a variety of charter contracts, including time, bareboat and voyage charters and contracts of affreightment. Time and bareboat charter revenues are recorded over the term of the charter as the service is provided. Revenues generated under voyage charter agreements are recognized ratably from the date of loading (Notice of Readiness to the charterer, that the vessel is available for loading) to discharge of cargo (loading-to-discharge). Voyage expenses that qualify as contract fulfillment costs and are incurred by the Company from the latter of the end of the previous vessel employment, provided that the vessel is fixed, or from the date of inception of a voyage charter contract until the arrival at the loading port, are capitalized and amortized ratably over the total transit time of the voyage (loading-to-discharge). We have made an accounting policy election to not recognize contract fulfillment costs for time charters. Vessel voyage expenses that do not qualify as contract fulfillment costs, operating expenses and charter hire expense are expensed when incurred. Revenues from profit sharing arrangements are recognized to the extent the variable amounts earned beyond an agreed fixed minimum hire at the reporting date and all other revenue recognition criteria are met.

Depreciation. The Company's subsidiaries' vessels are depreciated on a straight-line basis over their estimated useful lives, after considering their estimated residual values, based on the assumed value of the scrap steel available for recycling after demolition, calculated at $390 per lightweight ton since October 1, 2012. Our estimate was based on the average demolition prices prevailing in the market during the previous ten years for which historical data were available. Since then, management has monitored scrap values, which have risen to $500 per lwt and fallen to as low as $250 per lwt in 2016 and climbed again to $390 per lwt in 2019. Given the historical volatility of scrap prices, management will continue to monitor prices going forward and where a distinctive trend is observed over a given length of time, management may consider revising the scrap price accordingly. In assessing the useful lives of vessels, we have adopted the industry-wide accepted practice of assuming a vessel has a useful life of 25 years (40 years for the LNG carriers), given that all classification society rules have been adhered to concerning survey certification and statutory regulations are followed.

Assets held for sale. It is Company's policy to dispose of vessels when suitable opportunities occur and not necessarily to keep them until the end of their useful life. Long-lived assets are classified as held for sale when all applicable criteria enumerated under ASC 360 "Property, Plant, and Equipment" are met and are measured at the lower of their carrying amount or fair value less cost to sell. These assets are not depreciated once they meet the criteria to be held for sale. An impairment charge for an asset held for sale is recognized when its fair value less cost to sell is lower that its carrying value at the date it meets the held for sale criteria and upon subsequent measurement. At December 31, 2019, we considered that the suezmax tankers *Archangel, Alaska, Silia T* and the aframax tanker *Izumo Princess* met the criteria to be classified as held for sale, all expected to be sold within a year. An impairment charge of $7.9 million was recognized in 2019 ($3.4 million was required based on Level 1 inputs, determined by the sale price less cost to sell at the measurement date and $4.5 million was required based on Level 2 inputs at the measurement date, for the year ended December 31, 2019). At December 31, 2018, there were no vessels held for sale.

Impairment. The carrying value of the Company's vessels includes the original cost of the vessels plus capitalized expenses since acquisition relating to improvements and upgrading of the vessel, less accumulated depreciation. Carrying value also includes the unamortized portion of deferred special survey and dry-docking costs. The carrying value of vessels usually differs from the fair market value applicable to any vessel, as market values fluctuate continuously depending on the market supply and demand conditions for vessels, as determined primarily by prevailing freight rates and newbuilding costs.

The Company reviews and tests all vessels and vessels under construction for impairment at each quarter-end and at any time that specific vessels may be affected by events or changes in circumstances indicate that the carrying amount of the vessel may not be recoverable, such as during severe disruptions in global economic and market conditions, and unexpected changes in employment. A vessel to be held and used is tested for recoverability by comparing the estimate of future undiscounted net operating cash flows expected to be generated by the use of the vessel over its remaining useful life and its eventual disposition to its carrying amount. The average age of our vessels is approximately 9.0 years as of April 2, 2020. The average remaining operational life is, therefore, 16.0 years, excluding the LNG carriers. Given the extensive remaining lives, we do not believe that there is a significant risk of not generating future undiscounted net operating cash flows in excess of carrying values, other than for the four vessels with respect to which the Company recorded an impairment charge in 2019. However, as indicated above, circumstances may change at any time which would oblige us to reconsider the extent of risk of impairment.

Future undiscounted net operating cash flows are determined by applying various assumptions regarding future revenues net of commissions, operating expenses, scheduled dry-dockings and expected off-hire and scrap values. Our projections for charter revenues are based on existing charter agreements for the fixed fleet days and an estimated daily average hire rate per vessel category for the unfixed days based on the most recent ten year historical averages publicly provided by major brokers, which, given the wide spread of annual rates between the peaks and troughs over the decade, we believe provides as fair as any other assumption that could be used in determining a rate for a long-term forecast. In addition, we apply a 2% annual escalation in rates to take account of published long-term growth and inflation expectations in the developed world. Future operating costs are based on the 2019 average per individual vessel and vessel type to which we also apply a 2% annual escalation. Residual or scrap value is based on the same scrap price used for depreciation purposes as described above. All such estimations are inevitably subjective. In addition, the Company performs sensitivity analyses on the key parameters of the exercise by making use of publicly available market forecasts. Actual freight rates, industry costs and scrap prices may be volatile. As a consequence, estimations may differ considerably from actual results.

Where a vessel is deemed to be a risk, we also take into account the age, condition, specifications, marketability and likely trading pattern of each such vessel, and apply various possible scenarios for employment of the vessel during its remaining life. We prepare cash flows for each scenario and apply a percentage possibility to each scenario to calculate a weighted average expected cash flow for the vessel for assessing whether an impairment charge is required. The estimations also take into account regulations regarding the permissible trading of tankers depending on their structure and age.

While management, therefore, is of the opinion that the assumptions it has used in assessing whether there are grounds for impairment are justifiable and reasonable, the possibility remains that conditions in future periods may vary significantly from current assumptions, which may result in a material impairment loss. If current economic conditions stall worsen or if the upward trend in oil prices continues rise for an extended period, oil demand over an extended period of time could be negatively impacted. This would exacerbate the consequences of overcapacity in the tanker sector. In such circumstances, the possibility will increase that both the market value of the older vessels of our fleet and the future cash flow they are likely to earn over their remaining lives will be less than their carrying value and an impairment loss will occur.

Should the carrying value of the vessel exceed its estimated undiscounted cash flows, impairment is measured based on the excess of the carrying amount over the fair value of the asset. The fair values are determined based principally from or by corroborated observable market data. Inputs considered by management in determining the fair value include independent brokers' valuations. As vessel values are also volatile, the actual market value of a vessel may differ significantly from estimated values within a short period of time.

The Company would not record an impairment charge for any of the vessels for which the fair market value is below its carrying value unless and until the Company either determines to sell the vessel for a loss or determines that the vessel's carrying amount is not recoverable. Carrying values of three out of four vessels determined to be sold, indicated a loss and an impairment charge was recognized.

As noted above, we determine projected cash flows for unfixed days using an estimated daily time charter rate based on the most recent ten-year historical average rates, inflated annually by a 2.0% growth rate. We consider this approach to be reasonable and appropriate. However, charter rates are subject to change based on a variety of factors that we cannot control and we note that charter rates over the last few years have been, on average, below their historical ten year average. If as at December 31, 2019 and 2018, we were to utilize an estimated daily time charter equivalent for our vessels' unfixed days based on the most recent five year, three year or one year historical average rates for one-year time charters, the impairment results would be the following:

	As of December 31, 2019		As of December 31, 2018	
	Number of Vessels(*)	Amount (U.S.$ millions)(**)	Number of Vessels(*)	Amount (U.S.$ millions)(**)
5-year historical average rate	0	0	0	0
3-year historical average rate	4	64.3	1	14.5
1-year historical average rate	0	0	23	371.8

(*) Number of vessels the carrying value of which would not have been recovered, other than the four vessels for which we recorded an impairment as of December 31, 2019.

(**) Aggregate carrying value that would not have been recovered.

Although we believe that the assumptions used to evaluate potential impairment are reasonable and appropriate, such assumptions are highly subjective. There can be no assurance as to how long charter rates and vessel values will remain at their current levels or whether they will again decline or improve by any significant degree. Charter rates remained relatively low during most of 2018 and 2019. However, charter rates markedly increased in late 2019, and remained historically strong through March 2020 and are likely to remain at relatively strong levels through the first half of 2020, which may have a positive effect on our revenue and profitability, and future assessments of vessel impairment.

At December 31, 2019, our review of the carrying amounts of the vessels, including advances for vessels under construction in connection with the estimated recoverable amount did not indicate an impairment of their carrying values, apart from four handysize. two suezmaxes and one aframax vessels. For those vessels the Company concluded that an impairment charge of $18.7 million was required based on Level 2 inputs of the fair value hierarchy, as determined by management taking into consideration valuations from independent marine valuers. An impairment loss of $66.0 million was recorded in 2018 for five vessels.

At December 31, 2019, the market value of the fleet owned by our subsidiary companies, as determined based on management estimates and assumptions and by making use of available market data and taking into consideration third party valuations, was $2.3 billion, compared to a total carrying value of $2.8 billion, following the impairment charge. While the future undiscounted net operating cash flows expected to be generated by each of the vessels in the fleet was comfortably in excess of its respective carrying value, there were 49 vessels in our fleet, whose carrying values exceeded their market values. As determined at December 31, 2019, the aggregate carrying value of these vessels was $2.3 billion, and the aggregate market value of these vessels was $1.8 billion. These vessels were:

- LNG: *Neo Energy, Maria Energy*
- VLCC: *Ulysses, Hercules I*
- Suezmax: *Antarctic, Arctic, Spyros K, Dimitris P, Eurovision, Euro, Pentathlon, Decathlon*
- Aframax: *Proteas, Promitheas, Propontis, Sakura Princess, Maria Princess, Nippon Princess, Ise Princess, Asahi Princess, Sapporo Princess, Uraga Princess, Elias Tsakos, Thomas Zafiras, Leontios H, Parthenon TS, Marathon TS, Oslo TS, Sola TS, Stavanger TS, Bergen TS*
- Panamax: *Selecao, Socrates, Andes, Maya, Inca, World Harmony, Chantal, Selini, Salamina, Sunray, Sunrise*
- Handymax: *Artemis, Afrodite, Ariadne, Aris, Apollon, Ajax*
- Handysize: *Didimon*

Allowance for doubtful accounts. Revenue is based on contracted charter parties and although our business is with customers whom we believe to be of the highest standard, there is always the possibility of dispute over terms and payment of freight and demurrage. In particular, disagreements may arise as to the responsibility for lost time and demurrage revenue due to the Company as a result. As such, we periodically assess the recoverability of amounts outstanding and we estimate a provision if there is a possibility of non-recoverability, primarily based on the aging of such balances and any amounts in dispute. Although we believe any provision that we might record to be based on fair judgment at the time of its creation, it is possible that an amount under dispute is not ultimately recovered and the estimated provision for doubtful recoverability is inadequate.

Amortization of deferred charges. In accordance with Classification Society requirements, a special survey is performed on our vessels every five years. A special survey requires a dry-docking. In between special surveys, a further intermediate survey takes place, for which a dry-docking is obligatory for vessels over fifteen years. During a dry-docking, work is undertaken to bring the vessel up to the condition required for the vessel to be given its classification certificate. The costs include the yard charges for labor, materials and services, possible new equipment and parts where required, plus part of the participating crew costs incurred during the survey period. We defer these charges and amortize them over the period up to the vessel's next scheduled dry-docking.

Fair value of financial instruments. Management reviews the fair values of financial assets and liabilities included in the balance sheet on a quarterly basis as part of the process of preparing financial statements. The carrying amounts of financial assets and accounts payable are considered to approximate their respective fair values due to the short maturity of these instruments. The fair values of long-term bank loans with variable interest rates approximate the recorded values, generally due to their variable interest rates. The Company performs relevant enquiries on a periodic basis to assess the recoverability of the long-term investment and the long-term receivable estimates that the carrying value approximates the amount that is expected to be received by the Company in the event of sale of that investment and the end of the non-cancellable lease period, respectively. The fair value of the investments equates to the amounts that would be received by the Company in the event of sale of those investments, and any shortfall from carrying value is treated as an impairment of the value of that investment. The fair value of the interest rate swap, bunker swap agreements, and bunker call options held by the

Company are determined through Level 2 of the fair value hierarchy as defined in FASB guidance and are derived principally from or corroborated by observable market data, interest rates, yield curves and other items that allow value to be determined. The fair values of impaired vessels are determined by management through Level 2 of the fair value hierarchy based on available market data and taking into consideration third party valuations.

Basis of Presentation and General Information

Voyage revenues. Revenues are generated from freight billings and time charters. Time and bareboat charter revenues are recorded over the term of the charter as the service is provided. Revenues from voyage charters on the spot market or under contracts of affreightment are recognized from the date of loading (Notice of Readiness to the charterer, that the vessel is available for loading) to discharge date of cargo (loading-to-discharge). The operating revenues of vessels operating under a tanker pool are pooled and are allocated to the pool participants on a time charter equivalent basis according to an agreed upon formula. Revenues from profit sharing arrangements are accounted for as a variable consideration and included in the transaction price to the extent that variable amounts earned beyond an agreed fixed minimum hire are determinable at the reporting date and when there is no uncertainty associated with the variable consideration. Profit sharing revenues are calculated at an agreed percentage of the excess of the charter's average daily income over an agreed amount. Unearned revenue represents cash received prior to the year-end for which related service has not been provided, primarily relating to charter hire paid in advance to be earned over the applicable charter period.

Time Charter Equivalent ("TCE") allows vessel operators to compare the revenues of vessels that are on voyage charters with those on time charters. For vessels on voyage charters, we calculate TCE by taking revenues earned on the voyage (on a loading to discharge basis) and deducting the voyage costs and dividing by the actual number of net earning days, which does not take into account off-hire days. For vessels on bareboat charters, for which we do not incur either voyage or operating costs, we calculate TCE by taking revenues earned on the charter and adding a representative amount for the vessels' operating expenses. TCE differs from average daily revenue earned in that TCE is based on revenues after commissions less voyage expenses and does not take into account off-hire days.

Commissions. We pay commissions on all chartering arrangements to Tsakos Shipping, as our broker, and to any other broker we employ. Each of these commissions generally amounts to around 1.25%, although there can be some limited variance, particularly for charters involving multiple brokers, of the daily charter hire or lump sum amount payable under the charter. In addition, on some trade routes, certain charterers may include in the charter agreement an address commission which is a payment due to the charterer, usually ranging from 1.25% to 3.75% of the daily charter hire or freight payable under the relevant charter. These commissions, as well as changes in prevailing charter rates, will cause our commission expenses to fluctuate from period to period. Commissions are expensed as incurred.

Voyage expenses. Voyage expenses include all our costs, other than vessel operating expenses, that are related to a voyage, including charter commissions, port charges, canal dues and bunker fuel costs. Voyage expenses that qualify as contract fulfillment costs and are incurred from the latter of the end of the previous vessel employment, provided that the vessel is fixed, or from the date of inception of a voyage charter contract until the arrival at the loading port, are capitalized and amortized ratably over the total transit time of the voyage (loading-to-discharge) when the relevant criteria under ASC 340-40 are met.

Charter hire expense. We hire certain vessels from third-party owners or operators for a contracted period and rate in order to charter the vessels to our customers. These vessels may be hired when an appropriate market opportunity arises or as part of a sale and lease back transaction or on a short-term basis to cover the time-charter obligations of one of our vessels in dry-dock. Since December 31, 2010, the Company had not had any vessels under hire from a third-party, until December 2017, when two vessels were sold and chartered back to the Company for five years. In January 2020, two additional vessels were sold and chartered back to the Company

for five years. Following adoption of ASC 842 and the package of practical expedients, the Company continues to account for the transaction as an operating lease.

Vessel operating expenses. These expenses consist primarily of manning, hull and machinery insurance, P&I and other vessel insurance, repairs and maintenance, spares, stores and lubricant costs. All vessel operating expenses are expensed as incurred.

Depreciation and Amortization of deferred charges. We depreciate our vessels on a straight-line basis over their estimated useful lives, after considering their estimated scrap values. Useful life is ultimately dependent on customer demand and if customers were to reject our vessels, either because of new regulations or internal specifications, then the useful life of the vessel will require revision.

We amortize the costs of dry-docking and special surveys of each of our ships over the period up to the ship's next scheduled dry-docking (generally every 5 years for vessels aged up to 15 years and every 2.5 years thereafter). These charges are part of the normal costs we incur in connection with the operation of our fleet

Impairment loss. An impairment loss for an asset held for use and for advances for vessels under construction should be recognized when indicators of impairment exist and when the estimate of undiscounted cash flows expected to be generated by the use of the asset is less than its carrying amount (the vessel's net book value plus any unamortized deferred dry-docking charges). Measurement of the impairment loss is based on the fair value of the asset as determined by reference to available market data and considering valuations provided by third parties. An impairment loss for an asset held for sale is recognized when its fair value less cost to sell is lower than its carrying value at the date it meets the held for sale criteria. In this respect, management reviews regularly the carrying amount of the vessels in connection with the estimated recoverable amount for each of the Company's vessels. As a result of such reviews, it was determined that an impairment charge was required in 2019 for seven vessels *Amphitrite, Arion, Andromeda, Aegeas, Izumo Princess*, *Archangel, Alaska*. In 2018 there was an impairment charge for five vessels, *Byzantion, Bosporos, Selini, Salamina*, *Silia T* and for an advance for construction (later abandoned) and in 2017 for the two oldest vessels in the fleet, *Millennium* and *Silia T*.

General and administrative expenses. These expenses consist primarily of professional fees, office supplies, investor relations, advertising costs, directors' and officers' liability insurance, directors' fees, reimbursement of our directors' and officers' travel-related expenses and incentive awards and management fees. Management fees are the fixed fees we pay to Tsakos Energy Management under our management agreement with them. Since 2012, there has been no increase in such fees. For 2020, no increase has been agreed by April 2, 2020 and monthly vessel management fees remain the same as in 2019, 2018 and 2017. Accordingly, monthly fees for operating vessels will be $27,500 per owned vessel and $20,400 for chartered-in vessels or vessels chartered out on a bareboat basis or under construction. The monthly fee for the LNG carriers will be $37,280 and for the suezmax DP2 shuttle tankers will be $35,000. The fees are recorded under "General and Administrative Expenses."

Insurance claim proceeds. In the event of an incident involving one of our vessels, where the repair costs or loss of hire is insurable, we immediately initiate an insurance claim and account for such claim when it is determined that recovery of such costs or loss of hire is probable and collectability is reasonably assured within the terms of the relevant policy. Depending on the complexity of the claim, we would generally expect to receive the proceeds from claims within a twelve-month period. During the 2019 /20 policy year, we received approximately $0.5 million in net proceeds from hull and machinery and loss of hire claims arising from incidents where damage was incurred by one of our vessels in a previous policy year. Such settlements were generally received as credit-notes from our insurer, Argosy Insurance Company Limited, and set off against insurance premiums due to that company. Therefore, within the consolidated statements of cash flows, these proceeds are included in decreases in receivables and in decreases in accounts payable. There is no material impact on reported earnings arising from these settlements.

The Company's P&I renewals as of February 20, 2020 saw an increase in costs of 4.96% partly due to the International Group of P&I Clubs' need to increase their income after several years of premium reductions and partly due to the claim on the Group reinsurance contract resulting from the collision between the tanker "*Sola TS*" and the Norwegian frigate "HELGE INGSTAD" in November 2018.

Financial Analysis

(Percentage calculations are based on the actual amounts shown in the accompanying consolidated financial statements)

Year ended December 31, 2019 versus year ended December 31, 2018

Voyage revenues

Voyage revenues earned in 2019 and 2018 per charter category were as follows:

	2019		2018	
	U.S. $ million	*% of total*	U.S. $ million	*% of total*
Time charter-bareboat	1.0	*1%*	—	*0%*
Time charter-fixed rate	254.2	*42%*	236.6	*45%*
Time charter-variable rate (profit share)	127.0	*21%*	108.5	*20%*
Voyage charter-contract of affreightment	32.0	*5%*	40.7	*8%*
Voyage charter-spot market	183.3	*31%*	144.1	*27%*
Total voyage revenue	597.5	*100%*	529.9	*100%*

Revenue from vessels amounted to $597.5 million during the year ended December 31, 2019, compared to $529.9 million during 2018, a notable 12.8% increase mainly due to the upturn of the market during the first and fourth quarter of 2019. There was an average of 64.2 vessels operating in 2019 compared to an average of 64.3 vessels in 2018, the slight decrease relating to the sale of the VLCC vessel *Millennium* during April 2018, partially offset by the delivery of one aframax vessel during October 2019. Based on the total days that the vessels were actually employed as a percentage of the days that the Company owned or chartered-in the vessels, the fleet enjoyed 96.2% employment for each of the years ended December 31, 2019 and 2018 respectively, the lost time being mainly due to dry-dockings and repositioning voyages.

Market conditions for tankers remained strong during the first quarter of 2019, followed by a reasonable decline in freight rates during the second and third quarter of 2019, attributed to the expected seasonal oil demand factors and the extension of OPEC production cuts. In the fourth quarter of 2019, a significant improvement in the market rate environment, primarily driven by higher oil production from non-OPEC countries, the upcoming environmental legislation imposed by IMO and geopolitical developments, positively affected market rates. The Company, by following a diversified employment strategy was able to benefit from the upward trend in the market, mainly from the suezmaxes and aframaxes which enjoyed strong results by either participating in the spot market or earning profit share above their fixed time-charter rates. In addition, the Company managed to enter into new time charter arrangements for both LNG carriers with favorable charter rates, evident also by their TCE performance which surged to $49,251 per day for the year ended December 31, 2019, compared to $29,491 per day for the equivalent period of 2018.

The average time charter equivalent rate per vessel for the year 2019 was $21,378 per day, an impressive increase of 17.3% from $18,226 per day in 2018. The overall improvement of the market positively affected all different types and sizes of our fleet, with TCE's being well above the prior year's levels and increases ranging from 2.0% to 67.0% for the year ended December 31, 2019 compared to the equivalent period of 2018. Our aframax vessels generated additional revenue of $24.4 million, the increase being driven by the spike of spot market rates during the first and fourth quarter of 2019, with average time charter equivalent rate reaching $21,303 per day for the year ended December 31, 2019, compared to $18,926 per day for the year ended

December 31, 2018, a 12.6% increase. Our suezmax tankers also enjoyed strong results with profit share earnings surging up to $32.1 million in 2019, compared to $11.5 million profit share earned for the year ended December 31, 2018. An additional contribution of $14.9 million in revenue was generated by our LNG carriers for the year ended December 31, 2019, compared to the corresponding period of 2018, due to time charter renewals with higher rates. Approximately 72.3% of the fleet was operating on time-charter arrangements during 2019. The revenue generated by vessels on time charters alone was enough to cover all cash expenditure relating to operating costs, commissions, finance costs and overhead costs of the whole fleet.

Average daily TCE rates earned for the years ended December 31, 2019 and 2018, were as follows:

	Year ended December 31,	
	2019	**2018**
	U.S. $	**U.S. $**
LNG carrier	49,251	29,491
VLCC	32,233	26,139
Suezmax	22,083	17,228
DP2 shuttle	50,397	49,401
Aframax	21,303	18,926
Panamax	14,002	12,896
Handymax	13,380	12,883
Handysize	13,242	10,706

TCE is calculated by taking voyage revenue less voyage costs divided by the number of revenue days less 446 days lost as a result of calculating revenue on a loading to discharge basis for the year ended December 31, 2019 compared to 378 days lost for the year ended December 31, 2018. In the case of a bare-boat charter, we add an estimate of operating expenses of $10,000 per day in order to render the bare-boat charter comparable to a time-charter. Time charter equivalent revenue and TCE rate are not measures of financial performance under U.S. GAAP and may not be comparable to similarly titled measures of other companies. However, TCE is a standard shipping industry performance measure used primarily to compare period-to-period changes in shipping performance despite changes in the mix of charter types (i.e. spot voyage charters, time charters and bare-boat charters) under which the vessels may be employed between the periods. The following table reflects the calculation of our TCE rates for the periods presented (amount in thousands of U.S. dollars, except for TCE rate, which is expressed in U.S. dollars, and operating days):

	Year ended December 31,	
	2019	**2018**
Voyage revenues	$ 597,452	$ 529,879
Less: Voyage expenses	(125,802)	(125,350)
Add: Representative operating expenses for Bareboat charter ($10,000 daily)	720	—
Time charter equivalent revenues	$ 472,370	$ 404,529
Divided by: net earnings (operating) days	22,096	22,195
Average TCE per vessel per day	$ 21,378	$ 18,226

Voyage expenses

	Total voyage expenses per category			Average daily voyage expenses per relevant vessel		
	Year ended December 31,		% increase/ (decrease)	Year ended December 31,		% increase/ (decrease)
	2019	2018		2019	2018	
	U.S.$ million	U.S.$ million		U.S.$	U.S.$	
Bunkering expenses	66.8	70.2	*(4.8)%*	10,677	10,780	*(1.0)%*
Port and other expenses	38.1	36.4	*4.7%*	6,088	5,587	*9.0%*
Commissions	20.9	18.8	*11.2%*	3,347	2,892	*15.7%*
Total voyage expenses	125.8	125.4	0.4%	20,112	19,259	4.4%
Days on spot and Contract of Affreightment (COA) employment			%	6,255	6,509	

Voyage expenses include port charges, agents' fees, canal dues, commissions and bunker (fuel) costs relating to spot charters or contracts of affreightment. These voyage expenses are borne by the Company unless the vessel is on time charter or bareboat charter, in which case they are borne by the charterer. Commissions are borne by the Company for all types of charter. Voyage expenses remained relatively stable at $125.8 million during 2019 compared to $125.4 million in 2018, a 0.4% increase. The total operating days on spot charters and contracts of affreightment totaled 6,255 days in 2019 and 6,509 days in 2018, a 3.9% reduction.

Voyage expenses are highly dependent on the voyage patterns followed and size of vessels employed on spot charter or contract of affreightment. Bunkering purchases typically constitute the largest part of voyage expenses and therefore the usual volatility and price swings of crude oil in any given year affect bunker prices and consequently voyage expenses. While oil prices remained at high levels throughout 2019, both crude oil and global bunker prices had surged in 2018, resulting in a 3.6% decrease in the average delivered price paid by the Company for the bunkers procured globally during 2019, and a 4.8% decrease in the annual bunkering expenses of the fleet. Also, during 2019, there was an increase of 4.7% in the amount of port expenses that vessels operating on spot and COA employment bearing voyage expenses incurred, due to short haul voyages and increased port calls. On a per relevant vessel basis the average daily voyage expense increased by 4.4% mainly due to the increase in commission charges and port expenses.

Commissions in 2019 totaled $20.9 million compared to $18.8 million in 2018, an 11.2% increase. As commissions are highly correlated with revenue patterns, the increase in commissions is attributed to the overall increase of revenue by 12.8%. Additionally, commissions represented 3.5% of revenue from vessels in 2019 compared to 3.6% in 2018.

Vessel operating expenses

	Operating expenses per category			Average daily operating expenses per vessel		
	2019	2018	% increase/ (decrease)	2019	2018	% increase/ (decrease)
	U.S.$ million	U.S.$ million		U.S.$	U.S.$	
Crew expenses	107.0	108.6	*(1.5)%*	4,580	4,630	*(1.1)%*
Insurances	15.4	15.6	*(1.5)%*	659	667	*(1.1)%*
Repairs and maintenance, and spares	27.1	25.4	*6.8%*	1,159	1,080	*7.2%*
Stores	11.6	11.3	*2.9%*	497	481	*3.4%*
Lubricants	7.5	7.3	*3.1%*	321	310	*3.5%*
Other (quality and safety, taxes, registration fees, communications)	11.8	13.5	*(12.5)%*	507	577	*(12.1)%*
Foreign currency (gains)	(0.2)	0.0	(100)%	(7)	0	(100)%
Total operating expenses	180.2	181.7	*(0.8)%*	7,716	7,745	*(0.4)%*
Earnings capacity days excluding vessel on bare-boat charter				*23,360*	*23,460*	

Vessel operating expenses include crew costs, insurances, repairs and maintenance, spares, stores, lubricants, quality and safety costs and other expenses such as tonnage tax, registration fees and communication costs, as well as foreign currency gains. Total operating costs were $180.2 million in 2019, compared to $181.7 million during 2018, a slight decrease of 0.8%.

Average operating expenses per vessel per day for the fleet decreased marginally by 0.4% to $7,716 for 2019 from $7,745 in 2018, remaining relatively stable, assisted by the strengthening of U.S. dollar by approximately 5.2% over the course of 2019, impacting positively our crew costs, in addition to lower tax rates contributing to a decrease in our other operating expenses. These decreases were partially offset by a slight increased average daily vessel expenditure on spares, stores lubricants and repairs and maintenance costs.

Depreciation and Amortization

Depreciation and amortization charges totaled $139.4 million in 2019 compared to $146.8 million in 2018, a 5.0% decrease.

Depreciation amounted to $128.8 million in 2019 compared to $137.0 million during 2018, a decrease of $8.2 million, or 6.0%. The decrease being mainly due to the vessels *Izumo Princess*, *Alaska* and *Archangel*, which were classified as held for sale during the second quarter of 2019 and did not incur depreciation expense since then. In addition, the decrease is also attributed to the impairment charge taken on five vessels of the fleet during the fourth quarter of 2018.

During 2019, amortization of deferred dry-docking costs was $10.6 million compared to $9.8 million in 2018. The increase relates mainly to the dry-dock of the two DP2 shuttle tankers *Rio 2016* and *Brasil 2014*, which incurred higher costs than conventional tankers, and from the increased number of vessels that underwent dry-docking in recent years.

General and administrative expenses

Management fees, including those paid to third-party managers, totaled $21.7 million during 2019, compared to $21.8 million in 2018, a 0.5% decrease due to the decrease of the average number of vessels for the year ended December 31, 2019 compared to 2018.

The Company pays Tsakos Energy Management fixed fees per vessel under a management agreement. The fee includes remuneration for services that cover both the management of the individual vessels and of the

enterprise as a whole. According to the management agreement, there may be an adjustment to the fees based on certain criteria within the agreement, if both parties agree. There was no increase in management fees payable to the management company in 2019. During 2019, all the vessels in the fleet were managed by TCM, apart from the LNG carriers *Neo Energy* and *Maria Energy*, the VLCCs *Ulysses, Hercules I*, the suezmax *Eurochampion 2004* and the aframaxes *Maria Princess* and *Sapporo Princess*, which were managed by third-party managers. Monthly management fees for operating conventional vessels are $27,500 per month, since January 1, 2012. The monthly fee relating to vessels chartered-in or chartered-out on a bare-boat basis or for vessels under construction is $20,400. Management fees for the LNG carriers *Neo Energy* and *Maria Energy* are $36,877 per month, of which $10,000 is payable to the management company and $26,877 to the third-party manager. Management fees for the DP2 suezmax shuttle tankers *Rio 2016, Brasil 2014* and *Lisboa* are $35,000 per month. Management fees for vessels *Eurochampion 2004, Maria Princess, Sapporo Princess* and VLCCs *Hercules I* and *Ulysses* are $27,500 per month, of which $14,503 is payable to a third-party manager. Management fees paid relating to vessels under construction are capitalized as part of the vessels' costs.

Office general and administrative expenses consist primarily of professional fees, investor relations, office supplies, advertising costs, directors' liability insurance, directors' fees and reimbursement of our directors' and officers' travel-related expenses. Office general and administrative expenses in 2019 totaled $5.5 million compared to $5.1 million in 2018, a 9.5% increase mainly due to increased consultant fees and new projects' cost.

Total general and administrative expenses plus management fees paid to Tsakos Energy Management, any management incentive award, any special awards (described below) and stock compensation expense, all together represent the overhead of the Company. On a per vessel basis, daily overhead costs remained relatively stable at $1,182 for the year ended December 31, 2019 and $1,152 for the equivalent period of 2018, a 2.6% increase.

The Board of Directors approved an award of $0.5 million and $0.2 million to the management company for the years ended December 31, 2019 and 2018 respectively, based on various performance criteria and taking into account cash availability and market volatility. A separate award of $0.8 million was made in 2018 to Tsakos Energy Management in relation to services provided towards a public offering in 2018, which was included as a deduction of additional paid in capital in the accompanying Consolidated Financial Statements.

The Company did not grant any stock compensation awards in 2019 and 2018.

Loss on sale of vessels

There were no vessel sales during 2019. In April 2018, the VLCC *Millennium* was sold for net proceeds of $17.1 million, resulting in a net loss of $0.4 million.

Impairment charges

During 2019, vessel values recovered considerably compared to 2018. As a result, 49 of our vessels had carrying values in excess of their market values. Our fleet is for the most part young, with an average age of 9.1 years as of December 31, 2019 and in all these cases, except for two suezmax, one aframax and four handysize vessels, the remaining vessels are expected to generate considerably more cash during their remaining expected useful lives than their carrying values as at December 31, 2019. The Company's cash flow tests per vessel for assessing whether an impairment charge was required indicated that an impairment charge of $23.2 million was required as at December 31, 2019, based on Level 2 inputs of the fair value hierarchy, as determined by management taking into consideration valuations from independent marine valuers and $3.4 million was required based on Level 1 inputs for the year ended December 31, 2019, determined by the sale price less cost to sell at the measurement date. An impairment charge of $66.0 million was recorded in 2018 for two handysize vessels, two panamaxes, one suezmax and one advance for an under-construction vessel (later abandoned).

The Company held 125,000 common shares at a total cost of $1.0 million in a private U.S. company which undertakes research into synthetic genomic processes which may have a beneficial environmental impact within the energy and maritime industries. Management performed a qualitative assessment considering impairment indicators and evaluated that the investment was impaired in 2019. The impairment charge of $1.0 million was recorded in 2019 and is included in "*Impairment charges*".

Operating income (loss)

For 2019, income from vessel operations was $85.9 million compared to loss of $28.1 million in 2018, a significant increase. The increase was mainly driven by the overall improvement of the market and the increase in revenue in addition to the lower impairment charges in 2019.

Interest and finance costs, net

	2019	2018
	U.S.$ million	U.S.$ million
Loan interest expense	70.0	71.4
Interest rate swap cash settlements—hedging	—	0.9
Less: Interest capitalized	(1.0)	(0.3)
Interest expense, net	69.0	72.0
Interest rate swap cash receipts—hedging	—	(0.5)
Bunkers non-hedging instruments cash settlements	1.5	(9.9)
Change in fair value of non-hedging instruments	(0.8)	10.8
Amortization of loan expenses	4.8	4.0
Bank loan charges	0.2	0.4
Net total	74.7	76.8

Interest and finance costs, net, were $74.7 million for 2019 compared to $76.8 million for 2018, a 2.7% decrease. Loan interest, excluding payment of swap interest, decreased to $70.0 million from $71.4 million, a 2.1% decrease mainly due to the decreased level of average debt during the course of the year. The decrease was partially offset by the upward trend of LIBOR during the year.

Cash settlements, net, on both hedging and non-hedging interest rate swaps, based on the difference between fixed payments and variable six and three-month LIBOR, were less than $0.1 million in 2019, compared to $0.4 million in 2018, due to the number of effective swaps between the two periods and the early termination of swap agreements in 2018, resulting in interest rate cash receipts of $0.5 million.

Capitalized interest, which is based on expenditures incurred to date on vessels under construction, was $1.0 million in 2019, compared to $0.3 million in 2018, the increase being attributed to three additional vessels under construction, two suezmax tankers and one LNG carrier, during the period ended December 31, 2019.

At December 31, 2019 and 2018, the Company held one interest rate swap that did not meet hedge accounting criteria. The fair value of non-hedging swap as of December 31, 2019 and 2018, amounted to $0.2 million (negative) and $0.1 million (negative), respectively. The changes in fair value amounting to $0.1 million (negative) and $0.1 million (negative) during 2019 and 2018, respectively, have been included in Change in fair value of non-hedging instruments in the table above.

At December 31, 2019 and 2018, the Company held one and three, respectively, call option agreements in order to hedge its exposure to bunker price fluctuations associated with the consumption of bunkers by its vessels. The value of the call options at December 31, 2019 and 2018 was $0.2 million (positive) and

$0.4 million (positive), respectively. The changes in fair value of these call option agreements during 2019 and 2018, amounting to $0.2 million (negative) and $0.2 million (positive), respectively, have been included in Change in fair value of non-hedging instruments in the table above. During 2018, the Company entered into two call option agreements for a total premium of $1.5 million, which was paid in 2019.

As at December 31, 2019 and 2018, the Company had twenty-five and nineteen bunker swap agreements, respectively, in order to hedge its exposure to bunker price fluctuations associated with the consumption of bunkers by its vessels. The fair value of bunker swaps as of December 31, 2019 and 2018, amounted to $2.9 million (negative) and $4.0 million (negative), respectively. The change in their fair values amounted to $1.1 million (positive) during 2019 compared to $11.0 million (negative) in the prior year, due to a sudden sharp fall in oil prices in late December 2018.

In November 2018, the Company entered into early termination agreements of the three bunker swap agreements with expiring dates in September 2019 and October 2019. Total cash received from these swaps' terminations amounted to $1.5 million in 2018. The change in their fair value during 2018 was $3.3 million (negative).

Amortization of loan expenses was $4.8 million in 2019 compared to $4.0 million in 2018. Other bank charges amounted to $0.2 million in 2019 and $0.4 million in 2018 due to the refinancing program.

Interest income

Interest income in 2019 amounted to $3.7 million compared to $2.5 million in 2018. The increase is due to higher interest rates in 2019 compared to 2018.

Non-controlling interest

There is a non-controlling interest of 49% in the subsidiary Mare Success S.A., which owns 100% of each of the companies that own the panamax vessels *Maya* and *Inca*. In the second quarter of 2019, Mare Success increased its paid-in capital by $20,408 of which $10,408 was the 51% share contributed by the Company and the remaining $10,000 was the 49% share contributed by Polaris Oil Shipping Inc. ("Polaris"), an affiliate of Flopec. After the recapitalization, the shareholding of Mare Success S.A. remained at 51% for the Company and 49% for Polaris. The additional paid-in capital was made to finance part of the intragroup sale of panamax vessels, *Selini* and *Salamina*. During the second quarter of 2019, the Company transferred the net assets of *Selini* and *Salamina* to Mare Success. S.A. The Company accounted for the transaction at the carrying amounts of the net assets.

Net loss attributable to the non-controlling interest amounted to $1.1 million in 2019 compared to $1.8 million net income in 2018.

Net income (loss) attributable to Tsakos Energy Navigation Limited

As a result of the foregoing, net income attributable to Tsakos Energy Navigation Limited for 2019 was $15.1 million, or a loss of $0.32 per share basic and diluted, after taking into account the cumulative dividends of $43.1 million on our preferred shares, compared to net loss of $99.2 million, or a loss of $1.53 per share basic and diluted, after taking into account the cumulative dividends of $33.8 million on our preferred shares for 2018.

Year ended December 31, 2018 versus year ended December 31, 2017

Voyage revenues

Voyage revenues earned in 2018 and 2017 per charter category were as follows:

	2018		2017	
	U.S. $ million	**% of total**	**U.S. $ million**	**% of total**
Time charter-bareboat	—	0%	3.8	1%
Time charter-fixed rate	236.6	45%	222.1	42%
Time charter-variable rate (profit share)	108.5	20%	106.7	20%
Voyage charter-contract of affreightment	40.7	8%	38.5	7%
Voyage charter-spot market	144.1	27%	158.1	30%
Total voyage revenue	529.9	100%	529.2	100%

Revenue from vessels amounted to $529.9 million during the year ended December 31, 2018 compared to $529.2 million during 2017, a 0.1% increase mainly due to the upturn of the market during the fourth quarter of 2018. There was an average of 64.3 vessels operating in 2018 compared to an average of 62.6 vessels in 2017, the increase relates to the delivery of the final two vessels of the recent newbuilding program in July and October 2017, respectively, which were fully operational during 2018. The increase was partially offset by the sale of the VLCC vessel *Millennium* in April 2018. Based on the total days that the vessels were actually employed as a percentage of the days that we owned or chartered-in the vessels, the fleet enjoyed 96.2% employment in 2018 compared to 96.7% in 2017, the lost time being mainly due to dry-dockings and long-haul repositioning voyages.

Market conditions for tankers remained weak during the first nine months of 2018, with the market recovering during the fourth quarter of 2018. Production and export cuts by leading suppliers (notably OPEC countries), in addition to U.S. re-imposition of sanctions against Iran and the economic crisis in Venezuela, led to rate volatility as the tanker market underwent a cyclical low during 2018. There was significant improvement in the market rate environment in the fourth quarter of 2018, mainly due to increased oil demand as a result of lower oil prices and adequate oil supplies, particularly from U.S. exports positively affecting market rates. The Company was well positioned during the market upturn to take advantage of the strong freight rates.

