Teekay LNG Partners L.P.
Form 20-F
April 05, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)
¨ REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) or (g) OF THE SECURITIES EXCHANGE ACT OF 1934
OR
ý ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
OR
¨ TRANSITION REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
OR
¨ SHELL COMPANY REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Date of event requiring this shell company report
For the transition period from to
Commission file number 1- 32479

TEEKAY LNG PARTNERS L.P.
(Exact name of Registrant as specified in its charter)

Republic of The Marshall Islands
(Jurisdiction of incorporation or organization)
4th Floor, Belvedere Building, 69 Pitts Bay Road, Hamilton, HM 08, Bermuda
Telephone: (441) 298-2530
(Address and telephone number of principal executive offices)
Edith Robinson
4th Floor, Belvedere Building, 69 Pitts Bay Road, Hamilton, HM 08, Bermuda
Telephone: (441) 298-2530
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(Contact information for company contact person)

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

Title of each class	Name of each exchange on which registered
Common Units	New York Stock Exchange
Series A Preferred Units	New York Stock Exchange
Series B Preferred Units	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

Indicate the number of outstanding shares of each issuer's classes of capital or common stock as of the close of the period covered by the annual report.
79,360,719 Common Units
5,000,000 Series A Preferred Units
6,800,000 Series B Preferred Units

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities
Act. Yes ý 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 ý
Indicate by check mark if 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 ý No ¨
Indicate by check mark if the registrant (1) 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 ý 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 ý 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. ¨
† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.
Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ý	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 ý

TEEKAY LNG PARTNERS L.P.
INDEX TO REPORT ON FORM 20-F

PART I

This Annual Report should be read in conjunction with the consolidated financial statements and accompanying notes included in this report.

Unless otherwise indicated, references in this prospectus to "Teekay LNG Partners," "we," "us" and "our" and similar terms refer to Teekay LNG Partners L.P. and/or one or more of its subsidiaries, except that those terms, when used in this Annual Report in connection with the common or preferred units described herein, shall mean specifically Teekay LNG Partners L.P. References in this Annual Report to "Teekay Corporation" refer to Teekay Corporation and/or any one or more of its subsidiaries.

In addition to historical information, this Annual Report contains forward-looking statements that involve risks and uncertainties. Such forward-looking statements relate to future events and our operations, objectives, expectations, performance, financial condition and intentions. When used in this Annual Report, the words "expect," "intend," "plan," "believe," "anticipate," "estimate" and variations of such words and similar expressions are intended to identify forward-looking statements. Forward-looking statements in this Annual Report include, in particular, statements regarding:

- our distribution policy and our ability to make cash distributions on our units or any increases in quarterly distributions, and the impact of cash distribution reductions on our financial position;
- our future financial condition and results of operations and our future revenues, expenses and capital expenditures, and our expected financial flexibility to pursue capital expenditures, acquisitions and other expansion opportunities, including vessel acquisitions;
- our liquidity needs and meeting our going concern requirements, including our anticipated funds and sources of financing for liquidity and working capital needs and the sufficiency of cash flows, and our estimation that we will have sufficient liquidity for at least a one-year period;
- our ability to obtain financing, including new bank financings, and to refinance existing indebtedness;
- the expected timing, amounts and methods of financing for new projects;
- growth prospects and future trends of the markets in which we operate;
- our expectations regarding demand in the oil and gas industry;
- liquefied natural gas (or LNG), liquefied petroleum gas (or LPG) and tanker market fundamentals, including the balance of supply and demand in the LNG, LPG and tanker markets, estimated growth in size of the world LNG and LPG fleets and spot LNG, LPG and tanker charter rates;
- our expectations as to the useful lives of our vessels;
- our expectations and estimates regarding future charter business, including with respect to minimum charter hire payments, revenues and our vessels' ability to perform to specifications and maintain their hire rates in the future;
- our expectations regarding the ability of Awilco LNG ASA (or Awilco), and our other customers to make charter payments to us, and the ability of our customers to fulfill purchase obligations at the end of charter contracts, including obligations relating to two of our LNG carriers completing charters with Awilco in 2019;
- our ability to maximize the use of our vessels, including the redeployment or disposition of vessels no longer under long-term charter or whose charter contract is expiring in 2019 and 2020;
- the adequacy of our insurance coverage, less an applicable deductible;
- the future resumption of an LNG plant in Yemen operated by Yemen LNG Company Limited (or YLNG), the expected expiration of the current deferral arrangement with YLNG, the expected further agreement with YLNG to suspend the charter contracts, the expected repayment of deferred hire amounts on our two 52%-owned vessels, the Marib Spirit and Arwa Spirit, on charter to YLNG, and the expected reduction to our equity income in 2019 as a result of the charter payment deferral;
- expected purchases and deliveries of newbuilding vessels, the newbuildings' commencement of service under charter contracts, and estimated costs for newbuilding vessels;
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- expected deliveries of the LNG newbuilding vessels in connection with our joint venture with China LNG Shipping (Holdings) Limited;
- expected funding of our proportionate share of the remaining shipyard installment payments for our joint venture with China LNG, CETS Investment Management (HK) Co. Ltd. and BW LNG Investments Pte. Ltd. (or the Pan Union Joint Venture);
- the expected technical and operational capabilities of newbuildings, including the benefits of the M-type, Electronically Controlled, Gas Injection (or MEGI) twin engines in certain LNG carrier newbuildings;
- our ability to continue to derive a significant portion of our revenues and cash flow from a limited number of customers;
- our ability to maintain long-term relationships with major LNG and LPG importers and exporters and major crude oil companies;
- our ability to leverage to our advantage Teekay Corporation's relationships and reputation in the shipping industry;
- our continued ability to enter into long-term, fixed-rate time-charters with our LNG and LPG customers;

- obtaining LNG and LPG projects that we or Teekay Corporation bid on;
- our expectations regarding the schedule and performance of the receiving and regasification terminal in Bahrain, which will be owned and operated by a new joint venture, Bahrain LNG W.L.L., owned by us (30%), National Oil & Gas Authority (or Nogaholding) (30%), Gulf Investment Corporation (or GIC) (24%) and Samsung C&T (or Samsung) (16%) (or the Bahrain LNG Joint Venture), and our expectations regarding the charter of a floating storage unit (or FSU) vessel for the project;
- our ability to obtain all permits, licenses, and certificates with respect to the conduct of our operations;
- the impact and expected cost of, and our ability to comply with, new and existing governmental regulations and maritime self-regulatory organization standards applicable to our business, including the expected cost to install ballast water treatment systems on our vessels and the switch to burning low sulphur fuel in compliance with the International Marine Organization (or IMO) proposals and the effect of IMO 2020, a new regulation for a 0.50% global sulphur cap for marine fuels effective January 1, 2020;
- the expected impact of heightened environmental and quality concerns of insurance underwriters, regulators and charterers;
- the future valuation or impairment of our assets, including goodwill;
- our hedging activities relating to foreign exchange, interest rate and spot market risks, and the effects of fluctuations in foreign exchange, interest rate and spot market rates on our business and results of operations;
- the potential impact of new accounting standards guidance;
- our and Teekay Corporation's ability to maintain good relationships with the labor unions who work with us;
- anticipated taxation of our partnership and its subsidiaries; and
- our business strategy and other plans and objectives for future operations.

Forward-looking statements involve known and unknown risks and are based upon a number of assumptions and estimates that are inherently subject to significant uncertainties and contingencies, many of which are beyond our control. Actual results may differ materially from those expressed or implied by such forward-looking statements. Important factors that could cause actual results to differ materially include, but are not limited to, those factors discussed in "Item 3 – Key Information: Risk Factors," and other factors detailed from time to time in other reports we file with or furnish to the U.S. Securities and Exchange Commission (or the SEC).

We do not intend to revise any forward-looking statements in order to reflect any change in our expectations or events or circumstances that may subsequently arise. You should carefully review and consider the various disclosures included in this Annual Report and in our other filings made with the SEC that attempt to advise interested parties of the risks and factors that may affect our business prospects and results of operations.

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 Financial Data

Set forth below is selected consolidated financial and other data of Teekay LNG Partners and its subsidiaries for the fiscal years 2014 through 2018, which have been derived from our consolidated financial statements. The following table should be read together with, and is qualified in its entirety by reference to, (a) "Item 5 – Operating and Financial Review and Prospects," included herein, and (b) the historical consolidated financial statements and the accompanying notes and the Report of Independent Registered Public Accounting Firm therein (which are included herein), with respect to the consolidated financial statements for the years ended December 31, 2018, 2017 and 2016.

Our consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (or GAAP).