The average time charter equivalent rate per vessel achieved for the year 2018 was $18,226 per day, down 3.7% from $18,931 per day in 2017. In 2018, our suezmax tankers suffered an average fall of 11% in average time charter equivalent rates from the previous year, mainly due to lower minimum rates on the renewal of time charters with profit sharing arrangements. The decrease in TCE rates for the conventional tankers was partially offset by the two LNG carriers, as average time charter equivalent rates for these vessels increased by 25% for the year ended December 31, 2018 compared to the corresponding period of 2017, due to time charters' renewal with higher rates. Approximately 71% of the fleet was operating on time-charters. The revenue generated by vessels on time charters alone was enough to cover all cash expenditure relating to operating costs, commissions, finance costs and overhead costs of the whole fleet. Our panamax tankers, which were trading mostly on spot and on time charters with profit sharing arrangements, earned an average time charter equivalent rate 19% lower than in 2017.

Average daily TCE rates earned for the years ended December 31, 2018 and 2017 were:

	Year ended December 31,	
	2018	2017
	U.S. $	U.S. $
LNG carrier	29,491	23,641
VLCC	26,139	26,490
Suezmax	17,228	19,296
DP2 shuttle	49,401	49,654
Aframax	18,926	18,818
Panamax	12,896	15,932
Handymax	12,883	14,223
Handysize	10,706	10,909

TCE is calculated by taking voyage revenue less voyage costs divided by the number of revenue days less 378 days lost as a result of calculating revenue on a loading to discharge basis for the year ended December 31, 2018. The change in the calculation of days is due to the adoption of the new revenue recognition standard. Time charter equivalent revenue and TCE rate are not measures of financial performance under U.S. GAAP and may not be comparable to similarly titled measures of other companies. However, TCE is a standard shipping industry performance measure used primarily to compare period-to-period changes in shipping performance despite changes in the mix of charter types (i.e. spot voyage charters, time charters and bare-boat charters) under which the vessels may be employed between the periods. The following table reflects the calculation of our TCE rates for the periods presented (amount in thousands of U.S. dollars, except for TCE rate, which is expressed in U.S. dollars, and operating days):

	Year ended December 31,	
	2018	2017
Voyage revenues	$ 529,879	$ 529,182
Less: Voyage expenses	(125,350)	(113,403)
Add: Representative operating expenses for Bareboat charter ($10,000 daily)	—	2,500
Time charter equivalent revenues	$ 404,529	$ 418,279
Divided by: net earnings (operating) days	22,195	22,095
Average TCE per vessel per day	$ 18,226	$ 18,931

Voyage expenses

	Total voyage expenses per category			Total voyage expenses per category		
	Year ended December 31,		% increase/ (decrease)	Year ended December 31,		% increase/ (decrease)
	2018	2017		2018	2017	
	U.S.$ million	U.S.$ million		U.S.$	U.S.$	
Bunkering expenses	70.2	56.2	24.8%	10,780	8,483	27.1%
Port and other expenses	36.4	37.2	(2.2)%	5,587	5,606	(0.4)%
Commissions	18.8	20.0	(5.9)%	2,892	3,018	(4.2)%
Total voyage expenses	125.4	113.4	10.5%	19,259	17,107	12.6%
Days on spot and Contract of Affreightment (COA) employment				6,509	6,629	(1.8)%

Voyage expenses include port charges, agents' fees, canal dues, commissions and bunker (fuel) costs relating to spot charters or contracts of affreightment. These voyage expenses are borne by the Company unless the vessel is on time-charter or operating in a pool, in which case they are borne by the charterer or by the pool operators. Commissions are borne by the Company for all types of charter. Voyage expenses were $125.4 million during 2018 compared to $113.4 million in 2017, a 10.5% increase. The total operating days on spot charters and contracts of affreightment totaled 6,509 days in 2018, and 6,629 days in 2017, a 1.8% reduction.

Voyage expenses are highly dependent on the voyage patterns followed and size of vessels employed on spot charter or contract of affreightment. Bunkering purchases typically constitute the largest part of voyage expenses and therefore the usual volatility and price swings of crude oil in any given year affect bunker prices and subsequently voyage expenses. While oil prices recovered during 2017, both crude oil and global bunker prices surged in 2018, with the price of Brent increasing on average 30.9% between the two years, although a sharp fall in oil and, consequently, bunker prices occurred at the end of the year. Overall, this resulted in a 34.8% increase in the average delivered price paid by the Company for the bunkers procured globally during 2018, and a 24.8% increase in the annual bunkering expenses of the fleet. Also, during 2018, there was a decrease of 2.2% in the amount of port expenses that vessels operating on spot and COA employment bearing voyage expenses incurred, due to reduced employment of vessels on spot and COA. On a per relevant vessel basis the average daily voyage expense increased by 12.6% due mainly to the increase in price of oil.

Commissions in 2018 totaled $18.8 million compared to $20.0 million in 2017, a 5.9% decrease. Commissions were 3.6% of revenue from vessels in 2018 and 3.8% in 2017. The decrease in total commission charges relates mainly to time charter renewals for suezmax and handymax vessels with lower commission rates.

Vessel operating expenses

	Operating expenses per category			Average daily operating expenses per vessel		
	2018	2017	% increase/ (decrease)	2018	2017	% increase/ (decrease)
	U.S.$ million	U.S.$ million		U.S.$	U.S.$	
Crew expenses	108.6	105.5	3.0%	4,630	4,663	(0.7)%
Insurances	15.6	16.4	(4.9)%	667	727	(8.3)%
Repairs and maintenance, and spares	25.4	22.2	14.3%	1,080	982	9.9%
Stores	11.3	10.2	10.7%	481	451	6.6%
Lubricants	7.3	7.1	2.9%	310	313	(0.9)%
Other (quality and safety, taxes, registration fees, communications)	13.5	11.4	19.1%	577	502	15.3%
Foreign currency losses	0.0	1.1	*(100.8)%*		50	*(100.8)%*
Total operating expenses	181.7	173.9	4.5%	7,745	7,688	0.7%
Earnings capacity days excluding vessel on bare-boat charter				23,460	22,600	

Vessel operating expenses include crew costs, insurances, repairs and maintenance, spares, stores, lubricants, quality and safety costs and other expenses such as tonnage tax, registration fees and communication costs, as well as foreign currency gains or losses. Total operating costs were $181.7 million in 2018, compared to $173.9 million during 2017, an increase of 4.5%, mainly due to the addition of the new aframax vessels which were acquired during 2017 and were fully operational throughout 2018.

Average operating expenses per ship per day for the fleet increased by 0.7% to $7,745 for 2018 from $7,688 in 2017, remaining relatively stable, despite the fact that the U.S. dollar weakened by approximately 4.6% over the course of 2018, impacting negatively the cost of stores, spares and services purchased in Europe. These increases were partially offset by reduced average daily vessel expenditure on insurances and lubricants as a result of cost-effective ship management by the technical managers.

Depreciation and Amortization

Depreciation and amortization charges totaled $146.8 million in 2018 compared to $139.0 million in 2017, a 5.6% increase.

Depreciation amounted to $137.0 million in 2018 compared to $131.9 million during 2017, an increase of $5.1 million, or 3.9%. The increase is due to the delivery of seven vessels to the fleet during 2017, which were fully operational throughout 2018 and is partially offset by the sale of VLCC vessel *Millennium*.

We amortize the cost of drydockings related to classification society surveys over the period to the next dry-docking, and this amortization is included as part of the normal costs we incur in connection with the operation of our vessels. During 2018, amortization of deferred dry-docking costs was $9.8 million compared to $7.1 million in 2017. The specific increase relates mainly due to the dry-dock of the two DP2 shuttle tankers *Rio 2016* and *Brasil 2014*, which required higher costs than conventional tankers.

General and administrative expenses

Management fees, including those paid to third-party managers, totaled $21.8 million during 2018, compared to $21.0 million in 2017, a 3.6% increase due to the increase of the average number of vessels for the year ended December 31, 2018 compared to 2017.

The Company pays Tsakos Energy Management fixed fees per vessel under a management agreement. The fee includes remuneration for services that cover both the management of the individual vessels and of the enterprise as a whole. According to the management agreement, there may be an adjustment to the fees based on certain criteria within the agreement, if both parties agree. There was no increase in management fees payable to the management company in 2018. During 2018, all the vessels in the fleet were managed by TCM, apart from the LNG carriers *Neo Energy* and *Maria Energy*, the VLCCs *Ulysses, Hercules I, Millennium*, the suezmax *Eurochampion 2004* and the aframaxes *Maria Princess* and *Sapporo Princess*, which were managed by third-party managers. Monthly management fees for operating conventional vessels are $27,500 per month, since January 1, 2012. The monthly fee relating to vessels chartered-in or chartered-out on a bare-boat basis or for vessels under construction is $20,400. Management fees for the LNG carriers *Neo Energy* and *Maria Energy* are $36,877 per month, of which $10,000 is payable to the management company and $26,877 to the third-party manager. Management fees for the DP2 suezmax shuttle tankers are $35,000 per month. Management fees for *Eurochampion 2004, Maria Princess, Sapporo Princess* and VLCCs *Hercules I* and *Ulysses* are $27,500 per month, of which $14,503 is payable to a third-party manager. Management fees paid relating to vessels under construction are capitalized as part of the vessels' costs.

Office general and administrative expenses consist primarily of professional fees, investor relations, office supplies, advertising costs, directors' liability insurance, directors' fees and reimbursement of our directors' and officers' travel-related expenses. Office general and administrative expenses in 2018 totaled $5.1 million compared to $4.2 million in 2017, a 19.1% increase mainly due to increased consultant fees and new projects cost.

Total general and administrative expenses plus management fees paid to Tsakos Energy Management, any management incentive award, any special awards (described below) and stock compensation expense, all together represent the overhead of the Company. On a per vessel basis, daily overhead costs remained at $1,152 for each of the years ended December 31, 2018 and 2017 respectively.

In October 2018, the Board of Directors approved an award of $0.2 million to the management company based on various performance criteria and taking into account cash availability and market volatility. A separate award of $0.8 million was made in 2018 to Tsakos Energy Management in relation to services provided towards a public offering in 2018, which was included as a deduction of additional paid in capital in the accompanying

Consolidated Financial Statements. In June 2017, the management company was awarded with $0.6 million based on a decision made by the Board of Directors. An award of $0.6 million was also made in 2017 to Tsakos Energy Management in relation to services provided towards a public offering in 2017, which was included as a deduction of additional paid in capital in the accompanying Consolidated Financial Statements.

In 2018, the Company did not grant any stock compensation awards. In 2017, it was decided by the Board of Directors that a stock compensation award of 110,000 restricted stock units should be awarded to non-executive directors to vest immediately, the cost of which is based on the share price of the stock on the date that the directors were notified. The total cost was $0.5 million, which is included in General and administrative expenses.

Loss on sale of vessels

In April 2018, the VLCC *Millennium* was sold for net proceeds of $17.1 million, resulting in a net loss of $0.4 million. Two vessels, the suezmaxes *Eurochampion 2004* and *Euronike* (both built in 2005), were sold in the fourth quarter of 2017, both to the same third party as part of sale and leaseback arrangements. The combined sales price was $65.2 million. Net proceeds after a seller's credit of $13.0 million and costs amounted to $51.6 million. After a prepayment of related loans totaling $36.0 million, there was $15.6 million of cash available to the Company. There was a combined loss on the sale of the vessels totaling $3.9 million. The two vessels have been chartered back to the Company on a five-year bare-boat charter at the end of which the seller's credit will be returned to the Company or earlier if the vessels are sold within five years.

Vessel impairment charge

During 2018, vessel values did not increase from those of 2017. As a result, 59 of our vessels had carrying values in excess of market values. Our fleet is for the most part young, with an average age of 8.2 years as of December 31, 2018 and in all these cases, except for two handysize vessels, two panamaxes, one suezmax and one advance for an under construction vessel (later abandoned), the remaining vessels are expected to generate considerably more cash during their remaining expected lives than their carrying values as at December 31, 2018. The Company's cash flow tests per vessel for assessing whether an impairment charge was required indicated that an impairment charge of $66.0 million was required as at December 31, 2018, based on Level 2 inputs of the fair value hierarchy, as determined by management taking into consideration valuations from independent marine valuers. An impairment loss of $8.9 million was also recorded in 2017 for two vessels. There was no indication that an impairment charge was required for the vessels in the fleet at December 31, 2016.

Operating (loss) income

For 2018, loss from vessel operations was $28.1 million compared to income of $63.5 million in 2017, a decrease of 144.3%.

Interest and finance costs, net

	2018	2017
	U.S.$ million	U.S.$ million
Loan interest expense	71.4	59.8
Interest rate swap cash settlements—hedging	0.9	2.5
Less: Interest capitalized	(0.3)	(0.4)
Interest expense, net	72.0	61.9
Interest rate swap cash receipts—hedging	(0.5)	(3.7)
Bunkers non-hedging instruments cash settlements	(9.9)	(2.3)
Change in fair value of non-hedging instruments	10.8	(3.4)
Amortization of loan expenses	4.0	4.2
Bank loan charges	0.4	0.1
Net total	76.8	56.8

Interest and finance costs, net, were $76.8 million for 2018 compared to $56.8 million for 2017, a 35.1% increase. Loan interest, excluding payment of swap interest, increased to $71.4 million from $59.8 million, a 19.3% increase mainly due to the upward trend of LIBOR throughout the year and partly due to the increased level of average debt during the course of the year, which fluctuated during the year depending on the timing of refinancing and repayments, although outstanding debt in total fell by $156 million in 2018.

Cash settlements on both hedging and non-hedging interest rate swaps, based on the difference between fixed payments and variable six and three-month LIBOR, was $0.4 million in 2018 compared to $1.2 million in 2017. The decrease in interest rate cash settlements from $2.5 million in 2017 to $0.9 million in 2018, is mainly due to less effective swaps between the two years. In 2018 and 2017, interest rate swap cash receipts were $0.5 million from the early termination of two swap agreements and $3.7 million from the early termination of four swap agreements, respectively.

The average loan financing cost in 2018, including the impact of all interest rate swap cash settlements, was 4.3% compared to 3.4% for 2017. Capitalized interest, which is based on expenditures incurred to date on vessels under construction, was $0.3 million in 2018, compared to $0.4 million in 2017.

At December 31, 2018, the Company held one interest rate swap that did not meet hedge accounting criteria. There was no non-hedging interest rate swap as of December 31, 2017.

During 2018, the Company entered into two call option agreements for a premium of $1.6 million. During 2017, the Company entered into two call option agreements and paid a premium of $0.2 million and earned $1.2 million.

The changes in fair value of these call option agreements during 2018 and 2017, amounting to $0.2 million (positive) and $1.2 million (negative), respectively, have been included in Change in fair value of non-hedging instruments in the table above.

During 2016, the Company entered into three bunker swap agreements in order to hedge its exposure to bunker price fluctuations associated with the consumption of bunkers by the vessel *Ulysses*. In November 2018, the Company entered into early termination agreements of the three bunker swap agreements with expiring dates September 2019 and October 2019. Total cash received from those swaps amounted to $1.5 million. The change in their fair value during 2018 and 2017 were $3.3 million (negative) and $0.8 million (positive), respectively.

In relation the bunker hedges, the Company gained in total $9.9 million of actual cash settlements in 2018 but lost $10.8 million in non-cash mark-to-market valuations of the hedges at December 31, 2018, due to a sudden sharp fall in oil prices in late December 2018, which began to recover in early 2019.

Amortization of loan expenses was $4.0 million in 2018 compared to $4.2 million in 2017. Other bank charges amounted to $0.4 million in 2018 and $0.1 million in 2017 due to the refinancing program.

Interest income

Interest income in 2018 amounted to $2.5 million compared to $1.1 million in 2017. The increase is due to higher interest rates in 2018 compared to 2017 and to larger amounts of cash held in 2018, following the raising of $144.3 million in a preferred stock offering.

Non-controlling interest

Net loss attributable to the non-controlling interest (49%) in the subsidiary, which owns the companies owning the vessels *Maya* and *Inca* amounted to $1.8 million in 2018 compared to $1.6 million net income in 2017. The loss is attributed to increased expenses for drydockings that both vessels underwent in 2018.

Net (loss) income attributable to Tsakos Energy Navigation Limited

As a result of the foregoing, net loss attributable to Tsakos Energy Navigation Limited for 2018 was $99.2 million, or a loss of $1.53 per share basic and diluted, after taking into account the cumulative dividends of $33.8 million on our preferred shares, compared to net income of $7.6 million, or a loss of $0.19 per share basic and diluted, after taking into account the cumulative dividends of $23.8 million on our preferred shares for 2017.

Liquidity and Capital Resources

Our liquidity requirements relate to servicing our debt, funding the equity portion of investments in vessels, funding working capital and controlling fluctuations in cash flow. In addition, our newbuilding commitments, other expected capital expenditures on dry-dockings and vessel improvements and/or acquisitions, which in total equaled $115.1 million in 2019 and $32.2 million in 2018, will again require us to expend cash in 2020. Net cash flow generated by operations is our main source of liquidity. Apart from the possibility of raising further funds through the capital markets, additional sources of cash include proceeds from asset sales and borrowings, although all borrowing arrangements to date are related to the acquisition of specific vessels.

We believe, given our current cash holdings and the number of vessels we have on time charter, that if market conditions remain relatively stable throughout 2020, our financial resources, including the cash expected to be generated within the year, will be sufficient to meet our liquidity and working capital needs for the next twelve months, taking into account our existing capital commitments and debt service requirements. If market conditions worsen significantly due to the current pandemic of COVID-19 then our cash resources may decline to a level that may put at risk our ability to service timely our debt and capital expenditure commitments. To avoid such an eventuality, management would expect to be able to raise extra capital through the alternative sources described above.

Non-restricted cash balances were $184.8 million as of December 31, 2019, compared to $204.8 million as of December 31, 2018.

Working capital (net of restricted cash and deferred loan costs) amounted to a positive $27.0 million at December 31, 2019 compared to a positive $44.2 million, at December 31, 2018. The decrease is attributed to lower cash balances, a decrease in inventories due to a drop in oil prices during the fourth quarter of 2019 supported by a decrease in vessels operating in the spot market as at December 31, 2019 and the increased current portion of loan facilities as at December 31, 2019. Also contributing to the decrease in working capital was the adoption of accounting standard ASC 842 “Leases” added by ASU 2016-02 effective for public business entities for annual periods beginning on January 1, 2019, which requires the determination and inclusion under current liabilities of the current portion of obligations under operating leases. The decrease was partially offset by an increase in our current assets due to vessels *Izumo Princess, Alaska, Archangel* and *Silia T.* being classified as held for sale as at December 31, 2019.

Current assets increased to $397.0 million at December 31, 2019 from $317.5 million at December 31, 2018, mainly due to four vessels classified as held for sale, partially offset by a decrease in cash and cash equivalents. The increase in current assets is also attributed to the increase in accounts receivable by $5.0 million which is correlated to the overall increase of revenue for the year ended December 31, 2019 compared to the year ended December 31, 2018. The increase was partially offset by a lower balance in inventories and a decrease in restricted cash as at December 31, 2019 compared to the prior year. Current liabilities increased to $354.2 million at December 31, 2019, from $254.3 million at December 31, 2018, mainly due to the increased current portion of debt by $74.9 million related to the vessels held for sale, the current portion of obligations under operating leases of by $7.5 million and unearned revenue increased by $6.1 million due to hire prepayments by our charterers.

Net cash provided by operating activities was $184.3 million in 2019 and $73.9 million in 2018. The $110.4 million increase is primarily attributable to a stronger tanker market with higher freight rates which

contributed to an increase in voyage revenues by $67.6 million as more fully described in the paragraph "Voyage Revenues" above under "—Financial Analysis". While revenue increased in 2019, cash expenditure remained relatively stable in 2019 compared to 2018. Total cash expenditure on voyage expenses, operating expenses, charter-in costs, G&A expenses, finance expenses and other, net expenses amounted to $416.1 million in 2019, compared to $406.0 million in 2018, an increase of just $10.1 million or 2%. The expense movements are fully described in the respective paragraphs in this "Financial Analysis". Inventories, mainly consisting of bunker fuel, which increased by $4.1 million in 2018, decreased by $7.4 million in 2019, an $11.5 million positive turnaround, as oil prices fell during the year. Unearned revenue, arising from collection of time- charter hire due in 2020, but paid in 2019, increased by $6.1 million due to certain charterers paying early, whereas in 2018 unearned revenue had decreased by $7.6 million as several charterers had deferred payments to the next year. Payments to repair yards decreased by $2.0 million in 2019 due to only seven vessels undergoing their scheduled drydock compared to nine dry dockings performed in the year ended December 31, 2018. Amounts payable to suppliers a $17.6 million change compared to 2018 as payables in 2019 increased by $7.7 million mainly relating to increases in delivery of supplies of fuel to spot vessels as the Company prepared for the implementation of new IMO regulations at the beginning of 2020, and to port call expenses unpaid by year-end, while in 2018, payables to suppliers fell by $9.9 million as settlements were made in relation to vessel operations that took into account two new vessels joining the fleet. Receivables and advances increased by $9.1 million compared to an increase in receivables of $16.0 million in 2018, a $6.9 million improvement in rate of collectability, mainly due to increased time-charter rates achieved in the year, especially by the LNG carriers. Interest earned from cash deposits also increased by $1.2 million.

Net cash used in investing activities in 2019 amounted to $102.2 million compared to $0.2 million in 2018. In 2019, the cash outflow in investing activities consists of $56.0 million of payments for vessels under construction, $42.9 million of payments for the acquisition of one aframax vessel and $3.3 million for improvements on existing vessels. In 2018, $16.2 million was paid for two vessels under construction and $1.2 million for improvements on existing vessels. Cash outflow from investing activities during 2018 was offset by cash generated by the sale of VLCC *Millennium* for net proceeds of $17.1 million. As at December 31, 2019, there was one aframax, two suezmaxes and one LNG carrier on order and the remaining yard installments to be paid for those vessels as at December 31, 2019 amounted to $323.3 million, the majority of which will be covered through secured debt we expect to arrange. The amount of $188.8 million is due to be paid in 2020 and the amount of $134.5 million in 2021. The aframax tanker, *Caribbean Voyager,* was delivered in the first quarter of 2020, two suezmax tankers are expected to be delivered in the third and fourth quarter of 2020 and the LNG carrier is expected to be delivered in the fourth quarter of 2021.

Net cash used in financing activities amounted to $104.9 million for the year ended December 31, 2019 compared to $55.9 million for the equivalent period of 2018. During 2019, the Company drew down $65.5 million under new loans to finance the acquisition of the aframax tanker *Mediterranean Voyager* and to finance of the remaining three vessels under construction and $428.9 million was drawn as part of refinancing loans and prepaid $400.3 million on the loans. The amount of $156.7 million was paid in scheduled installments. During 2019, the Company redeemed all of its 2,000,000 Series B Preferred Shares with a liquidation preference of $25.00 per share for a total amount of $50.0 million. Cash outflow from financing activities was partially offset by net proceeds of $34.0 million from the issuance of Series G Convertible Preferred Shares, the capital contribution of $10.0 million relating to the increase of paid in capital of Mare Success S.A and proceeds from sale of common shares of $16.6 million. Proceeds from new bank loans in 2018 amounted to $352.9 million and repayments of debt amounted to $508.8 million, which included $171.7 million balloon repayments on the maturity of certain loans, $147.9 million prepayments on certain refinanced loans and $10.2 million on repayment of the loan related to the sale of the vessel *Millennium.*

Total debt outstanding decreased from $1.61 billion at December 31, 2018, to $1.54 billion at December 31, 2019. The debt to capital (equity plus debt) ratio was 51.2% at December 31, 2019 (or 47.8% on a net of cash basis) and 51.6% at December 31, 2018 (or 47.9% on a net of cash basis).

In 2019, dividends of $0.05 per common share were paid in May and December 2019. Total dividend payments to common shareholders in 2019 amounted to $8.9 million, compared to $13.1 million in 2018. On March 24, 2020, the Company declared a dividend of $0.05 per common share payable in June 2020. The Board of Directors decided in 2019, to move from quarterly dividends to semi-annual dividends, payable in June and December of each calendar year. The payment and the amount are subject to the discretion of our Board of Directors and depends on available cash balances, anticipated cash needs, our results of operations, our financial condition, and any loan agreement restrictions binding us or our subsidiaries, as well as other relevant factors. On March 24, 2020, the Company announced that its Board of Directors had authorized a share repurchase program for its common and/or its preferred shares of up to $50 million.

Dividends of $0.50 per share for the 8.00% Series B Preferred Shares, were paid each on January 30, April 30, July 30, 2019, totaling in aggregate $3.0 million. On July 30, 2019, the Company redeemed all of its 2,000,000 Series B Preferred Shares, with a liquidation preference of $25.00 per share.

Dividends of $0.5547 per share for the 8.875% Series C Preferred Shares were paid each on January 30, April 30, July 30 and October 30, 2019, totaling in aggregate $4.4 million and on January 30, 2020, $1.1 million.

Dividends of $0.5469 per share for the 8.75% Series D Preferred Shares, were paid on February 28, May 29, August 28 and November 28, 2019, totaling in aggregate $7.5 million, and on February 28, 2020, $1.9 million.

Dividends of $0.5781 per share for the 9.25% Series E Preferred Shares were paid on February 28, May 29, August 28 and November 28, 2019, totaling in aggregate $10.6 million, and on February 28, 2020, $2.7 million.

Dividends of $0.59375 per share for the 9.50% Series F Preferred Shares were paid on January 30, April 30, July 30 and October 30, 2019, totaling in aggregate $14.3 million, and on February 28, 2020, $3.6 million.

In September 2019, the Company entered into a Share Purchase Agreement for the private placement of 3,500,000 Series G Redeemable Convertible Perpetual Preferred Shares, par value $1.00 per share and liquidation preference $10.00 per share, at a purchase price of $10.00 per share, raising $34.0 million, net of structuring fee and other expenses. The Series G Convertible Preferred Shares have a stated coupon rate of 0%, subject to adjustment in the event of a cross-default or failure to redeem on any redemption date and participate on an as-converted basis in dividends declared and paid on the Company's common shares.

The Series G Convertible Preferred Shares are convertible at any time, at the option of the holder, at a conversion price of $3.00 per share, representing a conversion rate of three and one-third common shares per Series G Convertible Preferred Share. All or a portion of the Series G Convertible Preferred Shares will automatically convert into common shares at the conversion rate if the trading price of the Company's Common Shares exceed certain levels between 130% and 170% of the conversion price. The holders, however, will be prohibited from converting the Series G Convertible Preferred Shares into common shares to the extent that, as a result of such conversion, the holder would own more than 9.99% of the total number common shares then issued and outstanding. The Company may also redeem the Series G Convertible Preferred Shares prior to September 1, 2020, at the as-converted value of the Series G Convertible Preferred Shares, if the trading price of the common shares exceeds certain levels. On December 23, 2019, 875,000 Series G Convertible Preferred Shares converted into 2,916,666 common shares and, on January 15, 2020, the holders of the Series G Convertible Preferred Shares converted 10,000 Series G Convertible Preferred Shares into 33,333 common shares.

Dividends of $0.05 per common share into which the Series G Convertible Preferred Shares were convertible were paid in December 2019, amounting to $0.6 million.

Preferred share dividends on the Series C Preferred Shares are payable quarterly in arrears on the 30th day of January, April, July and October of each year, when, as and if declared by the Company's Board of Directors.

Preferred share dividends on Series D and Series E Preferred Shares are payable quarterly in arrears on the 28th day of February, May, August and November of each year, when, as and if declared by the Company's board of directors. As of December 31, 2019, the Company was in full compliance with all the covenants contained within the terms of its Series C Preferred Shares.

On July 10, 2018, the Company completed an offering of 6,000,000 of its Series F Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share, liquidation preference $25.00 per share, raising $144.3 million, net of underwriter's discount and other expenses. Dividends on the Series F Preferred Shares are cumulative from the date of original issue and are payable quarterly in arrears on the 30th day of January, April, July and October of each year, when, as and if declared by our board of directors. Dividends will be payable from cash available for dividends at a rate equal to 9.50% per annum of the stated liquidation preference prior to July 30, 2028 and from and including July 30, 2028, at a floating rate equal to three-month LIBOR plus spread of 6.54% per annum of the stated liquidation preference. On October 30, 2018, the Company paid dividends of $0.80486 per share each or $4.8 million in total and on January 30, 2019 paid dividends of $3.6 million in total on its 9.50% Series F Preferred Shares.

In 2018, the Company sold 1,019,069 common shares from its treasury stock and issued 265,993 common shares for net proceeds of $4.5 million.

From time to time and depending upon market conditions, we may consider various capital raising alternatives to finance the strategic growth and diversification of our fleet. Any such capital raising transactions may be at the Tsakos Energy Navigation Limited or subsidiary level, to which interests in certain vessels in our fleet and rights to receive related cash flows would be transferred, as well as other capital raising alternatives available to us at that particular time.

Investment in Fleet and Related Expenses

We operate in a capital-intensive industry requiring extensive investment in revenue-producing assets. We continue to have an active fleet development program resulting in a fleet of modern and young vessels with an average age of 9.0 years at April 2, 2020. We raise the funds for such investments in newbuildings mainly from borrowings and partly out of internally generated funds and equity issuance transactions. Newbuilding contracts generally provide for multiple staged payments of 10%, with the balance of the vessel purchase price paid upon delivery. In the case of newbuildings, pre-delivery financing is arranged to finance part of the installment payments to the shipbuilding yard and delivery finance is arranged for the last installment to the yard on delivery of the vessels. Otherwise, for the equity portion of an investment in a newbuilding or a second-hand vessel, we generally pay from our own cash approximately 20% to 30% of the contract price. Repayment of the debt incurred to purchase the vessel is made from vessel operating cash flow, typically over four to twelve years, compared to the vessel's asset life of approximately 25 years (LNG carriers 40 years).

Debt

As is customary in our industry, we anticipate financing the majority of our commitments on vessel newbuildings with bank debt. Generally, we raise 70% to 80% of the vessel purchase price with bank debt for a period of between unusually between four and twelve years. For vessels for which we have secured long-term charters with first-class charterers, we would expect to raise up to 80% of the vessel purchase price with bank debt. Our existing credit facilities require us and certain of our subsidiaries to comply with certain operating and financial covenant restrictions. See "Note 6—Long Term Debt" to our audited consolidated financial statements included elsewhere in this report.

Summary of Loan Movements Throughout 2019 (in millions of U.S. dollars):

Loan	Vessel	Balance at January 1, 2019	New Loans	Prepaid	Repaid	Balance at December 31, 2019
Credit facility	*Neo Energy*	62,500	—	62,500	—	—
12-year term loan	*Sapporo Princess*	18,750	—	—	2,500	16,250
10-year term loan	*Uraga Princess*	16,900	—	16,900	—	—
10-year term loan	*Selini*	18,181	—	16,575	1,606	—
9-year term loan	*Salamina*	21,300	—	21,300	—	—
10-year term loan	*Spyros K*	24,000	—	24,000	—	—
9-year term loan	*Dimitris P*	25,948	—	25,948	—	—
8-year term loan	*Rio 2016*	73,672	—	—	6,406	67,266
7-year term loan	*Eurovision*	30,800	—	28,000	2,800	—
6-year term loan	*Sola TS*	169,120	—	127,250[1]	8,476	33,394
7-year term loan	*Oslo TS*	36,377	—	35,036	1,341	—
6-year term loan	*Marathon TS, Bergen TS*	72,925	—	—	4,669	68,256
6-year term loan	*Stavanger TS*	37,457	—	—	2,497	34,960
5-year term loan	*Sunray*	31,280	—	—	1,955	29,325
7-year term loan	*Sunrise*	30,792	—	—	2,199	28,593
7-year term loan	*Pentathlon*	29,019	—	—	3,627	25,392
5-year term loan	*Silia T, Andes, Didimon, Byzantion, Bosporos*	56,908	—	—	10,347	46,561
6-year term loan	*Socrates, Selecao*	32,351	—	—	4,622	27,729
7-year term loan	*Decathlon*	36,800	—	—	3,200	33,600
12-year term loan	*Maria Energy, Ulysses, Hercules I*	252,433	—	—	21,502	230,931
5-year term loan	*Amphitrite, Arion, Andromeda*	21,996	—	19,450	2,546	—
4-year term loan	*Maya, Inca*	10,875	—	9,063	1,812	—
7 1/2-year term loan	*Lisboa*	79,333	—	—	5,667	73,666
4-year term loan	*Izumo Princess, Asahi Princess Archangel, Aegeas, Alaska, World Harmony, Chantal*	92,314	—	—	15,594	76,720
6-year term loan	*Brasil 2014*	76,255	—	—	7,490	68,765
5-year term loan	*Arctic, Antarctic, Afrodite, Apollon, Artemis, Ariadne, Aris, Ajax, Proteas, Promitheas, Propontis*	151,014	—	—	23,122	127,892
5-year term loan	*Sakura Princess, Euro*	44,000	—	—	4,700	39,300
5-year term loan	*Maria Princess, Nippon Princess, Ise Princess*	48,650	—	—	6,081	42,569
8-year term loan	*Mediterranean Voyager, Caribbean Voyager*	5,172	51,720	—	—	56,892
5-year term loan	*Neo Energy*	—	62,500	—	3,000	59,500
6-year term loan	*Uraga Princess, Spyros K, Dimitris P.*	—	88,150	14,272[2]	4,358	69,520
5-year term loan	*Maya, Inca, Selini, Salamina*	—	38,250	—	3,187	35,063
4-year term loan	*Amphitrite, Arion, Andromeda*	—	26,000	—	—	26,000
7-year term loan	*Hull 8041*	—	6,979	—	—	6,979
10-year term loan	*Hull 8042*	—	6,733	—	—	6,733
7-year term loan	*Thomas Zafiras, Leontios H.*	—	72,000	—	—	72,000
5-year term loan	*Elias Tsakos, Oslo TS*	—	71,036	—	1,341	69,695
5-year term loan	*Parthenon TS*	—	36,000	—	—	36,000
5-year term loan	*Eurovision*	—	35,000	—	—	35,000
Total		**1,607,122**	**494,368**	**400,294**	**156,645**	**1,544,551**

[1] Prepaid portion of the outstanding loan for four vessels (*Elias Tsakos, Thomas Zafiras, Leontios H, Oslo TS*).
[2] Prepaid portion of the outstanding loan for vessel *Salamina.*

The above term bank loans are secured by first priority mortgages on all vessels owned by the Company's subsidiaries, by assignments of earnings and insurances of the respectively mortgaged vessels, and by corporate guarantees of the relevant ship-owning subsidiaries and in certain cases by the parent company.

As a result of such financing activities, long-term debt decreased in 2019 by a net amount of $62.6 million compared to a net decrease of $156.0 million in 2018. The debt to capital (equity plus debt) ratio was 51.2% at December 31, 2019, or net of cash, 47.8%, and 51.6% at December 31, 2018 or, net of cash, 47.9%.

We have paid all of our scheduled loan installments and related loan and swap interest consistently without delay or omission. As a percentage of total liabilities against total assets at fair value, our consolidated leverage (a non-GAAP measure) as computed in accordance with our loan agreements at December 31, 2019 was 57.7%, below the original loan covenant maximum of 70%, which is applicable to all the above loans on a fleet and total liabilities basis. Almost all the loan agreements also include a requirement for the value of the vessel or vessels secured against the related loan to be at least 120% (in four cases 110% and in four other cases the ratio is based on a formula which takes into account vessels on time charters) of the outstanding associated debt at all times. The Company continues to be fully compliant with its scheduled debt service requirements, repaying capital and paying interest promptly in accordance with respective bank agreements without fail. Our existing bank loans require us and certain of our subsidiaries to comply with certain operating and financial covenant restrictions. See "Note 6 – Long Term Debt" to our audited consolidated financial statements included elsewhere in this report. As at December 31, 2019, the Company and its wholly and majority owned subsidiaries were compliant with the financial covenants in its twenty-nine loan agreements totaling $1.54 billion. At December 31, 2019 we were compliant with the leverage ratio covenant contained in all of our bank loans. We do not expect to pay down the Company's loans in 2020 beyond the amounts that we have already classified as current liabilities. Upon an event of default, all the loan agreements, which are secured by mortgages on our vessels and in certain cases by the parent company, include the right of lenders to accelerate repayments. All our loan agreements and our interest rate swap agreements also contain a cross-default provision that may be triggered by a default under one of our other loans. A cross-default provision means that a notice of default on one loan would result in a default on other agreements.

Interest is usually payable at a variable rate, based on six-month LIBOR plus a margin. Interest rate swap instruments currently cover approximately 32% of the outstanding debt as of March 31, 2020. We review our hedging position relating to interest on a continuous basis and have regular discussions with banks with regards to terms for potential new instruments to hedge our interest.

Off-Balance Sheet Arrangements

None.

Long-Term Contractual Obligations as of December 31, 2019 (in millions of U.S. dollars) were:

Contractual Obligations	Total	Less than 1 year (2020)	1-3 years (2021-2022)	3-5 years (2023-2024)	More than 5 years (after January 1, 2025)
Long-term debt obligations (excluding interest)	1,544.6	238.4	388.4	598.8	319.0
Vessel operating leases[1]	32.2	10.9	21.3	—	—
Interest on long-term debt obligations (including interest rate swap payments)[2]	178.5	49.7	77.5	34.9	16.4
Purchase Obligations (newbuildings)[3]	323.3	188.8	134.5	—	—
Management Fees payable to Tsakos Energy Management (based on existing fleet plus contracted future deliveries as at December 31, 2019)	208.2	21.3	42.8	41.9	102.2
Total	2,286.8	509.1	664.5	675.6	437.6

(1) The amounts represent Company's commitments under sale and leaseback agreement for two of its vessels. In 2020, we have entered into sale and leaseback agreements for two additional vessels.

(2) The amounts shown above for interest obligations include contractual interest obligations for floating rate debt as at December 31, 2019 based on the amortization schedule for such debt and the average interest rate as described in "Item 11. Quantitative and Qualitative Disclosures about Market Risk." Derivative contracts and their implied average fixed rates are also included in the calculations.

(3) The amounts shown above for purchase obligations (newbuildings) include amounts payable based on contracts agreed with shipbuilding yards for four vessels under construction.

Item 6. Directors, Senior Management and Employees

The following table sets forth, as of March 31, 2020, information for each of our directors and senior managers.

Name	Age	Positions	Year First Elected
Efstratios Georgios Arapoglou	68	Chairman of the Board	2010
Nikolas P. Tsakos	56	President and Chief Executive Officer, Director	1993
Michael G. Jolliffe	70	Vice Chairman of the Board, Director	1993
George V. Saroglou	55	Vice President, Chief Operating Officer, Director	2001
Paul Durham	69	Chief Financial Officer and Chief Accounting Officer	—
Vasileios Papageorgiou	73	Chief Marine Officer	—
Nicholas F. Tommasino	62	Director	2017
Aristides A.N. Patrinos	72	Director	2006
Efthimios E. Mitropoulos	80	Director	2012
Maria Vassalou	54	Director	2016
Denis Petropoulos	63	Director	2018

Certain biographical information regarding each of these individuals is set forth below.

EFSTRATIOS GEORGIOS (TAKIS) ARAPOGLOU
CHAIRMAN OF THE BOARD

Takis Arapoglou is a consultant with an earlier career in International Capital Markets and Corporate & Investment banking and later in managing, restructuring and advising publicly listed Financial Institutions and Corporates. Most recent executive assignments include: Managing Director and Global Head of the Banks and

Securities Industry for Citigroup; Chairman and CEO of the National Bank of Greece; Chairman of the Hellenic Banks Association; CEO of Commercial Banking at EFG-Hermes Holding SAE. He is currently holding the following non-executive board positions: Chairman of Bank of Cyprus; Chairman of Titan Cement International; Independent board member of EFG-Hermes Holding; Board member of Bank Alfalah Ltd., representing the International Finance Corporation (IFC). He is a member of the International Board of Advisors of Tufts University, Boston, MA., a member of the Business Advisory Council for the International MBA program at the Athens University of Economics and Business. He holds degrees in Mathematics, Engineering and Management from Greek and British Universities.

NIKOLAS P. TSAKOS, Dr.
FOUNDER, PRESIDENT AND CHIEF EXECUTIVE OFFICER

Mr. Nikolas P. Tsakos is the Founder and Chief Executive Officer of Tsakos Energy Navigation (TEN), a pioneering shipping company, established 27 years ago and quoted on the New York Stock Exchange. He comes from a traditional Chios seafaring family and has extensive seagoing experience, having also served as an Officer in the Greek Navy. Mr. Tsakos was the Chairman of INTERTANKO from 2014 to 2018 and the former President of the environmental organisation "HELMEPA". He sits on the boards of a number of maritime and finance organisations and associations. Nikolas graduated from Columbia University in New York with a degree in Economics and Political Science and obtained a Master's Degree in Shipping, Trade and Finance from London's City University Business School (CASS). In 2011, he was awarded an honorary doctorate from City University, for his pioneering work in the equity financial markets relating to shipping companies. He is married and has three children.

MICHAEL G. JOLLIFFE
CO-FOUNDER AND VICE CHAIRMAN

Mr. Jolliffe has been joint Managing Director and then Vice Chairman of our Board since 1993. He is a director of a number of companies in shipping, agency representation, shipbroking capital services and mining. Mr. Jolliffe is Chief Executive Officer of Tsakos Containers Navigation LLC, a shipping company set up in joint venture between the Tsakos and Jolliffe families and Warwick Capital Partners, a London based fund manager. He is also Chairman of the Wighams Group owning companies involved in shipbroking, agency representation and capital markets businesses. Mr. Jolliffe is a director of ColdHarbour Marine, a company manufacturing equipment for the marine industry. He is also Chairman of StealthGas Inc., a shipping company which is quoted on the Nasdaq Stock Exchange and which owns 45 LPG carriers, three product carriers and one crude oil tanker. Mr. Jolliffe is also a Trustee of Honeypot Children's Charity.

GEORGE V. SAROGLOU
VICE PRESIDENT, CHIEF OPERATING OFFICER AND DIRECTOR

Mr. Saroglou has been Chief Operating Officer of the Company since 1996. Mr. Saroglou worked for a private Greek information technology systems integrator from 1987 until 1994. From 1995 to 1996 he was employed in the Trading Department of the Tsakos Group. He graduated from McGill University in Canada in 1987 with a Bachelor's Degree in Science (Mathematics). Mr. Saroglou is the cousin of Mr. Tsakos.

PAUL DURHAM
CHIEF FINANCIAL OFFICER AND CHIEF ACCOUNTING OFFICER

Mr. Durham joined Tsakos in 1999 and has served as our Chief Financial Officer and Chief Accounting Officer since 2000. Mr. Durham is a Fellow of the Institute of Chartered Accountants in England & Wales. From 1989 through 1998, Mr. Durham was employed in Athens with the Latsis Group, a shipping, refinery and banking enterprise, becoming Financial Director of Shipping in 1995. From 1983 to 1989, Mr. Durham was employed by RJR Nabisco Corporation, serving as audit manager for Europe, Asia and Africa until 1986 and

then as financial controller of one of their United Kingdom food divisions. Mr. Durham worked with public accounting firms Ernst & Young (London and Paris) from 1972 to 1979 and Deloitte & Touche (Chicago and Athens) from 1979 to 1983. Mr. Durham is a graduate in Economics from the University of Exeter, England.

VASILEIOS PAPAGEORGIOU
CHIEF MARINE OFFICER

Mr. Papageorgiou is our Chief Marine Officer. He monitors our fleet's technical and operational performance. In addition, he heads the newbuilding section and technically led the recent successful large scale fleet expansion and renewal plan. For the past 15 years Mr Papageorgiou has overseen the construction of more than 104 vessels of diverse type and range, amongst them DP Shuttle tankers and LNG vessels. He has an extended technical academic background, holding Bachelor of Science degrees in Naval Architecture and Marine Engineering and Master of Science degrees in Internal Combustion Engines and Management and Economics. Mr. Papageorgiou initiated his career 50 years ago, being employed for a period of 5 years in the Greek ship and repair yards of Skaramanga, Perama and Elefsis, being engaged in the supervision of ship repairs and newbuildings. In 1976 and for a period of 4 years he worked for Chalkis Shipyard and Carras Shipping Co attending repairs and newbuildings in Japan and Yugoslavia. In 1980, Mr. Papageorgiou joined Lloyd's Register of Shipping initially as a junior Ship and Engine Surveyor in the Far East area (Korea, Japan, China, Hong Kong, Philippines). He was the first surveyor of Greek nationality of Lloyd's Register supervising the construction of newbuildings in Asia. Soon he was promoted to Principal Surveyor, thereafter to Senior Principal Surveyor, a position held for the first time by an Engineer of Greek nationality. Successively, in 1990, Lloyd's Register appointed him in the post of area Managing Director for the wider region of Greece, Balkans and Middle East, again a position held for the first time by a Greek citizen. Mr. Papageorgiou is an active participant in a wide range of technical committees.

ARISTIDES A.N. PATRINOS, Ph.D
DIRECTOR

Dr. Patrinos is the Chief Scientist and Director for Research of the Novim Group, a think tank based in Santa Barbara, California, USA. He is also a Distinguished Industry Professor of Mechanical and Biomolecular Engineering at New York University (currently on leave). Since 2006 he is also affiliated with Synthetic Genomics Inc. (SGI) serving as President (2006-2011), Senior Vice President for Corporate Affairs (2011-2012) and currently as a Programs and Policy Advisor. SGI is a US-based privately held company dedicated to developing and commercializing synthetic biology instruments, clean and renewable fuels and chemicals, sustainable food products; and novel medical applications such as synthetic vaccines and other biologics. Dr. Patrinos also serves on the board of directors of Liberty Biosecurity LLC (since December 2016), a USA-based private DNA sequencing and analysis company focused on biodefense and other applications; and on the board of directors of Data Cubed, Inc. (since June 2016) a NYC-based private company focused on healthcare, big data, and human decision-making. Dr. Patrinos also consults for Oak Ridge National Laboratory, the translational medicine program of the University of Pittsburgh, and the Research Council of the State University of New York. From 1976 to 2006, Dr. Patrinos served in the U.S. Department of Energy (DOE) and several of the DOE National Laboratories and engaged in several facets of energy production and use and led key research programs in biology and the environment. He played a leading role in the Human Genome Project and has been a central architect of the "genomics" revolution. He is a member of many scientific societies and is a recipient of numerous awards and distinctions including three U.S. Presidential Rank Awards, and two Secretary of Energy Gold Medals. He holds a Diploma in Mechanical and Electrical Engineering from the National Technical University of Athens (Metsovion) and a Ph.D. in Mechanical Engineering and Astronautical Sciences from Northwestern University. During 2016, Dr. Patrinos was Senior Adviser to USA Department of Energy Secretary Ernest Moniz. Since January 2018 he is a consultant to the Nuclear Thread Initiative, a foundation based in Washington, DC, dedicated to the prevention of nuclear and bioterror threats.

EFTHIMIOS E. MITROPOULOS, KCMG
DIRECTOR

Mr. Mitropoulos is Secretary-General Emeritus of the International Maritime Organization (IMO), the United Nations specialized agency responsible for the regulation of international shipping from the safety, security and environmental protection points of view. After 23 years of service at IMO (ten of which as Director of the Maritime Safety Division), he was elected Secretary-General in 2003 and re-elected in 2007 for a total of the maximum time permitted of eight years. As a graduate of both Merchant and Naval Academies of Greece, he spent time at sea as a navigation officer and twenty years as a commissioned Hellenic Coast Guard officer, retiring as a rear admiral, having represented Greece at IMO and various other international forums dealing with shipping matters over a twelve year period and having spent two years as Harbour Master of Corfu. Between 2004 and 2012, he was Chancellor of the World Maritime University, Malmö, Sweden and Chairman of the Governing Board of the International Maritime Law Institute in Malta. He is the author of several books on shipping, including texts on tankers, modern types of merchant ships, safety of navigation and shipping economics and policy. He is Chairman of the Board of the "Maria Tsakos" Public Benefit Foundation – International Centre for Maritime Research and Tradition and Patron of two international maritime organizations. He is a member of several shipping societies in Greece and in the United Kingdom and a recipient of many awards and distinctions from Governments, international organizations and universities. He is an honorary citizen of Galaxidi, Greece and Malmö, Sweden.

MARIA VASSALOU Ph.D
DIRECTOR

Prior to founding Vassalou Capital Management in 2019, Dr. Maria Vassalou was a Partner and Portfolio Manager at Perella Weinberg Partners, responsible for the Global Macro Business. Dr. Vassalou joined Perella Weinberg Partners from MIO Partners, a subsidiary of McKinsey & Company, where as a Portfolio Manager she managed a similar global macro investment strategy in a dedicated legal entity, and as Head of Asset Allocation she provided counsel on allocation for liquid assets within MIO's portfolio. Prior to joining MIO, Dr. Vassalou was a Global Macro Portfolio Manager at SAC Capital Advisors, LP. She joined SAC from Soros Fund Management where she was responsible for global quantitative research, as well as the development and management of global quantitative trading strategies. Prior to her career in asset management, Dr. Vassalou was an Associate Professor of Finance at Columbia Business School which she joined in 1995 and where she established many of the investment principles she employs today. Dr. Vassalou is a Past President of the European Finance Association and was the Chair of the 2008 European Finance Association Meetings. A Research Affiliate of the Centre for Economic Policy Research (CEPR) in London for many years, Dr. Vassalou is a past member of the Academic Advisory Board of the Vienna-based Guttmann Center of Competence in Portfolio Management. Her research focus has been on the interrelation of the macro-economy and financial markets with applications in hedge fund strategies. A frequent speaker to both academic and practitioner-oriented seminars and conferences, Dr. Vassalou has published in leading academic journals, such as the Journal of Finance, Journal of Financial Economics, Journal of Financial and Quantitative Analysis, Journal of Business, Journal of International Money and Finance, and the Journal of Economic Dynamics and Control. While she was on the faculty of Columbia University, she also served as a consultant to many premier hedge funds and asset management institutions in the U.S. and Europe. Dr. Vassalou serves on the Board of Directors of Titan Cement International SA (EBR: TITC), and is an Overseer of The Gennadius Library, American School of Classical Studies at Athens. Dr. Vassalou received a Bachelor of Arts in Economics from the University of Athens and she holds a PhD in Financial Economics from London Business School.

NICHOLAS F. TOMMASINO
DIRECTOR

Mr. Tommasino is a retired partner of Deloitte LLP, a global professional services firm focusing on Audit, Tax, Advisory and Consulting services ("D&T"). With more than 38 years of experience, including 27 as a

Partner until his retirement in 2016, he served global clients in a variety of industries including Transportation, Telecommunications, Pharmaceuticals, Agribusiness and Hospitality. He provided services across a wide range of areas including audit, mergers and acquisitions, U.S. listings, including foreign private issuers, and regulatory and risk areas. He held a number of leadership roles from leading the New York Audit and Advisory practice to the Northeast Practice to the entire East Sector culminating in his assuming the role of Chairman and CEO of Deloitte and Touche LLP (D&T) where he was responsible for all aspects of a multi-billion dollar, fourteen thousand personnel, professional services firm. He directed the Development and Implementation of Strategy, Operations, Talent, Quality, Governance and Cultural Cultivation at D&T. He was a Board member of D&T (including Chairman) and chaired the D&T Executive Committee. He serves as a Trustee and Vice President of the Madison Square Boys and Girls Club. He was an associate adjunct professor at Columbia University. He graduated Summa Cum Laude with a BS in accounting from Manhattan College.

DENIS PETROPOULOS
DIRECTOR

Denis Petropoulos has worked in competitive ship broking for over 35 years and has presented on a broad base of shipping related topics at many major international industry conferences. His knowledge of the energy industry and in particular its shipping requirements for crude oils, products, chemicals, LPG and LNG extends to all the supply and refinery centres around the world. He presently sits on INTERTANKO's Associate Members' Committee and on the council of the Baltic Exchange in London. Mr. Petropoulos left H.Clarksons in 1985 to open Braemar Tankers, which in 2001 evolved into Braemar Shipping Services PLC, as it is known today, where he sat on the board as Executive Director. In 2011 he opened Braemar's shipbroking office in Singapore and remained there until 2017 heading up the company's expanding operations in the Asia-Australia. He came off the Braemar Shipping Services PLC board in 2015 and remains a shareholder.

Board of Directors

Our business is managed under the direction of the Board, in accordance with the Companies Act 1981 of Bermuda, as amended (the "Companies Act") and our Memorandum of Association and Bye-laws. Members of the Board are kept informed of our business through: discussions with the Chairman of the Board, the President and Chief Executive Officer and other members of our management team; the review of materials provided to directors; and, participation in meetings of the Board and its committees. In accordance with our Bye-laws, the Board has specified that the number of directors will be set at no less than five nor more than fifteen. At December 31, 2019 we had nine directors on our Board. At its May 25, 2018 meeting, the Board of Directors approved the appointment of Mr. Petropoulos as an additional Director and as member in the Corporate Governance, Nominating and Compensation Committee. Under our Bye-laws, one third (or the number nearest one third) of the Board (with the exception of any executive director) retires by rotation each year. The Bye-laws require that the one third of the directors to retire by rotation be those who have been in office longest since their last appointment or re-appointment. The Bye-laws specify that where the directors to retire have been in office for an equal length of time, those to retire are to be determined by lot (unless they agree otherwise among themselves).

During the fiscal year ended December 31, 2019, the full Board held four meetings, of which three were in person and one by teleconference. Each director attended all of the meetings of the Board and all of the meetings of committees of which such director was a member in 2019, except for two directors, who attended at least 75% of such meetings.

Independence of Directors

The foundation for the Company's corporate governance is the Board's policy that a majority of the members of the Board should be independent. With the exception of the two Executive Directors (Messrs. Tsakos and Saroglou) and one Non-executive Director (Mr. Jolliffe), the Board believes that each of the other

incumbent directors (Messrs. Tommasino, Arapoglou, Mitropoulos and Petropoulos and Drs. Patrinos and Vassalou) is independent under the standards established by the New York Stock Exchange (the "NYSE") because none has a material relationship with the Company directly or indirectly or any relationship that would interfere with the exercise of their independent judgment as directors of the Company.

The Board made its determination of independence in accordance with its Corporate Governance Guidelines, which specify standards and a process for evaluating director independence. The Guidelines provide that:

- A director cannot be independent if he or she fails to meet the objective requirements as to "independence" under the NYSE listing standards.
- If a director meets the objective NYSE standards, he or she will be deemed independent, absent unusual circumstances, if in the current year and the past three years the director has had no related-party transaction or relationship with the Company or an "interlocking" relationship with another entity triggering disclosure under SEC rules.
- If a director who meets the objective NYSE independence requirements either has had a disclosable transaction or relationship or the Corporate Governance, Nominating and Compensation Committee requests that the Board consider any other circumstances in determining the director's independence, the Board will make a determination of the director's independence.

To promote open discussion among the independent directors, those directors met three times in 2019 in regularly scheduled executive sessions without participation of the Company's management and will continue to do so in 2020. Dr. Patrinos serves as the Presiding Director for purposes of these meetings.

Documents Establishing Our Corporate Governance

The Board and the Company's management have engaged in an ongoing review of our corporate governance practices in order to oversee our compliance with the applicable corporate governance rules of the NYSE and the SEC.

The Company has adopted a number of key documents that are the foundation of its corporate governance, including:

- a Code of Business Conduct and Ethics for Directors, Officers and Employees;
- a Corporate Governance, Nominating and Compensation Committee Charter; and
- an Audit Committee Charter.

These documents and other important information on our governance, including the Board's Corporate Governance Guidelines, are posted in the "Investor Relations" section of the Tsakos Energy Navigation Limited website, and may be viewed at http://www.tenn.gr. We will also provide any of these documents in hard copy upon the written request of a shareholder. Shareholders may direct their requests to the attention of Investor Relations, c/o George Saroglou or Paul Durham, Tsakos Energy Navigation Limited, 367 Syngrou Avenue, 175 64 P. Faliro, Athens, Greece.

The Board has a long-standing commitment to sound and effective corporate governance practices. The Board's Corporate Governance Guidelines address a number of important governance issues such as:

- Selection and monitoring of the performance of the Company's senior management;
- Succession planning for the Company's senior management;
- Qualifications for membership on the Board;

- Functioning of the Board, including the requirement for meetings of the independent directors; and
- Standards and procedures for determining the independence of directors.

The Board believes that the Corporate Governance Guidelines and other governance documents meet current requirements and reflect a very high standard of corporate governance.

Committees of the Board

The Board has established an Audit Committee, a Corporate Governance, Nominating and Compensation Committee, a Business Development and Capital Markets Committee and an Operational, Safety and Environmental ("OSE") Committee.

Audit Committee

The current members of the Audit Committee are Messrs. Tommasino and Arapoglou and Dr. Vassalou, each of whom is an independent director. Mr. Tommasino is the Chairman of the committee. The Audit Committee is governed by a written charter, which is approved and adopted annually by the Board. The Board has determined that the continuing members of the Audit Committee meet the applicable independence requirements, and that all continuing members of the Audit Committee meet the requirement of being financially literate. The Audit Committee held four meetings during the fiscal year ended December 31, 2019. The Audit Committee is appointed by the Board and is responsible for, among other matters:

- engaging the Company's external and internal auditors;
- approving in advance all audit and non-audit services provided by the auditors;
- approving all fees paid to the auditors;
- reviewing the qualification and independence of the Company's external auditors;
- discussing compliance with accounting standards and any proposals which the external auditors have made regarding the Company's accounting standards with the external auditors;
- overseeing the Company's financial reporting and internal control functions;
- overseeing the Company's whistleblower's process and protection;
- overseeing general compliance with related regulatory requirements;
- overseeing the executive management's identification and assessment of risks that the Company faces and the establishment of a risk management structure capable of addressing and mitigating those risks;
- overseeing the division of risk-related responsibilities among each of the Board committees as clearly as possible and performing a gap analysis to confirm that the oversight of any risk is not missed;
- in conjunction with the full Board, approving the Company-wide risk management program; and
- assessing whether the Company's technical and commercial managers have effective procedures for managing risks.

The Board of Directors has determined that each of Messrs. Tommasino, Arapoglou, and Dr. Vassalou, whose biographical details are included herein, qualifies as an "audit committee financial expert" under current SEC regulations and each is independent in accordance with SEC rules and the listing standards of the NYSE.

Corporate Governance, Nominating and Compensation Committee

The current members of the Corporate Governance, Nominating and Compensation Committee are Messrs. Arapoglou, Mitropoulos, Tommasino and Petropoulos and Drs. Patrinos and Vassalou, each of whom is an independent director. Dr. Patrinos is the Chairman of the committee. The Corporate Governance, Nominating and Compensation Committee is appointed by the Board and is responsible for:

- developing and recommending to the Board corporate governance guidelines applicable to the company and keeping such guidelines under review;
- overseeing the evaluation of Board and management;
- arranging for an annual performance evaluation of the committee and producing an annual report to the Board;
- reviewing regularly the Board structure, size and composition and making recommendations to the Board with regard to any adjustments that are deemed necessary;
- identifying and nominating candidates for the approval of the Board to fill Board vacancies as and when they arise;
- implementing plans for succession, making recommendations to the Board for the continuation in service of an executive director and recommending directors who are retiring by rotation to be put forward for re-election;
- determining the compensation of the non-executive directors, determining and administering the Company's long term incentive plans, including any equity based plans and grants under them; and
- producing an annual report on executive compensation as required by the SEC to be included in the Company's annual proxy statement or annual report.

During 2019, there were three meetings of the Corporate Governance, Nominating and Compensation Committee.

Business Development and Capital Markets Committee

The current members of the Business Development and Capital Markets Committee are Messrs. Arapoglou, Jolliffe, Saroglou and Tsakos and Dr. Vassalou. Mr. Jolliffe is Chairman of the committee. The Business Development and Capital Markets Committee was established in 2014 for the purpose of overseeing the financial policies and activities of the Company and its subsidiaries relating to the Company's capital structure and capital raising activities. The committee reviews and approves presentations to, and communications with, shareholders, financial analysts, and potential investors and oversees the establishment and maintenance of the Company's relations with investment banks and financial institutions, as well as the development and expansion of the Company's business, including the evaluation of strategic growth opportunities.

Operational, Safety and Environmental Committee

The current members of the Operational, Safety and Environmental Committee are Messrs. Jolliffe, Mitropoulos Papageorgiou and Dr. Patrinos. Mr. Mitropoulos is Chairman of the committee. The primary role of the OSE Committee is to draw the attention of the Board and the Company's management to issues of concern regarding the safety of crew and vessels and the impact of the maritime industry on the environment, to provide an update on related legislation and technological innovations, and more specifically highlight areas in which the Company itself may play a more active role in being in the forefront of adopting operational procedures and technologies that will ensure maximum safety for crew and vessels and contribute to a better environment.

Board Compensation

We pay no cash compensation to our directors who are executive officers. For the year ended December 31, 2019, the aggregate cash compensation of all of the members of the Board was $660,000 per the following annual fee schedule, which was approved by the shareholders of the Company on May 30, 2019:

- Service on the Board—$60,000
- Service on the Audit Committee—$20,000
- Service on the Business Development and Capital Markets Committee—$10,000
- Service on the Operational, Safety and Environmental Committee—$10,000
- Service as Chairman of the Corporate Governance, Nominating and Compensation Committee—$10,000
- Service as Chairman of the Operational, Safety and Environmental Committee—$10,000
- Service as Chairman of the Audit Committee—$30,000
- Service as Chairman of the Business Development and Capital Markets Committee—$30,000
- Service as Chairman of the Board—$40,000

No fees are paid for service on the Corporate Governance and Nominating and Compensation Committee.

We do not provide benefits for directors upon termination of their service with us.

Management Company

Tsakos Energy Management, under its management agreement with us, provides overall executive and commercial management of our affairs in exchange for a monthly management fee. See "Management and Other Fees" in Item 7 for more information on the management agreement and the management fees we paid for the fiscal year ended December 31, 2019.

Management Compensation

Messrs. Tsakos, Saroglou, Durham and Papageorgiou serve as President and Chief Executive Officer, Vice President and Chief Operating Officer, Chief Financial Officer and Chief Accounting Officer, and Chief Marine Officer, respectively. Such individuals are employees of Tsakos Energy Management, except for Mr. Papageorgiou who is an employee of Tsakos Shipping, and, except for the equity compensation discussed below and the compensation paid to Mr. Papageorgiou for service on the OSE Committee, are not directly compensated by the Company. Although he is not a member of the Board, our Chief Marine Officer, Mr. Papageorgiou serves on the Operational, Safety and Environmental Committee and receives the same $10,000 per annum cash compensation for service on such committee as is paid to non-executive members of the Board serving thereon.

From 2010 to 2014 the Corporate Governance, Nominating and Compensation Committee did not establish a performance incentive program for Tsakos Energy Management. In May 2015, a management incentive award program based on various performance criteria was approved by the Board of Directors. In March 2019, October 2018 and June 2017, the Board of Directors decided to reward the management company with an award of $0.5 million, $0.2 million and $0.6 million, respectively, based on various performance criteria, and taking into account cash availability and market volatility. The award is accounted for on a straight-line basis within the year it is determined. In addition, an amount of $0.8 million and $0.6 million was awarded to Tsakos Energy Management relating to services provided towards an equity offering during 2018 and 2017, respectively. There was no such an award in 2019.

Employees

Tsakos Energy Navigation Limited has no salaried employees. All crew members are employed by the owning-company of the vessel on which they serve, except where the vessel may be on a bareboat charter-out, or where the vessels or the crewing thereof, are under third-party management arranged by our technical managers. All vessel owning-companies are subsidiaries of Tsakos Energy Navigation Limited. Approximately 2,000 officers and crew members served on board the vessels we own and were managed by our technical managers as of December 31, 2019.

Share Ownership

The common shares beneficially owned by our directors and senior managers and/or companies affiliated with these individuals are disclosed in "Item 7. Major Shareholders and Related Party Transactions" below.

Stock Compensation Plan

At the 2012 Annual Meeting of Shareholders, our shareholders approved a share-based incentive plan (the "2012 Plan"). This plan permits us to grant share options or other share based awards to our directors and officers, to the officers of the vessels in the fleet, and to the directors, officers and employees of our manager, Tsakos Energy Management, and our commercial manager, Tsakos Shipping.

The purpose of the 2012 Plan is to provide a means to attract, retain, motivate and reward the persons whose performance of administrative, commercial, management, technical and maritime services are important for the Company by increasing their ownership in our Company. Awards under the 2012 Plan may include options to purchase our common shares, restricted share awards, other share-based awards (including share appreciation rights granted separately or in tandem with other awards) or a combination thereof.

The 2012 Plan is administered by our Corporate Governance, Nominating and Compensation Committee. Such committee has the authority, among other things, to: (i) select the present or prospective directors, officers, consultants and other personnel entitled to receive awards under the 2012 Plan; (ii) determine the form of awards, or combinations of awards; (iii) determine the number of shares covered by an award; and (iv) determine the terms and conditions of any awards granted under the 2012 Plan, including any restrictions or limitations on transfer, any vesting schedules or the acceleration of vesting schedules and any forfeiture provision or waiver of the same. The 2012 Plan authorizes the issuance of up to 1,000,000 Common Shares in the form of restricted stock units ("RSUs") or options. In 2017, 110,000 RSUs were issued to the non-executive directors of the Company, which vested immediately. In 2016, 87,500 RSUs were also issued to the non-executive directors of the Company, which vested immediately. In 2018, no RSUs or other awards were issued. As of December 31, 2019, there were no outstanding (non-vested) RSUs.

Total stock compensation expense recognized was $nil for the year ended December 31, 2019 and December 31, 2018, respectively and for the year ended December 31, 2017 was $0.5 million.

Item 7. Major Shareholders and Related Party Transactions

It is our policy that transactions with related parties are entered into on terms no less favorable to us than would exist if these transactions were entered into with unrelated third parties on an arm's length basis. Tsakos Energy Management has undertaken to ensure that all transactions with related parties are reported to the board of directors. Under the management agreement, any such transaction or series of transactions involving payments in excess of $100,000 and which is not in the ordinary course of business requires the prior consent of the board of directors. Transactions not involving payments in excess of $100,000 may be reported quarterly to the board of directors.

To help minimize any conflict between our interests and the interests of other companies affiliated with the Tsakos family and the owners of other vessels managed by such companies if an opportunity to purchase a tanker which is 10 years of age or younger is referred to or developed by Tsakos Shipping, Tsakos Shipping will notify us of this opportunity and allow us a 10 business day period within which to decide whether or not to accept the opportunity before offering it to any of its affiliates or other clients.

The following table sets forth the amounts charged by related parties for services rendered (in thousands of U.S. dollars):

	2019	2018	2017
Tsakos Shipping and Trading S.A. (commissions)	7,405	6,580	6,532
Tsakos Energy Management Limited (management fees)	20,147	20,169	19,480
Tsakos Columbia Shipmanagement S.A. (special charges)	2,038	2,389	1,518
Argosy Insurance Company Limited (insurance premiums)	9,519	9,799	10,199
AirMania Travel S.A. (travel services)	5,617	5,345	5,404
Total expenses with related parties	44,726	44,282	43,133

Management Affiliations

Nikolas P. Tsakos, our president, chief executive officer and one of our directors, is an officer, director and the sole shareholder of Tsakos Energy Management. He is also the son of the founder of Tsakos Shipping.

George V. Saroglou, our chief operating officer and one of our directors, is a cousin of Nikolas P. Tsakos.

Management and Other Fees

We prepay or reimburse our technical manager at cost for all vessel operating expenses payable by them in their capacity as technical manager of the fleet. At December 31, 2019 and 2018, the outstanding advances to TCM amounted to $20.1 million and $20.9 million, and the amount due to Tsakos Shipping was $1.4 million and $0.5 million, respectively. In 2019, 2018 and 2017, an additional amount of $2.0 million, $2.4 million and $1.5 million, respectively, was paid in fees directly by the Company to TCM for additional services it provided or arranged in relation to information technology, application of corporate governance procedures required by the Company and seafarers' training.

From the management fee we pay Tsakos Energy Management, Tsakos Energy Management in turn pays a management fee to TCM for its services as technical manager of the fleet. Under the terms of our management agreement with Tsakos Energy Management, we paid Tsakos Energy Management total management fees of $20.1 million in 2019, $20.2 million in 2018 and $19.5 million in 2017. In 2019, 2018 and 2017, we granted Tsakos Energy Management an incentive award of $0.5 million, $0.2 million and $0.6 million, respectively. In addition, a special award of $0.7 million and $0.6 million were paid to the Management Company in relation to capital raising offerings in 2018 and 2017, respectively.

Management Agreement

Our management agreement with Tsakos Energy Management was amended and restated on March 8, 2007 and has a term of ten years that renews annually. Tsakos Energy Management may terminate the management agreement at any time upon not less than one year's notice. In addition, either party may terminate the management agreement under certain circumstances, including the following:

- certain events of bankruptcy or liquidation involving either party;
- a material breach by either party; or
- a failure by Tsakos Energy Management, for a continuous period of two months, materially to perform its duties because of certain events of force majeure.

Moreover, following a change in control of us, which would occur if at least one director were elected to our Board without having been recommended by our existing Board, Tsakos Energy Management may terminate the agreement on 10 business days' notice. If Tsakos Energy Management terminates the agreement for this reason, then we would immediately be obligated to pay Tsakos Energy Management the present discounted value of all of the payments that would have otherwise been due under the management agreement up until June 30 of the tenth year following the date of termination plus the average of the incentive awards previously paid to Tsakos Energy Management multiplied by ten. Under these terms, therefore, a termination as of December 31, 2019 would have resulted in a payment of approximately $172.7 million. Under the terms of the Management Agreement between the Company and Tsakos Energy Management, the Company may terminate the agreement only under specific circumstances, such as breach of contract by the manager and change of control in the shareholding of the manager without the prior approval of the Company's Board of Directors.

Under the management agreement, we pay monthly fees for Tsakos Energy Management's management of the vessels in the fleet. These fees are based on the number of ships in the fleet. The per-ship charges begin to accrue for a vessel at the point that a newbuilding contract is acquired, which may be 18 to 24 months before the vessel begins to earn revenue. For 2019, monthly fees for operating conventional vessels continues to be $27,500 per owned vessel and $20,400 for chartered-in vessels and vessels bareboat chartered out. Monthly management fees for the DP2 shuttle tankers continue to be $35,000 per vessel. Monthly management fees for the suezmax *Eurochampion 2004,* the aframaxes *Maria Princess, Sapporo Princess* and the VLCCs *Ulysses and Hercules,* were $27,500 of which $14,503 was payable to a third-party manager. The monthly fee for the LNG carriers is $36,877 of which $10,000 is payable to Tsakos Energy Management and $26,877 to a third-party manager. We paid Tsakos Energy Management aggregate management fees of $20.1 million in 2019, $20.2 million in 2018 and $19.5 million in 2017.

Chartering Commissions, Sale and Purchase Commissions and Vessel New-delivery Fees

We pay a chartering commission to Tsakos Shipping equal to 1.25% on all freights, hires and demurrages involving our vessels. Tsakos Shipping may also charge a brokerage commission on the sale of a vessel. There was no such brokerage commission in 2019 and in 2017. In 2018, the Company sold the VLCC tanker *Millennium* and for this service, Tsakos Shipping charged a brokerage commission of $0.1 million which was 0.5% of the sale price of the vessel. We have been charged by Tsakos Shipping chartering and brokerage commissions aggregating $7.4 million in 2019 ($6.6 million in 2018 and $6.5 million in 2017).

Tsakos Shipping may also charge a fee of $0.2 million (or such other sum as may be agreed) on delivery of each newbuilding vessel in payment for the cost of design and supervision of the newbuilding by Tsakos Shipping. This amount is added to the cost of the vessels concerned and is amortized over their remaining lives. In 2017, $3.1 million in aggregate was charged for supervision fees on fifteen vessels which were delivered between May 2016 and October 2017. In 2019 and 2018, no such fee was charged.

Captive Insurance Policies

We pay Argosy Insurance Company, an affiliate of Tsakos family interests, premiums to provide hull and machinery, increased value and loss of hire insurance for our vessels. In 2019, 2018 and 2017, we were charged an aggregate of $9.5 million, $9.8 million and $10.2 million, respectively, by Argosy for insurance premiums.

Travel Services

We use AirMania Travel S.A., an affiliate of Tsakos family interests, for travel services primarily to transport our crews to and from our vessels. In 2019, 2018 and 2017, we were charged an aggregate of $5.6 million, $5.3 million, $5.4 million, respectively, by AirMania for travel services.

Major Shareholders

The following table sets forth certain information regarding the beneficial ownership of our outstanding common shares as of April 2, 2020 held by:

- each person or entity that we know beneficially owns 5% or more of our common shares; and
- all our directors and officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC. In general, a person who has or shares voting power or investment power with respect to securities is treated as a beneficial owner of those securities. Beneficial ownership does not necessarily imply that the named person has the economic or other benefits of ownership. Under SEC rules, shares subject to options, warrants or rights currently exercisable or exercisable within 60 days are considered as beneficially owned by the person holding those options, warrants or rights. The applicable percentage of ownership of each shareholder is based on 95,673,076 Common Shares outstanding on April 2, 2020.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Outstanding Common Shares
Tsakos Holdings Foundation(1)	15,815,021	16.53%
Redmont Trading Corp.(1)	3,690,007	3.86%
First Tsakos Investments Inc.(1)	12,125,014	12.67%
Kelley Enterprises Inc.(1)	7,600,007	7.94%
Marsland Holdings Limited(1)	4,525,007	4.73%
AY Tank Limited (3)	10,302,552	9.99%
Kopernik Global Investors, LLC (4)	4,791,500	5.01%
Sea Consolidation S.A. of Panama(2)	6,700,000	7.00%
Methoni Shipping Company Limited (2)	5,975,000	6.25%
Intermed Champion S.A. of Panama(2)	2,730,000	2.85%
All officers and directors as a group (11 persons)(5)	639,108	0.67%

(1) First Tsakos Investments Inc. ("First Tsakos") is the sole holder of the outstanding capital stock of Kelley Enterprises Inc. ("Kelley") and Marsland Holdings Limited ("Marsland") and may be deemed to have shared voting and dispositive power of the common shares reported by Kelley and Marsland. Tsakos Holdings Foundation ("Tsakos Holdings") is the sole holder of outstanding capital stock of First Tsakos and Redmont Trading Corp. ("Redmont") and may be deemed to have shared voting and dispositive power of the common shares reported by Kelley, Marsland and Redmont. According to a Schedule 13D/A filed on April 12, 2018 by Tsakos Holdings, First Tsakos, Kelley, Marsland and Redmont, Tsakos Holdings is a Liechtenstein foundation whose beneficiaries include persons and entities affiliated with the Tsakos family, charitable institutions and other unaffiliated persons and entities. The council which controls Tsakos Holdings consists of five members, two of whom are members of the Tsakos family. Under the rules of the SEC, beneficial ownership includes the power to directly or indirectly vote or dispose of securities or to share such power. It does not necessarily imply economic ownership of the securities. Members of the Tsakos family are among the five council members of Tsakos Holdings and accordingly may be deemed to share voting and/or dispositive power with respect to the shares owned by Tsakos Holdings and may be deemed the beneficial owners of such shares.

(2) According to the Schedule 13D/A filed on April 12, 2018 by Sea Consolidation S.A. of Panama ("Sea Consolidation"), Intermed Champion S.A. of Panama ("Intermed"), Methoni Shipping Company Limited ("Methoni"), Panayotis Tsakos and Nikolas Tsakos and information provided to us, Sea Consolidation, Intermed, Methoni and Nikolas Tsakos beneficially owned 6,700,000, 2,730,000, 5,975,000 and 15,613,000 common shares, respectively. According to the Schedule 13D/A, each of Panayotis Tsakos and Nikolas Tsakos, our president and chief executive officer, shares voting and dispositive control over the common shares held by each of Sea Consolidation, Intermed and Methoni and may be deemed to indirectly beneficially own such common shares. Panayotis Tsakos is the father of Nikolas Tsakos.

(3) Based upon the Amendment No. 1 to the Schedule 13G filed by AY Tank Limited, OMP AY Holdings Limited, Offshore Merchant Partners Asset Yield Fund, LP, OMP SICAV p.l.c. and HitecVision VI, LP on October 21, 2019 and information provided to the Company. Consists of 2,949,999 Common Shares issued to AY Tank Limited upon conversion of Series G Convertible Preferred Shares and 7,352,553 Common Shares issuable upon conversion of 2,615,000 Series G Redeemable Convertible Perpetual Preferred Shares held by AY Tank Limited, subject to a 9.99% beneficial ownership limitation. According to the Amendment No. 1, each of OMP AY Holdings Limited, Offshore Merchant Partners Asset Yield Fund, LP, OMP SICAV p.l.c. and HitecVision VI, LP may be deemed to indirectly beneficially own such common shares. In calculating the amount of common shares beneficially owned by this shareholder, we treated as outstanding the number of common shares issuable upon conversion of this shareholder's Series G Convertible Preferred Shares. The percentage beneficially owned by this shareholder reflects that the terms of the Series G Convertible Preferred Shares held by this shareholder prohibit the exercise thereof to the extent that such exercise would result in this shareholder's beneficial ownership being greater than 9.99% of the common shares then outstanding. The 2,615,000 Series G Convertible Preferred Shares currently outstanding are convertible into an aggregate of 8,716,667 common shares, subject to this 9.99% ownership limitation.

(4) Based solely upon the Amendment No. 2 to the Schedule 13G/A filed by Kopernik Global Investors, LLC on February 14, 2020.

(5) Does not include shares owned by Tsakos Holdings, First Tsakos, Kelley, Marsland, Redmont Trading Corp., Sea Consolidation, Intermed or Methoni.

Based on information provided to us, entities affiliated with Panayotis Tsakos and Nikolas Tsakos own 138,544, or 6.9%, of our outstanding Series C Preferred Shares, 306,271, or 8.9%, of our outstanding Series D Preferred Shares, 110,000, or 2.4%, of our outstanding Series E Preferred Shares, and 135,000, or 2.9%, of our outstanding Series F Preferred Shares as of April 2, 2020. Entities affiliated with Nikolas Tsakos own 140,000, or 7.0%, of our outstanding Series C Preferred Shares, and 35,000, or 0.8%, of our outstanding Series E Preferred Shares and 80,000, or 0.7%, of our outstanding Series F Preferred Shares as of April 2, 2020. Methoni owns 2,000, or 0.1%, of our outstanding Series C Preferred Shares, as of April 2, 2020. Kelley owns 700, or less than 0.1%, of our outstanding Series D Preferred Shares as of April 2, 2020. Marsland owns 1,200, or less than 0.1%, of our outstanding Series D Preferred Shares as of April 2, 2020.

To our knowledge, none of the entities in the above table own any other shares, and none of our other officers or directors own 1% or more, of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares or Series G Convertible Preferred Shares as of April 2, 2020.

As of April 2, 2020, we had 21 holders of record of our common shares. These shareholders of record include CEDEFAST which, as nominee for the Depository Trust Company, is the record holder of 95,512,848 common shares representing approximately 99.83% of our outstanding common shares. CEDEFAST is the nominee of banks and brokers which hold shares on behalf of their customers, the beneficial owners of the shares, who may or may not be resident in the United States. However, apart from the shareholders indicated in the footnotes (1) and (2) above and certain of the directors and officers, we believe that the majority of the remaining shareholders are resident in the United States. The Company is not aware of any arrangements the operation of which may at a subsequent date result in a change of control of the Company.

Item 8. Financial Information

See "Item 18. Financial Statements" below.

Significant Changes. No significant change has occurred since the date of the annual financial statements included in this Annual Report on Form 20-F.

Legal Proceedings. We are involved in litigation from time to time in the ordinary course of business. In our opinion, the litigation in which we are involved as of April 2, 2020, individually or in the aggregate, is not material to us.

Dividend Policy. While we cannot assure you that we will do so, and subject to the limitations discussed below, we intend to pay semi-annual cash dividends on our common shares.

On September 30, 2013, we issued 2,000,000 8.875% Series C Cumulative Redeemable Perpetual Preferred Shares. The holders of those shares are entitled to a quarterly dividend of $0.55469 per share payable quarterly in arrears on the 30th day of January, April, July and October each year when, as and if declared by our Board of Directors. If the Series C Preferred Shares are not redeemed in whole by October 30, 2020, the dividend rate on the Series C Preferred Shares would increase.

On April 22, 2015, we issued 3,400,000 8.75% Series D Cumulative Redeemable Perpetual Preferred Shares, and subsequently issued an additional 24,803 Series D Cumulative Redeemable Perpetual Preferred Shares in the first quarter of 2017. The holders of those shares are entitled to a quarterly dividend of $0.546875 per share payable quarterly in arrears on the 28th day of February, May, August and November each year when, as and if declared by our Board of Directors.