(in thousands of U.S. Dollars, except unit, per unit and fleet data)	Year Ended December 31, 2018	Year Ended December 31, 2017	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
	$	$	$	$	$
Income Statement Data:					
Voyage revenues	510,762	432,676	396,444	397,991	402,928
Income from vessel operations[1]	147,809	148,649	153,181	181,372	183,823
Equity income[2]	53,546	9,789	62,307	84,171	115,478

Interest expense	(128,303)	(80,937)	(58,844)	(43,259)	(60,414)
Interest income	3,760	2,915	2,583	2,501	3,052
Realized and unrealized gain (loss) on non-designated derivative instruments(3)	3,278	(5,309)	(7,161)	(20,022)	(44,682)
Foreign currency exchange gain (loss)(4)	1,371	(26,933)	5,335	13,943	28,401
Other (expense) income(5)	(51,373)	1,561	1,537	1,526	836
Income tax expense	(3,213)	(824)	(973)	(2,722)	(7,567)
Net income	26,875	48,911	157,965	217,510	218,927
Non-controlling and other interests in net income	24,260	29,325	22,988	42,903	44,676
Limited partners’ interest in net income	2,615	19,586	134,977	174,607	174,251
Limited partners’ interest in net income per:					
Common unit - basic	0.03	0.25	1.70	2.21	2.30
Common unit - diluted	0.03	0.25	1.69	2.21	2.30
Cash distributions declared per common unit	0.5600	0.5600	0.5600	2.8000	2.7672
Balance Sheet Data (at end of period):					
Cash and cash equivalents	149,014	244,241	126,146	102,481	159,639
Restricted cash	73,850	95,194	117,027	111,519	45,997
Vessels and equipment(6)	3,329,523	2,905,712	2,215,983	2,108,160	1,989,230
Investment in and advances to equity-accounted joint ventures	1,116,133	1,094,596	1,037,726	883,731	891,478
Net investments in direct financing leases(7)	575,163	495,990	643,008	666,658	682,495
Total assets	5,384,781	5,019,299	4,315,474	4,052,980	3,947,275
Total debt and obligations related to capital leases	3,268,332	2,809,541	2,184,065	2,058,336	1,970,531
Partners’ equity	1,833,254	1,879,038	1,738,506	1,519,062	1,537,752
Total equity	1,882,597	1,931,423	1,777,412	1,543,679	1,547,371
Common units outstanding	79,360,719	79,626,819	79,571,820	79,551,012	78,353,354
Preferred units outstanding	11,800,000	11,800,000	5,000,000	—	—
Other Financial Data:					
Net voyage revenues(8)	482,525	424,474	394,788	396,845	399,607
EBITDA(9)	279,009	233,302	310,741	353,243	377,983
Adjusted EBITDA(9)	492,275	424,436	445,341	442,463	466,965
Capital expenditures:					
Expenditures for vessels and equipment(10)	686,305	714,529	344,987	191,969	194,255
Liquefied Natural Gas Fleet Data:					
Consolidated:					
Calendar-ship-days(11)	7,570	5,912	5,244	4,745	4,745
Average age of our fleet (in years at end of year)	7.8	8.9	9.7	10.2	9.2
Vessels at end of year(12)	23	18	15	13	13
Equity-Accounted:(13)					
Calendar-ship-days(11)	6,912	5,920	5,840	5,840	5,840
Average age of our fleet (in years at end of year)	7.0	8.0	7.5	6.5	5.5
Vessels at end of year(12)	20	17	16	16	16
Liquefied Petroleum Gas Fleet Data:					
Consolidated:					
Calendar-ship-days(11)	2,555	2,445	2,196	2,190	1,874
Average age of our fleet (in years at end of year)	9.9	8.9	7.0	6.0	5.0
Vessels at end of year(12)	7	7	6	6	6
Equity-Accounted:(13)					
Calendar-ship-days(11)	7,645	7,001	6,395	5,880	5,498

Average age of our fleet (in years at end of year)	7.9	9.1	9.6	10.4	10.8
Vessels at end of year(12)	22	20	19	16	15
Conventional Fleet Data:					
Calendar-ship-days(11)	1,389	1,904	2,439	2,920	3,202
Average age of our fleet (in years at end of year)	12.0	12.6	11.7	9.5	8.5
Vessels at end of year	2	5	6	8	8

(1) Income from vessel operations includes write-down of goodwill and write-down and loss on sale of vessels of $54.7 million, $50.6 million and $39.0 million for the years ended December 31, 2018, 2017 and 2016, respectively.

(2) Equity income includes unrealized gains on non-designated derivative instruments, and any ineffectiveness of derivative instruments designated as hedges for accounting purposes of $9.4 million, $2.4 million, $7.3 million, $10.2 million and $1.6 million for the years ended December 31, 2018, 2017, 2016, 2015 and 2014, respectively. In addition, equity income for the year ended December 31, 2018 includes a gain of $5.6 million on our sale of our 50% ownership interest in our joint venture with Exmar NV (or Exmar) (or the Excelsior Joint Venture), which owned one LNG carrier, the Excelsior.

(3) We entered into interest rate swap and swaption agreements to mitigate our interest rate risk from our floating-rate debt. We also have entered into an agreement with Teekay Corporation relating to the Toledo Spirit time-charter contract under which Teekay Corporation paid us any amounts payable to the charterer as a result of spot rates being below the fixed rate, and we paid Teekay Corporation any amounts payable to us as a result of spot rates being in excess of the fixed rate. The Toledo Spirit was sold in early 2019, and as a result, the derivative agreement ended at that time. With the exception of the interest rate swaps in our consolidated joint venture, Teekay Nakilat Corporation (or the Teekay Nakilat Joint Venture), and for several interest rate swaps in certain of our equity-accounted joint ventures where we have applied hedge accounting, changes in the fair value of our derivatives are recognized immediately into income and are presented as realized and unrealized gain (loss) on derivative instruments in the consolidated statements of income. Please see “Item 18 – Financial Statements: Note 13 – Derivative Instruments and Hedging Activities.”

(4) Under GAAP, all foreign currency-denominated monetary assets and liabilities, such as cash and cash equivalents, accounts receivable, restricted cash, accounts payable, accrued liabilities, advances from affiliates and long-term debt, are revalued and reported based on the prevailing exchange rate at the end of the period. Foreign exchange gains and losses include realized and unrealized gains and losses on our cross currency swaps. We entered into cross currency swaps concurrently with the issuance of our Norwegian Kroner (or NOK) denominated bonds to economically hedge the foreign currency exposure on the payment of interest and principal of our NOK-denominated bonds. Our primary sources of foreign currency exchange gains and losses are our Euro-denominated term loans and NOK-denominated bonds. Euro-denominated term loans totaled, 169.0 million Euros ($193.8 million) at December 31, 2018, 194.1 million Euros ($233.0 million) at December 31, 2017, 208.9 million Euros ($219.7 million) at December 31, 2016, 227.7 million Euros ($241.8 million) at December 31, 2015 and 235.6 million Euros ($285.0 million) at December 31, 2014. Our NOK-denominated bonds totaled 3.1 billion NOK ($353.0 million) at December 31, 2018, 3.1 billion NOK ($377.9 million) at December 31, 2017, 3.2 billion NOK ($371.3 million) at December 31, 2016, 2.6 billion NOK ($294.0 million) at December 31, 2015 and 1.6 billion NOK ($214.7 million) at December 31, 2014.

(5) Other (expense) income for the year ended December 31, 2018 includes a $53.0 million expense relating to the Teekay Nakilat Joint Venture recognizing an additional tax indemnification liability. Please see "Item 5 – Operating and Financial Review and Prospects: Significant Developments in 2018 and Early 2019 – Teekay Nakilat Capital Lease."

(6) Vessels and equipment consist of (a) our vessels, at cost less accumulated depreciation, (b) vessels related to capital leases, at cost less accumulated depreciation and (c) advances on our newbuildings.

(7) Certain of our external charters have been accounted for as direct financing leases. As a result, the vessels associated with the external charters accounted for as direct financing leases are not included as part of vessels and equipment. Please see "Item 18 – Financial Statements: Note 6 – Revenue – Net Investments in Direct Financing Leases."