On April 5, 2017, we issued 4,600,000 Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares. Dividends on the Series E Preferred Shares are cumulative from the date of original issue and are payable quarterly in arrears on the 28th day of February, May, August and November of each year, when, as and if declared by our Board of Directors. Dividends will be payable from cash available for dividends (i) from and including the original issue date to, but excluding, May 28, 2027 at a fixed rate equal to 9.25% per annum of the stated liquidation preference and (ii) from and including May 28, 2027, at a floating rate equal to three-month LIBOR plus a spread of 6.881% per annum of the stated liquidation preference. The quarterly dividend to which holders of the Series E Preferred Shares will be entitled during the fixed rate period will be $0.578125 per share, when, as and if declared by our Board of Directors.

On June 28 and July 10, 2018, respectively, we issued 5,400,000 and 600,000 Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares. Dividends on the Series F Preferred Shares are cumulative from the date of original issue and are payable quarterly in arrears on the 30th day of January, April, July and October of each year, when, as and if declared by our Board of Directors. Dividends will be payable from cash available for dividends (i) from and including the original issue date to, but excluding, July 30, 2028 at a fixed rate equal to 9.50% per annum of the stated liquidation preference and (ii) from and including July 30, 2028, at a floating rate equal to three-month LIBOR plus a spread of 6.54% per annum of the stated liquidation preference. The quarterly dividend to which holders of the Series F Preferred Shares will be entitled during the fixed rate period will be $0.59375 per share, when, as and if declared by our Board of Directors.

We had 2,615,000 of our Series G Redeemable Convertible Perpetual Preferred Shares, par value $1.00 per share and liquidation preference $10.00 per share, outstanding as of April 2, 2020. We issued 3,500,000 Series G Convertible Preferred Shares at a purchase price of $10.00 per share, in a private placement on September 25, 2019 (the "Series G Closing Date"). On December 23, 2019, 875,000 Series G Convertible Preferred Shares converted into 2,916,666 common shares and, on January 15, 2020, the holders of the Series G Convertible Preferred Shares converted 10,000 Series G Convertible Preferred Shares into 33,333 common shares. The Series G Convertible Preferred Shares have a stated coupon rate of 0%, subject to adjustment in the event of a cross-default or failure to redeem on any redemption date, and participate on an as-converted basis in dividends declared and paid on the Company's common shares.

There can be no assurance that we will pay dividends or as to the amount of any dividend. The payment and the amount will be subject to the discretion of our board of directors and will depend, among other things, on available cash balances, anticipated cash needs, our results of operations, our financial condition, and any loan

agreement restrictions binding us or our subsidiaries, as well as other relevant factors. For example, if we earned a capital gain on the sale of a vessel or newbuilding contract, we could determine to reinvest that gain instead of using it to pay dividends. Depending on our operating performance for that year, this could result in no dividend at all despite the existence of net income, or a dividend that represents a lower percentage of our net income. Of course, any payment of cash dividends could slow our ability to renew and expand our fleet.

Because we are holding a company with no material assets other than the stock of our subsidiaries, our ability to pay dividends will depend on the earnings and cash flow of our subsidiaries and their ability to pay dividends to us.

Under the terms of certain of our existing bank loans, we are permitted to declare or pay a cash dividend in any year as long as we are not in default under such bank loans and an event of default would not occur as a result of the payment of such dividends. In addition, cash dividends can be paid only to the extent permitted by Bermuda law. See "Item 10. Additional Information—Description of Share Capital—Bermuda Law—Dividends." See "Item 3. Key Information—Risks Related to our Common and Preferred Shares—We may not be able to pay cash dividends on our common shares or preferred shares as intended if market conditions change."

Item 9. The Offer and Listing

Our common shares are listed on the New York Stock Exchange and the Bermuda Stock Exchange. Following a decision of our Board of Directors, our common shares were de-listed from Oslo Børs on March 18, 2005. Our common shares are not actively traded on the Bermuda Stock Exchange.

Trading on the New York Stock Exchange

Since our initial public offering in the United States in March of 2002, our common shares have been listed on the New York Stock Exchange under the ticker symbol "TNP."

Since October 2013, our Series C Preferred Shares have been listed on the New York Stock Exchange under the ticker symbol "TNP PR C."

Since April 2015, our Series D Preferred Shares have been listed on the New York Stock Exchange under the ticker symbol "TNP PR D."

Since April 6, 2017, our Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares have been listed on the New York Stock Exchange under the ticker symbol "TNP PR E".

Since July 3, 2018, our Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares have been listed on the New York Stock Exchange under the ticker symbol "TNP PR F".

Item 10. Additional Information

DESCRIPTION OF SHARE CAPITAL

Our authorized share capital consists of 175,000,000 common shares, par value $1.00 per share, and 25,000,000 blank check preferred shares, $1.00 par value per share. 2,300,000 shares have been designated 8.875% Series C Cumulative Redeemable Perpetual Preferred Shares as described below under "—Series C Preferred Shares," 3,910,000 shares have been designated 8.75% Series D Cumulative Redeemable Perpetual Preferred Shares as described below under "—Series D Preferred Shares", 4,600,000 shares have been designated Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares as described below under

"—Series E Preferred Shares", 6,210,000 shares have been designated Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares as described below under "— Series F Preferred Shares" and 3,500,000 shares have been designated Series G Redeemable Convertible Perpetual Preferred Shares as described below under "— Series G Convertible Preferred Shares" As of April 2, 2020, there were outstanding: 95,673,076 common shares, 2,000,000 8.875% Series C Cumulative Redeemable Preferred Shares, 3,424,803 8.75% Series D Cumulative Redeemable Perpetual Preferred Shares, 4,600,000 9.25% Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares, 6,000,000 9.50% Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares and 2,615,000 Series G Redeemable Convertible Perpetual Preferred Shares.

Common Shares

The holders of common shares are entitled to receive dividends out of assets legally available for that purpose at times and in amounts as our board of directors may from time to time determine. Each shareholder is entitled to one vote for each common share held on all matters submitted to a vote of shareholders. Cumulative voting for the election of directors is not provided for in our Memorandum of Association or Bye-laws, which means that the holders of a majority of the common shares voted can elect all of the directors then standing for election. Our Bye-laws provide for a staggered board of directors, with one-third of our non-executive directors being selected each year. The common shares are not entitled to preemptive rights and are not subject to conversion or redemption. Upon the occurrence of a liquidation, dissolution or winding-up, the holders of common shares would be entitled to share ratably in the distribution of all of our assets remaining available for distribution after satisfaction of all our liabilities.

Preferred Shares

Under our Bye-laws, our board of directors has the authority to issue preferred shares in one or more series, and to establish the terms and preferences of the shares of each series, up to the number of preferred shares authorized under our constitutive documents as described above. Holders of each series of preferred shares will be entitled to receive cash dividends, when, as and if declared by our board of directors out of funds legally available for dividends. Such distributions will be made before any distribution is made on any securities ranking junior in relation to preferred shares in liquidation, including common shares.

Series C Preferred Shares

We have 2,000,000 of our 8.875% Series C Cumulative Redeemable Perpetual Preferred Shares outstanding as of April 2, 2020, which were issued on September 30, 2013. The initial liquidation preference of the Series C Preferred Shares is $25.00 per share, subject to adjustment. The shares are redeemable by us at any time on or after October 30, 2018. The shares carry an annual dividend rate of 8.875% per $25.00 of liquidation preference per share, subject to increase if (i) we fail to comply with certain covenants, (ii) we experience certain defaults under any of our credit facilities, (iii) four quarterly dividends payable on the Series C Preferred Shares are in arrears, or (iv) the Series C Preferred Shares are not redeemed in whole by October 30, 2020. The Series C Preferred Shares represent perpetual equity interests in us and, unlike our indebtedness, do not give rise to a claim for payment of a principal amount at a particular date. As such, the Series C Preferred Shares rank junior to all of our indebtedness and other liabilities with respect to assets available to satisfy claims against us. Upon any liquidation or dissolution of us, holders of the Series C Preferred Shares and any pari passu securities will generally be entitled to receive, on a pro rata basis, the liquidation preference of the Series C Preferred Shares, or, in the case of pari passu securities, the liquidation preference of such series of pari passu securities, plus an amount equal to accumulated and unpaid dividends ratably with any pari passu securities, after satisfaction of all liabilities to our creditors and holders of securities senior to the Series C Preferred Shares, but before any distribution is made to or set aside for the holders of junior shares, including our common shares. The Series C Preferred Shares rank pari passu with the Series D Preferred Shares, the Series E Preferred Shares, the Series F Preferred Shares and the Series G Convertible Preferred Shares. The Series C Preferred Shares are not convertible into common shares or other of our securities, do not have exchange rights and their holders are not entitled to any preemptive or similar rights.

Series D Preferred Shares

We have 3,424,803 of our 8.75% Series D Cumulative Redeemable Perpetual Preferred Shares outstanding as of April 2, 2020, which were issued on April 29, 2015 and in the first quarter of 2017. The initial liquidation preference of the Series D Preferred Shares is $25.00 per share, subject to adjustment. The shares are redeemable by us at any time on or after April 29, 2020. The shares carry an annual dividend rate of 8.75% per $25.00 of liquidation preference per share. The Series D Preferred Shares represent perpetual equity interests in us and, unlike our indebtedness, do not give rise to a claim for payment of a principal amount at a particular date. As such, the Series D Preferred Shares rank junior to all of our indebtedness and other liabilities with respect to assets available to satisfy claims against us. Upon any liquidation or dissolution of us, holders of the Series D Preferred Shares and any pari passu securities will generally be entitled to receive, on a pro rata basis, the liquidation preference of the Series D Preferred Shares, or, in the case of pari passu securities, the liquidation preference of such series of pari passu securities, plus an amount equal to accumulated and unpaid dividends ratably with any pari passu securities, after satisfaction of all liabilities to our creditors and holders of securities senior to the Series D Preferred Shares, but before any distribution is made to or set aside for the holders of junior shares, including our common shares. The Series D Preferred Shares rank pari passu with the Series C Preferred Shares, the Series E Preferred Shares and the Series F Preferred Shares and Series G Convertible Preferred Shares. The Series D Preferred Shares are not convertible into common shares or other of our securities, do not have exchange rights and their holders are not entitled to any preemptive or similar rights.

Series E Preferred Shares

We had 4,600,000 of our 9.25% Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares outstanding as of April 2, 2020, which were issued on April 5, 2017. The initial liquidation preference of the Series E Preferred Shares is $25.00 per share, subject to adjustment. The shares are redeemable by us at any time on or after May 28, 2027. Dividends on the Series E Preferred Shares are cumulative from the date of original issue and will be payable quarterly in arrears on the 28th day of February, May, August and November of each year, commencing May 28, 2017, when, as and if declared by our board of directors. Dividends will be payable from cash available for dividends (i) from and including the original issue date to, but excluding, May 28, 2027 at a fixed rate equal to 9.25% per annum of the stated liquidation preference and (ii) from and including May 28, 2027, at a floating rate equal to three-month LIBOR plus a spread of 6.881% per annum of the stated liquidation preference. The Series E Preferred Shares represent perpetual equity interests in us and, unlike our indebtedness, do not give rise to a claim for payment of a principal amount at a particular date. As such, the Series E Preferred Shares rank junior to all of our indebtedness and other liabilities with respect to assets available to satisfy claims against us. Upon any liquidation or dissolution of us, holders of the Series E Preferred Shares and any pari passu securities will generally be entitled to receive, on a pro rata basis, the liquidation preference of the Series E Preferred Shares, or, in the case of pari passu securities, the liquidation preference of such series of pari passu securities, plus an amount equal to accumulated and unpaid dividends ratably with any pari passu securities, after satisfaction of all liabilities to our creditors and holders of securities senior to the Series E Preferred Shares, but before any distribution is made to or set aside for the holders of junior shares, including our common shares. The Series E Preferred Shares rank pari passu with the Series C Preferred Shares, the Series D Preferred Shares, the Series F Preferred Shares and Series G Convertible Preferred Shares. The Series E Preferred Shares are not convertible into common shares or other of our securities, do not have exchange rights and their holders are not entitled to any preemptive or similar rights.

Series F Preferred Shares

We had 6,000,000 of our 9.50% Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares outstanding as of April 2, 2020, which were issued on June 28, 2018. The initial liquidation preference of the Series F Preferred Shares is $25.00 per share, subject to adjustment. The shares are redeemable by us at any time on or after July 30, 2028. Dividends on the Series F Preferred Shares are cumulative from the date of original issue and will be payable quarterly in arrears on the 30th day of January, April, July and October

of each year, commencing October 30, 2018, when, as and if declared by our board of directors. Dividends will be payable from cash available for dividends (i) from and including the original issue date to, but excluding, July 30, 2028 at a fixed rate equal to 9.50% per annum of the stated liquidation preference and (ii) from and including July 30, 2028, at a floating rate equal to three-month LIBOR plus a spread of 6.54% per annum of the stated liquidation preference. The Series F Preferred Shares represent perpetual equity interests in us and, unlike our indebtedness, do not give rise to a claim for payment of a principal amount at a particular date. As such, the Series F Preferred Shares rank junior to all of our indebtedness and other liabilities with respect to assets available to satisfy claims against us. Upon any liquidation or dissolution of us, holders of the Series F Preferred Shares and any pari passu securities will generally be entitled to receive, on a pro rata basis, the liquidation preference of the Series F Preferred Shares, or, in the case of pari passu securities, the liquidation preference of such series of pari passu securities, plus an amount equal to accumulated and unpaid dividends ratably with any pari passu securities, after satisfaction of all liabilities to our creditors and holders of securities senior to the Series F Preferred Shares, but before any distribution is made to or set aside for the holders of junior shares, including our common shares. The Series F Preferred Shares rank pari passu with the Series C Preferred Shares, Series D Preferred Shares, Series E Preferred and Series G Convertible Preferred Shares. The Series F Preferred Shares are not convertible into common shares or other of our securities, do not have exchange rights and their holders are not entitled to any preemptive or similar rights.

Series G Convertible Preferred Shares

We had 2,615,000 of our Series G Redeemable Convertible Perpetual Preferred Shares, par value $1.00 per share and liquidation preference $10.00 per share, outstanding as of April 2, 2020. We issued 3,500,000 Series G Convertible Preferred Shares at a purchase price of $10.00 per share, in a private placement on September 25, 2019 pursuant to a Share Purchase Agreement, dated September 23, 2019, between us, our subsidiary Shyris Shipping Company S.A. ("Shyris Shipping") and AY Tank Limited, as purchaser. On December 23, 2019, 875,000 Series G Convertible Preferred Shares converted into 2,916,666 common shares and, on January 15, 2020, the holders of the Series G Convertible Preferred Shares converted 10,000 Series G Convertible Preferred Shares into 33,333 common shares. The Series G Convertible Preferred Shares have a stated coupon rate of 0%, subject to adjustment in the event of a cross-default or failure to redeem on any redemption date, and participate on an as-converted basis in dividends declared and paid on the Company's common shares.

The Series G Convertible Preferred Shares are convertible at any time, at the option of the holder, at a conversion price of $3.00 per share, representing a conversion rate of three and one-third common shares per Series G Convertible Preferred Share. All or a portion of the Series G Convertible Preferred Shares will automatically convert into common shares at the conversion rate if the trading price of the Company's common shares exceed certain levels between 130% and 170% of the conversion price. The holders, however, will be prohibited from converting the Series G Convertible Preferred Shares into common shares to the extent that, as a result of such conversion, the holder would own more than 9.99% of the total number common shares then issued and outstanding. The Company may also redeem the Series G Convertible Preferred Shares prior to September 1, 2020, at the as-converted value of the Series G Convertible Preferred Shares, if the trading price of the common shares exceeds certain levels.

The holders of the Series G Convertible Preferred Shares generally do not have voting rights. However, without the affirmative vote or consent of the holders of at least two-thirds of the outstanding Series G Convertible Preferred Shares, voting as a single class, the Company may not adopt any amendment to its memorandum of association or bye-laws that materially or adversely alters or affects the preferences, powers or rights of the Series G Convertible Preferred Shares in any respect or any amendment to the Series G Convertible Preferred Shares Certificate of Designations. The Series G Convertible Preferred Shares rank *pari passu* with the Company's other outstanding series of preferred shares and senior to the Company's common shares with respect to dividend distributions and distributions upon any liquidation event.

On February 1, 2021, or, if earlier, the delivery date of the last of the Company's newbuilding conventional tankers, i.e. *Hull 8042* (the "Redemption Date"), subject to certain limitations, outstanding Series G Convertible Preferred Shares having a redemption price of up to $35 million will be mandatorily exchanged for preferred shares (the "Shyris Shipping Preferred Shares") to be issued by the subsidiary of the Company, Shyris Shipping, that will own such crude oil tankers. The redemption price at which the Series G Convertible Preferred Shares will be exchanged will be the higher of 95% of the as-converted value of the Series G Convertible Preferred Shares, based on a six-month VWAP of the Company's common shares, or a price providing for a return of 7.75% per annum on an actual/360-day basis on the Series G Convertible Preferred Shares, taking into account all dividends actually received on the Series G Convertible Preferred Shares. To the extent certain limitations intended to ensure Shyris Shipping's compliance with Section 883 of the Internal Revenue Code of 1986, as amended, result in less than $35 million of Shyris Shipping Preferred Shares being issued on the Redemption Date, Series G Convertible Preferred Shares with an aggregate redemption price equal to such shortfall below $35 million will remain outstanding, subject to redemption in exchange for Shyris Shipping Preferred Shares should such limitations cease to apply prior to the fifth anniversary of the Series G Closing Date, at which time such Series G Convertible Preferred Shares will automatically convert into Company common shares at the conversion rate or be redeemed for Shyris Shipping Preferred Shares. Any other Series G Convertible Preferred Shares not exchanged for Shyris Shipping Preferred Shares on the Redemption Date will automatically convert on such date into the Company's common shares at the conversion rate (unless the Company elects to redeem such Series G Convertible Preferred Shares for cash). The Series G Convertible Preferred Shares holder will also have the right to require the Company to redeem the Series G Convertible Preferred Shares for cash, in the event of non-compliance with certain requirements relating to Shyris Shipping.

The Shyris Shipping Preferred Shares will be entitled to receive cumulative semi-annual dividends from Shyris Shipping at a rate of 7.50% per annum as, when and if declared by the Shyris Shipping Board of Directors. At any time that Shyris Shipping Preferred Shares are outstanding, free cash flow available for distribution, as defined in the Statement of Designation of the Shyris Shipping Preferred Shares, is required to be applied by Shyris Shipping towards any accrued and unpaid dividends and redemption of such Shyris Shipping Preferred Shares before any dividends on, or repurchases or redemptions of, other equity securities of the Shyris Shipping Preferred Shares.The Shyris Shipping Preferred Shares will be non-convertible and perpetual, and will be redeemable by Shyris Shipping, in whole or in part, at redemption prices that decline over time to 100% of the deemed issuance price, plus any accrued and unpaid dividends, by the fifth anniversary of issuance or at 100% of the deemed issuance price, plus any accrued and unpaid dividends, at any time after issuance with cash from operations and in certain other circumstances.

Bermuda Law

We are an exempted company organized under the Companies Act 1981 of Bermuda, as amended (the "Companies Act 1981 of Bermuda"). Bermuda law and our Memorandum of Association and Bye-laws govern the rights of our shareholders. Our objects and purposes are set forth in paragraph 6 and the Schedule to our Memorandum of Association. Our objects and purposes include to act and to perform all the functions of a holding company in all its branches and to coordinate the policy and administration of any subsidiary company or companies wherever incorporated or carrying on business or of any group of companies of which we or any subsidiary of ours is a member or which are in any manner controlled directly or indirectly by us. The Companies Act 1981 of Bermuda differs in some material respects from laws generally applicable to United States corporations and their shareholders. The following is a summary of the material provisions of Bermuda law and our organizational documents. You should read the more detailed provisions of our Memorandum of Association and Bye-laws for provisions that may be important to you. You can obtain copies of these documents by following the directions outlined in "Available Information."

Dividends. Under Bermuda law, a company may not pay dividends that are declared from time to time by its board of directors or make a distribution out of contributed surplus if there are reasonable grounds for believing that the company is, or would after the payment be, unable to pay its liabilities as they become due or that the realizable value of its assets would then be less than its liabilities.

Voting rights. Under Bermuda law, except as otherwise provided in the Companies Act 1981 of Bermuda or our Bye-laws, questions brought before a general meeting of shareholders are decided by a majority vote of common shareholders present at the meeting. Our Bye-laws provide that, subject to the provisions of the Companies Act 1981 of Bermuda, any question proposed for the consideration of the shareholders will be decided in a general meeting by a simple majority of the votes cast, on a show of hands, with each shareholder present (and each person holding proxies for any shareholder) entitled to one vote for each common share held by the common shareholder, except for special situations where a shareholder has lost the right to vote because he has failed to comply with the terms of a notice requiring him to provide information to the company pursuant to the Bye-laws, or his voting rights have been partly suspended under the Bye-laws as a consequence of becoming an interested person. In addition, a super-majority vote of not less than seventy-five percent (75%) of the votes cast at the meeting is required to effect any action related to the variation of class rights and a vote of not less than eighty percent (80%) of the votes cast at the meeting is required to effect any of the following actions: removal of directors, approval of business combinations with certain "interested" persons and for any alteration to the provisions of the Bye-laws relating to the staggered board, removal of directors and business combinations.

The Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares have no voting rights except as set forth below or as otherwise provided by Bermuda law. In the event that six quarterly dividends, whether consecutive or not, payable on Series C, Series D, Series E or Series F Preferred Shares are in arrears, the holders of Series C, Series D, Series E and/or Series F Preferred Shares, as the case may be, will have the right, voting separately as a class together with holders of any other parity securities upon which like voting rights have been conferred and are exercisable, at the next meeting of shareholders called for the election of directors, to elect one member of our board of directors, and the size of our board of directors will be increased as needed to accommodate such change (unless the size of our board of directors already has been increased by reason of the election of a director by holders of parity securities upon which like voting rights have been conferred and with which the Series C, Series D, Series E or Series F Preferred Shares, respectively, voted as a class for the election of such director). The right of such holders of Series C, Series D, Series E or Series F Preferred Shares, as the case may be, to elect a member of our board of directors will continue until such time as all dividends accumulated and in arrears on the Series C, Series D, Series E or Series F. Preferred Shares, as the case may be, have been paid in full, at which time such right will terminate, subject to revesting in the event of each and every subsequent failure to pay six quarterly dividends as described above. Upon any termination of the right of the holders of the Series C, Series D, Series E and Series F Preferred Shares and any other parity securities to vote as a class for directors, the term of office of all directors then in office elected by such holders voting as a class will terminate immediately. Any directors elected by the holders of the Series B, Series C, Series D, Series E and Series F Preferred Shares and any other parity securities shall each be entitled to one vote per director on any matter before our board of directors.

Unless we have received the affirmative vote or consent of the holders of at least two-thirds of the issued and outstanding, Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares, respectively, each voting as a single class, we may not adopt any amendment to the Memorandum of Association that adversely alters the preferences, powers or rights of Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares in any material respect;

In addition, unless we have received the affirmative vote or consent of the holders of at least two-thirds of the issued and outstanding, Series C, Series D, Series E and Series F Preferred Shares, respectively, each voting as a single class, we may not

- issue any securities ranking pari passu with the Series C, Series D, Series E and Series F Preferred Shares if the cumulative dividends payable on outstanding Series C, Series D, Series E or Series F Preferred Shares, as applicable, are in arrears; or
- create or issue any equity securities ranking senior to the Series C, Series D, Series E and Series F Preferred Shares.

On any matter described above in which the holders of the Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares, respectively, are entitled to vote as a class, such holders will be entitled to one vote per share. The Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares held by us or any of our subsidiaries or affiliates will not be entitled to vote.

Unless we have received the affirmative vote or consent of the holders of at least two-thirds of the issued and outstanding Series G Convertible Preferred Shares we also may not:

- adopt any amendment to the Certificate of Designation of such series (including by merger, consolidation or otherwise); or
- split, combine, reverse split or undertake a similar action with respect to the Series G Convertible Preferred Shares.

Rights in liquidation. Under Bermuda law, in the event of liquidation or winding up of a company, after satisfaction in full of all claims of creditors and subject to the preferential rights accorded to any series of preferred shares, the proceeds of the liquidation or winding up are distributed ratably among the holders of the company's common shares.

Meetings of shareholders. Bermuda law provides that a special general meeting may be called by the board of directors and must be called upon the request of shareholders holding not less than 10% of the paid-up capital of the company carrying the right to vote. Bermuda law also requires that shareholders be given at least five (5) days' advance notice of a general meeting but the accidental omission to give notice to, or the non-receipt of such notice by, any person does not invalidate the proceedings at a meeting. Under our Bye-laws, we must give each shareholder at least ten (10) days' notice and no more than fifty (50) days' notice of the annual general meeting and of any special general meeting.

Under Bermuda law, the number of shareholders constituting a quorum at any general meeting of shareholders is determined by the Bye-laws of a company. Our Bye-laws provide that the presence in person or by proxy of two shareholders constitutes a quorum; but if we have only one shareholder, one shareholder present in person or by proxy shall constitute the necessary quorum.

Access to books and records and dissemination of information. Members of the general public have the right to inspect the public documents of a company available at the office of the Registrar of Companies in Bermuda. These documents include a company's Certificate of Incorporation, its Memorandum of Association (including its objects and powers) and any alteration to its Memorandum of Association. The shareholders have the additional right to inspect the Bye-laws of the company, minutes of general meetings and the company's audited financial statements, which must be presented at the annual general meeting. The register of shareholders of a company is also open to inspection by shareholders without charge and by members of the general public without charge. A company is required to maintain its share register in Bermuda but may, subject to the provisions of Bermuda law, establish a branch register outside Bermuda. We maintain a share register in Hamilton, Bermuda. A company is required to keep at its registered office a register of its directors and officers that is open for inspection for not less than two (2) hours each day by members of the public without charge. Bermuda law does not, however, provide a general right for shareholders to inspect or obtain copies of any other corporate records.

Election or removal of directors. Under Bermuda law and our Bye-laws, directors are elected or appointed at the annual general meeting and serve until re-elected or re-appointed or until their successors are elected or appointed, unless they are earlier removed or resign. Our Bye-laws provide for a staggered board of directors, with one-third of the directors selected each year.

Under Bermuda law and our Bye-laws, a director may be removed at a special general meeting of shareholders specifically called for that purpose, provided the director is served with at least 14 days' notice. The director has a right to be heard at that meeting. Any vacancy created by the removal of a director at a special

general meeting may be filled at that meeting by the election of another director in his or her place or, in the absence of any such election, by the board of directors.

Amendment of Memorandum of Association. Bermuda law provides that the Memorandum of Association of a company may be amended by a resolution passed at a general meeting of shareholders of which due notice has been given. Generally, our Bye-laws may be amended by the directors with the approval of a majority being not less than 75% of the votes of the shareholders in a general meeting. However, a super-majority vote is required for certain resolutions relating to the variation of class rights, the removal of directors, the approval of business combinations with certain ‘interested persons’ and for any alteration to the provisions of the Bye-laws relating to the staggered board, removal of directors and business combinations.

Under Bermuda law, the holders of an aggregate of no less than 20% in par value of a company’s issued share capital or any class of issued share capital have the right to apply to the Bermuda Court for an annulment of any amendment of the Memorandum of Association adopted by shareholders at any general meeting, other than an amendment which alters or reduces a company’s share capital as provided in the Companies Act 1981 of Bermuda. Where such an application is made, the amendment becomes effective only to the extent that it is confirmed by the Bermuda Court. An application for the annulment of an amendment of the Memorandum of Association must be made within 21 days after the date on which the resolution altering the company’s memorandum is passed and may be made on behalf of the persons entitled to make the application by one or more of their number as they may appoint in writing for the purpose. Persons voting in favor of the amendment may make no such application.

Appraisal rights and shareholder suits. Under Bermuda law, in the event of an amalgamation or merger involving a Bermuda company, a shareholder who is not satisfied that fair value has been paid for his shares may apply to the Bermuda Court to appraise the fair value of his or her shares. The amalgamation or merger of a company with another company requires the amalgamation or merger agreement to be approved by the board of directors and, except where the amalgamation or merger is between a holding company and one or more of its wholly owned subsidiaries or between two or more wholly owned subsidiaries, by meetings of the holders of shares of each company and of each class of such shares.

Class actions and derivative actions are generally not available to shareholders under Bermuda law. The Bermuda Court, however, would ordinarily be expected to permit a shareholder to commence an action in the name of a company to remedy a wrong done to the company where the act complained of is alleged to be beyond the corporate power of the company or is illegal or would result in the violation of the company’s Memorandum of Association or Bye-laws. Further consideration would be given by the Bermuda Court to acts that are alleged to constitute a fraud against the minority shareholders or, for instance, where an act requires the approval of a greater percentage of the company’s shareholders than that which actually approved it.

When the affairs of a company are being conducted in a manner oppressive or prejudicial to the interests of some part of the shareholders, one or more shareholders may apply to the Bermuda Court for an order regulating the company’s conduct of affairs in the future or compelling the purchase of the shares by any shareholder, by other shareholders or by the company.

Anti-takeover effects of provisions of our charter documents

Several provisions of our Bye-laws may have anti-takeover effects. These provisions are intended to avoid costly takeover battles, lessen our vulnerability to a hostile change of control and enhance the ability of our board of directors to maximize shareholder value in connection with any unsolicited offer to acquire us. However, these anti-takeover provisions, which are summarized below, could also discourage, delay or prevent (1) the merger or acquisition of our company by means of a tender offer, a proxy contest or otherwise, that a shareholder may consider in our best interest and (2) the removal of incumbent officers and directors.

Classified board of directors.

Our Bye-laws provide for a classified board of directors with one-third of our directors being selected each year. This classified board provision could discourage a third party from making a tender offer for our shares or attempting to obtain control of our company. It could also delay shareholders who do not agree with the policies of the board of directors from removing a majority of the board of directors for two years.

Transactions involving certain business combinations.

Our Bye-laws prohibit the consummation of any business combination involving us and any interested person, unless the transaction is approved by a vote of a majority of 80% of those present and voting at a general meeting of our shareholders, unless:

- the ratio of (i) the aggregate amount of cash and the fair market value of other consideration to be received per share in the business combination by holders of shares other than the interested person involved in the business combination, to (ii) the market price per share, immediately prior to the announcement of the proposed business combination, is at least as great as the ratio of (iii) the highest per share price, which the interested person has theretofore paid in acquiring any share prior to the business combination, to (iv) the market price per share immediately prior to the initial acquisition by the interested person of any shares;
- the aggregate amount of the cash and the fair market value of other consideration to be received per share in the business combination by holders of shares other than the interested person involved in the business combination (i) is not less than the highest per share price paid by the interested person in acquiring any shares, and (ii) is not less than the consolidated earnings per share of our company for our four full consecutive fiscal quarters immediately preceding the record date for solicitation of votes on the business combination multiplied by the then price/earnings multiple (if any) of the interested person as customarily computed and reported in the financial community;
- the consideration (if any) to be received in the business combination by holders of shares other than the interested person involved shall, except to the extent that a shareholder agrees otherwise as to all or part of the shares which the shareholder owns, be in the same form and of the same kind as the consideration paid by the interested person in acquiring shares already owned by it;
- after the interested person became an interested person and prior to the consummation of the business combination: (i) such interested person shall have taken steps to ensure that the board includes at all times representation by continuing directors proportionate in number to the ratio that the number of shares carrying voting rights in our company from time to time owned by shareholders who are not interested persons bears to all shares carrying voting rights in our company outstanding at the time in question (with a continuing director to occupy any resulting fractional position among the directors); (ii) the interested person shall not have acquired from us or any of our subsidiaries, directly or indirectly, any shares (except (x) upon conversion of convertible securities acquired by it prior to becoming an interested person, or (y) as a result of a pro rata share dividend, share split or division or subdivision of shares, or (z) in a transaction consummated on or after June 7, 2001 and which satisfied all requirements of our Bye-laws); (iii) the interested person shall not have acquired any additional shares, or rights over shares, carrying voting rights or securities convertible into or exchangeable for shares, or rights over shares, carrying voting rights except as a part of the transaction which resulted in the interested person becoming an interested person; and (iv) the interested person shall not have (x) received the benefit, directly or indirectly (except proportionately as a shareholder), of any loans, advances, guarantees, pledges or other financial assistance or tax credits provided by us or any subsidiary of ours, or (y) made any major change in our business or equity capital structure or entered into any contract, arrangement or understanding with us except any change, contract, arrangement or understanding as may have been approved by the favorable vote of not less than a majority of the continuing directors; and
- a proxy statement complying with the requirements of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"), as amended, shall have been mailed to all holders of shares carrying

voting rights for the purpose of soliciting approval by the shareholders of the business combination. The proxy statement shall contain at the front thereof, in a prominent place, any recommendations as to the advisability (or inadvisability) of the business combination which the continuing directors, or any of them, may have furnished in writing and, if deemed advisable by a majority of the continuing directors, an opinion of a reputable investment banking firm as to the adequacy (or inadequacy) of the terms of the business combination from the point of view of the holders of shares carrying voting rights other than any interested person (the investment banking firm to be selected by a majority of the continuing directors, to be furnished with all information it reasonably requests, and to be paid a reasonable fee for its services upon receipt by us of the opinion).

For purposes of this provision, a "business combination" includes mergers, consolidations, exchanges, asset sales, leases and other transactions resulting in a financial benefit to the interested shareholder and an "interested person" is any person or entity that beneficially owns 15% or more of our voting shares and any person or entity affiliated with or controlling or controlled by that person or entity. "Continuing directors" means directors who have been elected before June 7, 2001 or designated as continuing directors by the majority of the then continuing directors.

Consequences of becoming an interested person.

Our Bye-laws provide that, at any time a person acquires or becomes the beneficial owner of 15% or more of our voting shares, which we refer to as the "threshold," then the person will not be entitled to exercise voting rights for the number of common shares in excess of the threshold he holds or beneficially owns. This disability applies to any general meeting of our company as to which the record date or scheduled meeting date falls within a period of five years from the date such person acquired beneficial ownership of a number of common shares in excess of the threshold.

The above restrictions do not apply to us, our subsidiaries or to:

- any person who on June 7, 2001 was the holder or beneficial owner of a number of shares carrying voting rights that exceeded the threshold and who continues at all times after June 7, 2001 to hold shares in excess of the threshold; and
- any person whose acquisition of a number of shares exceeding the threshold has been approved by (1) a majority of 80% of those present and voting at a general meeting or (2) by a resolution adopted by the continuing directors, followed by a resolution adopted by a shareholder vote in excess of 50% of the voting shares not owned by such interested person.

Transfer agent and registrar. Computershare Trust Company N.A. serves as transfer agent and registrar for our common shares and our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares. Series F Preferred Shares and Series G Convertible Preferred Shares.

New York Stock Exchange listing. Our common shares are listed on the New York Stock Exchange under the ticker symbol "TNP." Our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares are listed on the New York Stock Exchange under the trading symbols "TNP-PC", "TNP-PD", "TNP-PE" and "TNP-PF", respectively.

Material Contracts

See description of Management Agreement under Item 4. "Information on the Company—Management Contract—Executive and Commercial Management" and for a description of the Share Purchase Agreement for Series G Convertible Preferred Shares "Item 10. Description of Share Capital – Series G Convertible Preferred Shares". Such description is not intended to be complete and reference is made to the contract itself, which is an exhibit to this Annual Report on Form 20-F.

Exchange Controls

Under Bermuda and Greek 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 nonresident holders of our common shares.

TAX CONSIDERATIONS

Taxation of Tsakos Energy Navigation Limited

We believe that none of our income will be subject to tax in Bermuda, which currently has no corporate income tax, or by other countries in which we conduct activities or in which our customers are located, excluding the United States. However, this belief is based upon the anticipated nature and conduct of our business which may change, and upon our understanding of our position under the tax laws of the various countries in which we have assets or conduct activities, which position is subject to review and possible challenge by taxing authorities and to possible changes in law, which may have retroactive effect. The extent to which certain taxing jurisdictions may require us to pay tax or to make payments in lieu of tax cannot be determined in advance. In addition, payments due to us from our customers may be subject to withholding tax or other tax claims in amounts that exceed the taxation that we might have anticipated based upon our current and anticipated business practices and the current tax regime.

Bermuda tax considerations

Under current Bermuda law, we are not subject to tax on income or capital gains. Furthermore, we have obtained from the Minister of Finance of Bermuda, under the Exempted Undertakings Tax Protection Act 1966 of Bermuda, as amended (the "Exempted Undertakings Act"), assurance that, in the event that Bermuda enacts any legislation imposing tax computed on profits or income or computed on any capital asset, gain or appreciation, or any tax in the nature of estate duty or inheritance tax, then the imposition of such tax will not be applicable to us or to any of our operations, or to the share capital of Tsakos Energy Navigation Limited, until March 31, 2035. This assurance does not, however, prevent the imposition of property taxes on any company owning real property or leasehold interests in Bermuda or on any person ordinarily resident in Bermuda. We pay an annual government fee on our authorized share capital and share premium, which for 2019 is $19,615.

Under current Bermuda law, shareholders not ordinarily resident in Bermuda will not be subject to any income, withholding or other taxes or stamp or other duties upon the issue, transfer or sale of common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares or on any payments made on common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares.

United States federal income tax considerations

The following summary of United States federal income tax matters is based on the Internal Revenue Code, judicial decisions, administrative pronouncements, and existing and proposed regulations issued by the United States department of the treasury, all of which are subject to change, possibly with retroactive effect. This discussion does not address any United States local or state taxes.

The following is a summary of the material United States federal income tax considerations that apply to (1) our operations and the operations of our vessel-operating subsidiaries and (2) the acquisition, ownership and disposition of common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares by a shareholder that is a United States holder. This summary is based upon our beliefs and expectations concerning our past, current and anticipated activities, income and assets and those of our subsidiaries, the direct, indirect and constructive ownership of our shares and the trading and quotation of our shares. Should any such beliefs or expectations prove to be incorrect, the conclusions described herein could be adversely affected. For purposes of this discussion, a United States holder is a beneficial owner of common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares who or which is:

- An individual citizen or resident of the United States;

- A corporation, or other entity taxable as a corporation for United States federal income tax purposes, created or organized in or under the laws of the United States or any of its political subdivisions; or
- An estate or trust the income of which is subject to United States federal income taxation regardless of its source.

This summary deals only with common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares that are held as capital assets by a United States holder, and does not address tax considerations applicable to United States holders that may be subject to special tax rules, such as:

- Dealers or traders in securities or currencies;
- Financial institutions;
- Insurance companies;
- Tax-exempt entities;
- United States holders that hold common shares as a part of a straddle or conversion transaction or other arrangement involving more than one position;
- United States holders that own, or are deemed for United States tax purposes to own, ten percent or more of the total combined voting power of all classes of our voting stock;
- A person subject to United States federal alternative minimum tax;
- A partnership or other entity classified as a partnership for United States federal income tax purposes;
- United States holders that have a principal place of business or "tax home" outside the United States; or
- United States holders whose "functional currency" is not the United States dollar.

The discussion below is based upon the provisions of the Internal Revenue Code and regulations, administrative pronouncements and judicial decisions as of the date of this Annual Report; any such authority may be repealed, revoked or modified, perhaps with retroactive effect, so as to result in United States federal income tax consequences different from those discussed below.

Because United States tax consequences may differ from one holder to the next, the discussion set out below does not purport to describe all of the tax considerations that may be relevant to you and your particular situation. Accordingly, you are advised to consult your own tax advisor as to the United States federal, state, local and other tax consequences of investing in the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares.

Taxation of our operations

In General

Unless exempt from United States federal income taxation under the rules discussed below, a foreign corporation is subject to United States federal income taxation in respect of any income that is derived from the use of vessels, from the hiring or leasing of vessels for use on a time, voyage or bareboat charter basis, from the participation in a pool, partnership, strategic alliance, joint operating agreement, code sharing arrangements or other joint venture it directly or indirectly owns or participates in that generates such income, or from the performance of services directly related to those uses, which we refer to as "shipping income," to the extent that the shipping income is derived from sources within the United States. For these purposes, 50% of shipping income that is attributable to transportation that begins or ends, but that does not both begin and end, in the United States constitutes income from sources within the United States, which we refer to as "U.S.-source shipping income."

Shipping income attributable to transportation that both begins and ends in the United States is considered to be 100% from sources within the United States. We do not expect that we or any of our subsidiaries will engage in transportation that produces income which is considered to be 100% from sources within the United States.

Shipping income attributable to transportation exclusively between non-United States ports will be considered to be 100% derived from sources outside the United States. Shipping income derived from sources outside the United States will not be subject to any United States federal income tax.