(8) Net voyage revenues is a non-GAAP financial measure. Consistent with general practice in the shipping industry, we use net voyage revenues (defined as voyage revenues less voyage expenses) as a measure of equating revenues generated from voyage charters to revenues generated from time-charters, which assists us in making operating decisions about the deployment of our vessels and their performance. Under time-charters the charterer pays the voyage expenses, whereas under voyage charter contracts the ship owner pays these expenses. Some voyage expenses are fixed, and the remainder can be estimated. If we, as the ship owner, pay the voyage expenses, we typically pass the approximate amount of these expenses on to our customers by charging higher rates under the contract or billing the expenses to them. As a result, although voyage revenues from different types of contracts

may vary, the net voyage revenues are comparable across the different types of contracts. We principally use net voyage revenues because it provides more meaningful information to us than voyage revenues, the most directly comparable GAAP financial measure. Net voyage revenues are also widely used by investors and analysts in the shipping industry for comparing financial performance between companies and to industry averages. The following table reconciles net voyage revenues with voyage revenues:

(in thousands of U.S. Dollars)	Year Ended December 31, 2018	Year Ended December 31, 2017	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Voyage revenues	510,762	432,676	396,444	397,991	402,928
Voyage expenses	(28,237)	(8,202)	(1,656)	(1,146)	(3,321)
Net voyage revenues	482,525	424,474	394,788	396,845	399,607

(9) EBITDA and Adjusted EBITDA are non-GAAP financial measures. EBITDA represents net income before interest, taxes, depreciation and amortization. Adjusted EBITDA represents EBITDA before write-down of goodwill and write-down and loss on sales of vessels, foreign currency exchange (gain) loss, amortization of in-process contracts included in voyage revenues net of offsetting vessel operating expenses, unrealized (gain) loss on non-designated derivative instruments, realized loss on interest rate swaps and Adjustments to Equity-Accounted EBITDA. EBITDA and Adjusted EBITDA are used as a supplemental financial performance measure by management and by external users of our financial statements, such as investors. EBITDA and Adjusted EBITDA assist our management and security holders by increasing the comparability of our fundamental performance from period to period and against the fundamental performance of other companies in our industry that provide EBITDA and Adjusted EBITDA information. This increased comparability is achieved by excluding the potentially disparate effects between periods or companies of interest expense, taxes, depreciation or amortization, amortization of in-process revenue contracts and realized and unrealized loss on derivative instruments relating to interest rate swaps, interest rate swaptions, and cross currency swaps, which items are affected by various and possibly changing financing methods, capital structure and historical cost basis and which items may significantly affect net income between periods. We believe that including EBITDA and Adjusted EBITDA benefits investors in (a) selecting between investing in us and other investment alternatives and (b) monitoring our ongoing financial and operational strength and health in assessing whether to continue to hold our equity or debt securities, as applicable.

Neither EBITDA nor adjusted EBITDA should be considered as an alternative to net income, operating income, or any other measure of financial performance presented in accordance with GAAP. EBITDA and Adjusted EBITDA exclude certain items that affect net income and these measures may vary among other companies. Therefore, EBITDA and Adjusted EBITDA as presented in this Annual Report may not be comparable to similarly titled measures of other companies.

The following table reconciles our historical consolidated EBITDA and Adjusted EBITDA to net income.

(in thousands of U.S. Dollars)	Year Ended December 31, 2018	Year Ended December 31, 2017	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Reconciliation of “EBITDA” and “Adjusted EBITDA” to “Net income”:					
Net income	26,875	48,911	157,965	217,510	218,927
Depreciation and amortization	124,378	105,545	95,542	92,253	94,127
Interest expense, net of interest income	124,543	78,022	56,261	40,758	57,362
Income tax expense	3,213	824	973	2,722	7,567
EBITDA	279,009	233,302	310,741	353,243	377,983
Write-down of goodwill and write-down and loss on sale of vessels	54,653	50,600	38,976	—	—
Foreign currency exchange (gain) loss	(1,371)	26,933	(5,335)	(13,943)	(28,401)
Amortization of in-process contracts included in voyage revenues, net of offsetting vessel operating expenses	(326)	(1,113)	(1,113)	(1,113)	(1,113)
Unrealized (gain) loss on non-designated derivative instruments	(30,133)	(13,448)	(19,433)	(12,375)	2,096
Realized loss on interest rate swaps and swaptions	28,335	19,435	25,940	28,968	41,725
Adjustments to Equity-Accounted EBITDA(14)(15)	109,108	108,727	95,565	87,683	74,675
Other expense(5)	53,000	—	—	—	—
Adjusted EBITDA	492,275	424,436	445,341	442,463	466,965

(10) Excludes expenditures for vessels and equipment from our equity-accounted joint ventures.

(11) Calendar-ship-days are equal to the aggregate number of calendar days in a period that our vessels were in our possession during that period. In addition, the calendar-ship-days for our consolidated LNG fleet includes 119 days relating to the charter-in contract of the Magellan Spirit from our 52%-owned joint venture with Marubeni Corporation (or the Teekay LNG-Marubeni Joint Venture).

(12) Liquefied Natural Gas

For 2018, 2017, 2016 and 2015, the number of vessels indicated does not include one, six, nine and 11 LNG carrier newbuilding(s), respectively, in our consolidated LNG fleet and five, nine, 10 and 10 LNG carrier newbuildings, respectively, in our equity-accounted LNG fleet.

Liquefied Petroleum Gas

For 2017, 2016 and 2015, the number of vessels indicated does not include three, four and seven LPG carrier newbuildings, respectively, in our equity-accounted LPG fleet.

(13) Equity-accounted vessels in our LNG fleet include (i) six LNG carriers (or the MALT LNG Carriers) relating to the Teekay LNG-Marubeni Joint Venture, (ii) four LNG carriers (or the RasGas 3 LNG Carriers) relating to our joint venture with QGTC Nakilat (1643-6) Holdings Corporation, (iii) four LNG carriers relating to the Angola Project (or the Angola LNG Carriers) in our joint venture with Mitsui & Co. Ltd. and NYK Energy Transport (Atlantic) Ltd., (iv) one LNG carrier at December 31, 2018 and two LNG carriers from 2017 to 2014 (or the Exmar LNG Carriers) relating to our LNG joint venture with Exmar, (v) three and one LNG carrier(s) (or the Pan Union LNG Carriers) relating to the Pan Union Joint Venture from 2018 and 2017, respectively, and (vi) two ARC7 LNG carriers relating to our 50/50 joint venture with China LNG (Holdings) Limited (or the Yamal LNG Joint Venture) in 2018. Equity-accounted vessels in our LPG fleet include 22, 20, 19, 16, and 15 LPG carriers (or the Exmar LPG Carriers) from 2018, 2017, 2016, 2015, and 2014, respectively, relating to our LPG joint venture with Exmar. The figures in the selected financial data for our equity-accounted vessels are at 100% and not based on our ownership percentages.

(14) Adjusted Equity-Accounted EBITDA is a non-GAAP financial measure. Adjusted Equity-Accounted EBITDA represents equity income after Adjustments to Equity Income. Adjustments to Equity Income consist of depreciation and amortization, interest expense net of interest income, income tax (recovery)

expense, amortization of in-process revenue contracts, foreign currency exchange (gain) loss, write-down and loss (gain) on sales of vessels, gain on sale of equity-accounted investment, unrealized gain on non-designated derivative instruments and realized loss on interest rate swaps, in each case related to our equity-accounted entities, on the basis of our ownership percentages of such entities. Neither Adjusted Equity-Accounted EBITDA nor Adjustments to Equity-Accounted EBITDA should be considered as an alternative to equity income or any other measure of financial performance or liquidity presented in accordance with GAAP. Adjustments to Equity-Accounted EBITDA exclude some, but not all, items that affect equity income and these measures may vary among other companies. Therefore, Adjustments to Equity-Accounted EBITDA as presented in this Annual Report may not be comparable to similarly titled measures of the other companies.

(15) Adjustments relating to equity income from our equity-accounted joint ventures are as follows:

7

(in thousands of U.S. Dollars)	Year Ended December 31, 2018	Year Ended December 31, 2017	Year Ended December 31, 2016	Year Ended December 31, 2015	Year Ended December 31, 2014
Reconciliation of “Adjusted Equity-Accounted EBITDA” to “Equity Income”:					
Equity income	53,546	9,789	62,307	84,171	115,478
Depreciation and amortization	52,883	54,453	52,095	48,702	45,885
Interest expense, net of interest income	69,186	51,442	39,849	37,376	36,916
Income tax (recovery) expense	(261)	504	352	315	(155)
Amortization of in-process revenue contracts	(3,847)	(4,307)	(5,482)	(7,153)	(8,295)
Foreign currency exchange (gain) loss	(391)	369	125	(527)	(441)
Write-down and loss (gain) on sales of vessels	257	5,500	4,861	1,228	(16,923)
Gain on sale of equity-accounted investment(2)	(5,563)	—	—	—	—
Unrealized gain on non-designated derivative instruments	(9,076)	(7,491)	(6,963)	(10,945)	(1,563)
Realized loss on interest rate swaps	5,920	8,257	10,728	18,687	19,251
Adjustments to Equity-Accounted EBITDA	109,108	108,727	95,565	87,683	74,675
Adjusted Equity-Accounted EBITDA	162,654	118,516	157,872	171,854	190,153

RISK FACTORS
Some of the following risks relate principally to the industry in which we operate and to our business in general. Other risks relate principally to the securities market and to ownership of our common or preferred units. The occurrence of any of the events described in this section could materially and adversely affect our business, financial condition, operating results and ability to pay distributions on, and the trading price of, our common and preferred units.
We may not have sufficient cash from operations to enable us to pay distributions on our common and preferred units.
The amount of cash we can distribute on our common and preferred units principally depends upon the amount of cash we generate from our operations, which may fluctuate based on, among other things:

- the rates we obtain from our charters;
- the expiration of charter contracts;
- the charterers' options to terminate charter contracts or repurchase vessels;
- the level of our operating costs, such as the cost of crews and insurance;
- the continued availability of LNG and LPG production, liquefaction and regasification facilities;
- the number of unscheduled off-hire days for our fleet and the timing of, and number of days required for, scheduled dry docking of our vessels;
- delays in the delivery of newbuildings and the beginning of payments under charters relating to those vessels;
- prevailing global and regional economic and political conditions;
- currency exchange rate fluctuations;
- the effect of governmental regulations and maritime self-regulatory organization standards on the conduct of our business; and
- limitation of obtaining cash distributions from joint venture entities due to similar restrictions within the joint venture entities.

The actual amount of cash we will have available for distribution also will depend on factors such as:

- the level of capital expenditures we make, including for maintaining vessels, building new vessels, acquiring existing vessels and complying with regulations;
- our debt service requirements and restrictions on distributions contained in our debt instruments;
- fluctuations in our working capital needs;
- our ability to make working capital borrowings, including to pay distributions to unitholders; and
- the amount of any cash reserves, including reserves for future capital expenditures, anticipated future credit needs and other matters, established by Teekay GP L.L.C., our general partner (or our General Partner), in its discretion.

The amount of cash we generate from our operations may differ materially from our profit or loss for the period, which will be affected by non-cash items. As a result of this and the other factors mentioned above, we may make cash distributions during periods when we record losses and may not make cash distributions during periods when we record net income.
Our ability to grow may be adversely affected by our cash distribution policy.
Our cash distribution policy, which is consistent with our partnership agreement, requires us to distribute each quarter all of our Available Cash (as defined in our partnership agreement, which takes into account cash reserves for, among other things, future capital expenditures and credit needs). Accordingly, our growth may not be as fast as businesses that reinvest their Available Cash to expand ongoing operations.

In determining the amount of cash available for distribution, the Board of Directors of our General Partner, which makes the determination on our behalf, approves the amount of cash reserves to set aside, including reserves for future maintenance capital expenditures, anticipated future credit needs, working capital and other matters. We also rely upon external financing sources, including commercial borrowings and proceeds from debt and equity offerings, to fund our capital expenditures. Accordingly, to the extent we do not have sufficient cash reserves or are unable to obtain financing, our cash distribution policy may significantly impair our ability to meet our financial needs or to grow.

Although global crude oil prices have experienced moderate recovery since falling from the highs reached in mid-2014, prices have not returned to those same highs. The decline in oil prices also contributed to depressed natural gas prices. Lower oil prices may negatively affect both the competitiveness of natural gas as a fuel for power generation and the market price of natural gas, to the extent that natural gas prices are benchmarked to the price of crude oil. These declines in energy prices, combined with other factors beyond our control, have adversely affected energy and master limited partnership capital markets and available sources of financing for our capital expenditures and debt repayment obligations. On November 13, 2018, our General Partner announced that quarterly common unit distributions would increase by

36 percent to $0.19 per unit, commencing with the first quarter of 2019 distribution to be paid in May 2019 as part of a balanced capital allocation strategy, however, our distribution policy is subject to certain restrictions and may be changed by the Board of Directors of our General Partner.

Our ability to repay or refinance our debt obligations and to fund our capital expenditures will depend on certain financial, business and other factors, many of which are beyond our control. To the extent we are unable to finance these obligations and expenditures with cash from operations or by issuing debt or equity securities, our ability to make cash distributions may be diminished or our financial leverage may increase, or our unitholders may be diluted. Our business may be adversely affected if we need to access other sources of funding.

To fund our existing and future debt obligations and capital expenditures, we will be required to use cash from operations, incur borrowings, and/or seek to access other financing sources. Our access to potential funding sources and our future financial and operating performance will be affected by prevailing economic conditions and financial, business, regulatory and other factors, many of which are beyond our control. If we are unable to access additional bank financing and generate sufficient cash flow to meet our debt, capital expenditure and other business requirements, we may be forced to take actions such as:

- restructuring our debt;
- seeking additional debt or equity capital;
- selling assets;
- reducing distributions;
- reducing, delaying or cancelling our business activities, acquisitions, investments or capital expenditures; or
- seeking bankruptcy protection.

Such measures might not be successful, available on acceptable terms or enable us to meet our debt, capital expenditure and other obligations. Some of such measures may adversely affect our business and reputation. In addition, our financing agreements may restrict our ability to implement some of these measures.

Use of cash from operations and possible future sale of certain assets will reduce cash available for distribution to unitholders. Our ability to obtain bank financing or to access the capital markets for future offerings may be limited by our financial condition at the time of any such financing or offering as well as by adverse market conditions. Even if we are successful in obtaining necessary funds, the terms of such financings could limit our ability to pay cash distributions to unitholders or operate our business as currently conducted. In addition, incurring additional debt may significantly increase our interest expense and financial leverage, and issuing additional equity securities may result in significant unitholder dilution and would increase the aggregate amount of cash required to maintain our quarterly distributions to unitholders.

We make substantial capital expenditures to maintain the operating capacity of our fleet, which reduce our cash available for distribution. In addition, each quarter our General Partner is required to deduct estimated maintenance capital expenditures from operating surplus, which may result in less cash available for distribution to unitholders than if actual maintenance capital expenditures were deducted.

We must make substantial capital expenditures to maintain, over the long term, the operating capacity of our fleet. These maintenance capital expenditures include capital expenditures associated with dry docking a vessel, modifying an existing vessel or acquiring a new vessel to the extent these expenditures are incurred to maintain the operating capacity of our fleet. These expenditures could increase as a result of changes in:

- the cost of labor and materials;
- customer requirements;
- increases in the size of our fleet;
- governmental regulations and maritime self-regulatory organization standards relating to safety, security or the environment; and
- competitive standards.

In addition, our actual maintenance capital expenditures vary significantly from quarter-to-quarter based on, among other things, the number of vessels dry docked during that quarter. Certain repair and maintenance items are more efficient to complete while a vessel is in dry dock. Consequently, maintenance capital expenditures will typically increase in periods when there is an increase in the number of vessels dry docked. Our significant maintenance capital expenditures reduce the amount of cash we have available for distribution to our unitholders.

Our partnership agreement requires our General Partner to deduct estimated, rather than actual, maintenance capital expenditures from operating surplus (as defined in our partnership agreement) each quarter in an effort to reduce fluctuations in operating surplus. The amount of estimated maintenance capital expenditures deducted from operating surplus is subject to review and change by the conflicts committee of our General Partner’s Board of Directors at least once a year. In years when estimated maintenance capital expenditures are higher than actual maintenance capital expenditures – as we expect will be the case in the years we are not required to make expenditures for mandatory dry dockings – the amount of cash available for distribution to unitholders will be lower than if actual maintenance capital expenditures were

deducted from operating surplus. If our General Partner underestimates the appropriate level of estimated maintenance capital expenditures, we may have less cash available for distribution in future periods when actual capital expenditures begin to exceed our previous estimates.
We make substantial capital expenditures to expand the size of our fleet or gas business and generally are required to make significant installment payments for acquisitions of newbuilding vessels or for construction of receiving and regasification terminals prior to their delivery or completion and generation of revenue.
We make substantial capital expenditures to increase the size of our fleet or gas business. Please read “Item 5 – Operating and Financial Review and Prospects,” for additional information about our newbuilding acquisitions. As at December 31, 2018, we had six LNG carrier newbuildings scheduled for delivery during 2019, and one LNG receiving and regasification terminal under construction scheduled for completion in 2019. The obligations of us and our equity-accounted joint ventures to purchase the newbuilding vessels is not conditional upon our or their ability to obtain financing for such purchases. In January 2019, we had $636 million of financing in place, including the sale-leaseback financing completed on the Yamal Spirit in January 2019 and our proportionate share of financings in our equity-accounted joint ventures, against $652 million related to our proportionate share of the estimated remaining cost for our newbuilding vessels and our LNG receiving and regasification terminal under construction as of December 31, 2018. Please read "Item 5 – Contractual Obligations and Contingencies."
Our substantial capital expenditures may reduce our cash available for distribution to our unitholders. Funding of any capital expenditures with debt may significantly increase our interest expense and financial leverage, and funding of capital expenditures by issuing additional equity securities may result in significant unitholder dilution. Our failure to obtain the funds for necessary future capital expenditures could have a material adverse effect on our business, results of operations and financial condition and on our ability to make cash distributions to unitholders.

We and Teekay Corporation regularly evaluate and pursue opportunities to provide the marine transportation requirements for new or expanding LNG and LPG projects. The award process relating to LNG transportation opportunities typically involves various stages and takes several months to complete. Neither we nor Teekay Corporation may be awarded charters relating to any of the projects we or it pursues. If any LNG project charters are awarded to Teekay Corporation, it must offer them to us pursuant to the terms of an omnibus agreement entered into in connection with our initial public offering. If we elect pursuant to the omnibus agreement to obtain Teekay Corporation’s interests in any projects Teekay Corporation may be awarded, or if we bid on and are awarded contracts relating to any LNG and LPG project, we will need to incur significant capital expenditures to buy Teekay Corporation’s interest in these LNG and LPG projects or to build the LNG and LPG carriers.