In the absence of exemption from tax under Section 883, our gross U.S.-source shipping income would be subject to a 4% tax imposed without allowance for deductions as described below.

Exemption of Operating Income from United States Federal Income Taxation

Under Section 883, we and our subsidiaries will be exempt from United States federal income taxation on our U.S.-source shipping income if:

- We and the relevant subsidiary are each organized in a foreign country (the "country of organization") that grants an "equivalent exemption" to corporations organized in the United States; and either
- More than 50% of the value of our stock is owned, directly or indirectly, by "qualified stockholders," individuals who are (i) "residents" of our country of organization or of another foreign country that grants an "equivalent exemption" to corporations organized in the United States and (ii) satisfy certain documentation requirements, which we refer to as the "50% Ownership Test," or
- Our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares, are "primarily and regularly traded on an established securities market" in our country of organization, in another country that grants an "equivalent exemption" to United States corporations, or in the United States, which we refer to as the "Publicly-Traded Test."

We believe that each of Bermuda, Greece, Liberia, Malta, the Marshall Islands and Panama, the jurisdictions where we and our ship-owning subsidiaries are incorporated, grants an "equivalent exemption" to United States corporations. Therefore, we believe that we and each of our subsidiaries will be exempt from United States federal income taxation with respect to our U.S.-source shipping income if we satisfy either the 50% Ownership Test or the Publicly-Traded Test.

Due to the widely-held nature of our stock, we will have difficulty satisfying the 50% Ownership Test. Our ability to satisfy the Publicly-Traded Test is discussed below.

The regulations provide, in pertinent part, that stock of a foreign corporation will be considered to be "primarily traded" on one or more established securities markets 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, our Series B Preferred Shares, prior to their redemption on July 30, 2019, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares, which, prior to the issuance of our Series G Convertible Preferred Shares, which are not listed on an exchange, on September 25, 2019, were our sole classes of our issued and outstanding shares in 2019, were "primarily traded" on an established securities market in the United States (the New York Stock Exchange) in 2019 and we expect that will continue to be the case in subsequent years.

Under the regulations, our stock will be considered to be "regularly traded" on an established securities market if one or more classes of our stock representing more than 50% of our outstanding shares, by total combined voting power of all classes of stock entitled to vote and total value, is listed on the market, which we refer to as the listing requirement. Since our common shares, Series C Preferred Shares, Series D Preferred

Shares and Series E Preferred Shares, which, other than our Series G Convertible Preferred Shares since their issuance on September 25, 2019, are our sole classes of issued and outstanding shares, were listed on the New York Stock Exchange throughout 2018, and Series F Preferred Shares were listed on the New York Stock Exchange, as were our Series B Preferred Shares prior to the redemption of all such shares on July 30, 2019, we satisfied the listing requirement for 2019. We expect that we will continue to do so, with respect to our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares, notwithstanding our outstanding Series G Convertible Preferred Shares which are not listed on an exchange, for subsequent years.

It is further required that with respect to each class of stock relied upon to meet the listing requirement (i) such class of the stock is traded on the market, other than in minimal quantities, on at least 60 days during the taxable year or 1/6 of the days in a short taxable year; and (ii) the aggregate number of shares of such class of stock traded on such market is 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. We believe our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares satisfied the trading frequency and trading volume tests for 2019 (and so did our Series B Preferred Shares prior to the redemption of all Series B Preferred Shares on July 30, 2019) and will also do so in subsequent years. For so long as the aggregate value of our common shares exceeds the aggregate value of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares and Series G Convertible Preferred Shares, if our common shares meet the trading frequency and trading volume tests, our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares and Series G Convertible Preferred Shares do not need to meet these tests (and, if the aggregate value of our common shares and any of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares meet the trading frequency and trading volume tests, the other series of our preferred shares would not need to meet these tests). Even if these tests were not satisfied, with respect to any of our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares and Series G Convertible Preferred Shares, the regulations provide that the trading frequency and trading volume tests will be deemed satisfied by a class of stock if, as we believe was the case with our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares in 2019 and we expect to be the case with our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares in subsequent years, such class of stock is traded on an established market in the United States and such class of stock is regularly quoted by dealers making a market in such stock.

Notwithstanding the foregoing, the regulations provide, in pertinent part, that our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares and Series G Convertible Preferred Shares will not be considered to be "regularly traded" on an established securities market for any taxable year in which 50% or more of our outstanding common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares and Series G Convertible Preferred Shares are owned, actually or constructively under specified stock attribution rules, on more than half the days during the taxable year by persons who each own 5% or more of our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares or Series G Convertible Preferred Shares, which we refer to as the "5 Percent Override Rule." For so long as the aggregate value of our common shares exceeds the aggregate value of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares or Series G Convertible Preferred Shares, if our common shares meet the "regularly traded" test, our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares or Series G Convertible Preferred Shares do not need to meet this test.

For purposes of being able to determine the persons who own 5% or more of our stock, or "5% Stockholders," the regulations permit us to rely on Schedule 13G and Schedule 13D filings with the SEC to identify persons who have a 5% or more beneficial interest in our common shares or, if our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares are then entitled to

vote, our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares. The 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% Stockholder for such purposes. Until such time, if any, as the Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares are entitled to vote, because Schedule 13G and Schedule 13D filings are only required for voting stock, it could be difficult to determine 5% Stockholders of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares. In the event the 5 Percent Override Rule is triggered, the regulations provide that the 5 Percent Override Rule will nevertheless not apply if we can establish, in accordance with specified ownership certification procedures, that a sufficient portion of the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares within the closely-held block are owned, actually or under applicable constructive ownership rules, by qualified shareholders for purposes of Section 883 to preclude the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares in the closely-held block that are not so owned from constituting 50% or more of the our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares for more than half the number of days during the taxable year.

We do not believe that we were subject to the 5 Percent Override Rule for 2019. Therefore, we believe that we satisfied the Publicly-Traded Test for 2019. However, there is no assurance that we will continue to satisfy the Publicly-Traded Test. If we were to be subject to the 5 Percent Override Rule for any tax year, then our ability and that of our subsidiaries to qualify for the benefits of Section 883 would depend upon our ability to establish, in accordance with specified ownership certification procedures, that a sufficient portion of the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares or Series G Convertible Preferred Shares within the closely-held block are owned, actually or under applicable constructive ownership rules, by qualified shareholders for purposes of Section 883, to preclude the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares and Series G Convertible Preferred Shares in the closely-held block that are not so owned from constituting 50% or more of the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares, Series F Preferred Shares or Series G Convertible Preferred Shares for more than half the number of days during the tax year. Since there can be no assurance that we would be able to establish these requirements, there can be no assurance that we or our subsidiaries will qualify for the benefits of Section 883 for any subsequent tax year.

Taxation in Absence of Exemption

To the extent the benefits of Section 883 are unavailable, our U.S.-source shipping income, to the extent not considered to be "effectively connected" with the conduct of a United States trade or business, as described below, would be subject to a 4% tax imposed by Section 887 of the Internal Revenue Code on a gross basis, without the benefit of deductions. Since under the sourcing rules described above, we do not expect that more than 50% of our shipping income would be treated as being derived from United States sources, the maximum effective rate of United States federal income tax on our shipping income would never exceed 2% under the 4% gross basis tax regime.

To the extent the benefits of the Section 883 exemption are unavailable and our U.S.-source shipping income or that of any of our subsidiaries is considered to be "effectively connected" with the conduct of a United States trade or business, as described below, any such "effectively connected" U.S.-source shipping income, net of applicable deductions, would be subject to the United States federal corporate income tax currently imposed at rates of up to 21%. In addition, we or our subsidiaries may be subject to the 30% "branch profits" taxes on earnings effectively connected with the conduct of such trade or business, as determined after allowance for certain adjustments, and on certain interest paid or deemed paid attributable to the conduct of its United States trade or business.

U.S.-source shipping income would be considered “effectively connected” with the conduct of a United States trade or business only if:

- We or one of our subsidiaries has, or is considered to have, a fixed place of business in the United States involved in the earning of shipping income; and
- (i) in the case of shipping income other than that derived from bareboat charters, substantially all of our or such subsidiary’s 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 and (ii) in the case of shipping income from bareboat charters, substantially all of our or such subsidiary’s income from bareboat charters is attributable to a fixed place of business in the U.S.

We do not intend that we or any of our subsidiaries will have any vessel operating to the United States on a regularly scheduled basis. Based on the foregoing and on the expected mode of our shipping operations and other activities, we believe that none of the U.S.-source shipping income of us or our subsidiaries will be “effectively connected” with the conduct of a United States trade or business.

United States Taxation of Gain on Sale of Vessels

Regardless of whether we or our subsidiaries qualify for exemption under Section 883, we and our subsidiaries will not be subject to United States federal income taxation with respect to gain realized on a sale of a vessel, provided the sale is considered to occur outside of the United States under United States federal income tax principles. In general, a sale of a vessel will be considered to occur outside of the United States 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. It is expected that any sale of a vessel by us or our subsidiaries will be considered to occur outside of the United States.

United States Holders

Distributions

Subject to the discussion below under “—Passive Foreign Investment Company Considerations,” distributions that we make with respect to the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares, other than distributions in liquidation and distributions in redemption of stock that are treated as exchanges, will be taxed to United States holders as dividend income to the extent that the distributions do not exceed our current and accumulated earnings and profits (as determined for United States federal income tax purposes). Distributions, if any, in excess of our current and accumulated earnings and profits will constitute a nontaxable return of capital to a United States holder and will be applied against and reduce the United States holder’s tax basis in its common shares. To the extent that distributions in excess of our current and accumulated earnings and profits exceed the tax basis of the United States holder in its common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares, the excess generally will be treated as capital gain.

Qualifying dividends received by individuals are eligible for taxation at capital gains rates (currently 20% for individuals not eligible for a lower rate). We are a non-United States corporation for U.S. federal income tax purposes. Dividends paid by a non-United States corporation are eligible to be treated as qualifying dividends only if (i) the non-United States corporation is incorporated in a possession of the United States, (ii) the non-United States corporation is eligible for the benefits of a comprehensive income tax treaty with the United States or (iii) the stock with respect to which the dividends are paid is “readily tradable on an established securities market in the United States.” We will not satisfy either of the conditions described in clauses (i) and (ii) of the preceding sentence. We expect that distributions on our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares that are treated as dividends

will qualify as dividends on stock that is "readily tradable on an established securities market in the United States" so long as our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares are traded on the New York Stock Exchange. In addition, dividends paid by a non-United States corporation will not be treated as qualifying dividends if the non-United States corporation is a "passive foreign investment company" (a "PFIC") for the taxable year of the dividend or the prior taxable year. Our potential treatment as a PFIC is discussed below under the heading "—Passive Foreign Investment Company Considerations." A dividend will also not be treated as a qualifying dividend to the extent that (i) the shareholder does not satisfy a holding period requirement that generally requires that the shareholder hold the shares on which the dividend is paid for more than 60 days during the 121-day period that begins on the date which is sixty days before the date on which the shares become ex-dividend with respect to such dividend, (ii) the shareholder is under an obligation to make related payments with respect to substantially similar or related property or (iii) such dividend is taken into account as investment income under Section 163(d)(4)(B) of the Internal Revenue Code. Legislation has been previously proposed in the United States Congress which, if enacted in its proposed form, would likely cause dividends on our shares to be ineligible for the preferential tax rates described above. There can be no assurance regarding whether, or in what form, such legislation will be enacted.

Special rules may apply to any "extraordinary dividend," generally a dividend in an amount which is equal to or in excess of ten percent (in the case of our common shares) or five percent (in the case of our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares) of a shareholder's adjusted basis (or fair market value in certain circumstances) in such shares paid by us. In addition, extraordinary dividends include dividends received within a one year period that, in the aggregate, equal or exceed 20% of a shareholder's adjusted tax basis (or fair market value in certain circumstances). If we pay an "extraordinary dividend" on our common shares and such dividend is treated as "qualified dividend income," then any loss derived by a U.S. individual holder from the sale or exchange of such common shares will be treated as long-term capital loss to the extent of such dividend.

Because we are not a United States corporation, a United States holder that is a corporation (or a United States entity taxable as a corporation) will not be entitled to claim a dividends received deduction with respect to any distributions paid by us.

Dividend income derived with respect to the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares generally will constitute portfolio income for purposes of the limitation on the use of passive activity losses, and, therefore, generally may not be offset by passive activity losses, and, unless treated as qualifying dividends as described above, investment income for purposes of the limitation on the deduction of investment interest expense. Dividends that we pay will not be eligible for the dividends received deduction generally allowed to United States corporations under Section 243 of the Internal Revenue Code.

For foreign tax credit purposes, if at least 50 percent of our stock by voting power or by value is owned, directly, indirectly or by attribution, by United States persons, then, subject to the limitation described below, a portion of the dividends that we pay in each taxable year will be treated as U.S.-source income, depending in general upon the ratio for that taxable year of our U.S.-source earnings and profits to our total earnings and profits. The remaining portion of our dividends (or all of our dividends, if we do not meet the 50 percent test described above) will be treated as foreign-source income and generally will be treated as passive category income or, in the case of certain types of United States holders, general category income for purposes of computing allowable foreign tax credits for United States federal income tax purposes. However, if, in any taxable year, we have earnings and profits and less than ten percent of those earnings and profits are from United States sources, then, in general, dividends that we pay from our earnings and profits for that taxable year will be treated entirely as foreign-source income. Where a United States holder that is an individual receives a dividend on our shares that is a qualifying dividend (as described in the second preceding paragraph), special rules will apply that will limit the portion of such dividend that will be included in such individual's foreign source taxable income and overall taxable income for purposes of calculating such individual's foreign tax credit limitation.

Sale or exchange

Subject to the discussion below under "—Passive Foreign Investment Company Considerations," upon a sale or exchange of common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares to a person other than us or certain entities related to us, a United States holder will recognize gain or loss in an amount equal to the difference between the amount realized on the sale or exchange and the United States holder's adjusted tax basis in the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares. Any gain or loss recognized will be capital gain or loss and will be long-term capital gain or loss if the United States holder has held the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares for more than one year.

Gain or loss realized by a United States holder on the sale or exchange of common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares generally will be treated as U.S.-source gain or loss for United States foreign tax credit purposes. A United States holder's ability to deduct capital losses against ordinary income is subject to certain limitations.

Passive Foreign Investment Company Considerations

PFIC classification. Special and adverse United States tax rules apply to a United States holder that holds an interest in a PFIC. In general, a PFIC is any foreign corporation, if (1) 75 percent or more of the gross income of the corporation for the taxable year is passive income (the "PFIC income test") or (2) the average percentage of assets held by the corporation during the taxable year that produce passive income or that are held for the production of passive income is at least 50 percent (the "PFIC asset test"). In applying the PFIC income test and the PFIC asset test, a corporation that owns, directly or indirectly, at least 25 percent by value of the stock of a second corporation must take into account its proportionate share of the second corporation's income and assets. Income we earn, or are deemed to earn, in connection with the performance of services will not constitute passive income. By contrast, rental income will generally constitute passive income (unless we are treated under certain special rules as deriving our rental income in the active conduct of a trade or business).

If a corporation is classified as a PFIC for any year during which a United States person is a shareholder, then the corporation generally will continue to be treated as a PFIC with respect to that shareholder in all succeeding years, regardless of whether the corporation continues to meet the PFIC income test or the PFIC asset test, subject to elections to recognize gain that may be available to the shareholder.

There are legal uncertainties involved in determining whether the income derived from time chartering activities constitutes rental income or income derived from the performance of services. In *Tidewater Inc. v. United States*, 565 F.2d 299 (5th Cir. 2009), the United States Court of Appeals for the Fifth Circuit held that income derived from certain time chartering activities should be treated as rental income rather than services income for purposes of a foreign sales corporation provision of the Code. In a published guidance, however, the Internal Revenue Service (the "IRS") states that it disagrees with the holding in *Tidewater*, and specifies that time charters should be treated as service contracts. On this basis, we do not believe that we were treated as a PFIC for our most recent taxable year or that we will be treated as a PFIC for any subsequent taxable year. This conclusion is based in part upon our beliefs regarding our past assets and income and our current projections and expectations as to our future business activity, including, in particular, our expectation that the proportion of our income derived from bareboat charters will not materially increase. However, we have not sought, and we do not expect to seek, an IRS ruling on this matter. As a result, the IRS or a court could disagree with our position. No assurance can be given that this result will not occur. In addition, although we intend to conduct our affairs in a manner to avoid, to the extent possible, 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, or that we can avoid PFIC status in the future.

Consequences of PFIC Status. As discussed below, if we were to be treated as a PFIC for any taxable year, a United States holder generally would be subject to one of three different U.S. income tax regimes, depending on whether or not the United States holder makes certain elections. Additionally, the United States holder would be required to file an annual information report with the IRS.

Taxation of United States Holders that Make No Election. If we are treated as a PFIC for any taxable year during which a United States holder holds our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares, then, subject to the discussion of the qualified electing fund ("QEF") and mark-to-market rules below, the United States holder will be subject to a special and adverse tax regime in respect of (1) gains realized on the sale or other disposition of our common shares, Series B Preferred Shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares and (2) distributions on our common shares, Series B Preferred Shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares to the extent that those distributions are treated as excess distributions. An excess distribution generally includes dividends or other distributions received from a PFIC in any taxable year of a United States holder to the extent that the amount of those distributions exceeds 125 percent of the average distributions made by the PFIC during a specified base period (or, if shorter, the United States holder's holding period for the shares). A United States holder that is subject to the PFIC rules (1) will be required to allocate excess distributions received in respect of our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares and gain realized on the sale of common shares, Series B Preferred Shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares to each day during the United States holder's holding period for the common shares, (2) will be required to include in income as ordinary income the portion of the excess distribution or gain that is allocated to the current taxable year and to certain pre-PFIC years, and (3) will be taxable at the highest rate of taxation applicable to ordinary income for the prior years, other than pre-PFIC years, to which the excess distribution or gain is allocable, without regard to the United States holder's other items of income and loss for such prior taxable years ("deferred tax"). The deferred tax for each prior year will be increased by an interest charge for the period from the due date for tax returns for the prior year to the due date for tax returns for the year of the excess distribution or gain, computed at the rates that apply to underpayments of tax. Pledges of PFIC shares will be treated as dispositions for purposes of the foregoing rules. In addition, a United States holder who acquires common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares from a decedent generally will not receive a stepped-up basis in the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares. Instead, the United States holder will have a tax basis in the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares equal to the lower of the fair market value of the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares and the decedent's basis.

If we are treated as a PFIC for any taxable year during which a United States holder holds our common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares and one of our subsidiaries also qualifies as a PFIC for such year, then such United States holder may also be subject to the PFIC rules with respect to its indirect interest in such subsidiary. No mark-to-market election will be available with respect to the indirect interest in the shares of such subsidiary and we currently do not intend to comply with reporting requirements necessary to permit the making of QEF elections in such circumstances.

Taxation of United States Holders that Make a QEF Election. In some circumstances, a United States holder may avoid the unfavorable consequences of the PFIC rules by making a QEF election with respect to us. A QEF election effectively would require an electing United States holder to include in income currently its pro rata share of our ordinary earnings and net capital gain. However, a United States holder cannot make a QEF election with respect to us unless we comply with certain reporting requirements and we currently do not intend to provide the required information.

Taxation of United States Holders that Make a Mark-to-Market Election. A United States holder that holds "marketable" stock in a PFIC may, in lieu of making a QEF election, avoid some of the unfavorable consequences of the PFIC rules by electing to mark the PFIC stock to market as of the close of each taxable year. The common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares will be treated as marketable stock for a calendar year if the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares are traded on the New York Stock Exchange, in other than de minimis quantities, on at least 15 days during each calendar quarter of the

year. A United States holder that makes the mark-to-market election generally will be required to include in income each year as ordinary income an amount equal to the increase in value of the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares for that year, regardless of whether the United States holder actually sells the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares. The United States holder generally will be allowed a deduction for the decrease in value of the common shares, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares for the taxable year, to the extent of the amount of gain previously included in income under the mark-to-market rules, reduced by prior deductions under the mark-to-market rules. Any gain from the actual sale of the PFIC stock will be treated as ordinary income, and any loss will be treated as ordinary loss to the extent of net mark-to-market gains previously included in income and not reversed by prior deductions.

Other PFIC Elections. If a United States holder held our stock during a period when we were treated as a PFIC, but the United States holder did not have a QEF election in effect with respect to us, then in the event that we failed to qualify as a PFIC for a subsequent taxable year, the United States holder could elect to cease to be subject to the rules described above with respect to those shares by making a "deemed sale" or, in certain circumstances, a "deemed dividend" election with respect to our stock. If the United States holder makes a deemed sale election, the United States holder will be treated, for purposes of applying the rules described above under the heading "consequences of PFIC status," as having disposed of our stock for its fair market value on the last day of the last taxable year for which we qualified as a PFIC (the "termination date"). The United States holder would increase his, her or its basis in such common stock by the amount of the gain on the deemed sale described in the preceding sentence. Following a deemed sale election, the United States holder would not be treated, for purposes of the PFIC rules, as having owned the common stock during a period prior to the termination date when we qualified as a PFIC.

If we were treated as a "controlled foreign corporation" for United States federal income tax purposes for the taxable year that included the termination date, then a United States holder could make a "deemed dividend" election with respect to our common stock, Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares or Series F Preferred Shares. If a deemed dividend election is made, the United States holder is required to include in income as a dividend his, her or its pro rata share (based on all of our stock held by the United States holder, directly or under applicable attribution rules, on the termination date) of our post-1986 earnings and profits as of the close of the taxable year that includes the termination date (taking only earnings and profits accumulated in taxable years in which we were a PFIC into account). The deemed dividend described in the preceding sentence is treated as an excess distribution for purposes of the rules described above under the heading "consequences of PFIC status." The United States holder would increase his, her or its basis in our stock by the amount of the deemed dividend. Following a deemed dividend election, the United States holder would not be treated, for purposes of the PFIC rules, as having owned the stock during a period prior to the termination date when we qualified as a PFIC. For purposes of determining whether the deemed dividend election is available, we generally will be treated as a controlled foreign corporation for a taxable year when, at any time during that year, United States persons, each of whom owns, directly or under applicable attribution rules, shares having 10% or more of the total voting power of our stock, in the aggregate own, directly or under applicable attribution rules, shares representing more than 50% of the voting power or value of our shares.

A deemed sale or deemed dividend election must be made on the United States holder's original or amended return for the shareholder's taxable year that includes the termination date and, if made on an amended return, such amended return must be filed not later than the date that is three years after the due date of the original return for such taxable year. Special rules apply where a person is treated, for purposes of the PFIC rules, as indirectly owning our shares.

You are urged to consult your own tax advisor regarding our possible classification as a PFIC, as well as the potential tax consequences arising from the ownership and disposition, directly or indirectly, of interests in a PFIC.

Unearned Income Medicare Contribution Tax

Certain United States holders that are individuals, estates or trusts are required to pay an additional 3.8% tax on, among other things, dividends on and capital gains from the sale or other disposition of stock. You are encouraged to consult your own tax advisors regarding the effect, if any, of this tax on the ownership and disposition of our shares.

Additional Disclosure Requirement

U.S. individuals that hold certain specified foreign financial assets with value in excess of reporting thresholds of $50,000 or more (which include shares in a foreign corporation) are subject to U.S. return disclosure requirements (and related penalties for failure to disclose). Such U.S. individuals are required to file IRS Form 8938, listing these assets, with their U.S. Federal income tax returns. You are encouraged to consult your own tax advisors concerning the filing of IRS Form 8938.

Information reporting and backup withholding

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries generally are subject to information reporting and backup withholding unless (i) you are a corporation or other exempt recipient or (ii) in the case of backup withholding, you provide a correct taxpayer identification number and certify that you are not subject to backup withholding.

The amount of any backup withholding from a payment to you will be allowed as a credit against your United States federal income tax liability and may entitle you to a refund, provided that the required information is furnished to the Internal Revenue Service.

Available Information

We are subject to the informational requirements of the Exchange Act, as amended. In accordance with these requirements, we file reports and other information as a foreign private issuer with the SEC. The SEC maintains an Internet site (http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. You may access the reports and other information we file with the SEC on this SEC Internet site without charge.

Item 11. Quantitative and Qualitative Disclosures About Market Risk

Our risk management policy. Our policy is to continuously monitor our exposure to business risks, including the impact of changes in interest rates, currency rates, and bunker prices on earnings and cash flows. We intend to assess these risks and, when appropriate, enter into derivative contracts with creditworthy counter parties to minimize our exposure to these risks. As part of our efforts to manage our risk, we have in the past entered into derivative contracts for both hedging and, periodically, trading purposes.

Each of the committees of the Board of Directors is responsible for the management of risk within their given areas. In particular, the committees are expected to:

- continuously review and assess all activities that may generate exposure to risk and ensure we are taking appropriate measures;
- ensure that our policies and procedures for evaluating and managing risks are effective and do not significantly increase overall risk; and
- assess the effectiveness of derivative contracts and recommend, if necessary, the early termination of any contract. Our risk management policy provides for the following procedures:
- All recommendations to enter into a derivative contract must originate either from qualified officers or directors of the company or from equivalent specialized officers of our commercial manager;

- All recommendations to enter into a derivative contract must be reviewed by a combined team of officers and advice is taken, as applicable, from third-party sources (e.g., our bankers, other banks, bunker brokers, insurers, etc.);
- Any recommendation must be formalized into a specific proposal which defines the risks to be managed, the action to be implemented, and the benefits and potential risks of the proposed derivative contract, which proposal shall be presented to the Risk Committee; and
- All derivative contracts must be approved by the Risk Committee and be within the overall limits set by the board of directors.

The Audit Committee is responsible for:

- overseeing the division of risk-related responsibilities among each of the Board committees as clearly as possible and performing a gap analysis to confirm that the oversight of any risk is not missed;
- in conjunction with the full Board, approving the Company-wide risk management program; and
- assessing whether the Company's technical and commercial managers have effective procedures for managing risks.

Interest rate risk

The Company is exposed to market risk from changes in interest rates, which could impact its results of operations, financial condition and cash flow. The Company manages its ratio of fixed to floating rate debt with the objective of achieving a mix that reflects management's interest rate outlook. As of March 31, 2020, we had a notional amount of $340.1 million in hedging swaps and $24.7 million in non-hedging swaps. The annualized impact resulting from a 0.25%-point increase in interest rates based on the notional amount at December 31, 2019 would be an increase of approximately $0.4 million in earnings and cash flow. An increase of 0.25% in interest rates will increase our loan interest rate payments by $4.0 million based on the outstanding amounts as of December 31, 2019 and the loans scheduled for amortization as of that date.

The table below provides information about our financial instruments at December 31, 2019, which are sensitive to changes in interest rates, including our debt and interest rate swaps. For debt obligations, the table presents principal cash flows and related weighted average interest rates by expected maturity dates. Weighted-average variable rates are based on the implied forward rates in the yield curves at the reporting date. For interest rate swaps, the table presents notional amounts and weighted-average interest rates by expected contractual maturity dates. Notional amounts are used to calculate the contractual payments to be exchanged under the contracts.

	Balance as of Dec. 31, 2019	Expected Maturities[1] 2020	2021	2022	2023	2024	Thereafter
	(In millions of U.S. dollars, except percentages)						
Long-Term Debt:							
Variable Rate Debt(2)	1,544.6	**238.4**	224.0	164.4	347.8	251.0	319.0
Weighted Average Interest Rate	4.41%	3.69%	3.56%	3.60%	3.60%	3.39%	3.83%
	1,544.6	**238.4**	**224.0**	**164.4**	**347.8**	**251.0**	**319.0**
Interest Rate Swaps (or Derivatives):							
Interest rate swaps—variable to fixed							
Notional Amount at December 31, 2019	161.9	73.7	47.3	47.0	70.5	122.5	173.3
Average Pay Rate	2.04%	2.34%	2.34%	2.34%	2.30%	2.72%	3.11%
Average Receive Rate	2.01%	1.69%	1.61%	1.65%	1.72%	1.80%	1.98%

(1) These are the expected maturities based on the balances as of December 31, 2019.

(2) Interest Payments on US Dollar-denominated debt and interest rate swaps are based on LIBOR.

Bunker price risk

The Company regularly enters into bunker swap agreements in order to hedge its exposure to bunker price fluctuations associated with the consumption of bunkers by its spot trading vessels. During 2019, the company entered into six swap agreements. During 2018, the Company entered into nineteen swap agreements and two call options with an exercise date in 2019 and through 2020. On the basis of 142,000 MT of bunker fuel purchased in the spot market during 2019 every $1/MT increase in prices, decreases annual earnings and cash flow by $0.14 million.

Foreign exchange rate fluctuation

The currency the international tanker industry is primarily using is the U.S. dollar. Virtually all of our revenues are in U.S. dollars and the majority of our operating costs are incurred in U.S. dollars. We incur certain operating expenses in foreign currencies, the most significant of which are in Euros. During fiscal 2019, approximately 24% of the total of our vessel and voyage costs and overhead expenditures were denominated in Euro. Based on 2019 Euro expenditure, therefore, we estimate that for every 1% change in the Euro/U.S. dollar rate there would be a 0.3% impact on vessel operating expenses and minimal impact on other cost categories apart from dry-docking which would depend on the location of the selected yard. However, we have the ability to shift our purchase of goods and services from one country to another and, thus, from one currency to another in order to mitigate the effects of exchange rate fluctuations. We have a policy of continuously monitoring and managing our foreign exchange exposure. On occasion, we do directly purchase amounts of Euro with U.S. dollars, but to date, we have not engaged in any foreign currency hedging transactions, as we do not believe we have had material risk exposure to foreign currency fluctuations.

Inflation

Although inflation has had a moderate impact on operating expenses, dry-docking expenses and corporate overhead, our management does not consider inflation to be a significant risk to direct costs in the current and foreseeable economic environment. However, if inflation becomes a significant factor in the world economy, inflationary pressures could result in increased operating and financing costs.

Item 12. Description of Securities Other than Equity Securities

Not Applicable.

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

None.

Item 15. Controls and Procedures

A. Evaluation of Disclosure Controls and Procedures

The Company's management, with the participation of the Company's chief executive officer and chief financial officer, evaluated the effectiveness of the Company's disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of the end of the period covered by this Annual Report. Based on that evaluation, the chief executive officer and the chief financial officer concluded that the Company's disclosure controls and procedures as of the end of the period covered by this Annual Report were designed and were functioning effectively to provide reasonable assurance that the information required to be disclosed by the Company in reports filed under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to the Company's management, including our chief executive officer and chief financial officer and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure.

The Company believes that a system of controls, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the controls are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

B. Management's Annual Report on Internal Control Over Financial Reporting

The management of Tsakos Energy Navigation Limited and its subsidiaries, according to Rule 13a-15(f) of the Exchange Act, is responsible for the establishment and maintenance of adequate internal controls over financial reporting for the Company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles. However, in any system of internal control there are inherent limitations and consequently internal control over financial reporting may not absolutely prevent or detect misstatements.

The Company's system of internal control over financial reporting includes policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal controls over financial reporting, misstatements may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has performed an assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2019, based on the criteria established within *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework).

Based on its assessment, management has determined that the Company's internal control over financial reporting as of December 31, 2019, was effective.

C. Attestation Report of Independent Registered Public Accounting Firm

Ernst & Young (Hellas) Certified Auditors Accountants S.A., or Ernst & Young (Hellas), which has audited the consolidated financial statements of the Company for the year ended December 31, 2019, has also audited the effectiveness of the Company's internal control over financial reporting as stated in their audit report which is incorporated into Item 18 of this Form 20-F from page F-3 hereof.

D. Change in Internal Control over Financial Reporting

No change in the Company's internal control over financial reporting occurred during the Company's most recent fiscal year that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 16A. Audit Committee Financial Expert

The Board of Directors of the Company has determined that Nicholas Tommasino, Efstratios Georgios Arapoglou and Dr. Maria Vassalou, whose biographical details are included in Item 6 of this Annual Report, each qualifies as an "audit committee financial expert" as defined under current SEC regulations and each satisfies the "accounting or related financial management expertise" standard of the New York Stock Exchange.

Item 16B. Code of Ethics

The Company has adopted a code of ethics that applies to its directors, officers and employees. A copy of our code of ethics is posted in the "Investor Relations" section of the Tsakos Energy Navigation Limited website, and may be viewed at http://www.tenn.gr. We will also provide a hard copy of our code of ethics free of charge upon written request of a shareholder. Shareholders may direct their requests to the attention of Investor Relations, c/o George Saroglou or Paul Durham, Tsakos Energy Navigation Limited, 367 Syngrou Avenue, 175 64 P. Faliro, Athens, Greece.

Item 16C. Principal Accountant Fees and Services

Ernst & Young (Hellas) has audited our annual financial statements acting as our "Independent Registered Public Accounting Firm" for the fiscal years ended December 31, 2019 and 2018.

Audit Fees

The audit fees include the aggregate fees billed for professional services rendered for the audit of our 2019 and 2018 annual financial statements and for related services that are reasonably related to the performance of

the audit or services that are normally provided by the auditor in connection with regulatory filings or engagements for those financial years (including comfort letters, review of the 20-F, consents and other services related to SEC requirements).

The total amount billed and accrued for the Ernst & Young Audit services performed in 2019 and 2018 (in Euros) was €719,250 and €680,000 respectively.

Audit-Related Fees

Ernst & Young did not provide any other services that would be classified in this category during 2019 or 2018.

Tax Fees

Ernst & Young did not provide any other services that would be classified in this category during 2019 or 2018.

All Other Fees

Ernst & Young did not provide any other services that would be classified in this category during 2019 or 2018.

Pre-approval Policies and Procedures

The Audit Committee Charter sets forth the Company's policy regarding retention of the independent auditors, requiring the Audit Committee to review and approve in advance the retention of the independent auditors for the performance of all audit and lawfully permitted non-audit services and the fees related thereto. The Chairman of the Audit Committee or in the absence of the Chairman, any member of the Audit Committee designated by the Chairman, has authority to approve in advance any lawfully permitted non-audit services and fees. The Audit Committee is authorized to establish other policies and procedures for the pre-approval of such services and fees. Where non-audit services and fees are approved under delegated authority, the action must be reported to the full Audit Committee at its next regularly scheduled meeting.

Item 16D. Exemptions from the Listing Standards for Audit Committees

Not Applicable.

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

On March 24, 2020, the Company announced that its Board of Directors had authorized a share repurchase program for its common and/or its preferred shares of up to $50 million. Shares may be purchased from time to time in open market or privately negotiated transactions, which may include derivative transactions, at times and prices that are considered to be appropriate by the Company and the program may be discontinued at any time..

No common or preferred share repurchases were made by the Company in 2019, 2018 or 2017.

Item 16F. Change in Registrant's Certifying Accountant

Not Applicable.

Item 16G. Corporate Governance

Pursuant to certain exceptions for foreign private issuers, we are not required to comply with certain of the corporate governance practices followed by U.S. companies under the New York Stock Exchange listing standards. However, during 2019 there were no significant differences between our corporate governance practices and the New York Stock Exchange standards applicable to listed U.S. companies.

Item 16H. Mine Safety Disclosure

Not Applicable.

PART III

Item 17. Financial Statements

Not Applicable.

Item 18. Financial Statements

The following financial statements together with the reports of our independent registered public accounting firm, beginning on page F-1, are filed as part of this annual report.

Item 19. Exhibits

The following Exhibits are filed as part of this Annual Report. Certain exhibits have been previously filed with the SEC pursuant to the Exchange Act, as amended (Commission File Number 001-31236).

Number	Description
1.1	Memorandum of Association of Tsakos Energy Navigation Limited(P) (filed as Exhibit 3.1 to the Company's Registration Statement on Form F-1 (File No. 333-82326) filed with the SEC and hereby incorporated by reference to such Registration Statement)
1.2	Memorandum of Increase of Share Capital (filed as Exhibit 3.1 to the Company's 6-K filed with the SEC on June 10, 2014, and hereby incorporated by reference)
1.3	Bye-laws of Tsakos Energy Navigation Limited (filed as Exhibit 3.1 to the Company's Form 6-K filed with the SEC on May 26, 2016, and hereby incorporated by reference)
2.1	Certificate of Designation of the 8.875% Series C Cumulative Redeemable Perpetual Preferred Shares (filed as Exhibit 3.3 to the Company's Form 8-A filed with the SEC on September 30, 2013, and hereby incorporated by reference)
2.2	Amendment No. 1 to Certificate of Designation of the 8.875% Series C Cumulative Redeemable Perpetual Preferred Shares (filed as Exhibit 3.3.1 to the Company's Form 8-A/A filed with the SEC on October 26, 2015, and hereby incorporated by reference)
2.3	Certificate of Designation of the 8.75% Series D Cumulative Redeemable Perpetual Preferred Shares (filed as Exhibit 3.3 to the Company's Form 8-A filed with the SEC on April 24, 2015, and hereby incorporated by reference)
2.4	Certificate of Designation of the 9.25% Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares (filed as Exhibit 3.3 to the Company's Form 8-A filed with the SEC on April 4, 2017, and hereby incorporated by reference)
2.5	Certificate of Designation of the 9.50% Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares (filed as Exhibit 3.3 to the Company's Form 8-A filed with the SEC on June 27, 2018 and hereby incorporated by reference)
2.6	Certificate of Designation of Series G Redeemable Convertible Perpetual Preferred Shares of Tsakos Energy Navigation Limited, dated September 25, 2019 (filed as Exhibit 99.1 to the Company's Form 6-K furnished to the SEC on September 27, 2019 and hereby incorporated by reference)
2.7	Description of Securities (filed herewith)
4.1	Tsakos Energy Navigation Limited 2012 Incentive Plan (filed as Exhibit 4.2 to the Company's Annual Report on Form 20-F filed with the SEC on April 29, 2013 and hereby incorporated by reference)

Number	Description
4.2	Amended and Restated Management Agreement between Tsakos Energy Navigation Limited and Tsakos Energy Management Limited effective January 1, 2007 (filed as Exhibit 4.4 to the Company's 20-F filed with the SEC on May 15, 2007, hereby incorporated by reference to such Annual Report)
4.3	Share Purchase Agreement, dated as of September 23, 2019, by and among Tsakos Energy Navigation Limited, Shyris Shipping Company S.A. and AY Tank Limited, as purchaser (including forms of Certificate of Designation of Series G Redeemable Convertible Perpetual Preferred Shares, Shyris Shipping Statement of Designation of Series B Cumulative Redeemable Perpetual Preferred Shares, and Registration Rights Agreement) (filed as Exhibit 99.1 to the Company's Form 6-K furnished to the SEC on September 23, 2019 and hereby incorporated by reference)
8	List of subsidiaries of Tsakos Energy Navigation Limited (filed herewith)
12.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended (filed herewith)
12.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended (filed herewith)
13.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
13.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
15.1	Consent of Independent Registered Public Accounting Firm (filed herewith)
101.INS	XBRL Instance Document (filed herewith)
101.SCH	XBRL Taxonomy Extension Schema (filed herewith)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase (filed herewith)
101.DEF	XBRL Taxonomy Extension Definition Linkbase (filed herewith)
101.LAB	XBRL Taxonomy Extension Label Linkbase (filed herewith)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase (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.

TSAKOS ENERGY NAVIGATION LIMITED

/s/ Nikolas P. Tsakos

Name: Nikolas P. Tsakos
Title: President and Chief Executive Officer
Date: April 14, 2020

TSAKOS ENERGY NAVIGATION LIMITED AND SUBSIDIARIES

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of
TSAKOS ENERGY NAVIGATION LIMITED

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of TSAKOS ENERGY NAVIGATION LIMITED and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of comprehensive income / (loss), other comprehensive income / (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (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, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated April 14, 2020 expressed an unqualified opinion thereon.

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 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. 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 2002.

Athens, Greece
April 14, 2020

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of
TSAKOS ENERGY NAVIGATION LIMITED

Opinion on Internal Control over Financial Reporting

We have audited TSAKOS ENERGY NAVIGATION LIMITED and subsidiaries' internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, TSAKOS ENERGY NAVIGATION LIMITED and subsidiaries (the "Company") maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019 based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of comprehensive income / (loss), other comprehensive income / (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and our report dated April 14, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's 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. Also, 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.

/s/ Ernst & Young (Hellas) Certified Auditors Accountants S.A.