To fund the remaining portion of existing or future capital expenditures, we will be required to use cash from operations or incur borrowings or raise capital through the sale of debt or additional equity securities. Use of cash from operations will reduce cash available for distributions to unitholders. Our ability to obtain bank financing or to access the capital markets for future offerings may be limited by our financial condition at the time of any such financing or offering as well as by adverse market conditions resulting from, among other things, general economic conditions and contingencies and uncertainties that are beyond our control. Our failure to obtain the funds for future capital expenditures could have a material adverse effect on our business, results of operations and financial condition and on our ability to make cash distributions. Even if we are successful in obtaining necessary funds, the terms of such financings could limit our ability to pay distributions to our unitholders. In addition, incurring additional debt may significantly increase our interest expense and financial leverage, and issuing additional equity securities may result in significant unitholder dilution and would increase the aggregate amount of cash required to maintain our current level of quarterly distributions to unitholders, which could have a material adverse effect on our ability to make cash distributions.

In addition, although delivery of the completed vessel will not occur until much later (approximately two to three years from the time the order is placed), we typically must pay an initial installment up-front upon signing the purchase contract. During the construction period, we generally are required to make installment payments on newbuildings prior to their delivery, in addition to incurring financing, miscellaneous construction and project management costs, but we do not derive any income from the vessel until after its delivery. If we finance these payments by issuing debt or equity securities, we will increase the aggregate amount of interest or cash required to maintain our current level of quarterly distributions to unitholders prior to generating cash from the operation of the newbuilding.

Our substantial debt levels may limit our flexibility in obtaining additional financing, refinancing credit facilities upon maturity, pursuing other business opportunities and paying distributions.

As at December 31, 2018, our consolidated debt, obligations related to capital leases and advances from affiliates totaled $3.3 billion and we had the capacity to borrow an additional $175.6 million under our revolving credit facilities. These facilities may be used by us for general partnership purposes. If we obtain debt financing for existing newbuilding orders or we are awarded contracts for new LNG or LPG projects, our consolidated debt and obligations related to capital leases will increase, perhaps significantly. We will continue to have the ability to incur additional debt, subject to limitations in our credit facilities. Our level of debt could have important consequences to us, including the following:

- our ability to obtain additional financing, if necessary, for working capital, capital expenditures, acquisitions or other purposes may be impaired, or such financing may not be available on favorable terms, if at all;
- we will need a substantial portion of our cash flow to make principal and interest payments on our debt, reducing the funds that would otherwise be available for operations, future business opportunities and distributions to unitholders;
- our debt level may make us more vulnerable than our competitors with less debt to competitive pressures or a downturn in our industry or the economy generally; and

- our debt level may limit our flexibility in responding to changing business and economic conditions.

Our ability to service our debt and obligations related to capital leases depends upon, among other things, our future financial and operating performance, which is affected by prevailing economic conditions and financial, business, regulatory and other factors, some of which are beyond our control. If our operating results are not sufficient to service our current or future indebtedness or obligations related to capital leases, we will be forced to take actions such as further reducing distributions, reducing, canceling or delaying our business activities, acquisitions, investments or capital expenditures, selling assets, seeking to restructure or refinance our debt, seeking additional debt or equity capital or seeking bankruptcy protection. We may not be able to effect any of these remedies on satisfactory terms, or at all.

Financing agreements containing operating and financial restrictions may restrict our business and financing activities.

The operating and financial restrictions and covenants in our financing arrangements and any future financing agreements could adversely affect our ability to finance future operations or capital needs or to pursue and expand or pursue our business activities. For example, these financing arrangements may restrict our ability to:

- incur or guarantee indebtedness;
- change ownership or structure, including mergers, consolidations, liquidations and dissolutions;
- make dividends or distributions when in default of the relevant loans;
- make certain negative pledges and grant certain liens;
- sell, transfer, assign or convey assets;
- make certain investments; and
- enter into new lines of business.

Some of our financing arrangements require us to maintain a minimum level of tangible net worth, to maintain certain ratios of vessel values as it relates to the relevant outstanding principal balance, to maintain a minimum level of aggregate liquidity, to maintain leverage below a maximum level and require certain of our subsidiaries to maintain restricted cash deposits. Please read "Item 5 – Operating and Financial Review and Prospects: Credit Facilities." Our ability to comply with covenants and restrictions contained in debt instruments may be affected by events beyond our control, including prevailing economic, financial and industry conditions. If market or other economic conditions deteriorate, compliance with these covenants may be impaired. If restrictions, covenants, ratios or tests in the financing agreements are breached, a significant portion or all of the obligations may become immediately due and payable, and the lenders' commitment to make further loans may terminate. This could lead to cross-defaults under other financing agreements and result in obligations becoming due and commitments being terminated under such agreements. A default under financing agreements could also result in foreclosure on any of our vessels and other assets securing related loans.

Furthermore, the termination of any of our charter contracts by our customers could result in the repayment of the debt facilities to which the chartered vessels relate.

Restrictions in our debt agreements may prevent us from paying distributions.

The payment of principal and interest on our debt and obligations related to capital leases reduces cash available for distribution on our units. In addition, our financing agreements prohibit the payment of distributions upon the occurrence of the following events, among others:

- failure to pay any principal, interest, fees, expenses or other amounts when due;
- failure to notify the lenders of any material oil spill or discharge of hazardous material, or of any action or claim related thereto;
- breach or lapse of any insurance with respect to vessels securing the facility;

- breach of certain financial covenants;
- failure to observe any other agreement, security instrument, obligation or covenant beyond specified cure periods in certain cases;
- default under other indebtedness;
- bankruptcy or insolvency events;
- failure of any representation or warranty to be materially correct;
- a change of control, as defined in the applicable agreement; or
- a material adverse effect, as defined in the applicable agreement.

We derive a substantial majority of our revenues from a limited number of customers, and the loss of any customer, charter or vessel, or any adjustment to our charter contracts could result in a significant loss of revenues and cash flow.

We have derived, and believe that we will continue to derive, a significant portion of our revenues and cash flow from a limited number of customers. Please read “Item 18 – Financial Statements: Note 4 – Segment Reporting.”

We could lose a customer or the benefits of a time-charter if:

- the customer fails to make charter payments because of its financial inability, disagreements with us or otherwise;
- we agree to reduce the charter payments due to us under a charter because of the customer’s inability to continue making the original payments;
- the customer exercises certain rights to terminate the charter, purchase or cause the sale of the vessel or, under some of our charters, convert the time-charter to a bareboat charter (some of which rights are exercisable at any time);
- the customer terminates the charter because we fail to deliver the vessel within a fixed period of time, the vessel is lost or damaged beyond repair, there are serious deficiencies in the vessel or prolonged periods of off-hire, or we default under the charter; or
- under some of our time-charters, the customer terminates the charter because of the termination of the charterer’s sales agreement or a prolonged force majeure event affecting the customer, including damage to or destruction of relevant facilities, war or political unrest preventing us from performing services for that customer.

In June 2017, we reached an agreement with Awilco to defer a portion of charter hire and extend the two LNG carrier bareboat charter contracts that were originally due to expire in November 2017 and August 2018 to December 2019, which would also include related purchase obligations on both vessels due at that time. However, there is no assurance that Awilco will be able to generate enough operating cash flows or have the ability to raise enough equity to pay for the charter hire deferrals and associated purchase obligations for the two LNG carriers. Further, two of the six MALT LNG Carriers in the Teekay LNG-Marubeni Joint Venture, the Marib Spirit and Arwa Spirit, are currently under long-term charter contracts with YLNG. Due to the political unrest in Yemen, YLNG decided to temporarily close operation of its LNG plant in Yemen in 2015. As a result, commencing January 1, 2016, the Teekay LNG-Marubeni Joint Venture agreed to successive deferral arrangements with YLNG pursuant to which a portion of the charter payments were deferred. Concurrent with the anticipated expiry of the most current deferral arrangement, which is expected to occur within the first half of 2019, the Teekay LNG-Marubeni Joint Venture intends to enter into a further agreement with YLNG pursuant to which the Teekay-LNG Marubeni Joint Venture and YLNG will suspend the two charter contracts for a period of up to three years. Should the LNG plant in Yemen resume operations during such suspended term, it is intended that YLNG will be required to repay the deferred amounts plus interest over a period of installments. However, there is no assurance if or when the LNG plant will resume operations and, accordingly, if YLNG will be able to repay all or any portion of the deferred amounts.

If we lose a key LNG time-charter, we may be unable to redeploy the related vessel on terms as favorable to us due to the long-term nature of most LNG time-charters and the lack of an established LNG spot market. If we are unable to redeploy a LNG carrier, we will not receive any revenues from that vessel, but we may be required to pay expenses necessary to maintain the vessel in proper operating condition. In addition, if a customer exercises its right to purchase a vessel, we would not receive any further revenue from the vessel and may be unable to obtain a substitute vessel and charter. This may cause us to receive decreased revenue and cash flows from having fewer vessels operating in our fleet. Any compensation under our charters for a purchase of the vessels may not adequately compensate us for the loss of the vessel and related time-charter.