Athens, Greece
April 14, 2020

TSAKOS ENERGY NAVIGATION LIMITED AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of U.S. Dollars—except share and per share data)

	2019	2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 184,835	$ 204,763
Restricted cash	12,935	15,763
Accounts receivable, net (Note 1(f))	40,342	35,351
Capitalized voyage expenses	505	617
Due from related parties (Note 2)	20,113	20,923
Advances and other	23,282	18,407
Vessels held for sale (Note 1(j))	100,277	—
Inventories	13,032	20,388
Prepaid insurance and other	895	1,073
Current portion of financial instruments—Fair value (Note 14)	798	217
Total current assets	397,014	317,502
INVESTMENTS (Note 3)	—	1,000
FINANCIAL INSTRUMENTS—FAIR VALUE, net of current portion (Note 14)	287	133
RIGHT OF USE ASSET UNDER OPERATING LEASES (Note 4)	21,428	—
LONG TERM RECEIVABLE (Note 4)	13,000	13,000
FIXED ASSETS (Note 4)		
Advances for vessels under construction	61,475	16,161
Vessels	3,610,590	3,813,987
Accumulated depreciation	(977,339)	(984,540)
Vessels' Net Book Value	2,633,251	2,829,447
Total fixed assets	2,694,726	2,845,608
DEFERRED CHARGES, net (Note 5)	27,648	27,815
Total assets	$3,154,103	$3,205,058
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Current portion of long-term debt (Note 6)	$ 235,513	$ 160,584
Payables	36,611	37,532
Due to related parties (Note 2)	7,702	4,366
Accrued liabilities	50,873	45,765
Unearned revenue	12,067	6,007
Current portion of obligations under operating leases (Note 4)	7,534	—
Current portion of financial instruments—Fair value (Note 14)	3,900	48
Total current liabilities	354,200	254,302
LONG-TERM DEBT, net of current portion (Note 6)	1,298,783	1,435,017
LONG-TERM OBLIGATIONS UNDER OPERATING LEASES (Note 4)	13,894	—
FINANCIAL INSTRUMENTS—FAIR VALUE, net of current portion (Note 14)	14,907	8,962
STOCKHOLDERS' EQUITY		
Preferred Shares, $ 1.00 par value; 25,000,000 shares authorized, 2,000,000 Series C Preferred Shares, 3,424,803 Series D Preferred Shares, 4,600,000 Series E Preferred Shares, 6,000,000 Series F Preferred Shares and 2,625,000 Series G Convertible Preferred Shares issued and outstanding at December 31, 2019 and 2,000,000 Series B Preferred Shares, 2,000,000 Series C Preferred Shares, 3,424,803 Series D Preferred Shares, 4,600,000 Series E Preferred Shares and 6,000,000 Series F Preferred Shares at December 31, 2018	18,650	18,025
Common shares, $ 1.00 par value; 175,000,000 shares authorized at December 31, 2019 and December 31, 2018; 95,078,607 and 87,604,645 shares issued and outstanding at December 31, 2019 and December 31, 2018, respectively	95,079	87,605
Additional paid-in capital	992,020	996,833
Accumulated other comprehensive loss	(18,353)	(8,660)
Retained earnings	364,000	400,933
Total Tsakos Energy Navigation Limited stockholders' equity	1,451,396	1,494,736
Non-controlling Interest	20,923	12,041
Total stockholders' equity	1,472,319	1,506,777
Total liabilities and stockholders' equity	$3,154,103	$3,205,058

The accompanying notes are an integral part of the consolidated financial statements.

TSAKOS ENERGY NAVIGATION LIMITED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND 2017
(Expressed in thousands of U.S. Dollars—except share and per share data)

	2019	2018	2017
VOYAGE REVENUES:	$ 597,452	$ 529,879	$ 529,182
EXPENSES:			
Voyage expenses	125,802	125,350	113,403
Charter hire expense	10,822	10,822	311
Vessel operating expenses	180,233	181,693	173,864
Depreciation and amortization	139,424	146,798	139,020
General and administrative expenses	27,696	27,032	26,324
Loss on sale of vessels (Note 4)	—	364	3,860
Impairment charges (Note 3, 4)	27,613	65,965	8,922
Total expenses	511,590	558,024	465,704
Operating income (loss)	85,862	(28,145)	63,478
OTHER INCOME (EXPENSES):			
Interest and finance costs, net (Note 7)	(74,723)	(76,809)	(56,839)
Interest income	3,694	2,507	1,082
Other, net	(825)	1,405	1,464
Total other expenses, net	(71,854)	(72,897)	(54,293)
Net income (loss)	14,008	(101,042)	9,185
Less: Net loss (income) attributable to the non-controlling interest	1,118	1,839	(1,573)
Net income (loss) attributable to Tsakos Energy Navigation Limited	$ 15,126	$ (99,203)	$ 7,612
Effect of preferred dividends (Note 10)	(40,400)	(33,763)	(23,776)
Deemed dividend on Series B Preferred Shares (Note 10)	(2,750)	—	—
Net loss attributable to common stockholders of Tsakos Energy Navigation Limited	(28,024)	(132,966)	(16,164)
Loss per share, basic and diluted attributable to Tsakos Energy Navigation Limited common stockholders	$ (0.32)	$ (1.53)	$ (0.19)
Weighted average number of shares, basic and diluted	88,757,923	87,111,636	84,713,572

The accompanying notes are an integral part of these consolidated financial statements.

TSAKOS ENERGY NAVIGATION LIMITED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OTHER COMPREHENSIVE INCOME (LOSS)
FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND 2017
(Expressed in thousands of U.S. Dollars)

	2019	2018	2017
Net income (loss)	$14,008	$(101,042)	$ 9,185
Other comprehensive income (loss)			
Unrealized losses from hedging financial instruments			
Unrealized loss on interest rate swaps, net	(9,693)	(3,355)	(992)
Comprehensive income (loss)	4,315	(104,397)	8,193
Less: comprehensive loss (income) attributable to the non-controlling interest	1,118	1,839	(1,573)
Comprehensive income (loss) attributable to Tsakos Energy Navigation Limited	$ 5,433	$(102,558)	$ 6,620

The accompanying notes are an integral part of these consolidated financial statements.

TSAKOS ENERGY NAVIGATION LIMITED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND 2017
(Expressed in thousands of U.S. Dollars—except for share and per share data)

	Preferred Shares	Common Shares	Additional Paid-in Capital	Treasury stock Shares	Treasury stock Amount	Retained Earnings	Accumulated Other Comprehensive Loss	Tsakos Energy Navigation Limited	Non-controlling Interest	Total Stockholders' Equity
BALANCE December 31, 2016	$ 7,400	$87,339	$752,001	3,617,786	$(20,173)	$582,889	$ (4,313)	$1,405,143	$12,307	$1,417,450
Net income						7,612		7,612	1,573	9,185
—Issuance of 9.25% Series E Preferred Shares	4,600		105,896			—		110,496		110,496
—Sale of Series D Preferred Shares	25		508			—		533		533
—Sale of Common Shares			(407)	(2,488,717)	13,848	(2,588)		10,853		10,853
—Shares granted to non-executive directors				(110,000)	589	(102)		487		487
—Cash dividends paid ($0.05 per common share)						(17,066)		(17,066)		(17,066)
—Dividends paid on Series B Preferred Shares						(4,000)		(4,000)		(4,000)
—Dividends paid on Series C Preferred Shares						(4,438)		(4,438)		(4,438)
—Dividends paid on Series D Preferred Shares						(7,485)		(7,485)		(7,485)
—Dividends paid on Series E Preferred Shares						(6,885)		(6,885)		(6,885)
—Other comprehensive loss						—	(992)	(992)		(992)
BALANCE December 31, 2017	$12,025	$87,339	$857,998	1,019,069	$ (5,736)	$547,937	$ (5,305)	$1,494,258	$13,880	$1,508,138
Adoption of new accounting standard						(1,311)		(1,311)		(1,311)
Net Loss						(99,203)		(99,203)	(1,839)	(101,042)
—Issuance of 9.50% Series F Preferred Shares	6,000		138,280			—		144,280		144,280
—Sale of Common Shares		266	555	(1,019,069)	5,736	(2,046)		4,511		4,511
—Cash dividends paid ($0.05 per common share)						(13,096)		(13,096)		(13,096)
—Dividends paid on Series B Preferred Shares						(4,000)		(4,000)		(4,000)
—Dividends paid on Series C Preferred Shares						(4,438)		(4,438)		(4,438)
—Dividends paid on Series D Preferred Shares						(7,492)		(7,492)		(7,492)
—Dividends paid on Series E Preferred Shares						(10,637)		(10,637)		(10,637)
—Dividends paid on Series F Preferred Shares						(4,781)		(4,781)		(4,781)
—Other comprehensive loss						—	(3,355)	(3,355)		(3,355)
BALANCE December 31, 2018	$18,025	$87,605	$996,833	—	$ —	$400,933	$ (8,660)	$1,494,736	$12,041	$1,506,777
Net income (loss)						15,126		15,126	(1,118)	14,008
—Issuance of Series G Convertible Preferred Shares	3,500		30,484			—		33,984		33,984
—Conversion of Series G Convertible Preferred Shares	(875)	2,917	(2,042)			—		—		—
—Sale of Common Shares		4,557	11,995			—		16,552		16,552
—Capital contribution from non-controlling interest						—		—	10,000	10,000
—Cash dividends paid ($0.05 per common share)						(8,907)		(8,907)		(8,907)
—Redemption of Series B Preferred Shares paid	(2,000)		(45,250)			(2,750)		(50,000)		(50,000)
—Dividends paid on Series B Preferred Shares						(3,000)		(3,000)		(3,000)
—Dividends paid on Series C Preferred Shares						(4,438)		(4,438)		(4,438)
—Dividends paid on Series D Preferred Shares						(7,492)		(7,492)		(7,492)
—Dividends paid on Series E Preferred Shares						(10,639)		(10,639)		(10,639)
—Dividends paid on Series F Preferred Shares						(14,250)		(14,250)		(14,250)
—Dividends paid on Series G Convertible Preferred Shares						(583)		(583)		(583)
—Other comprehensive loss						—	(9,693)	(9,693)		(9,693)
BALANCE December 31, 2019	$18,650	$95,079	$992,020	—	$ —	$364,000	$(18,353)	$1,451,396	$20,923	$1,472,319

The accompanying notes are an integral part of these consolidated financial statements.

TSAKOS ENERGY NAVIGATION LIMITED AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND 2017
(Expressed in thousands of U.S. Dollars)

	2019	2018	2017
Cash Flows from Operating Activities:			
Net income (loss)	$ 14,008	$(101,042)	$ 9,185
Adjustments to reconcile net income (loss) to net cash provided by operating activities			
Depreciation	128,783	137,023	131,873
Amortization of deferred dry-docking costs	10,641	9,775	7,147
Amortization of loan costs	4,822	3,992	4,152
Stock compensation expense	—	—	487
Change in fair value of derivative instruments	(820)	10,295	(3,692)
Loss on sale of vessels	—	364	3,860
Impairment charges	27,613	65,965	8,922
Payments for dry-docking	(12,871)	(14,869)	(12,532)
(Increase) Decrease in:			
Receivables, net	(9,056)	(15,995)	8,573
Inventories	7,356	(4,095)	2,463
Prepaid insurance and other	178	504	265
Capitalized voyage expenses	112	20	—
Increase (Decrease) in:			
Payables	2,415	(12,460)	(4,045)
Accrued liabilities	5,108	2,072	8,986
Unearned revenue	6,060	(7,604)	5,183
Net Cash provided by Operating Activities	184,349	73,945	170,827
Cash Flows from Investing Activities:			
Advances for vessels under construction and acquisitions	(55,988)	(16,161)	—
Vessel acquisitions and/or improvements	(46,217)	(1,154)	(293,347)
Proceeds from sale of vessels	—	17,136	51,550
Net Cash used in Investing Activities	(102,205)	(179)	(241,797)
Cash Flows from Financing Activities:			
Proceeds from long-term debt	494,368	352,872	397,092
Financing costs	(3,556)	(4,300)	(3,177)
Payments of long-term debt	(556,939)	(508,832)	(400,053)
Sale of treasury stock, net	—	4,511	10,853
Redemption of Series B preferred shares	(50,000)	—	—
Proceeds from stock issuance program, net	16,552	—	—
Proceeds from preferred stock issuance, net	33,984	144,280	111,029
Cash dividends	(49,309)	(44,444)	(39,874)
Capital contribution from non-controlling interest to subsidiary	10,000	—	—
Net Cash (used in) provided by Financing Activities	(104,900)	(55,913)	75,870
Net (decrease) increase in cash and cash equivalents and restricted cash	(22,756)	17,853	4,900
Cash and cash equivalents and restricted cash at beginning of period	220,526	202,673	197,773
Cash and cash equivalents and restricted cash at end of period	$ 197,770	$ 220,526	$ 202,673
Interest paid			
Cash paid for interest, net of amounts capitalized	$ 70,755	$ 67,922	$ 56,580
Reconciliation of cash and cash equivalents and restricted cash at end of period:			
Current Assets:			
Cash and cash equivalents	184,835	204,763	189,763
Restricted cash	12,935	15,763	12,910
Total Cash and cash equivalents and restricted cash	**197,770**	**220,526**	**202,673**

The accompanying notes are an integral part of these consolidated financial statements.

1. Significant Accounting Policies

(a) ***Basis of presentation and description of business:*** The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") and include the accounts of Tsakos Energy Navigation Limited (the "Holding Company"), and its wholly-owned and majority-owned subsidiaries (collectively, the "Company"). All intercompany balances and transactions have been eliminated upon consolidation.

The Company owns and operates a fleet of crude oil and product carriers including two vessels chartered-in and two liquified natural gas ("LNG") carriers providing worldwide marine transportation services under long, medium or short-term charters.

(b) ***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 amounts of assets and liabilities and expenses, reported in the consolidated financial statements and the accompanying notes. Although actual results could differ from those estimates, management does not believe that such differences would be material.

(c) ***Other Comprehensive Income (loss):*** The statement of other comprehensive income (loss), presents the change in equity (net assets) during a period from transactions and other events and circumstances from non-owner sources. It includes all changes in equity during a period except those resulting from investments by shareholders and distributions to shareholders. Reclassification adjustments are presented out of accumulated other comprehensive loss on the face of the statement in which the components of other comprehensive income (loss) are presented or in the notes to the consolidated financial statements. The Company follows the provisions of ASC 220 "Comprehensive Income", and presents items of net income, items of other comprehensive income ("OCI") and total comprehensive income in two separate and consecutive statements.

(d) ***Foreign Currency Translation:*** The functional currency of the Company is the U.S. Dollar because the Company's vessels operate in international shipping markets in which the U.S. Dollar is utilized to transact most business. The accounting books of the Company are also 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 year-end exchange rates. Resulting gains or losses are reflected within Vessel operating expenses in the accompanying Consolidated Statements of Comprehensive Income (Loss).

(e) ***Cash, Cash Equivalents and Restricted Cash:*** The Company classifies highly liquid investments such as time deposits and certificates of deposit and their equivalents with original maturities of three months or less as cash and cash equivalents. Cash deposits with certain banks that may only be used for special purposes (including loan repayments) are classified as Restricted cash.

(f) ***Accounts Receivable, Net:*** Accounts receivable, net at each balance sheet date includes estimated recoveries from charterers for hire, freight and demurrage billings and revenue earned but not yet billed, net of an allowance for doubtful accounts (nil as of December 31, 2019 and 2018). Accounts receivable are recorded when the right to consideration becomes unconditional. The Company's management at each balance sheet date reviews all outstanding invoices and provides allowance for receivables deemed uncollectible primarily based on the aging of such balances and any amounts in dispute. During 2019, the Company has written off $3,218 ($nil during 2018) of accounts receivable, deemed uncollectible.

(g) Inventories: Inventories consist of bunkers, lubricants, victualling and stores and are stated at the lower of cost or net realizable value. The cost is determined primarily by the first-in, first-out method. Net realizable value is defined as estimated selling prices in the ordinary course of business, disposal and transportation. When evidence exists that the net realizable value of inventory is lower than its cost, the difference is recognized as a loss in earnings in the period in which it occurs.

(h) Fixed Assets: Fixed assets consist of vessels. Vessels are stated at cost, less accumulated depreciation. The cost of vessels includes the contract price and pre-delivery costs incurred during the construction and delivery of newbuildings, including capitalized interest, and expenses incurred upon acquisition of second-hand vessels. Subsequent expenditures for conversions and major improvements are capitalized when they appreciably extend the life, increase the earning capacity or improve the efficiency or safety of the vessels; otherwise they are charged to expense as incurred. Expenditures for routine repairs and maintenance are expensed as incurred.

Depreciation is provided on the straight-line method based on the estimated remaining economic useful lives of the vessels, less an estimated residual value based on a scrap price.

(i) Impairment of Fixed Assets: The Company reviews vessels for impairment whenever events or changes in circumstances indicate that the carrying amount of a vessel may not be recoverable. When such indicators are present, a vessel to be held and used is tested for recoverability by comparing the estimate of future undiscounted net operating cash flows expected to be generated by the use of the vessel over its remaining useful life and its eventual disposition to its carrying amount. Net operating cash flows are determined by applying various assumptions regarding the use or probability of sale of each vessel, future revenues net of commissions, operating expenses, scheduled dry-dockings, expected off-hire and scrap values, and taking into account historical revenue data and published forecasts on future world economic growth and inflation. Should the carrying value of the vessel exceed its estimated future undiscounted net operating cash flows, impairment is measured based on the excess of the carrying amount over the fair market value of the asset. The Company determines the fair value of its vessels based on management estimates and assumptions and by making use of available market data and taking into consideration third party valuations. The review of the carrying amounts in connection with the estimated recoverable amount for certain of the Company's vessels and an advance for a vessel under construction as of December 31, 2019, 2018 and 2017, indicated an impairment charge of $18,661, $65,965 and $8,922, respectively (Note 4).

In addition, the Company reviews and tests its right-of use-assets for impairment at each reporting date by comparing their carrying amount with the estimated future undiscounted net operating cash flows expected to be generated by the use of the vessels over the remaining lease term (Note 4). The review of the carrying amounts in connection with the estimated recoverable amount for the Company's right of use assets as of December 31, 2019 indicated no impairment charge.

(j) Reporting Assets held for sale: It is the Company's policy to dispose of vessels when suitable opportunities occur and not necessarily to keep them until the end of their useful life. Long-lived assets are classified as held for sale when all applicable criteria enumerated under ASC 360 "Property, Plant, and Equipment" are met and are measured at the lower of their carrying amount or fair value less cost to sell. These assets are not depreciated once they meet the criteria to be held for sale. An impairment charge for an asset held for sale is recognized when its fair value less cost to sell is lower that its carrying value at the date it meets the held for sale criteria and upon subsequent measurement. At December 31, 2019, the Company considered that the suezmax tankers *Archangel, Alaska*, *Silia T* and the aframax tanker *Izumo Princess* met the criteria to be classified as held for sale, all expected to be sold within a year. An impairment charge of $7,952 was recognized in 2019. At December 31, 2018, there were no vessels held for sale.

(k) Accounting for Special Survey and Dry-docking Costs: The Company follows the deferral method of accounting for dry-docking and special survey costs whereby actual costs incurred are reported in Deferred Charges and are amortized on a straight-line basis over the period through the date the next dry-docking is scheduled to become due (approximately every five years during the first fifteen years of vessels' life and every two and a half years within the remaining useful life of the vessels). Costs relating to routine repairs and maintenance are expensed as incurred. The unamortized portion of special survey and dry-docking costs for a vessel that is sold is included as part of the carrying amount of the vessel in determining the gain or loss on sale of the vessel.

(l) Loan Costs: Costs incurred for obtaining new loans or refinancing of existing loans, upon application of certain criteria, are capitalized and amortized over the term of the respective loan, using the effective interest rate method. Any unamortized balance of costs relating to loans repaid or refinanced as debt extinguishments is expensed in the period the repayment or extinguishment is made. Deferred financing costs, net of accumulated amortization, are presented as a reduction of long-term debt (Note 6).

(m) Accounting for Leases: The Company adopted Accounting Standards Update 2016-02, Leases (or ASU 2016-02) and ASU No. 2018-11, Leases (ASC 842)—Targeted Improvements, on January 1, 2019, using the optional transition method. In connection with the adoption of ASC 842, the Company elected the package of practical expedients that allows companies not to reassess whether any expired or expiring contracts are or contain leases, lease classification for any expired or expiring leases and initial direct costs for any expired or expiring leases. Following the adoption and based on the Company's analysis, there was no cumulative effect adjustment to the opening balance of retained earnings. The adoption of ASC 842 resulted in a change in the accounting method for the lease portion of the daily charter hire for the Company's chartered-in vessels accounted for as operating leases with firm periods of greater than one year.

Sale and Leaseback Transactions: The Company has entered into two sale and leaseback transactions accounted for as operating leases (Note 4). According to the provisions of ASC 842-20-30-1, at the commencement date, a lessee shall measure both of the following: a) The lease liability at the present value of the lease payments not yet paid, discounted using the discount rate for the lease at lease commencement and b) The right-of-use asset, which shall consist of all of the following: i) The amount of the initial measurement of the lease liability, ii) Any lease payments made to the lessor at or before the commencement date, minus any lease incentives received and iii) Any initial direct costs incurred by the lessee.

(n) ***Revenue from Contracts with Customers:*** On January 1, 2018, the Company adopted ASC 606 – Revenue from Contracts with Customers, using the modified retrospective method only to contracts that were not completed at January 1, 2018. The prior period comparative information has not been restated and continues to be reported under the accounting guidance in effect for that period. Its adoption mainly changed the method of recognizing revenue over time for voyage charters from the discharge-to-discharge method to the loading-to-discharge method. The adoption of the new accounting standard resulted in a cumulative adjustment of $1,311 in the opening balance of the retained earnings for the fiscal year of 2018. The Company has decided to apply the optional exemption not to disclose the value of the undelivered performance obligations for contracts with an original expected length of one year or less.

Accounting for Revenue and Expenses: Voyage revenues are generated from voyage charter agreements and contracts of affreightment, bareboat charter or time charter agreements (including profit sharing clauses).

Voyage charters and contracts of affreightment: Voyage charters, where a contract is made in the spot market for the use of a vessel for a specific voyage in return of payment of an agreed upon freight rate per ton of cargo. Contracts of affreightment are contracts for multiple voyage charter employments. Revenues from voyage charters in the spot market or under contracts of affreightment are recognized ratably from commencement of cargo loading to completion of discharge of the current cargo. Voyage charter payments are due upon discharge of the cargo. Revenues from voyage charters and contracts of affreightment amounted to $215,197, $184,779 and $196,590 for the years ended December 31, 2019, 2018 and 2017, respectively. At December 31, 2019 and 2018, receivables from voyage charters and contracts of affreightment amounted to $26,222 and $25,206 respectively, the majority of them collected upon completion of the voyage.

Demurrage revenue, which is included in voyage revenues, represents charterers' reimbursement for any potential delays exceeding the allowed lay time as per charter party agreement and is recognized as the performance obligation is satisfied.

Time charters and Bareboat revenues: For time charters and bareboat arrangements, a contract exists, and the vessel is delivered (commencement date) to the charterer, for a fixed period of time, at rates that are determined in the charter agreement and the relevant voyage expenses burden the charterer (i.e. port dues, canal tolls, pilotages and fuel consumption). The charterer has the right, upon delivery of the vessel, to control the use of the vessel as it has the enforceable right to: (i) decide the (re)delivery time of the vessel; (ii) arrange the ports from which the vessel shall pass; (iii) give directions to the master of the vessel regarding the vessel's operations (i.e. speed, route, bunkers purchases, etc.); (iv) sub-charter the vessel and (v) consume any income deriving from the vessel's charter. Thus, time and bareboat charter agreements are accounted for as operating leases, ratably on a straight line over the duration of the charter agreement and therefore, fall under the scope of ASC 842 (Note 1 (m)).

The charterer may charter the vessel with or without the owner's crew and other operating services (time and bareboat charter, respectively). Thus, the agreed day rates (hire rates) in the case of time charter agreements also include compensation for part of the agreed crew and other operating services provided by the owner (non-lease components). The Company has elected to account for the lease and non-lease components of time charter agreements as a combined component in its consolidated financial statements, having taken into account that the non-lease component would be accounted for ratably on a straight-line basis over the duration of the time charter in accordance with ASC 606 and that the lease component is considered as the predominant component. In this respect, the Company qualitatively assessed that more value is ascribed to the vessel rather than to the services provided under the time charter agreements.

Profit sharing contracts are accounted for as variable consideration and included in the transaction price to the extent that variable amounts earned beyond an agreed fixed minimum hire are determinable at the reporting date and when there is no uncertainty associated with the variable consideration. Profit-sharing revenues are calculated at an agreed percentage of the excess of the charter's average daily income over an agreed amount.

Revenue from time charter hire arrangements with an escalation clause is recognized on a straight-line basis over the charter term unless another systematic and rational basis is more representative of the time pattern in which the vessel is employed. Revenues from time and bareboat charter hire arrangements amounted to $382,255, $345,100 and $332,592 for the years ended December 31, 2019, 2018 and 2017 respectively.

Revenues generated from time charter and bareboat arrangements are usually collected in advance.

Voyage related and vessel operating costs: Voyage expenses primarily consist of port charges, canal dues and bunker (fuel) costs relating to spot charters or contract of affreightment. These voyage expenses are borne by the Company unless the vessel is on time-charter, in which case they are borne by the charterer. Commissions (i.e. brokerage and address) are included in voyage expenses under all types of employment. All voyage expenses are expensed as incurred, apart from bunker expenses which consist part of the contract fulfillment costs and are recognized as a deferred contract cost and amortized over the voyage period when the relevant criteria under ASC 340-40 are met. Unamortized deferred contract costs are included in the consolidated balance sheet under Capitalized voyage expenses. Commissions are expensed as incurred. Vessel operating costs include crew costs, insurances, repairs and maintenance, spares, stores, lubricants, quality and safety costs and other expenses such as tonnage tax, registration fees and communication costs, as well as foreign currency gains or losses. All vessel operating expenses are expensed as incurred. Under a bareboat charter, the charterer assumes responsibility for all voyage and vessel operating expenses and risk of operation. Upon adoption of ASC 842, the Company made an accounting policy election to not recognize contract fulfillment costs for time charters under ASC 340-40.

Unearned revenue: Unearned revenue represents cash received prior to the year-end for which related service has not been provided primarily relating to charter hire paid in advance to be earned over the applicable charter period and to revenue resulting from charter agreements with varying rates.

Customers' concentration: Voyage revenues for 2019, 2018 and 2017 included revenues derived from significant charterers as follows (in percentages of total voyage revenues):

Charterer	2019	2018	2017
A	13%	15%	14%
B	11%	10%	11%
C	10%	10%	10%

(o) ***Segment Reporting:*** The Company does not evaluate the operating results by type of vessel or by type of charter or by type of cargo. Although operating results may be identified by type of vessel, management, including the chief operating decision maker, reviews operating results primarily by revenue per day and operating results of the fleet. The Company operates two LNG carriers which meet the quantitative thresholds used to determine reportable segments. The chief operating decision maker does not review the operating results of these vessels separately or make any decisions about resources to be allocated to these vessels or assess their performance separately; therefore, the LNG carriers do not constitute a separate reportable segment. The Company's vessels operate on many trade routes throughout the world and, therefore, the provision of geographic information is considered impracticable by management. For the above reasons, the Company has determined that it operates in one reportable segment, the worldwide maritime transportation of liquid energy related products.

(p) ***Derivative Financial Instruments:*** The Company regularly enters into interest rate swap contracts to manage its exposure to fluctuations of interest rates associated with its specific borrowings. Also, the Company enters into bunker swap contracts and put or call options to manage its exposure to fluctuations of bunker prices associated with the consumption of bunkers by its vessels. Interest rate and bunker price differentials paid or received under the swap agreements are recognized as part of Interest and finance costs, net. On the inception of a put or call option on bunkers an asset or liability is recognized. The subsequent changes in its fair value and realized payments or receipts upon exercise of the options are recognized in the consolidated statement of comprehensive income (loss) as part of the interest and finance costs, net. All derivatives are recognized in the consolidated financial statements at their fair value. On the inception date

of the derivative contract, the Company evaluates the derivative as an accounting hedge of the variability of cash flow to be paid of a forecasted transaction ("cash flow" hedge). Changes in the fair value of a derivative that is qualified, designated and highly effective as a cash flow hedge are recorded in other comprehensive income (loss) until earnings are affected by the forecasted transaction. Changes in the fair value of undesignated derivative instruments and the ineffective portion of designated derivative instruments are reported in earnings in the period in which those fair value changes occur. Realized gains or losses on early termination of undesignated derivative instruments are also classified in earnings in the period of termination of the respective derivative instrument.

The Company formally documents all relationships between hedging instruments and hedged items, as well as the risk-management objective and strategy for undertaking various hedge transactions. This process includes linking all derivatives that are designated as cash flow hedges of the variable cash flows of a forecasted transaction to a specific forecasted transaction. The Company also formally assesses, both at the hedge's inception and on an ongoing basis, whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in cash flow of hedged items. When it is determined that a derivative is not highly effective as a hedge or that it has ceased to be a highly effective hedge, the Company discontinues hedge accounting prospectively. In accordance with ASC 815 "Derivatives and Hedging," the Company may prospectively discontinue the hedge accounting for an existing hedge if the applicable criteria are no longer met, the derivative instrument expires, is sold, terminated or exercised or if the Company removes the designation of the respective cash flow hedge. In those circumstances, the net gain or loss remains in accumulated other comprehensive loss and is reclassified into earnings in the same period or periods during which the hedged forecasted transaction affects earnings, unless the forecasted transaction is no longer probable in which case the net gain or loss is reclassified into earnings immediately.

On January 1, 2019, the Company adopted ASU No. 2017-12, Derivatives and Hedging (Topic 815). Targeted Improvements to Accounting for Hedging Activities (ASU No. 2017-12), which amends and simplifies existing guidance in order to allow companies to more accurately present the economic effects of risk management activities in the consolidated financial statements, and ASU 2018-16, "Derivatives and Hedging (Topic 815)—Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes", which permits the use of the OIS rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes under Topic 815 in addition to the UST, the LIBOR swap rate, the OIS rate based on the Fed Funds Effective Rate and the SIFMA Municipal Swap Rate, as further amended through ASU 2019-04, "Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825 Financial Instruments". The amendments have been adopted on a prospective basis for qualifying new or re-designated hedging relationships entered into on or after the date of adoption. The adoption of this new accounting guidance had no effect on the Company's consolidated financial statements.

(q) ***Fair Value Measurements:*** The Company follows the provisions of ASC 820, "Fair Value Measurements and Disclosures" which defines, and provides guidance as to the measurement of fair value. ASC 820 applies when assets or liabilities in the consolidated financial statements are to be measured at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants (Note 14).

(r) ***Going concern:*** The Company evaluates whether there is substantial doubt about its ability to continue as a going concern by applying the provisions of ASU No. 2014-15. In more detail, the Company evaluates whether there are conditions or events that raise substantial doubt about the Company's ability to continue as a going concern within one year from the date the consolidated financial statements are issued. As part of

such evaluation, the Company did not identify any conditions that raise substantial doubt about the entity's ability to continue as a going concern within one year from the date the consolidated financial statements are issued. As a result, there was no impact in the Company's results of operations, financial position, cash flows or disclosures.

(s) ***Treasury stock:*** Treasury stock is stock that is repurchased by the issuing entity, reducing the number of outstanding shares in the open market. When shares are repurchased, they may either be cancelled or held for reissue. If not cancelled, such shares are referred to as treasury stock. Treasury stock is essentially the same as unissued capital and reduces ordinary share capital. The cost of the acquired shares should generally be shown as a deduction from stockholders' equity. Dividends on such shares held in the entity's treasury should not be reflected as income and not shown as a reduction in equity. Gains and losses on sales of treasury stock should be accounted for as adjustments to stockholders' equity and not as part of income. Depending on whether the shares are acquired for reissuance or retirement, treasury stock is accounted for under the cost method or the constructive retirement method. The cost method is also used, when reporting entity management has not made decisions as to whether the reacquired shares will be retired, held indefinitely or reissued. The Company elected for the repurchase of its common shares to be accounted for under the cost method. Under this method, the treasury stock account is charged for the aggregate cost of shares reacquired.

(t) ***Accounting for transactions under common control:*** Common control transaction is any transfer of net assets or exchange of equity interests between entities or businesses that are under common control by an ultimate parent or controlling shareholder before and after the transaction. Common control transactions may have characteristics that are similar to business combinations but do not meet the requirements to be accounted for as business combinations because, from the perspective of the ultimate parent or controlling shareholder, there has not been a change in control over the acquiree. Due to the fact common control transactions do not result in a change in control at the ultimate parent or controlling shareholder level, the Company does not account for such transactions at fair value. Rather, common control transactions are accounted for at the carrying amount of the net assets or equity interests transferred.

(u) ***Net Income (Loss) Per Share Attributable to Common Stockholders:*** The Company computes net income (loss) per share using the two-class method required for participating securities. The two-class method requires income available to common stockholders for the period to be allocated between common shares and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

The Company's Series G Convertible Preferred Shares (Note 8) are participating securities. Any remaining earnings would be distributed to the holders of common shares and the holders of the Series G Convertible Preferred Shares on a pro-rata basis assuming conversion of all Series G Convertible Preferred Shares into common shares. This participating security does not contractually require the holders of such shares to participate in the Company's losses. As such, net losses for the periods presented were not allocated to the Company's participating security.

New Accounting Pronouncements—Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13—Financial Instruments—Credit Losses (Topic 326) which amends the guidance on reporting credit losses for assets held at amortized cost basis and available for sale debt securities. The standard is effective for interim and annual periods beginning after December 15, 2019, although

early adoption is permitted. *In November 2018, the FASB issued ASU 2018-19, "Codification Improvements to Topic 326, Financial Instruments—Credit Losses*". The amendments clarify that receivables arising from operating leases are not within the scope of Subtopic 326-20. Instead, impairment of receivables arising from operating leases should be accounted for in accordance with Topic 842, Leases. *In April 2019, the FASB issued ASU 2019-04, "Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825 Financial Instruments",* the amendments of which clarify the modification of accounting for available for sale debt securities excluding applicable accrued interest, which must be individually assessed for credit losses when fair value is less than the amortized cost basis. *In May 2019, the FASB issued ASU 2019-05,* "*Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825 Financial Instruments",* the amendments of which provide entities that have certain instruments within the scope of Subtopic 326-20, Financial Instruments—Credit Losses—Measured at Amortized Cost, with an option to irrevocably elect the fair value option in Subtopic 825-10, Financial Instruments—Overall, applied on an instrument-by-instrument basis for eligible instruments, upon adoption of Topic 326. The fair value option election does not apply to held-to-maturity debt securities. An entity that elects the fair value option should subsequently apply the guidance in Subtopics 820-10, Fair Value Measurement—Overall, and 825-10. The effective date and transition requirements for the amendments in these Updates are the same as the effective dates and transition requirements in Update 2016-13, as amended by these Updates. The adoption of the new accounting guidance will not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820)—Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement", which improves the effectiveness of fair value measurement disclosures. In particular, the amendments in this Update modify the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement, based on the concepts in FASB Concepts Statement, Conceptual Framework for Financial Reporting—Chapter 8: Notes to Financial Statements, including the consideration of costs and benefits. The amendments in the Update apply to all entities that are required under existing U.S. GAAP to make disclosures about recurring and non-recurring fair value measurements. ASU 2018-13 is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2019. The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements and the narrative description of measurement uncertainty should be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. Early adoption is permitted upon issuance of this Update. An entity is permitted to early adopt any removed or modified disclosures upon issuance of this Update and delay adoption of the additional disclosures until their effective date. The Company is currently assessing the impact that adopting this new accounting guidance will have on its consolidated financial statements and related disclosures.

In March 2020, the FASB issued ASU 2020-04, "Facilitation of the Effects of Reference Rate Reform on Financial Reporting (Topic 848)", which is intended to provide temporary optional expedients and exceptions to U.S. GAAP guidance on contracts, hedge accounting and other transactions affected by the expected market transition from the London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative reference rates. This ASU is effective for all entities beginning on March 12, 2020 through December 31, 2020. The Company is currently evaluating the impact this guidance may have on its consolidated financial statements and related disclosures.

2. Transactions with Related Parties

(a) ***Tsakos Energy Management Limited (the "Management Company"):*** The Holding Company has a Management Agreement ("Management Agreement") with the Management Company, a Liberian corporation, to provide overall executive and commercial management of its affairs for a monthly fee, which may be adjusted per the Management Agreement of March 8, 2007, effective from January 1, 2008, at the beginning of each year, in accordance with the terms of the Management Agreement, if both parties agree. In 2019, 2018 and 2017, the monthly fees for operating conventional vessels were $27.5 and $20.4 for vessels chartered in or chartered out on a bare-boat basis or for vessels under construction, $35.0 for the DP2 shuttle tankers, while the monthly fees for LNG carriers amounted to $36.9 for both 2019 and 2018 and $36.3 for 2017. From the above fees, fees are also paid to third-party managers for the LNG carriers, *Maria Energy* and *Neo Energy*, the suezmax *Eurochampion 2004,* the aframaxes *Maria Princess* and *Sapporo Princess*, the VLCCs *Ulysses, Hercules I* and the VLCC *Millennium* until April 11, 2018, the date of vessel's sale. The Management Company, for services rendered, charged $20,147, $20,169 and $19,480 for 2019, 2018 and 2017, respectively. Management fees for vessels are included in the General and Administrative Expenses in the accompanying Consolidated Statements of Comprehensive Income (Loss).

In addition to the Management fee, the Management Agreement provides for an incentive award to the Management Company, which is at the absolute discretion of the Holding Company's Board of Directors. In 2019, 2018 and 2017, an award of $500, $200 and $575, respectively, was granted to the Management Company and is included in the General and Administrative expenses in the accompanying Consolidated Statements of Comprehensive Income (Loss). In addition, special awards of $750 and $575 were paid to the Management Company in relation to capital raising offerings in 2018 and 2017, respectively. These awards relating to offerings have been included as a deduction of additional paid-in capital in the accompanying consolidated financial statements.

The Holding Company and the Management Company have certain officers and directors in common. The President, who is also the Chief Executive Officer and a Director of the Holding Company, is also the sole stockholder of the Management Company. The Management Company may unilaterally terminate its Management Agreement with the Holding Company at any time upon one year's notice. In addition, if even one director is elected to the Holding Company without the recommendation of the existing Board of Directors, the Holding Company would be obligated to pay the Management Company an amount calculated in accordance with the terms of the Management Agreement. Under the terms of the Management Agreement between the Holding Company and the Management Company, the Holding Company may terminate the Management Agreement only under specific circumstances, without the prior approval of the Holding Company's Board of Directors.

Estimated future management fees payable over the next ten years under the Management Agreement, exclusive of any incentive awards and based on existing vessels and known vessels scheduled for future delivery as at December 31, 2019, are $21,271 for 2020, $21,420 for years 2021 and 2022, $20,934 for each of the years 2023 and 2024, and $102,213 from 2025 to 2029.

Also, under the terms of the Management Agreement, the Management Company provides supervisory services for the construction of new vessels for a monthly fee of $20.4 in 2019, 2018 and 2017. These fees in total amounted to $850, $245 and $590 for 2019, 2018 and 2017, respectively, and are either accounted for as part of construction costs for delivered vessels or are included in Advances for vessels under construction.

At December 31, 2019, the amount due to the Management Company was $197 ($114 at December 31, 2018).

(b) Tsakos Columbia Shipmanagement S.A. ("TCM"): The Management Company appointed TCM to provide technical management to the Company's vessels from July 1, 2010. TCM is owned jointly and in equal part by related party interests and by a private German Group. TCM, with the consent of the Holding Company, may subcontract all or part of the technical management of any vessel to an alternative unrelated technical manager.

Effective July 1, 2010, the Management Company, at its own expense, pays technical management fees to TCM, and the Company bears and pays directly to TCM most of its operating expenses, including repairs and maintenance, provisioning and crewing of the Company's vessels, as well as certain charges which are capitalized or deferred, including reimbursement of the costs of TCM personnel sent overseas to supervise repairs and perform inspections on the Company's vessels. TCM for services rendered charged $2,038, $2,389 and $1,518 for 2019, 2018 and 2017, respectively.

At December 31, 2019, the amount due from TCM was $20,113 ($20,923 at December 31, 2018), relating to vessel operating expenses to be incurred in the following month.

TCM has a 25% share in a manning agency, located in the Philippines, named TCM Tsakos Maritime Philippines (TMPI), which provides crew to certain of the Company's vessels. The Company has no control or ownership directly in TCM Tsakos Maritime Philippines, nor had any direct transactions to date with the agency.