If we lose a key conventional tanker customer, we may be unable to obtain other long-term conventional charters and may become subject to the volatile spot market, which is highly competitive and subject to significant price fluctuations. If a customer exercises its right under some charters to purchase or force a sale of the vessel, we may be unable to acquire an adequate replacement vessel or may be forced to construct a new vessel. Any replacement newbuilding would not generate revenues during its construction and we may be unable to charter any replacement vessel on terms as favorable to us as those of the terminated charter.

The loss of certain of our customers, time-charters or vessels, or a decline in payments under our charters, could have a material adverse effect on our business, results of operations and financial condition and our ability to make cash distributions to unitholders.

We depend on Teekay Corporation and certain of our joint venture partners to assist us in operating our business and competing in our markets.

Pursuant to certain services agreements between us and certain of our operating subsidiaries, on the one hand, and certain direct and indirect subsidiaries of Teekay Corporation and certain of our joint venture partners, on the other hand, the Teekay Corporation subsidiaries and certain of our joint venture partners provide to us various services including, in the case of operating subsidiaries, substantially all of their managerial, operational and administrative services (including vessel maintenance, crewing for some of our vessels, purchasing, shipyard supervision, insurance and financial services) and other technical and advisory services, and in the case of Teekay LNG Partners L.P., various administrative services. Our operational success and ability to execute our growth strategy depend significantly upon Teekay Corporation’s and certain of our joint venture partners’ satisfactory performance of these services. Our business will be harmed if Teekay Corporation or certain of our joint venture partners fail to perform these services satisfactorily or if Teekay Corporation or certain of our joint venture partners stop providing these services to us.

Our ability to compete for the transportation requirements of certain LNG and LPG projects, enter into new charter contracts, secure financings and expand our customer relationships depends in part on our ability to leverage our relationships with Teekay Corporation, our joint venture partners and their respective reputation and relationships in the shipping industry. If Teekay Corporation or certain of our joint venture partners suffer material damage to their reputation or relationships it may harm our ability to:

- renew existing charters upon their expiration;
- obtain new charters;
- successfully interact with shipyards during periods of shipyard construction constraints;
- obtain financing on commercially acceptable terms; or
- maintain satisfactory relationships with our employees and suppliers.

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

Our operating subsidiaries may also contract with certain subsidiaries of Teekay Corporation and certain of our joint venture partners to have newbuildings constructed on behalf of our operating subsidiaries and to incur the construction-related financing. Our operating subsidiaries would purchase the vessels on or after delivery based on an agreed-upon price. None of our operating subsidiaries currently has this type of arrangement with Teekay Corporation or any of its affiliates or any joint venture partners.

Significant declines in natural gas and oil prices may adversely affect our growth prospects and results of operations.

Although global crude oil and gas prices have experienced moderate recovery since the highs of mid-2014, prices have not returned to those same highs and remain volatile due to global and regional geopolitical, economic and strategic risks and changes. A further decline in oil prices may adversely affect our business, results of operations and financial condition and our ability to make cash distributions, as a result of, among other things:

- a reduction in exploration for or development of new natural gas reserves or projects, or the delay or cancellation of existing projects as energy companies lower their capital expenditures budgets, which may reduce our growth opportunities;
- a reduction in both the competitiveness of natural gas as a fuel for power generation and the market price of natural gas, to the extent that natural gas prices are benchmarked to the price of crude oil;
- lower demand for vessels of the types we own and operate, which may reduce available charter rates and revenue to us upon redeployment of our vessels following expiration or termination of existing contracts or upon the initial chartering of vessels, or which may result in extended periods of our vessels being idle between contracts;
- customers potentially seeking to renegotiate or terminate existing vessel contracts, or failing to extend or renew contracts upon expiration, or seeking to negotiate cancelable contracts;
- the inability or refusal of customers to make charter payments to us or to our joint ventures, due to financial constraints or otherwise; or
- declines in vessel values, which may result in losses to us upon vessel sales or impairment charges against our earnings.

Our growth depends on continued growth in demand for LNG and LPG shipping.

Our growth strategy focuses on expansion in the LNG and LPG shipping sectors. Accordingly, our growth depends on continued growth in world and regional demand for LNG and LPG and marine transportation of LNG and LPG, as well as the supply of LNG and LPG. Demand for LNG and LPG and for the marine transportation of LNG and LPG could be negatively affected by a number of factors, such as:

- increases in the cost of natural gas derived from LNG relative to the cost of natural gas generally;
- increase in the cost of LPG relative to the cost of naphtha and other competing petrochemicals;
- 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 relative to other energy sources or other factors making consumption of natural gas less attractive;
- additional sources of natural gas, including shale gas;

- availability of alternative energy sources; and
- negative global or regional economic or political conditions, particularly in LNG and LPG consuming regions, which could reduce energy consumption or its growth.

Reduced demand for LNG and LPG shipping would have a material adverse effect on our future growth and could harm our business, results of operations and financial condition.
Changes in the LPG markets could result in decreased demand for our LPG vessels operating in the spot market.

We have several LPG carriers that operate in the LPG spot market and are either owned by us or owned or chartered-in by Exmar LPG BVBA (or the Exmar LPG Joint Venture), a joint venture entity formed pursuant to a joint venture agreement made in February 2013 between us and Belgium-based Exmar to own and charter-in LPG carriers with a primary focus on the mid-size gas carrier segment. The charters in the spot market operate for short durations and are priced on a current, or "spot," market rate. The LPG spot market is volatile and fluctuates based upon the many conditions and events that affect the price, production and transport of LPG, including competition from alternative energy sources and negative global or regional economic or political conditions. Any adverse changes in the LPG markets may impact our ability to enter into economically beneficial charters when our LPG carriers complete their existing short-term charters in the LPG spot market, which may reduce vessel earnings and impact our operating results.

Future adverse economic conditions, including disruptions in the global credit markets, could adversely affect our business, financial condition, and results of operations.

Economic downturns and financial crises in the global markets could produce illiquidity in the capital markets, market volatility, increased exposure to interest rate and credit risks and reduced access to capital markets. If global financial markets and economic conditions significantly deteriorate in the future, we may face restricted access to the capital markets or bank lending, which may make it more difficult and costly to fund future growth. Decreased access to such resources could have a material adverse effect on our business, financial condition and results of operations.

Future adverse economic conditions or other developments may affect our customers' ability to charter our vessels and pay for our services and may adversely affect our business and results of operations.

Future adverse economic conditions or other developments relating directly to our customers may lead to a decline in our customers' operations or ability to pay for our services, which could result in decreased demand for our vessels and services. Our customers' inability to pay for any reason could also result in their default on our current contracts and charters. The decline in the amount of services requested by our customers or their default on our contracts with them could have a material adverse effect on our business, financial condition and results of operations.

Growth of the LNG market may be limited by infrastructure constraints and community environmental group resistance to new LNG infrastructure over concerns about the environment, safety and terrorism.

A complete LNG project includes production, liquefaction, regasification, storage and distribution facilities and LNG carriers. Existing LNG projects and infrastructure are limited, and new or expanded LNG projects are highly complex and capital-intensive, with new projects often costing several billion dollars. Many factors could negatively affect continued development of LNG infrastructure or disrupt the supply of LNG, including:

- increases in interest rates or other events that may affect the availability of sufficient financing for LNG projects on commercially reasonable terms;
- decreases in the price of LNG, which might decrease the expected returns relating to investments in LNG projects;
- the inability of project owners or operators to obtain governmental approvals to construct or operate LNG facilities;
- local community resistance to proposed or existing LNG facilities based on safety, environmental or security concerns;
- any significant explosion, spill or similar incident involving an LNG facility or LNG carrier; and
- labor or political unrest affecting existing or proposed areas of LNG production.

If the LNG supply chain is disrupted or does not continue to grow, or if a significant LNG explosion, spill or similar incident occurs, it could have a material adverse effect on our business, results of operations and financial condition and our ability to make cash distributions to unitholders.

Our growth depends on our ability to expand relationships with existing customers and obtain new customers, for which we will face substantial competition.

One of our principal objectives is to enter into additional long-term, fixed-rate LNG and LPG charters. The process of obtaining new long-term charters is highly competitive and generally involves an intensive screening process and competitive bids, and often extends for several months. Shipping contracts are awarded based upon a variety of factors relating to the vessel operator, including:

- shipping industry relationships and reputation for customer service and safety;
- shipping experience and quality of ship operations (including cost effectiveness);
- quality and experience of seafaring crew;
- the ability to finance carriers at competitive rates and financial stability generally;
- relationships with shipyards and the ability to get suitable berths;
- construction management experience, including the ability to obtain on-time delivery of new vessels according to customer specifications;

15

- willingness to accept operational risks pursuant to the charter, such as allowing termination of the charter for force majeure events; and
- competitiveness of the bid in terms of overall price.

We compete for providing marine transportation services for potential energy projects with a number of experienced companies, including state-sponsored entities and major energy companies affiliated with the energy project requiring energy shipping services. Many of these competitors have significantly greater financial resources than we do or Teekay Corporation does. We anticipate that an increasing number of marine transportation companies – including many with strong reputations and extensive resources and experience – will enter the energy transportation sector. This increased competition may cause greater price competition for time-charters. As a result of these factors, we may be unable to expand our relationships with existing customers or to obtain new customers on a profitable basis, if at all, which would have a material adverse effect on our business, results of operations and financial condition and our ability to make cash distributions to unitholders.

Delays in deliveries of newbuildings, or in conversions or upgrades of existing vessels, or construction of LNG receiving and regasification terminals could harm our operating results and lead to the termination of related contracts.

As at April 1, 2019, we had a total of four newbuilding vessels under construction and an LNG receiving and regasification terminal under construction. The delivery of newbuildings or vessel conversions or upgrades or construction of receiving and regasification terminals we may order or undertake or otherwise acquire, could be delayed, which would delay our receipt of revenues under the contracts for these assets. In addition, under some of our charters if delivery of a vessel to our customer is delayed, we may be required to pay liquidated damages in amounts equal to or, under some charters, almost double, the hire rate during the delay. For prolonged delays, the customer may terminate the time-charter and, in addition to the resulting loss of revenues, we may be responsible for additional, substantial liquidated damages.

Our receipt of newbuildings or of vessel conversions or upgrades, or completion of the construction of LNG receiving and regasification terminals could be delayed because of:

- quality or engineering problems;
- changes in governmental regulations or maritime self-regulatory organization standards;
- work stoppages or other labor disturbances at the shipyard or construction site;
- bankruptcy or other financial crisis of the builder;
- a backlog of orders at the shipyard;
- political or economic disturbances where our vessels or terminals are being or may be built;
- weather interference or catastrophic event, such as a major earthquake or fire;
- our requests for changes to the original vessel specifications;
- shortages of or delays in the receipt of necessary construction materials, such as steel;
- our inability to finance the purchase or construction of the vessels or terminals; or
- our inability to obtain requisite permits or approvals.

If delivery of a vessel or the completion of an LNG receiving and regasification terminal is materially delayed, it could adversely affect our results or operations and financial condition and our ability to make cash distributions to unitholders.

We may be unable to charter or recharter vessels at attractive rates, which may lead to reduced revenues and profitability.

Our ability to charter or recharter our LNG and LPG carriers upon the expiration or termination of their current time charters and the charter rates payable under any renewal or replacement charters depend upon, among other things, the then current states of the LNG and LPG carrier markets. As of December 31, 2018, in our liquefied natural gas and liquified petroleum gas operating fleet, including the Magellan Spirit chartered-in from the Teekay LNG-Marubeni

Joint Venture, we had zero and eight vessels, respectively, that were unchartered or trading in the spot market; we had four and 11 vessels, respectively, with charters scheduled to expire in 2019, excluding extension options; and two and five vessels, respectively, with charters scheduled to expire in 2020, excluding extension options. If charter rates are low when existing time charters expire, we may be required to recharter our vessels at reduced rates or even possibly at a rate whereby we incur a loss, which would harm our results of operations. Alternatively, we may determine to leave such vessels off-charter. The size of the current orderbooks for LNG carriers and LPG carriers is expected to result in the increase in the size of the world LNG and LPG fleets over the next few years. An over-supply of vessel capacity, combined with stability or any decline in the demand for LNG or LPG carriers, may result in a reduction of charter hire rates.

We may have more difficulty entering into long-term, fixed-rate LNG time-charters if the active short-term, medium-term or spot LNG shipping markets continue to develop.

LNG shipping historically has been transacted with long-term, fixed-rate time-charters, usually with terms ranging from 20 to 25 years. One of our principal strategies is to enter into additional long-term, fixed-rate LNG time-charters. In recent years, the amount of LNG traded on a spot and short-term basis (defined as contracts with a duration of 4 years or less) has been increasing. In 2018, spot and short-term trades accounted for approximately 30% of global LNG trade.

If the active spot, short-term or medium-term markets continue to develop, we may have increased difficulty entering into long-term, fixed-rate time-charters for our LNG carriers and, as a result, our cash flow may decrease and be less stable. In addition, an active short-term, medium-term or spot LNG market may require us to enter into charters based on changing market prices, as opposed to contracts based on a fixed rate, which could result in a decrease in our cash flow in periods when the market price for shipping LNG is depressed.

Over time, the value of our vessels may decline, which could adversely affect our operating results.

Vessel values for LNG and LPG carriers and conventional tankers can fluctuate substantially over time due to a number of different factors, including:

- prevailing economic conditions in natural gas, oil and energy markets;
- a substantial or extended decline in demand for natural gas, LNG, LPG or oil;
- competition from more technologically advanced vessels;
- increases in the supply of vessel capacity; and
- the cost of retrofitting or modifying existing vessels, as a result of technological advances in vessel design or equipment, changes in applicable environmental or other regulation or standards, or otherwise.

Vessel values may decline from existing levels. If the operation of a vessel is not profitable, or if we cannot redeploy a chartered vessel at attractive rates upon charter termination, rather than continue to incur costs to maintain and finance the vessel, we may seek to dispose of it. Our inability to dispose of the vessel at a fair market value or the disposal of the vessel at a fair market value that is lower than its book value could result in a loss on its sale and adversely affect our results of operations and financial condition. Further, if we determine at any time that a vessel's future useful life and earnings require us to impair its value on our financial statements, we may need to recognize a significant charge against our earnings.

We have recognized vessel and goodwill write-downs in the past and we may recognize additional write-downs in the future, which will reduce our earnings and net assets.

If we determine at any time that a vessel's value or goodwill has been impaired, we may need to recognize an impairment charge that will reduce our earnings and net assets. We review our vessels for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable, which occurs when an asset's carrying value is greater than the estimated undiscounted future cash flows the asset is expected to generate over its remaining useful life. We review our goodwill for impairment annually and if a reporting unit's goodwill carrying value is greater than the estimated fair value, the goodwill attributable to that reporting unit is impaired.

A reduction in our net assets could result in a breach of certain financial covenants contained in our credit agreements, which could limit our ability to borrow additional funds under our credit facilities or require us to repay outstanding amounts. This could harm our business, results of operations, financial condition, ability to raise capital or ability to pay distributions.

For the write-downs that occurred during 2018, please read "Item 5 – Operating and Financial Review and Prospects: Management's Discussion and Analysis of Financial Condition and Results of Operations – Year Ended December 31, 2018 versus Year Ended December 31, 2017", "Item 18 – Financial Statements: Note 8 – Intangible Assets and Goodwill" and "Note 19 – Write-Down and Loss on Sales of Vessels."

Increased technological innovation in vessel design or equipment could reduce our charter hire rates and the value of our vessels.

The charter hire rates and the value and operational life of a vessel are determined by a number of factors, including the vessel's efficiency, operational flexibility and physical life. Efficiency includes speed, fuel economy and the ability for LNG or LPG to be loaded and unloaded quickly. More efficient vessel designs, engines or other features may increase overall vessel efficiency. Flexibility includes the ability to access LNG and LPG storage facilities, utilize related docking facilities and pass through canals and straits. Physical life is related to the original design and construction, maintenance and the impact of the stress of operations. If new LNG or LPG carriers are built that are more efficient or flexible or have longer physical lives than our vessels, competition from these more technologically advanced LNG or LPG carriers could reduce recharter rates available to our vessels and the resale value of the vessels. As a result, our business, results of operations and financial condition could be harmed.

Actual results of new technologies or technologies upgrades may differ from expected results and affect our results of operations.

We have invested and are investing in technology upgrades such as MEGI twin engines and other equipment and designs for certain LNG carrier newbuildings, including, among other things, to improve fuel efficiency and vessel performance. These new engine designs and other equipment may not perform to expectations, which may result in performance issues or claims based on failure to achieve specification included in charter party agreements. Actual fuel consumption for our MEGI LNG carriers exceeds specified levels in certain charter party agreements, which may result in reimbursement by us to the charterer for the cost of the excess fuel consumed. The amount of the reimbursements generally will increase to the extent fuel prices increase, including as a result of the IMO 2020 regulations that will take effect

January 1, 2020 and limit Sulphur content in vessel fuel oils. We are considering installing additional equipment to lower fuel consumption on these vessels and taking action against the shipbuilders for failure to deliver vessels that meet anticipated levels of fuel efficiency. Continued reimbursement obligations or unrecovered capital expenditures could harm our results of operations or financial condition.

We or our joint venture partners may be unable to deliver or operate an LNG receiving and regasification terminal.

We have contracted the construction of an LNG regasification and receiving terminal in Bahrain in which we will have a 30% ownership interest (please read "Item 18 – Financial Statements: Note 7a(i) – Equity-Accounted Investments"). We or our joint venture partners may be unable to operate a LNG receiving and regasification terminal properly, which could reduce the expected output of this terminal. As a result, our business, results of operations and financial condition could be harmed.