(c) Tsakos Shipping and Trading S.A. ("Tsakos Shipping"): Tsakos Shipping provides chartering services for the Company's vessels by communicating with third party brokers to solicit research and propose charters. For this service, the Company pays Tsakos Shipping a chartering commission of approximately 1.25% on all freights, hires and demurrages. Such commissions are included in Voyage expenses in the accompanying Consolidated Statements of Comprehensive Income (Loss). Tsakos Shipping also provides sale and purchase of vessels brokerage service. In 2019 there were no such sale and purchase charges. In 2018, the VLCC tanker *Millennium* was sold and for this service, Tsakos Shipping charged a brokerage commission of $0.1 million, which was 0.5% of the sale price of the vessel. Tsakos Shipping may also charge a fee of $200 (or such other sum as may be agreed) on delivery of each newbuilding vessel in payment for the cost of design and supervision of the newbuilding by Tsakos Shipping. In 2019 and 2018, no such fee was charged. In 2017, $3.1 million in aggregate was charged for supervision fees on fifteen vessels which were delivered between May 2016 and October 2017. All commissions are paid in the ordinary course of the Company's business and at terms standard to industry practice.

Certain members of the Tsakos family are involved in the decision-making processes of Tsakos Shipping and of the Management Company and are also shareholders of the Holding Company.

Tsakos Shipping for services rendered charged $7,405, $6,580 and $6,532 for 2019, 2018 and 2017, respectively. At December 31, 2019, the amount due to Tsakos Shipping was $1,386 ($520 at December 31, 2018). There is also at December 31, 2019, an amount of $350 ($327 at December 31, 2018) due to Tsakos Shipping, included in accrued liabilities, which relates to services rendered but not yet invoiced.

(d) Argosy Insurance Company Limited ("Argosy"): The Company places its hull and machinery insurance, increased value insurance, war risk insurance and certain other insurance through Argosy, a captive insurance company affiliated with Tsakos Shipping. Argosy, for services rendered, charged $9,519, $9,799 and $10,199 for 2019, 2018 and 2017, respectively. At December 31, 2019, the amount due to Argosy was $5,705 ($3,387 at December 31, 2018). There is also at December 31, 2019, an amount of $18 ($nil at December 31, 2018) due to Argosy, included in accrued liabilities, which relates to services rendered but not yet invoiced.

(e) ***AirMania Travel S.A. ("AirMania"):*** Apart from third-party agents, the Company also uses an affiliated company, AirMania, for travel services. AirMania, for services rendered, charged $5,617, $5,345 and $5,404 for 2019, 2018 and 2017, respectively.

At December 31, 2019, the amount due to AirMania was $420 ($345 at December 31, 2018).

3. Long-term Investments

At December 31, 2019 and 2018, the Company held 125,000 common shares at a total cost of $1,000 in a private U.S. company which undertakes research into synthetic genomic processes which may have a beneficial environmental impact within the energy and maritime industries. Management performed a qualitative assessment considering impairment indicators and evaluated that the investment is impaired in 2019. The impairment charge of $1,000 is included in *"Impairment Charges"* in the accompanying Consolidated Statements of Comprehensive Income (Loss). No income was received from this investment during 2019, 2018 and 2017.

4. Vessels

Acquisitions

On October 21, 2019, the Company took delivery of its newbuilding aframax tanker *Mediterranean Voyager* for $51,980. In 2018, there were no vessel acquisitions.

Sales

There were no vessel sales in 2019.

On April 11, 2018, the Company sold the VLCC *Millennium*, for net proceeds of $17,136, realizing a net loss of $364. The loss from the sale of the vessel is separately reflected in the accompanying Consolidated Statements of Comprehensive Income (Loss).

Sale and Leaseback

On December 21, 2017, the Company entered into a five-year sale and leaseback agreement for each of the two suezmaxes, *Eurochampion 2004* and *Euronike*. The agreed net sale price was $32,600 each. Under these leaseback agreements, there is a seller's credit of $13,000 on the sales price that becomes immediately payable to the Company by the owners at the end of the five-year charter or upon sale of the vessels during the charter period. At December 31, 2019 and 2018, the Company has assessed the recoverability of seller's credit. There was no indication of impairment. Following adoption of ASC 842 and the package of practical expedients, the Company continues to account for the transaction as an operating lease.

Upon adoption of ASC 842, the Company as at January 1, 2019, recognized on its consolidated balance sheet a right-of-use asset of $29,382 based on the present value of the future minimum lease payments and an obligation under operating leases of $29,382. The Company has not incurred any initial direct costs for the sale and leaseback transaction and has not performed any payments prior to the commencement date of the contract. The leaseback agreements include three one-year option periods, following completion of the initial five-year charters, which are not recognized as part of the right-of-use asset and the obligation under operating leases.

The incremental borrowing rate used to determine the right-of-use asset and the obligations under operating leases was 5.45% and the weighted average remaining lease term was 2.98 years as at December 31, 2019. Amortization of the right-of-use asset is recognized on a straight-line basis from the commencement date of the contract to the end of the non-cancellable lease period, provided that no impairment will be recognized over the lease term. As at December 31, 2019, both the right-of use asset and the corresponding obligation under operating leases were $21,428 (current portion $7,534 and non-current portion $13,894).

Year	Lease Commitment
2020	$ 8,191
2021	8,191
2022	8,191
Minimum net lease payments	$24,573
Less: Present value discount	(3,145)
Total Obligations under operating leases (current and non-current portion)	$21,428

The amount of $15,408 was recognized as sublease income for the year ended December 31, 2019, compared to $11,599 for the corresponding period of 2018.

Impairment

As of December 31, 2019, the Company reviewed the carrying amount in connection with the estimated recoverable amount and the probability of sale for each of its vessels and vessels under construction. This review indicated that such carrying amount was not fully recoverable for three of the Company's vessels classified as held for sale (Note 1(j)); *Archangel, Alaska, Izumo Princess* and for four of the Company's vessels held and used (Note 1(i)); *Amphitrite, Arion, Andromeda, Aegeas.* Consequently, the carrying value of five of the above vessels (*Amphitrite, Arion, Andromeda, Aegeas, Izumo Princess)* totaling $102,550, has been written down to $79,300 based on the lower of the carrying amounts and Level 2 inputs of the fair value hierarchy, as determined by management taking into consideration valuations from independent marine valuers. The carrying value of two of the above vessels (*Archangel, Alaska)* totaling $64,433, has been written down to $61,070 based on the lower of their carrying amounts and Level 1 inputs indicative of the vessels' sales prices, less cost to sell. The resulting impairment charge was $26,613 and is reflected in the accompanying Consolidated Statements of Comprehensive Income (Loss). In 2018, there was an impairment charge of $65,965 relating to *Silia T, Byzantion, Bosporos, Selini, Salamina* plus an advance for a construction later abandoned. In 2017, there was an impairment charge of $8,922 relating to the vessels *Silia T* and *Millennium*.

5. Deferred Charges

Deferred charges, consisting of dry-docking and special survey costs, net of accumulated amortization, amounted to $27,648 and $27,815 at December 31, 2019 and 2018, respectively. Amortization of deferred dry-docking costs is included in Depreciation and amortization in the accompanying Consolidated Statements of Comprehensive Income (Loss).

6. Long –Term Debt

Facility	2019	2018
(a) Credit Facilities	—	62,500
(b) Term Bank Loans	1,544,551	1,544,622
Total	**1,544,551**	**1,607,122**
Less loan costs, net	(10,255)	(11,521)
Total long-term debt	**1,534,296**	**1,595,601**
Less current portion of debt	(238,351)	(163,870)
Add deferred finance costs, current portion	2,838	3,286
Total long-term portion, net of current portion and deferred finance costs	**1,298,783**	**1,435,017**

(a) Credit facilities

As at December 31, 2018, the Company had one open reducing revolving credit facility which matured in February 2019.

(b) Term bank loans

Term loan balances outstanding at December 31, 2019, amounted to $1,544,551. These bank loans are payable in U.S. Dollars in semi-annual installments with balloon payments mainly due at maturity between July 2020 and May 2030. Interest rates on the outstanding loans as at December 31, 2019 are based on London interbank offered rate ("LIBOR") plus a spread.

On December 6, 2018, the Company signed a new eight-year loan agreement for $82,752 relating to the pre- and post-delivery financing of the aframax tankers under construction, *Mediterranean Voyager* and *Caribbean Voyager*. The loan is repayable in sixteen equal consecutive semi-annual installments of $1,149.3, commencing six months after the delivery of each vessel, plus a balloon of $22,987 payable together with the last installment for each vessel. The amount of $56,892 was drawn up to December 31, 2019 and the remaining amount of $25,860 was drawn on January 2, 2020, with the delivery of the second aframax tanker *Caribbean Voyager* (Note 10).

On December 28, 2018, the Company signed a new five-year loan agreement for $62,500 relating to the refinancing of the LNG carrier *Neo Energy*. On January 10, 2019, the Company repaid the amount of $62,500 which was outstanding at the refinancing date and drew down $62,500 on the same date. The new loan is repayable in ten semi-annual installments of $3,000, commencing six months after the drawdown date, plus a balloon of $32,500 payable with the last installment.

On January 28, 2019, the Company signed a new six-year loan agreement for $88,150 relating to the refinancing of the debt approaching maturity of the suezmax tankers, *Spyros K* and *Dimitris P,* the aframax tanker *Uraga Princess* and the panamax tanker *Salamina.* The loan was drawn on January 30, 2019 and is repayable in twelve semi-annual installments of $5,200, commencing six months after the drawdown date, plus a balloon of $25,750 payable together with the last installment. Part of the loan, for the vessel *Salamina*, amounting to $14,272, was prepaid on June 17, 2019.

On May 31, 2019, the Company signed a new five-year loan agreement amounting to $38,250 to refinance the existing loans of four vessels, the panamax tankers, *Maya, Inca, Selini* and *Salamina.* On May 31, 2019 and June 13, 2019, the Company drew down the amount of $25,500 and $12,750, respectively. On May 31, 2019 and June 3, 2019, the Company repaid the old loan amounts of $9,062 for *Maya* and *Inca* and $16,575 for *Selini*. The loan is repayable in ten semi-annual installments of $3,187, commencing six months after the drawdown date, plus a balloon of $6,375 payable together with the last installment.

On July 12, 2019, the Company signed a new four-year loan agreement amounting to $26,000 for the refinancing of three handysize vessels, *Amphitrite, Arion* and *Andromeda.* On July 17, 2019, the Company drew down $26,000 and on the same date, repaid the old loan amounting to $19,448. The new loan is repayable in ten semi-annual installments of $2,600.

On July 12, 2019, the Company signed a new seven-year loan agreement amounting to $56,352 relating to the pre- and post-delivery financing of the first suezmax tanker under contruction (*Hull 8041*). The first drawdown of $6,979 was made on July 31, 2019, for the payment of the second installment to the ship building yard. The loan is repayable in fourteen consecutive semi-annual installments of $1,408.8, commencing six months after the delivery of the vessel, plus a balloon of $36,629 payable together with the last installment.

On August 5, 2019, the Company signed a new seven-year loan agreement amounting to $72,000 for the refinancing of two aframax tankers, *Thomas Zafiras* and *Leontios H*. The loan was drawn on August 8, 2019 and is repayable in fourteen semi-annual installments of $2,400 plus a balloon payment of $38,400 payable together with the last installment. On August 9, 2019, the Company prepaid the old loan amounting to $64,825.

On August 7, 2019, the Company signed a new ten-year loan agreement amounting to $54,387 relating to pre- and post-delivery financing of the second suezmax tanker under construction (*Hull 8042*). The first drawdown of $6,733 was made on August 9, 2019, for the payment of the second installment to the ship building yard. The loan is repayable in twenty consecutive semi-annual installments of $1,510.7, commencing six months after the delivery of the vessel, plus a balloon of $24,172 payable together with the last installment.

On August 21, 2019, the Company signed a new five-year loan agreement amounting to $71,036 for the refinancing of two aframax tankers, *Elias Tsakos* and *Oslo TS*. The loan was drawn in two tranches on August 27, 2019 and August 28, 2019, repayable in fourteen semi-annual installments of $1,200 plus a balloon of $19,200 and ten semi-annual installments of $1,341 plus a balloon of $21,626 payable with last installment, respectively. On August 27, 2019 and August 28, 2019, the Company prepaid the old loans amounting to $31,212 and $35,036, respectively.

On December 6, 2019, the Company signed a new five-year loan agreement amounting to $36,000 for the refinancing of the aframax tanker *Parthenon TS*. The loan was drawn on December 10, 2019 and on the same date prepaid the old loan amounting to $31,212. The loan is repayable in ten semi-annual installments of $1,200 plus a balloon of $24,000 payable with last installment.

On December 18, 2019, the Company signed a new five-year loan agreement amounting to $35,000 for the refinancing of the aframax tanker *Eurovision*. The loan was drawn on December 19, 2019 and on the same date the Company prepaid the old loan amounting to $28,000. The loan is repayable in ten semi-annual installments of $1,591 plus a balloon of $19,090 payable with the last installment.

At December 31, 2019, interest rates on these term bank loans ranged from 3.45% to 5.13%.

The weighted-average interest rates on the above executed loans for the applicable periods were:

Year ended December 31, 2019	4.41%
Year ended December 31, 2018	4.21%
Year ended December 31, 2017	3.47%

Loan movements for credit facilities and term loans throughout 2019:

Loan	Origination Date	Original Amount	Balance at January 1, 2019	New Loans	Prepaid	Repaid	Balance at December 31, 2019
Credit facility	2007	120,000	62,500	—	62,500	—	—
12-year term loan	2009	40,000	18,750	—	—	2,500	16,250
10-year term loan	2010	39,000	16,900	—	16,900	—	—
10-year term loan	2010	43,924	18,181	—	16,575	1,606	—
9-year term loan	2010	42,100	21,300	—	21,300	—	—
10-year term loan	2011	48,000	24,000	—	24,000	—	—
9-year term loan	2011	48,650	25,948	—	25,948	—	—
8-year term loan	2011	73,600	73,672	—	—	6,406	67,266
7-year term loan	2014	42,000	30,800	—	28,000	2,800	—
6-year term loan	2014	193,239	169,120	—	127,250	8,476	33,394
7-year term loan	2014	40,400	36,377	—	35,036	1,341	—
6-year term loan	2014	78,744	72,925	—	—	4,669	68,256
6-year term loan	2014	39,954	37,457	—	—	2,497	34,960
5-year term loan	2015	35,190	31,280	—	—	1,955	29,325
7-year term loan	2015	35,190	30,792	—	—	2,199	28,593
7-year term loan	2015	39,900	29,019	—	—	3,627	25,392
5-year term loan	2015	82,775	56,908	—	—	10,347	46,561
6-year term loan	2015	46,217	32,351	—	—	4,622	27,729
7-year term loan	2015	44,800	36,800	—	—	3,200	33,600
12-year term loan	2016	309,824	252,433	—	—	21,502	230,931
5-year term loan	2016	33,104	21,996	—	19,450	2,546	—
4-year term loan	2016	18,125	10,875	—	9,063	1,812	—
71/2-year term loan	2017	85,000	79,333	—	—	5,667	73,666
4-year term loan	2017	122,500	92,314	—	—	15,594	76,720
6-year term loan	2018	80,000	76,255	—	—	7,490	68,765
5-year term loan	2018	180,000	151,014	—	—	23,122	127,892
5-year term loan	2018	44,000	44,000	—	—	4,700	39,300
5-year term loan	2018	48,650	48,650	—	—	6,081	42,569
8-year term loan	2018	82,752	5,172	51,720	—	—	56,892
5-year term loan	2018	62,500	—	62,500	—	3,000	59,500
6-year term loan	2019	88,150	—	88,150	14,272	4,358	69,520
5-year term loan	2019	38,250	—	38,250	—	3,187	35,063
4-year term loan	2019	26,000	—	26,000	—	—	26,000
7-year term loan	2019	56,352	—	6,979	—	—	6,979
10-year term loan	2019	54,387	—	6,733	—	—	6,733
7-year term loan	2019	72,000	—	72,000	—	—	72,000
5-year term loan	2019	71,036	—	71,036	—	1,341	69,695
5-year term loan	2019	36,000	—	36,000	—	—	36,000
5-year term loan	2019	35,000	—	35,000	—	—	35,000
Total			1,607,122	494,368	400,294	156,645	1,544,551

The above term bank loans are secured by first priority mortgages on all vessels owned by the Company's subsidiaries, by assignments of earnings and insurances of the respectively mortgaged vessels, and by corporate guarantees of the relevant ship-owning subsidiaries and in certain cases of the parent company as well.

The loan agreements include, among other covenants, covenants requiring the Company to obtain the lenders' prior consent in order to incur or issue any financial indebtedness, additional borrowings, pay dividends provided no event of default has occurred, sell vessels and assets, and change the beneficial ownership or management of the vessels. Also, the covenants require the Company to maintain a minimum liquidity, not legally restricted, of $104,979 at December 31, 2019 and $99,154 at December 31, 2018, a minimum consolidated leverage ratio, a minimum hull value in connection with the vessels' outstanding loans and insurance coverage of the vessels against all customary risks. Two loan agreements require the Company to maintain throughout the security period, an aggregate credit balance in a deposit account of $3,700. Four loan agreements require a monthly pro rata transfer to retention account of any principal due but unpaid.

As at December 31, 2019, the Company and its wholly owned subsidiaries had twenty-nine loan agreements, totaling $1,544,551. The Company fulfilled its requirements in respect of the financial covenants of all of its loan agreements, as at December 31, 2019.

The Company's liquidity requirements relate primarily to servicing its debt, funding the equity portion of investments in vessels and funding expected capital expenditures on dry-dockings and working capital.

The annual principal payments, including balloon payments on loan maturity, required to be made after December 31, 2019, are as follows:

Year	Amount
2020	238,351
2021	224,044
2022	164,367
2023	347,775
2024	250,978
2025 and thereafter	319,036
	1,544,551

7. Interest and Finance Costs, net

	2019	2018	2017
Interest expense	69,980	72,191	62,343
Less: Interest capitalized	(1,018)	(252)	(445)
Interest expense, net	68,962	71,939	61,898
Interest swaps termination cash settlements	—	(477)	(3,685)
Bunkers swap and call options cash settlements	1,469	(9,857)	(2,547)
Bunker call options premium	—	—	216
Amortization of loan costs	4,822	3,992	4,152
Bank charges	240	405	164
Change in fair value of non-hedging financial instruments	(770)	10,807	(3,359)
Net total	74,723	76,809	56,839

At December 31, 2019, the Company was committed to nine floating-to-fixed interest rate swaps with major financial institutions covering notional amounts aggregating to $481,998, maturing from July 2020 through October 2027, on which it pays fixed rates averaging 2.40% and receives floating rates based on the six-month LIBOR (Note 14).

At December 31, 2019, the Company held eight of the nine interest rate swap agreements, designated and qualifying as cash flow hedges, in order to hedge its exposure to interest rate fluctuations associated with its debt covering notional amounts aggregating to $455,998.

The fair values of such financial instruments as of December 31, 2019 and 2018, in aggregate amounted to $14,832 (negative) and $5,000 (negative), respectively. The net amount of cash flow hedge losses at December 31, 2019, that is estimated to be reclassified into earnings within the next twelve months is $45.

At December 31, 2019, the Company held one interest rate swap that did not meet hedge accounting criteria. On December 20, 2018, the Company discontinued as a cash flow hedge one hedging interest rate swap. This interest rate swap associated with a secured term loan facility, which was part of the refinancing of debt approaching maturity relating to the vessels *Euro* and *Sakura Princess*. Upon completion of the refinancing on December 20, 2018, the hedge no longer met the criteria for hedge accounting as it was no longer highly effective, and it was determined by management that the future cash flows associated with the repayment of the new financing were not probable of occurring. The fair value of the non-hedging swap as of December 31, 2019 and 2018, amounted to $187 (negative) and $38 (negative), respectively. As such, the changes in its fair value during 2019 and 2018 amounting to $149 (negative) and $86 (negative), respectively, have been included in Change in fair value of non-hedging financial instruments in the above table.

In November 2018, the Company entered into two call option agreements, with an exercise date in 2019 and through 2020, for a total premium of $1,602. At December 31, 2019 and 2018, the Company held one and three, respectively, call option agreements in order to hedge its exposure to bunker price fluctuations associated with the consumption of bunkers by its vessels. The value of the call options at December 31, 2019 and 2018 was $147 (positive) and $350 (positive), respectively. The changes in their fair value during 2019 and 2018 amounting to $203 (negative) and $232 (positive), respectively, have been included in Change in fair value of non-hedging financial instruments in the above table.

In 2019 and 2018, the Company held twenty-five and nineteen bunker swap agreements, respectively, in order to hedge its exposure to bunker price fluctuations associated with the consumptions of bunkers by its vessels. The fair value of bunker swap agreements at December 31, 2019 and December 31, 2018 were $2,850 (negative) and $3,972 (negative), respectively. The change in the fair values as of December 31, 2019 and December 31, 2018, was $1,122 (positive) and $10,999 (negative), respectively.

During 2016, the Company entered into three bunker swap agreements in order to hedge its exposure to bunker price fluctuations associated with the consumption of bunkers by the vessel *Ulysses*. In November 2018, the Company entered into early termination agreements of the three bunker swap agreements with expiring dates September 2019 and October 2019. Total cash received from those swaps' terminations amounted to $1,470. The change in their fair value during 2018 and 2017 were $3,264 (negative) and $785 (positive) respectively.

8. Stockholders' Equity

In 2019, the Company issued 4,557,296 common shares for net proceeds of $16,552. In 2018, the Company sold 1,019,069 common shares from its treasury stock and issued 265,993 common shares for net proceeds

of $4,511. In 2017, the Company sold 2,488,717 common shares from its treasury stock for net proceeds of $10,853 and 24,803 of its Series D Preferred Shares for net proceeds of $533.

As of December 31, 2019, the Company was in full compliance with all the covenants contained within the terms of its Series C Preferred Shares. There are no financial covenants in the Company's other outstanding series of preferred shares.

On July 30, 2019, the Company redeemed all of its 2,000,000 Series B Preferred Shares, with a liquidation preference of $25.00 per share along with the payment of a final dividend of $0.50 per share, declared on June 28, 2019. The difference between the carrying value and the fair value of the Series B Preferred Shares, amounting to $2,750, was recognized as a reduction of retained earnings as a deemed dividend, and has been considered in the calculations of Loss per Common Share in 2019 (Note 10).

In September 2019, the Company entered into a share purchase agreement for the private placement of 3,500,000 Series G Redeemable Convertible Perpetual Preferred Shares, par value $1.00 per share and liquidation preference $10.00 per share (the "Series G Convertible Preferred Shares"), at a purchase price of $10.00 per share, raising $33,984, net of structuring fee and other expenses. The Series G Convertible Preferred Shares have a stated coupon rate of 0%, subject to adjustment in the event of a cross-default or failure to redeem on any redemption date and participate on an as-converted basis in dividends declared and paid on the Company's common shares.

The Series G Convertible Preferred Shares are convertible at any time, at the option of the holder, at a conversion price of $3.00 per share, representing a conversion rate of three and one-third common shares per Series G Convertible Preferred Share. All or a portion of the Series G Convertible Preferred Shares will automatically convert into common shares at the conversion rate if the trading price of the Company's common shares exceed certain levels between 130% and 170% of the conversion price. The holders, however, will be prohibited from converting the Series G Convertible Preferred Shares into common shares to the extent that, as a result of such conversion, the holder would own more than 9.99% of the total number common shares then issued and outstanding, unless a 61-day notice is delivered to the Company.

The conversion price is subject to customary anti-dilution and other adjustments relating to the issuance of common shares as a dividend or the subdivision, combination, or reclassification of common shares into a greater or lesser number of common shares. The Company may also redeem in full or in part the Series G Convertible Preferred Shares prior to September 1, 2020, for cash, at the as-converted value of the Series G Convertible Preferred Shares, if the trading price of the common shares exceeds certain levels.

The Series G Convertible Preferred Shares did not generate a beneficial conversion feature (BCF) upon issuance as the fair value of the Company's common shares was lower than the conversion price. The Series G Convertible Preferred Shares did not meet the criteria for mandatorily redeemable financial instruments. Additionally, the Company determined that the nature of the Series G Convertible Preferred Shares was more akin to an equity instrument and that the economic characteristics and risks of the embedded conversion options were clearly and closely related to the Series G Convertible Preferred Shares. As such, the conversion options were not required to be bifurcated from the equity host under ASC 815, Derivatives and Hedging. The Company also determined that the redemption call option did meet the definition of a derivative, but that the value of the derivative was zero due to the expectations under which the call option would be exercised.

On December 23, 2019, 875,000 Series G Convertible Preferred Shares converted into 2,916,666 common shares.

The holders of the Series G Convertible Preferred Shares generally do not have voting rights. However, without the affirmative vote or consent of the holders of at least two-thirds of the outstanding Series G Convertible Preferred Shares, voting as a single class, the Company may not adopt any amendment to its memorandum of association or bye-laws that materially or adversely alters or affects the preferences, powers or rights of the Series G Convertible Preferred Shares in any respect or any amendment to the Series G Convertible Preferred Shares Certificate of Designations. The Series G Convertible Preferred Shares rank *pari passu* with the Company's other outstanding series of preferred shares and senior to the Company's common shares with respect to dividend distributions and distributions upon any liquidation event.

On February 1, 2021, or, if earlier, the delivery date of the last of the Company's newbuilding conventional tankers i.e. *Hull 8042,* (the "Redemption Date"), subject to certain limitations, outstanding Series G Convertible Preferred Shares having a redemption price of up to $35,000 will be mandatorily exchanged for preferred shares (the "Shyris Shipping Preferred Shares") to be issued by the subsidiary of the Company that will own such crude oil tankers after receipt of requisite approvals (Shyris Shipping). The redemption price at which the Series G Convertible Preferred Shares will be exchanged will be the higher of 95% of the as-converted value of the Series G Convertible Preferred Shares, based on a six-month volume weighted average price ("VWAP") of the Company's common shares, or a price providing for a return of 7.75% per annum on an actual/360-day basis on the Series G Convertible Preferred Shares, taking into account all dividends actually received on the Series G Convertible Preferred Shares. To the extent certain limitations result in less than $35,000 of Shyris Shipping Preferred Shares being issued on the Redemption Date, Series G Convertible Preferred Shares with an aggregate redemption price equal to such shortfall will remain subject to redemption prior to the fifth anniversary of the share purchase agreement. After such time, any Series G Convertible Preferred Shares will automatically convert into the Company's common shares at the conversion rate or be redeemed for Shyris Shipping Preferred Shares. Any other Series G Convertible Preferred Shares not exchanged for Shyris Shipping Preferred Shares on the Redemption Date will automatically convert on such date into the Company's common shares at the conversion rate (unless the Company elects to redeem such Series G Convertible Preferred Shares for cash). The Series G Convertible Preferred Shareholders will also have the right to require the Company to redeem the Series G Convertible Preferred Shares for cash, in the event of non-compliance with certain requirements relating to Shyris Shipping.

On July 10, 2018, the Company completed an offering of 6,000,000 of its Series F Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share, liquidation preference $25.00 per share, raising $144,280, net of underwriter's discount and other expenses. Dividends on the Series F Preferred Shares are cumulative from the date of original issue and are payable quarterly in arrears on the 30th day of January, April, July and October of each year, commencing October 30, 2018, when, as and if declared by our board of directors. Dividends will be payable from cash available for dividends at a rate equal to 9.50% per annum of the stated liquidation preference prior to July 30, 2028 and from and including July 30, 2028, at a floating rate equal to three-month LIBOR plus spread of 6.54% per annum of the stated liquidation preference.

On April 5, 2017, the Company completed an offering of 4,600,000 of its Series E Cumulative Perpetual Preferred Shares, par value $1.00 per share, liquidation preference $25.00 per share, raising $110,496, net of underwriter's discount and other expenses. Dividends on the Series E Preferred Shares are cumulative from the date of original issue and will be payable quarterly in arrears on the 28th day of February, May, August and November of each year, commencing May 28, 2017, when, as and if declared by our board of directors. Dividends will be payable from cash available for dividends at a rate equal to 9.25% per annum of the stated liquidation preference prior to May 28, 2027 and from and including May 28, 2027, at a floating rate equal to three-month LIBOR plus a spread of 6.881% per annum of the stated liquidation preference.

On October 10, 2017, under the Company's share-based plan the Company granted 110,000 restricted share units to all non-executive directors out of the repurchased treasury stock, which vested immediately. A related amount of $0.5 million was accounted for as stock compensation expense within General and Administrative expenses in the accompanying financial statements.

9. Accumulated other comprehensive loss

In 2019, Accumulated other comprehensive loss increased to $18,353 ($8,660 in 2018) mainly due to unrealized losses from hedging financial instruments of $9,693 (losses of $3,355 and $992 in 2018 and 2017, respectively).

10. Loss per Common Share

The Company calculates basic and diluted net loss per share in conformity with the two-class method required for companies with participating securities. The Company considered all series of redeemable convertible preferred shares to have been participating securities as the holders were entitled to receive non-cumulative dividends on a pari passu basis in the event that a dividend was paid on common shares. Under the two-class method, the net loss attributable to common stockholders is not allocated to the redeemable convertible preferred shares as the holders of redeemable convertible preferred shares do not have a contractual obligation to share in losses.

Under the two-class method, basic net loss per share is calculated by dividing the net loss by the weighted-average number of common shares outstanding during the period. Diluted net loss per share is computed by giving effect to all potentially dilutive common share equivalents outstanding for the period.

The following table sets forth the computation of basic and diluted net loss per share:

Numerator

	2019	2018	2017
Net income (loss) attributable to Tsakos Energy Navigation Limited	$ 15,126	$ (99,203)	$ 7,612
Preferred share dividends, Series B	(3,000)	(4,000)	(4,000)
Preferred share dividends, Series C	(4,438)	(4,438)	(4,437)
Preferred share dividends, Series D	(7,492)	(7,492)	(7,479)
Preferred share dividends, Series E	(10,637)	(10,637)	(7,860)
Preferred share dividends, Series F	(14,250)	(7,196)	—
Preferred share dividends, convertible Series G	(583)	—	—
Deemed dividend on Series B preferred shares	(2,750)	—	—
Net loss attributable to common stockholders	(28,024)	(132,966)	(16,164)
Denominator			
Weighted average common shares outstanding	88,757,923	87,111,636	84,713,572
Basic and diluted loss per common share	$ (0.32)	$ (1.53)	$ (0.19)

For purposes of this calculation, potential redeemable convertible preferred shares of 3,100,457 for the year ended December 31, 2019, are considered common shares equivalents but have been excluded from the calculation of diluted net loss per share as their effect is anti-dilutive. Basic and diluted net loss per share was the same for each period presented.

11. Non-controlling Interest in Subsidiary

The Company owns 51% of Mare Success S.A., the holding-company of two Panamanian registered companies which own the vessels *Maya* and *Inca* and two Liberian registered companies which own the vessels *Selini* and *Salamina*. 49% of Mare Success S.A. is owned by Polaris Oil Shipping Inc. ("Polaris"), an affiliate of one of the Company's major charterers, Flopec Petrolera Ecuatoriana ("Flopec"). Mare Success S.A. is fully consolidated in the accompanying consolidated financial statements. There have been no transactions between Polaris and the Company since the incorporation of Mare Success S.A., whereas approximately 6.2% of the Company's 2019 revenue (7.5% in 2018 and 9.5% in 2017) was generated by Flopec.

In June 2019, Mare Success S.A increased its paid-in capital by $20,408, of which $10,408 constituted the 51% portion contributed by the Company and the $10,000 constituted the 49% portion contributed by Polaris. After the recapitalization, the shareholding of Mare Success S.A. remained at 51% owned by the Company and 49% owned by Polaris. The additional paid-in capital was made to finance part of the intragroup sale of vessels, in particular, the panamax tankers, *Selini* and *Salamina*. This transaction did not affect vessels' carrying values on a consolidated basis.

12. Income Taxes

Under the laws of the countries of the Company's subsidiaries' incorporation and/or vessels' registration (Greece, Liberia, Marshall Islands, Panama, Bahamas, Cyprus, Malta), the companies are subject to registration and tonnage taxes, which have been included in the Vessel operating expenses.

The Company is not expected to be subject to United States Federal income tax on its gross income from the international operations of ships. In general, foreign persons operating ships to and from the United States are subject to United States Federal income tax of 4% of their United States source gross transportation income, which equals 50% of their gross income from transportation to or from the United States. The Company believes that it is exempt from United States Federal income tax on its United States source gross transportation income, as each vessel-operating subsidiary is organized in a foreign country that grants an equivalent exemption to corporations organized in the United States, and derives income from the international operation of ships and satisfies the stock ownership test as defined by the Internal Revenue Code and related regulations as a result of the Company's stock being primarily and regularly traded on an established securities market in the United States. Under the regulations, a Company's stock is considered to be regularly traded on an established securities market if (i) one or more classes of its stock representing 50% or more of its outstanding shares, by voting power and value, is listed on the market and is traded on the market, other than in minimal quantities, on at least 60 days during the taxable year; and (ii) the aggregate number of shares of stock traded during the taxable year is at least 10% of the average number of shares of the stock outstanding during the taxable year. Other requirements such as the substantiation and reporting requirements under the regulations also must be satisfied to qualify for the exemption from United States Federal income tax.

13. Commitments and Contingencies

As at December 31, 2019, the Company had under construction one aframax tanker, two suezmax tankers and one LNG carrier.

The total contracted amount remaining to be paid for the four vessels under construction plus the extra costs agreed as at December 31, 2019, were $323,331. The amount of $188,792 is due to be paid in 2020 and the amount of $134,539 in 2021.

In the ordinary course of the shipping business, various claims and losses may arise from disputes with charterers, agents and other suppliers relating to the operations of the Company's vessels. Management believes that all such matters are either adequately covered by insurance or are not expected to have a material adverse effect on the Company's results from operations or financial condition.

Charters-out

The future minimum revenues of vessels in operation at December 31, 2019, before reduction for brokerage commissions, expected to be recognized on non-cancelable time charters are as follows:

Year	Amount
2020	$306,717
2021	213,165
2022	133,127
2023	96,426
2024 to 2028	210,100
Minimum charter revenues	$959,535

These amounts do not assume any off-hire.

14. Financial Instruments

(a) ***Interest rate risk:*** The Company is subject to interest rate risk associated with changing interest rates with respect to its variable interest rate term loans and credit facilities as described in Notes 6 and 7.

(b) ***Concentration of credit risk:*** Financial Instruments consist principally of cash, trade accounts receivable, investments, and derivatives.

The Company places its temporary cash investments, consisting mostly of deposits, primarily with high credit qualified financial institutions. The Company performs periodic evaluations of the relative credit standing 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 and does not have any agreements to mitigate credit risk. The Company limits the exposure of non-performance by counterparties to derivative instruments by diversifying among counterparties with high credit ratings and performing periodic evaluations of the relative credit standing of the counterparties.

(c) ***Fair value:*** The carrying amounts reflected in the accompanying Consolidated Balance Sheet of cash and cash equivalents, restricted cash, trade receivables, accounts payable and due from(to) related parties, approximate their respective fair values due to the short maturity of these instruments. The fair value of long-term bank loans with variable interest rates approximate the recorded values, generally due to their variable interest rates. The Company performs relevant enquiries on a periodic basis to assess the recoverability of the long-term investment (Note 3) and the long-term receivable estimates that the amount

presented on the accompanying balance sheet approximates the amount that is expected to be received by the Company in the event of sale of that investment and the end of the non-cancellable lease period, respectively.

The fair values of the interest rate swap agreements, bunker swap agreements and call option agreements discussed in Note 6 above are determined through Level 2 of the fair value hierarchy as defined in FASB guidance for Fair Value Measurements and are derived principally from or corroborated by observable market data, interest rates, yield curves and other items that allow value to be determined.

The estimated fair values of the Company's financial instruments, other than derivatives at December 31, 2019 and 2018, are as follows:

	2019		2018	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Financial assets (liabilities)				
Cash and cash equivalents	184,835	184,835	204,763	204,763
Restricted cash	12,935	12,935	15,763	15,763
Investments	—	—	1,000	1,000
Debt	(1,544,551)	(1,544,551)	(1,607,122)	(1,607,122)

Tabular Disclosure of Derivatives Location

Derivatives are recorded in the consolidated balance sheet on a net basis by counterparty when a legal right of set-off exists. The following tables present information with respect to the fair values of derivatives reflected in the consolidated balance sheet on a gross basis by transaction. The tables also present information with respect to gains and losses on derivative positions reflected in the Consolidated Statements of Comprehensive Income (Loss) or in the Consolidated Balance Sheets, as a component of Accumulated other comprehensive loss.

		Asset Derivatives		Liability Derivatives	
		December 31, 2019	December 31, 2018	December 31, 2019	December 31, 2018
Derivative	Balance Sheet Location	Fair Value	Fair Value	Fair Value	Fair Value
Derivatives designated as hedging instruments					
Interest rate swaps	Current portion of financial instruments—Fair value	131	—	3,024	30
	Financial instruments—Fair Value, net of current portion	260	—	12,199	4,970
Subtotal		391	—	15,223	5,000

		Asset Derivatives		Liability Derivatives	
		December 31, 2019	December 31, 2018	December 31, 2019	December 31, 2018
Derivative	Balance Sheet Location	Fair Value	Fair Value	Fair Value	Fair Value
Derivatives not designated as hedging instruments					
Interest rate swaps	Current portion of financial instruments—Fair value	—	—	121	18
	Financial instruments—Fair Value, net of current portion	—	—	66	20
Bunker swaps	Current portion of financial instruments—Fair value	520	—	755	—
Bunker swaps	Financial instruments—Fair Value, net of current portion	27	—	2,642	3,972
Bunker call options	Current portion of financial instruments—Fair value	147	217	—	—
Bunker call options	Financial instruments—Fair Value, net of current portion	—	133	—	—
Subtotal		694	350	3,584	4,010
Total derivatives		1,085	350	18,807	9,010

Derivatives designated as Hedging Instruments-Net effect on the Consolidated Statements of Comprehensive Income (Loss)

Derivative	Gain (Loss) Recognized in Accumulated Other Comprehensive Loss on Derivative (Effective Portion) Location	Amount 2019	Amount 2018	Amount 2017
Interest rate swaps		(9,938)	(4,316)	(3,692)
Total		(9,938)	(4,316)	(3,692)

Derivative	Loss Reclassified from Accumulated Other Comprehensive Loss into Income (Effective Portion) Location	Amount 2019	Amount 2018	Amount 2017
Interest rate swaps	Depreciation expense	(189)	(189)	(189)
Interest rate swaps	Interest and finance costs, net	(56)	(772)	(2,511)
Total		(245)	(961)	(2,700)

The accumulated loss from Derivatives designated as Hedging instruments recognized in Accumulated Other Comprehensive Income (Loss) as of December 31, 2019 and 2018, was $18,353 and $8,660 respectively.

Derivatives not designated as Hedging Instruments – Net effect on the Consolidated Statements of Comprehensive Income (Loss)

Derivative	Net Realized and Unrealized Gain (Loss) Recognized on Statement of Comprehensive Income (Loss) Location	Amount		
		2019	2018	2017
Interest rate swaps	Interest and finance costs, net	(149)	(39)	—
Bunker swaps	Interest and finance costs, net	1,122	(1,142)	5,903
Bunker call options	Interest and finance costs, net	(1,672)	231	(213)
Total		(699)	(950)	5,690

The following tables summarize the fair values for assets and liabilities measured on a recurring basis as of December 31, 2019 and 2018, using Level 2 inputs (significant other observable inputs):

Recurring measurements:	December 31, 2019	December 31, 2018
Interest rate swaps	(15,019)	(5,038)
Bunker swaps	(2,850)	(3,972)
Bunker call options	147	350
	(17,722)	(8,660)

15. Subsequent Events

a) On January 7, 2020, the Company acquired the aframax tanker *Caribbean Voyager.*

b) On January 9, 2020, the Company entered into a five-year sale and leaseback agreement for each of the two suezmaxes previously classified as held for sale, *Archangel* and *Alaska*.

c) On January 15, 2020, the holders of the Series G Convertible Preferred Shares converted 10,000 Series G Convertible Preferred Shares into 33,333 common shares.

d) On January 30, 2020, the Company paid a dividend of $0.55469 per share for its 8.875% Series C Preferred Shares.

e) On January 30, 2020, the Company paid a dividend of $0.59375 per share for its 9.50% Series F Preferred Shares.

f) On January 31, 2020, the Company paid the second installment for the LNG carrier under construction, *Hull 3157,* amounting to $9,250.

g) On February 3, 2020, the Company sold the suezmax tanker *Silia T* to a client company of Tsakos Shipping for gross proceeds of $15,500.

h) On February 28, 2020, the Company paid a dividend of $0.54687 per share for its 8.75% Series D Preferred Shares.

i) On February 28, 2020, the Company paid a dividend of $0.57812 per share for its 9.25% Series E Preferred Shares.

j) On March 24, 2020, the Company declared a dividend of $0.05 per common share payable in June 2020 and announced an up to $50,000 common and preferred stock buyback program.

k) On March 24, 2020, the Company received a capital contribution of $4.0 million from non-controlling owners.

l) On April 6, 2020, the Company declared a dividend of $0.55469 per share and $0.59375 per share, respectively, for its Series C and Series F Preferred Shares payable on April 30, 2020.

m) As of April 14, 2020, the Company had raised $2,425 from the issuance of 561,136 common shares.

n) The current COVID-19 pandemic might have catastrophic impact globally, with a broad range of unavoidable consequences for the shipping industry, which might negatively affect our business, financial performance and our results of operations. An estimate of the impact cannot be made at this time.

Exhibit 2.7

DESCRIPTION OF TSAKOS ENERGY NAVIGATION LIMITED'S SECURITIES

REGISTERED PURSUANT TO SECTION 12

OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

References in this description to the "Company," "we," "our," "or "us" are to Tsakos Energy Navigation Limited. Defined terms used but not defined herein have the meaning given to them in our Annual Report on Form 20-F to which this description is an exhibit.

Tsakos Energy Navigation Limited's common shares, par value $1.00 per share, 8.875% Series C Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share, Series D Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share, Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares, par value $1.00 per share, and 9.50% Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares par value $1.00 per share, are registered under Section 12 of the Securities Exchange Act of 1934, as amended. The Company's Series G Redeemable Convertible Perpetual Preferred Shares, par value $1.00 per share, are not so registered. This description does not describe every aspect of the Company's share capital and is subject to, and qualified in its entirety by reference to, the provisions of the Company's Memorandum of Association, the Company's Bye-laws and the respective Certificates of Designation for each series of preferred shares, each as currently in effect, each of which is incorporated by reference as an exhibit to the Annual Report on Form 20-F of the Company, to which this description is filed as Exhibit 2.7.

DESCRIPTION OF SHARE CAPITAL

Our authorized share capital consists of 175,000,000 common shares, par value $1.00 per share, and 25,000,000 blank check preferred shares, $1.00 par value per share. 2,300,000 shares have been designated 8.875% Series C Cumulative Redeemable Perpetual Preferred Shares as described below under "—Series C Preferred Shares," 3,910,000 shares have been designated 8.75% Series D Cumulative Redeemable Perpetual Preferred Shares as described below under "—Series D Preferred Shares", 4,600,000 shares have been designated Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares as described below under "—Series E Preferred Shares", 6,210,000 shares have been designated Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares as described below under "—Series F Preferred Shares" and 3,500,000 shares have been designated Series G Redeemable Convertible Perpetual Preferred Shares as described below under "—Series G Convertible Preferred Shares" As of April 2, 2020, there were outstanding: 95,673,076 common shares, 2,000,000 8.875% Series C Cumulative Redeemable Preferred Shares, 3,424,803 8.75% Series D Cumulative Redeemable Perpetual Preferred Shares, 4,600,000 9.25% Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares, 6,000,000 9.50% Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares and 2,615,000 Series G Redeemable Convertible Perpetual Preferred Shares.

Common Shares

The holders of common shares are entitled to receive dividends out of assets legally available for that purpose at times and in amounts as our board of directors may from time to time determine. Each shareholder is entitled to one vote for each common share held on all matters submitted to a vote of shareholders. Cumulative voting for the election of directors is not provided for in our Memorandum of Association or Bye-laws, which means that the holders of a majority of the common shares voted can elect all of the directors then standing for election. Our Bye-laws provide for a staggered board of directors, with one-third of our non-executive directors being selected each year. The common shares are not entitled to preemptive rights and are not subject to conversion or redemption. Upon the occurrence of a liquidation, dissolution or winding-up, the holders of common shares would be entitled to share ratably in the distribution of all of our assets remaining available for distribution after satisfaction of all our liabilities.

Preferred Shares

Under our Bye-laws, our board of directors has the authority to issue preferred shares in one or more series, and to establish the terms and preferences of the shares of each series, up to the number of preferred shares authorized under our constitutive documents as described above. Holders of each series of preferred shares will be entitled to receive cash dividends, when, as and if declared by our board of directors out of funds legally available for dividends. Such distributions will be made before any distribution is made on any securities ranking junior in relation to preferred shares in liquidation, including common shares.

Series C Preferred Shares

We have 2,000,000 of our 8.875% Series C Cumulative Redeemable Perpetual Preferred Shares outstanding as of April 2, 2020, which were issued on September 30, 2013. The initial liquidation preference of the Series C Preferred Shares is $25.00 per share, subject to adjustment. The shares are redeemable by us at any time on or after October 30, 2018. The shares carry an annual dividend rate of 8.875% per $25.00 of liquidation preference per share, subject to increase if (i) we fail to comply with certain covenants, (ii) we experience certain defaults under any of our credit facilities, (iii) four quarterly dividends payable on the Series C Preferred Shares are in arrears, or (iv) the Series C Preferred Shares are not redeemed in whole by October 30, 2020. The Series C Preferred Shares represent perpetual equity interests in us and, unlike our indebtedness, do not give rise to a claim for payment of a principal amount at a particular date. As such, the Series C Preferred Shares rank junior to all of our indebtedness and other liabilities with respect to assets available to satisfy claims against us. Upon any liquidation or dissolution of us, holders of the Series C Preferred Shares and any pari passu securities will generally be entitled to receive, on a pro rata basis, the liquidation preference of the Series C Preferred Shares, or, in the case of pari passu securities, the liquidation preference of such series of pari passu securities, plus an amount equal to accumulated and unpaid dividends ratably with any pari passu securities, after satisfaction of all liabilities to our creditors and holders of securities senior to the Series C Preferred Shares, but before any distribution is made to or set aside for the holders of junior shares, including our common shares. The Series C Preferred Shares rank pari passu with the Series D Preferred Shares, the Series E Preferred Shares, the Series F Preferred Shares and the Series G Convertible Preferred Shares. The Series C Preferred Shares are not convertible into common shares or other of our securities, do not have exchange rights and their holders are not entitled to any preemptive or similar rights.

Series D Preferred Shares

We have 3,424,803 of our 8.75% Series D Cumulative Redeemable Perpetual Preferred Shares outstanding as of April 2, 2020, which were issued on April 29, 2015 and in the first quarter of 2017. The initial liquidation preference of the Series D Preferred Shares is $25.00 per share, subject to adjustment. The shares are redeemable by us at any time on or after April 29, 2020. The shares carry an annual dividend rate of 8.75% per $25.00 of liquidation preference per share. The Series D Preferred Shares represent perpetual equity interests in us and, unlike our indebtedness, do not give rise to a claim for payment of a principal amount at a particular date. As such, the Series D Preferred Shares rank junior to all of our indebtedness and other liabilities with respect to assets available to satisfy claims against us. Upon any liquidation or dissolution of us, holders of the Series D Preferred Shares and any pari passu securities will generally be entitled to receive, on a pro rata basis, the liquidation preference of the Series D Preferred Shares, or, in the case of pari passu securities, the liquidation preference of such series of pari passu securities, plus an amount equal to accumulated and unpaid dividends ratably with any pari passu securities, after satisfaction of all liabilities to our creditors and holders of securities senior to the Series D Preferred Shares, but before any distribution is made to or set aside for the holders of junior shares, including our common shares. The Series D Preferred Shares rank pari passu with the Series C Preferred Shares, the Series E Preferred Shares and the Series F Preferred Shares and Series G Convertible Preferred Shares. The Series D Preferred Shares are not convertible into common shares or other of our securities, do not have exchange rights and their holders are not entitled to any preemptive or similar rights.

Series E Preferred Shares

We had 4,600,000 of our 9.25% Series E Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares outstanding as of April 2, 2020, which were issued on April 5, 2017. The initial liquidation preference of the Series E Preferred Shares is $25.00 per share, subject to adjustment. The shares are redeemable by us at any time on or after May 28, 2027. Dividends on the Series E Preferred Shares are cumulative from the date of original issue and will be payable quarterly in arrears on the 28th day of February, May, August and November of each year, commencing May 28, 2017, when, as and if declared by our board of directors. Dividends will be payable from cash available for dividends (i) from and including the original issue date to, but excluding, May 28, 2027 at a fixed rate equal to 9.25% per annum of the stated liquidation preference and (ii) from and including May 28, 2027, at a floating rate equal to three-month LIBOR plus a spread of 6.881% per annum of the stated liquidation preference. The Series E Preferred Shares represent perpetual equity interests in us and, unlike our indebtedness, do not give rise to a claim for payment of a principal amount at a particular date. As such, the Series E Preferred Shares rank junior to all of our indebtedness and other liabilities with respect to assets available to satisfy claims against us. Upon any liquidation or dissolution of us, holders of the Series E Preferred Shares and any pari passu securities will generally be entitled to receive, on a pro rata basis, the liquidation preference of the Series E Preferred Shares, or, in the case of pari passu securities, the liquidation preference of such series of pari passu securities, plus an amount equal to accumulated and unpaid dividends ratably with any pari passu securities, after satisfaction of all liabilities to our creditors and holders of securities senior to the Series E Preferred Shares, but before any distribution is made to or set aside for the holders of junior shares, including our common shares. The Series E Preferred Shares rank pari passu with the Series C Preferred Shares, the Series D Preferred Shares, the Series F Preferred Shares and Series G Convertible Preferred Shares. The Series E Preferred Shares are not convertible into common shares or other of our securities, do not have exchange rights and their holders are not entitled to any preemptive or similar rights.

Series F Preferred Shares

We had 6,000,000 of our 9.50% Series F Fixed-to-Floating Rate Cumulative Redeemable Perpetual Preferred Shares outstanding as of April 2, 2020, which were issued on June 28, 2018. The initial liquidation preference of the Series F Preferred Shares is $25.00 per share, subject to adjustment. The shares are redeemable by us at any time on or after July 30, 2028. Dividends on the Series F Preferred Shares are cumulative from the date of original issue and will be payable quarterly in arrears on the 30th day of January, April, July and October of each year, commencing October 30, 2018, when, as and if declared by our board of directors. Dividends will be payable from cash available for dividends (i) from and including the original issue date to, but excluding, July 30, 2028 at a fixed rate equal to 9.50% per annum of the stated liquidation preference and (ii) from and including July 30, 2028, at a floating rate equal to three-month LIBOR plus a spread of 6.54% per annum of the stated liquidation preference. The Series F Preferred Shares represent perpetual equity interests in us and, unlike our indebtedness, do not give rise to a claim for payment of a principal amount at a particular date. As such, the Series F Preferred Shares rank junior to all of our indebtedness and other liabilities with respect to assets available to satisfy claims against us. Upon any liquidation or

dissolution of us, holders of the Series F Preferred Shares and any pari passu securities will generally be entitled to receive, on a pro rata basis, the liquidation preference of the Series F Preferred Shares, or, in the case of pari passu securities, the liquidation preference of such series of pari passu securities, plus an amount equal to accumulated and unpaid dividends ratably with any pari passu securities, after satisfaction of all liabilities to our creditors and holders of securities senior to the Series F Preferred Shares, but before any distribution is made to or set aside for the holders of junior shares, including our common shares. The Series F Preferred Shares rank pari passu with the Series C Preferred Shares, Series D Preferred Shares, Series E Preferred and Series G Convertible Preferred Shares. The Series F Preferred Shares are not convertible into common shares or other of our securities, do not have exchange rights and their holders are not entitled to any preemptive or similar rights.

Series G Convertible Preferred Shares

We had 2,615,000 of our Series G Redeemable Convertible Perpetual Preferred Shares, par value $1.00 per share and liquidation preference $10.00 per share, outstanding as of April 2, 2020. We issued 3,500,000 Series G Convertible Preferred Shares at a purchase price of $10.00 per share, in a private placement on September 25, 2019 (the “Series G Closing Date”) pursuant to a Share Purchase Agreement, dated September 23, 2019, between us, our subsidiary Shyris Shipping Company S.A. (“Shyris Shipping”) and AY Tank Limited, as purchaser. On December 23, 2019, 875,000 Series G Convertible Preferred Shares converted into 2,916,666 common shares and, on January 15, 2020, the holders of the Series G Convertible Preferred Shares converted 10,000 Series G Convertible Preferred Shares into 33,333 common shares. The Series G Convertible Preferred Shares have a stated coupon rate of 0%, subject to adjustment in the event of a cross-default or failure to redeem on any redemption date, and participate on an as-converted basis in dividends declared and paid on the Company’s common shares.

The Series G Convertible Preferred Shares are convertible at any time, at the option of the holder, at a conversion price of $3.00 per share, representing a conversion rate of three and one-third common shares per Series G Convertible Preferred Share. All or a portion of the Series G Convertible Preferred Shares will automatically convert into common shares at the conversion rate if the trading price of the Company’s common shares exceed certain levels between 130% and 170% of the conversion price. The holders, however, will be prohibited from converting the Series G Convertible Preferred Shares into common shares to the extent that, as a result of such conversion, the holder would own more than 9.99% of the total number common shares then issued and outstanding. The Company may also redeem the Series G Convertible Preferred Shares prior to September 1, 2020, at the as-converted value of the Series G Convertible Preferred Shares, if the trading price of the common shares exceeds certain levels.

The holders of the Series G Convertible Preferred Shares generally do not have voting rights. However, without the affirmative vote or consent of the holders of at least two-thirds of the outstanding Series G Convertible Preferred Shares, voting as a single class, the Company may not adopt any amendment to its memorandum of association or bye-laws that materially or adversely alters or affects the preferences, powers or rights of the Series G Convertible Preferred Shares in any respect or any amendment to the Series G Convertible Preferred Shares Certificate of Designations. The Series G Convertible Preferred Shares rank *pari passu* with the Company’s other outstanding series of preferred shares and senior to the Company’s common shares with respect to dividend distributions and distributions upon any liquidation event.

On February 1, 2021, or, if earlier, the delivery date of the last of the Company’s current newbuilding conventional tankers, i.e. *Hull 8042* (the “Redemption Date”), subject to certain limitations, outstanding Series G Convertible Preferred Shares having a redemption price of up to $35 million will be mandatorily exchanged for preferred shares (the “Shyris Shipping Preferred Shares”) to be issued by the subsidiary of the Company, Shyris Shipping, that will own such crude oil tankers. The redemption price at which the Series G Convertible Preferred Shares will be exchanged will be the higher of 95% of the as-converted value of the Series G Convertible Preferred Shares, based on a six-month VWAP of the Company’s common shares, or a price providing for a return of 7.75% per annum on an actual/360-day basis on the Series G Convertible Preferred Shares, taking into account all dividends actually received on the Series G Convertible Preferred Shares. To the extent certain limitations intended to ensure Shyris Shipping’s compliance with Section 883 of the Internal Revenue Code of 1986, as amended, result in less than $35 million of Shyris Shipping Preferred Shares being issued on the Redemption Date, Series G Convertible Preferred Shares with an aggregate redemption price equal to such shortfall below $35 million will remain outstanding, subject to redemption in exchange for Shyris Shipping Preferred Shares

should such limitations cease to apply prior to the fifth anniversary of the Series G Closing Date, at which time such Series G Convertible Preferred Shares will automatically convert into Company common shares at the conversion rate or be redeemed for Shyris Shipping Preferred Shares. Any other Series G Convertible Preferred Shares not exchanged for Shyris Shipping Preferred Shares on the Redemption Date will automatically convert on such date into the Company's common shares at the conversion rate (unless the Company elects to redeem such Series G Convertible Preferred Shares for cash). The Series G Convertible Preferred Shares holder will also have the right to require the Company to redeem the Series G Convertible Preferred Shares for cash, in the event of non-compliance with certain requirements relating to Shyris Shipping.

The Shyris Shipping Preferred Shares will be entitled to receive cumulative semi-annual dividends from Shyris Shipping at a rate of 7.50% per annum as, when and if declared by the Shyris Shipping Board of Directors. At any time that Shyris Shipping Preferred Shares are outstanding, free cash flow available for distribution, as defined in the Statement of Designation of the Shyris Shipping Preferred Shares, is required to be applied by Shyris Shipping towards any accrued and unpaid dividends and redemption of such Shyris Shipping Preferred Shares before any dividends on, or repurchases or redemptions of, other equity securities of the Shyris Shipping Preferred Shares. The Shyris Shipping Preferred Shares will be non-convertible and perpetual, and will be redeemable by Shyris Shipping, in whole or in part, at redemption prices that decline over time to 100% of the deemed issuance price, plus any accrued and unpaid dividends, by the fifth anniversary of issuance or at 100% of the deemed issuance price, plus any accrued and unpaid dividends, at any time after issuance with cash from operations and in certain other circumstances.

Bermuda Law

We are an exempted company organized under the Companies Act 1981 of Bermuda, as amended (the "Companies Act 1981 of Bermuda"). Bermuda law and our Memorandum of Association and Bye-laws govern the rights of our shareholders. Our objects and purposes are set forth in paragraph 6 and the Schedule to our Memorandum of Association. Our objects and purposes include to act and to perform all the functions of a holding company in all its branches and to coordinate the policy and administration of any subsidiary company or companies wherever incorporated or carrying on business or of any group of companies of which we or any subsidiary of ours is a member or which are in any manner controlled directly or indirectly by us. The Companies Act 1981 of Bermuda differs in some material respects from laws generally applicable to United States corporations and their shareholders. The following is a summary of the material provisions of Bermuda law and our organizational documents. You should read the more detailed provisions of our Memorandum of Association and Bye-laws for provisions that may be important to you.

Dividends. Under Bermuda law, a company may not pay dividends that are declared from time to time by its board of directors or make a distribution out of contributed surplus if there are reasonable grounds for believing that the company is, or would after the payment be, unable to pay its liabilities as they become due or that the realizable value of its assets would then be less than its liabilities.

Voting rights. Under Bermuda law, except as otherwise provided in the Companies Act 1981 of Bermuda or our Bye-laws, questions brought before a general meeting of shareholders are decided by a majority vote of common shareholders present at the meeting. Our Bye-laws provide that, subject to the provisions of the Companies Act 1981 of Bermuda, any question proposed for the consideration of the shareholders will be decided in a general meeting by a simple majority of the votes cast, on a show of hands, with each shareholder present (and each person holding proxies for any shareholder) entitled to one vote for each common share held by the common shareholder, except for special situations where a shareholder has lost the right to vote because he has failed to comply with the terms of a notice requiring him to provide information to the company pursuant to the Bye-laws, or his voting rights have been partly suspended under the Bye-laws as a consequence of becoming an interested person. In addition, a super-majority vote of not less than seventy-five percent (75%) of the votes cast at the meeting is required to effect any action related to the variation of class rights and a vote of not less than eighty percent (80%) of the votes cast at the meeting is required to effect any of the following actions: removal of directors, approval of business combinations with certain "interested" persons and for any alteration to the provisions of the Bye-laws relating to the staggered board, removal of directors and business combinations.

The Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares have no voting rights except as set forth below or as otherwise provided by Bermuda law. In the event that six quarterly dividends,

whether consecutive or not, payable on Series C, Series D, Series E or Series F Preferred Shares are in arrears, the holders of Series C, Series D, Series E and/or Series F Preferred Shares, as the case may be, will have the right, voting separately as a class together with holders of any other parity securities upon which like voting rights have been conferred and are exercisable, at the next meeting of shareholders called for the election of directors, to elect one member of our board of directors, and the size of our board of directors will be increased as needed to accommodate such change (unless the size of our board of directors already has been increased by reason of the election of a director by holders of parity securities upon which like voting rights have been conferred and with which the Series C, Series D, Series E or Series F Preferred Shares, respectively, voted as a class for the election of such director). The right of such holders of Series C, Series D, Series E or Series F Preferred Shares, as the case may be, to elect a member of our board of directors will continue until such time as all dividends accumulated and in arrears on the Series C, Series D, Series E or Series F. Preferred Shares, as the case may be, have been paid in full, at which time such right will terminate, subject to revesting in the event of each and every subsequent failure to pay six quarterly dividends as described above. Upon any termination of the right of the holders of the Series C, Series D, Series E and Series F Preferred Shares and any other parity securities to vote as a class for directors, the term of office of all directors then in office elected by such holders voting as a class will terminate immediately. Any directors elected by the holders of the Series B, Series C, Series D, Series E and Series F Preferred Shares and any other parity securities shall each be entitled to one vote per director on any matter before our board of directors.

Unless we have received the affirmative vote or consent of the holders of at least two-thirds of the issued and outstanding, Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares, respectively, each voting as a single class, we may not adopt any amendment to the Memorandum of Association that adversely alters the preferences, powers or rights of Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares in any material respect;

In addition, unless we have received the affirmative vote or consent of the holders of at least two-thirds of the issued and outstanding, Series C, Series D, Series E and Series F Preferred Shares, respectively, each voting as a single class, we may not

- issue any securities ranking pari passu with the Series C, Series D, Series E and Series F Preferred Shares if the cumulative dividends payable on outstanding Series C, Series D, Series E or Series F Preferred Shares, as applicable, are in arrears; or
- create or issue any equity securities ranking senior to the Series C, Series D, Series E and Series F Preferred Shares.

On any matter described above in which the holders of the Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares, respectively, are entitled to vote as a class, such holders will be entitled to one vote per share. The Series C, Series D, Series E, Series F and Series G Convertible Preferred Shares held by us or any of our subsidiaries or affiliates will not be entitled to vote.

Unless we have received the affirmative vote or consent of the holders of at least two-thirds of the issued and outstanding Series G Convertible Preferred Shares we also may not:

- adopt any amendment to the Certificate of Designation of such series (including by merger, consolidation or otherwise); or
- split, combine, reverse split or undertake a similar action with respect to the Series G Convertible Preferred Shares.

Rights in liquidation. Under Bermuda law, in the event of liquidation or winding up of a company, after satisfaction in full of all claims of creditors and subject to the preferential rights accorded to any series of preferred shares, the proceeds of the liquidation or winding up are distributed ratably among the holders of the company’s common shares.

Meetings of shareholders. Bermuda law provides that a special general meeting may be called by the board of directors and must be called upon the request of shareholders holding not less than 10% of the paid-up capital of the company carrying the right to vote. Bermuda law also requires that shareholders be given at least five (5) days’ advance notice of a general meeting but the accidental omission to give notice to, or the non-receipt of such notice by, any person does not invalidate the proceedings at a meeting. Under our Bye-laws, we must give each shareholder at least ten (10) days’ notice and no more than fifty (50) days’ notice of the annual general meeting and of any special general meeting.

Under Bermuda law, the number of shareholders constituting a quorum at any general meeting of shareholders is determined by the Bye-laws of a company. Our Bye-laws provide that the presence in person or by proxy of two shareholders constitutes a quorum; but if we have only one shareholder, one shareholder present in person or by proxy shall constitute the necessary quorum.

Access to books and records and dissemination of information. Members of the general public have the right to inspect the public documents of a company available at the office of the Registrar of Companies in Bermuda. These documents include a company's Certificate of Incorporation, its Memorandum of Association (including its objects and powers) and any alteration to its Memorandum of Association. The shareholders have the additional right to inspect the Bye-laws of the company, minutes of general meetings and the company's audited financial statements, which must be presented at the annual general meeting. The register of shareholders of a company is also open to inspection by shareholders without charge and by members of the general public without charge. A company is required to maintain its share register in Bermuda but may, subject to the provisions of Bermuda law, establish a branch register outside Bermuda. We maintain a share register in Hamilton, Bermuda. A company is required to keep at its registered office a register of its directors and officers that is open for inspection for not less than two (2) hours each day by members of the public without charge. Bermuda law does not, however, provide a general right for shareholders to inspect or obtain copies of any other corporate records.

Election or removal of directors. Under Bermuda law and our Bye-laws, directors are elected or appointed at the annual general meeting and serve until re-elected or re-appointed or until their successors are elected or appointed, unless they are earlier removed or resign. Our Bye-laws provide for a staggered board of directors, with one-third of the directors selected each year.

Under Bermuda law and our Bye-laws, a director may be removed at a special general meeting of shareholders specifically called for that purpose, provided the director is served with at least 14 days' notice. The director has a right to be heard at that meeting. Any vacancy created by the removal of a director at a special general meeting may be filled at that meeting by the election of another director in his or her place or, in the absence of any such election, by the board of directors.

Amendment of Memorandum of Association. Bermuda law provides that the Memorandum of Association of a company may be amended by a resolution passed at a general meeting of shareholders of which due notice has been given. Generally, our Bye-laws may be amended by the directors with the approval of a majority being not less than 75% of the votes of the shareholders in a general meeting. However, a super-majority vote is required for certain resolutions relating to the variation of class rights, the removal of directors, the approval of business combinations with certain 'interested persons' and for any alteration to the provisions of the Bye-laws relating to the staggered board, removal of directors and business combinations.

Under Bermuda law, the holders of an aggregate of no less than 20% in par value of a company's issued share capital or any class of issued share capital have the right to apply to the Bermuda Court for an annulment of any amendment of the Memorandum of Association adopted by shareholders at any general meeting, other than an amendment which alters or reduces a company's share capital as provided in the Companies Act 1981 of Bermuda. Where such an application is made, the amendment becomes effective only to the extent that it is confirmed by the Bermuda Court. An application for the annulment of an amendment of the Memorandum of Association must be made within 21 days after the date on which the resolution altering the company's memorandum is passed and may be made on behalf of the persons entitled to make the application by one or more of their number as they may appoint in writing for the purpose. Persons voting in favor of the amendment may make no such application.

Appraisal rights and shareholder suits. Under Bermuda law, in the event of an amalgamation or merger involving a Bermuda company, a shareholder who is not satisfied that fair value has been paid for his shares may apply to the Bermuda Court to appraise the fair value of his or her shares. The amalgamation or merger of a company with another company requires the amalgamation or merger agreement to be approved by the board of directors and, except where the amalgamation or merger is between a holding company and one or more of its wholly owned subsidiaries or between two or more wholly owned subsidiaries, by meetings of the holders of shares of each company and of each class of such shares.

Class actions and derivative actions are generally not available to shareholders under Bermuda law. The Bermuda Court, however, would ordinarily be expected to permit a shareholder to commence an action in the name of a company to remedy a wrong done to the company where the act complained of is alleged to be beyond the corporate power of the company or is illegal or would result in the violation of the company's Memorandum of Association or Bye-laws. Further consideration would be given by the Bermuda Court to acts that are alleged to constitute a fraud against the minority shareholders or, for instance, where an act requires the approval of a greater percentage of the company's shareholders than that which actually approved it.

When the affairs of a company are being conducted in a manner oppressive or prejudicial to the interests of some part of the shareholders, one or more shareholders may apply to the Bermuda Court for an order regulating the company's conduct of affairs in the future or compelling the purchase of the shares by any shareholder, by other shareholders or by the company.

Anti-takeover effects of provisions of our charter documents

Several provisions of our Bye-laws may have anti-takeover effects. These provisions are intended to avoid costly takeover battles, lessen our vulnerability to a hostile change of control and enhance the ability of our board of directors to maximize shareholder value in connection with any unsolicited offer to acquire us. However, these anti-takeover provisions, which are summarized below, could also discourage, delay or prevent (1) the merger or acquisition of our company by means of a tender offer, a proxy contest or otherwise, that a shareholder may consider in our best interest and (2) the removal of incumbent officers and directors.

Classified board of directors.

Our Bye-laws provide for a classified board of directors with one-third of our directors being selected each year. This classified board provision could discourage a third party from making a tender offer for our shares or attempting to obtain control of our company. It could also delay shareholders who do not agree with the policies of the board of directors from removing a majority of the board of directors for two years.

Transactions involving certain business combinations.

Our Bye-laws prohibit the consummation of any business combination involving us and any interested person, unless the transaction is approved by a vote of a majority of 80% of those present and voting at a general meeting of our shareholders, unless:

- the ratio of (i) the aggregate amount of cash and the fair market value of other consideration to be received per share in the business combination by holders of shares other than the interested person involved in the business combination, to (ii) the market price per share, immediately prior to the announcement of the proposed business combination, is at least as great as the ratio of (iii) the highest per share price, which the interested person has theretofore paid in acquiring any share prior to the business combination, to (iv) the market price per share immediately prior to the initial acquisition by the interested person of any shares;
- the aggregate amount of the cash and the fair market value of other consideration to be received per share in the business combination by holders of shares other than the interested person involved in the business combination (i) is not less than the highest per share price paid by the interested person in acquiring any shares, and (ii) is not less than the consolidated earnings per share of our company for our four full consecutive fiscal quarters immediately preceding the record date for solicitation of votes on the business combination multiplied by the then price/earnings multiple (if any) of the interested person as customarily computed and reported in the financial community;
- the consideration (if any) to be received in the business combination by holders of shares other than the interested person involved shall, except to the extent that a shareholder agrees otherwise as to all or part of the shares which the shareholder owns, be in the same form and of the same kind as the consideration paid by the interested person in acquiring shares already owned by it;
- after the interested person became an interested person and prior to the consummation of the business combination: (i) such interested person shall have taken steps to ensure that the board includes at all times representation by continuing directors proportionate in number to the ratio that the number of shares carrying voting rights in our company from time to time owned by shareholders who are not interested persons bears to all shares carrying voting rights in our company outstanding at the time in question (with a

continuing director to occupy any resulting fractional position among the directors); (ii) the interested person shall not have acquired from us or any of our subsidiaries, directly or indirectly, any shares (except (x) upon conversion of convertible securities acquired by it prior to becoming an interested person, or (y) as a result of a pro rata share dividend, share split or division or subdivision of shares, or (z) in a transaction consummated on or after June 7, 2001 and which satisfied all requirements of our Bye-laws); (iii) the interested person shall not have acquired any additional shares, or rights over shares, carrying voting rights or securities convertible into or exchangeable for shares, or rights over shares, carrying voting rights except as a part of the transaction which resulted in the interested person becoming an interested person; and (iv) the interested person shall not have (x) received the benefit, directly or indirectly (except proportionately as a shareholder), of any loans, advances, guarantees, pledges or other financial assistance or tax credits provided by us or any subsidiary of ours, or (y) made any major change in our business or equity capital structure or entered into any contract, arrangement or understanding with us except any change, contract, arrangement or understanding as may have been approved by the favorable vote of not less than a majority of the continuing directors; and

- a proxy statement complying with the requirements of the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”), as amended, shall have been mailed to all holders of shares carrying voting rights for the purpose of soliciting approval by the shareholders of the business combination. The proxy statement shall contain at the front thereof, in a prominent place, any recommendations as to the advisability (or inadvisability) of the business combination which the continuing directors, or any of them, may have furnished in writing and, if deemed advisable by a majority of the continuing directors, an opinion of a reputable investment banking firm as to the adequacy (or inadequacy) of the terms of the business combination from the point of view of the holders of shares carrying voting rights other than any interested person (the investment banking firm to be selected by a majority of the continuing directors, to be furnished with all information it reasonably requests, and to be paid a reasonable fee for its services upon receipt by us of the opinion).

For purposes of this provision, a “business combination” includes mergers, consolidations, exchanges, asset sales, leases and other transactions resulting in a financial benefit to the interested shareholder and an “interested person” is any person or entity that beneficially owns 15% or more of our voting shares and any person or entity affiliated with or controlling or controlled by that person or entity. “Continuing directors” means directors who have been elected before June 7, 2001 or designated as continuing directors by the majority of the then continuing directors.

Consequences of becoming an interested person.

Our Bye-laws provide that, at any time a person acquires or becomes the beneficial owner of 15% or more of our voting shares, which we refer to as the “threshold,” then the person will not be entitled to exercise voting rights for the number of common shares in excess of the threshold he holds or beneficially owns. This disability applies to any general meeting of our company as to which the record date or scheduled meeting date falls within a period of five years from the date such person acquired beneficial ownership of a number of common shares in excess of the threshold.

The above restrictions do not apply to us, our subsidiaries or to:

- any person who on June 7, 2001 was the holder or beneficial owner of a number of shares carrying voting rights that exceeded the threshold and who continues at all times after June 7, 2001 to hold shares in excess of the threshold; and
- any person whose acquisition of a number of shares exceeding the threshold has been approved by (1) a majority of 80% of those present and voting at a general meeting or (2) by a resolution adopted by the continuing directors, followed by a resolution adopted by a shareholder vote in excess of 50% of the voting shares not owned by such interested person.

Transfer agent and Registrar

Computershare Trust Company N.A. serves as transfer agent and registrar for our common shares and our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares. Series F Preferred Shares and Series G Convertible Preferred Shares.

New York Stock Exchange Listing

Our common shares are listed on the New York Stock Exchange under the ticker symbol “TNP.” Our Series C Preferred Shares, Series D Preferred Shares, Series E Preferred Shares and Series F Preferred Shares are listed on the New York Stock Exchange under the trading symbols “TNP-PC”, “TNP-PD”, “TNP-PE” and “TNP-PF”, respectively.

Exhibit 8

Tsakos Energy Navigation Ltd. Subsidiaries

As of April 2, 2020

Company*	Country of Incorporation	Vessel
Freeport Dominion S.A. **	Panama	Maya
Freeport Faith S.A.**	Panama	Inca
Ergo Glory S.A.	Panama	Andes
World Excellence S.A.	Panama	Didimon
Apollo Honour S.A.	Panama	Amphitrite
Apollo Glory S.A.***	Panama	Eurochampion 2004
Apollo Excellence S.A.***	Panama	Euronike
Activity Excellence S.A.***	Panama	Archangel
Worldwide Overseas S.A.***	Panama	Alaska
Fortune Faith S.A.	Panama	Arion
Victory Faith S.A.	Panama	Andromeda
Victory Spirit S.A.	Panama	Aegeas
Victory Mare S.A.	Panama	Izumo Princess
Universal Reserve S.A.	Panama	Sakura Princess
Sea Countess S.A.	Panama	Maria Princess
Global Triumph S.A.	Panama	Nippon Princess
Fairsea Enterprises S.A.	Panama	Ise Princess
Freeport Champion S.A.	Panama	Asahi Princess
Prosperity Faith S.A.	Panama	Sapporo Princess
Prosperity Success S.A.	Panama	Uraga Princess
Mercury Emerald S.A.	Panama	Arctic
Powerful Shipping S.A.	Panama	Antarctic
Sea Optima S.A.	Panama	Neo Energy
Shipping Celebrity S.A.	Panama	Artemis
Southport Marine S.A.	Panama	Afrodite
Southport Maritime S.A.	Panama	Ariadne
Sea Pioneer S.A.	Panama	Apollon
Sea Celebrity S.A.	Panama	Aris
Gladiator Shipping Services S.A.	Panama	Ajax
Southport Navigation S.A.	Panama	Proteas
Triton Success S.A.	Panama	Promitheas
Triton Triumph S.A.	Panama	Propontis
Optima Maritime S.A.	Panama	Byzantion
Optima United S.A.	Panama	Bosporos
Bayswater Trading Co. Ltd.	Liberia	Selecao
Kerry Trading Company Limited	Liberia	Socrates
Marine Velvet S.A.	Panama	Spyros K.
Medway Sea S.A.	Panama	Dimitris P.
Sayers Shipping Corp.	Liberia	World Harmony
Maynard Shipping Corp.	Liberia	Chantal
Selini Marine Company Ltd**	Liberia	Selini
Salamina Marine Company Ltd**	Liberia	Salamina
Rio 2016 Special Maritime Enterprise	Greece	Rio 2016
Pearsall Shipping Corporation	Liberia	—
Brasil 2014 Special Maritime Enterprise	Greece	Brasil 2014
Angleton Shipping Corporation	Liberia	—
Prescott Maritime Limited	Marshall Islands	Eurovision

Company*	Country of Incorporation	Vessel
Jelika Shipping Inc.	Marshall Islands	Euro
Delmer Marine Corp.	Marshall Islands	Decathlon
Larina Navigation Co.	Marshall Islands	Pentathlon
Canyon Trading Corporation	Liberia	Maria Energy
Mare Success S.A.****	Panama	49% owned by Flopec
Alcea Shipping S.A.	Liberia	S 7003
Apoplous Shipping Inc.	Marshall Islands	Elias Tsakos
Leega Shiptrade Company	Marshall Islands	Thomas Zafiras
Sentra Shipping Company	Marshall Islands	Leontios H.
Soft Shipmanagement Ltd	Marshall Islands	Parthenon TS
Twitt Navigation Limited	Marshall Islands	Sola TS
Barsley Maritime S.A.	Marshall Islands	Marathon TS
Cierzo Marine Ltd.	Marshall Islands	Oslo TS
Daucina Navigation S.A.	Marshall Islands	Stavanger TS
Etesian Shiptrade S.A.	Marshall Islands	Bergen TS
Chiara Shiptrade Co.	Marshall Islands	Sunray
Tauris Shipping Inc.	Marshall Islands	Sunrise
Watercraft Limited	Malta	Lisboa
Callidora Shiptrade S.A.	Marshall Islands	Ulysses
Octavia Navigation Inc.	Marshall Islands	Hercules I
Hermes Shipping Company Ltd	Marshall Islands	Caribbean Voyager
Prosalt Navigation S.A.	Marshall Islands	Mediterranean Voyager
Poseidon Shipping Company Ltd	Marshall Islands	HN8041
Zeus Shipping Company Ltd	Marshall Islands	HN8042
Shyris Shipping Company S.A.*****	Marshall Islands	
Bosporos Marine Company Ltd******	Marshall Islands	
Byzantion Marine Company Ltd******	Marshall Islands	
Spondi Maritime Ltd	Malta	
SPONDI MARITIME LIMITED*******	Greece	

* Unless otherwise indicated, each Company is a wholly-owned subsidiary.

** Owned 100% by Mare Success S.A.

*** Sale and leaseback arrangement sold and chartered back on a bare-boat

**** 51% owned by Tsakos Energy Navigation Ltd.

***** Incorporated for the purpose of issuing preferred shares (Note 8 to Financial Statements)

****** These companies have issued their shares to Mare Success S.A.

******* Owned 100% by Spondi Maritime Ltd

Exhibit 12.1

RULE 13a-14(a) CERTIFICATION

I, Nikolas P. Tsakos, certify that:

1. I have reviewed this annual report on Form 20-F of Tsakos Energy Navigation Limited;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report.

4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

d) disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 14, 2020

/s/ Nikolas P. Tsakos

Nikolas P. Tsakos
President and Chief Executive Officer

Exhibit 12.2

RULE 13a-14(a) CERTIFICATION

I, Paul Durham, certify that:

1. I have reviewed this annual report on Form 20-F of Tsakos Energy Navigation Limited;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report.

4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

d) disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 14, 2020

/s/ Paul Durham

Paul Durham
Chief Financial Officer and Chief Accounting Officer

Exhibit 13.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 20-F of Tsakos Energy Navigation Limited (the "Company") for the period ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Nikolas P. Tsakos, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, based on my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Nikolas P. Tsakos

Nikolas P. Tsakos
President and Chief Executive Officer

Date: April 14, 2020

Exhibit 13.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 20-F of Tsakos Energy Navigation Limited (the "Company") for the period ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Paul Durham, Chief Financial Officer and Chief Accounting Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that, based on my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Paul Durham

Paul Durham
Chief Financial Officer and Chief Accounting Officer

Date: April 14, 2020

Exhibit 15.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form F-3 No. 333-234279) of Tsakos Energy Navigation Limited,

(2) Registration Statement (Form F-3 No. 333 -219569) of Tsakos Energy Navigation Limited,

(3) Registration Statement (Form F-3 No. 333 -206852) of Tsakos Energy Navigation Limited,

(4) Registration Statement (Form F-3 No. 333-159218, as amended) of Tsakos Energy Navigation Limited,

(5) Registration Statement (Form F-3 No. 333 -111615) of Tsakos Energy Navigation Limited,

(6) Registration Statement (Form S-8 No. 333 -183007) pertaining to the 2012 Incentive Plan of Tsakos Energy Navigation Limited,

(7) Registration Statement (Form S-8 No. 333 -134306, as amended) pertaining to the 2004 Incentive Plan of Tsakos Energy Navigation Limited,

(8) Registration Statement (Form S-8 No. 333-104062) pertaining to the Stock Option Plan of Tsakos Energy Navigation Limited; and

(9) Registration Statement (Form S-8 No. 333-102860) pertaining to the Stock Option Plan of Tsakos Energy Navigation Limited.

of our reports dated April 14, 2020, with respect to the consolidated financial statements of Tsakos Energy Navigation Limited and subsidiaries and the effectiveness of internal control over financial reporting of Tsakos Energy Navigation Limited and subsidiaries included in this Annual Report (Form 20-F) of Tsakos Energy Navigation Limited for the year ended December 31, 2019.

/s/ Ernst & Young (Hellas) Certified Auditors Accountants S.A.

Athens, Greece
April 14, 2020