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

Due to concern over the risk of climate change, a number of countries have adopted, or are considering the adoption of, regulatory frameworks to reduce greenhouse gas emissions. These regulatory measures include, among others, adoption of cap and trade regimes, carbon taxes, increased efficiency standards, and incentives or mandates for renewable energy. Compliance with changes in laws, regulations and obligations relating to climate change could increase our costs related to operating and maintaining our vessels and require us to install new emission controls, acquire allowances or pay taxes related to our greenhouse gas emissions, or administer and manage a greenhouse gas emissions program. Revenue generation and strategic growth opportunities may also be adversely affected.

Adverse effects upon the oil and gas industry relating to climate change may also adversely affect demand for our services. Although we do not expect that demand for oil and gas will lessen dramatically over the short term, in the long term, climate change may reduce the demand for oil and gas or increased regulation of greenhouse gases may create greater incentives for use of alternative energy sources. Any long-term material adverse effect on the oil and gas industry could have a significant financial and operational adverse impact on our business that we cannot predict with certainty at this time.

We may be unable to make or realize expected benefits from acquisitions, and implementing our growth strategy through acquisitions may harm our business, financial condition and operating results.

Our growth strategy includes acquiring existing LNG and LPG carriers or LNG and LPG shipping businesses as the opportunities arise. Historically, there have been very few purchases of existing vessels and businesses in the LNG and LPG shipping industries. Factors that may contribute to a limited number of acquisition opportunities in the LNG and LPG shipping industries in the near term include the relatively small number of independent LNG and LPG fleet owners and the limited number of LNG and LPG carriers not subject to existing long-term charter contracts. In addition, competition from other companies could reduce our acquisition opportunities or cause us to pay higher prices.

Any acquisition of a vessel or business may not be profitable to us at or after the time we acquire it and may not generate cash flow sufficient to justify our investment. In addition, our acquisition growth strategy exposes us to risks that may harm our business, financial condition and operating results, including risks that we may:

- fail to realize anticipated benefits, such as new customer relationships, cost-savings or cash flow enhancements;
- be unable to hire, train or retain qualified shore and seafaring personnel to manage and operate our growing business and fleet;
- decrease our liquidity by using a significant portion of our available cash or borrowing capacity to finance acquisitions;
- significantly increase our interest expense or financial leverage if we incur additional debt to finance acquisitions;
- incur or assume unanticipated liabilities, losses or costs associated with the business or vessels acquired; or
- incur other significant charges, such as impairment of goodwill or other intangible assets, asset devaluation or restructuring charges.

Unlike newbuildings, existing vessels typically do not carry warranties as to their condition. While we generally inspect existing vessels prior to purchase, such an inspection would normally not provide us with as much knowledge of a vessel's condition as we would possess if it had been built for us and operated by us during its life. Repairs and maintenance costs for existing vessels are difficult to predict and may be substantially higher than for vessels we have operated since they were built. These costs could decrease our cash flow and reduce our liquidity.

Marine transportation is inherently risky, and an incident involving significant loss of or environmental contamination by any of our vessels could harm our reputation and business.

Our vessels, crew and cargoes are at risk of being damaged, injured or lost because of events such as:

- marine disasters;
- bad weather or natural disasters;
- mechanical failures;
- grounding, fire, explosions and collisions;

- piracy (hijacking and kidnapping);
- cyber attack;
- human error; and
- war and terrorism.

An accident involving any of our vessels could result in any of the following:

- death or injury to persons, loss of property or environmental damage;
- delays in the delivery of cargo;
- loss of revenues from or termination of charter contracts;
- governmental fines, penalties or restrictions on conducting business;
- higher insurance rates; and
- damage to our reputation and customer relationships generally.

Any of these results could have a material adverse effect on our business, financial condition and operating results. In addition, any damage to, or environmental contamination involving, oil production facilities serviced by our vessels could result in the suspension or curtailment of operations by our customer, which would in turn result in loss of revenues.

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

The operation of LNG and LPG carriers and oil tankers is inherently risky. Although we carry hull and machinery (marine and war risks) and protection and indemnity insurance, all risks may not be adequately insured against, and any particular claim may not be paid. In addition, only certain of our LNG and LPG carriers carry insurance covering the loss of revenues resulting from vessel off-hire time based on its cost compared to our off-hire experience. Any significant off-hire time of our vessels could harm our business, operating results and financial condition. Any claims covered by insurance would be subject to deductibles, and since it is possible that a large number of claims may be brought, the aggregate amount of these deductibles could be material. Certain 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 exceed association reserves.

We may be unable to procure adequate insurance coverage at commercially reasonable rates in the future. For example, more stringent environmental regulations have led in the past to increased costs for, and in the future may result in the lack of availability of, insurance against risks of environmental damage or pollution. A catastrophic oil spill, marine disaster or natural disasters could result in losses that exceed our insurance coverage, which could harm our business, financial condition and operating results. Any uninsured or underinsured loss could harm our business and financial condition. In addition, our insurance may be voidable by the insurers as a result of certain of our actions, such as our ships failing to maintain certification with applicable maritime regulatory organizations.

Changes in the insurance markets attributable to terrorist attacks or political change may also make certain types of insurance more difficult for us to obtain. In addition, the insurance that may be available may be significantly more expensive than our existing coverage.

Our and many of our customers’ substantial operations outside the United States expose us and them to political, governmental and economic instability, which could harm our operations.

Because our operations, and the operations of certain of our customers, are primarily conducted outside of the United States, they may be affected by economic, political and governmental conditions in the countries where we and they engage in business. Any disruption caused by these factors could harm our business or the business of these customers, including by reducing the levels of oil and gas exploration, development and production activities in these areas. We derive some of our revenues from shipping oil, LNG and LPG from politically and economically unstable regions, such as Angola and Yemen. Hostilities, strikes, or other political or economic instability in regions where we or these customers operate or where we or they may operate could have a material adverse effect on the growth of our business, results of operations and financial condition and ability to make cash distributions, or on the ability of these customers to make payments or otherwise perform their obligations to us. In addition, tariffs, trade embargoes and other economic sanctions by the United States or other countries against countries in which we operate or to which we trade may harm our business and ability to make cash distributions and a government could requisition one or more of our vessels, which is most likely during war or national emergency. Any such requisition would cause a loss of the vessel and could harm our cash flow and financial results. Please see above relating to our two vessels chartered out to YLNG "Item 3 – Risk Factors: We derive a substantial majority of our revenues from a limited number of customers, and the loss of any customer, charter or vessel, or any adjustment to our charter contracts could result in a significant loss of revenues and cash flow."

Terrorist attacks, increased hostilities, political change or war could lead to further economic instability, increased costs and disruption of our business.

Terrorist attacks, the current conflicts in the Middle East, South East Asia, West Africa (Nigeria), Libya and elsewhere, and political change, may adversely affect our business, operating results, financial condition, ability to raise capital and future growth. Continuing hostilities in the

Middle East, especially among Qatar, Saudi Arabia, UAE, Yemen and elsewhere may lead to additional armed conflicts or to further acts of terrorism and civil disturbance in the United States, or elsewhere, which may contribute to economic instability and disruption of LNG, LPG and oil production and distribution, which could result in reduced demand for our services or impact on our operations and or our ability to conduct business.

In addition, LNG, LPG and oil facilities, shipyards, vessels, pipelines and oil and gas fields could be targets of future terrorist attacks and warlike operations and our vessels could be targets of hijackers, terrorists or warlike operations. Any such attacks could lead to, among other things, bodily injury or loss of life, vessel or other property damage, increased vessel operational costs, including insurance costs, and the inability to transport LNG, LPG and oil to or from certain locations. Terrorist attacks, war, hijacking or other events beyond our control that adversely affect the distribution, production or transportation of LNG, LPG or oil to be shipped by us could entitle our customers to terminate our charter contracts, which would harm our cash flow and our business.

Terrorist attacks, or the perception that LNG or LPG facilities and carriers are potential terrorist targets, could materially and adversely affect expansion of LNG and LPG infrastructure and the continued supply and export of LNG and LPG involving the United States and other countries. Concern that LNG or LPG facilities may be targeted for attack by terrorists, as well as environmental concerns, has contributed to significant community resistance to the construction of a number of LNG or LPG facilities, primarily in North America. If a terrorist incident involving a LNG or LPG facility or LNG or LPG carrier did occur, in addition to the possible effects identified in the previous paragraph, the incident may adversely affect construction of additional LNG or LPG facilities in the United States and other countries or lead to the temporary or permanent closing of various LNG or LPG facilities currently in operation.

Acts of piracy on ocean-going vessels continue to be a risk, which could adversely affect our business.

Acts of piracy have historically affected ocean-going vessels trading in regions of the world such as the South China Sea, Gulf of Guinea and the Indian Ocean off the coast of Somalia. While there continues to be a significant risk of piracy in the Gulf of Aden and Indian Ocean, recently there have been increases in the frequency and severity of piracy incidents off the coast of West Africa and a resurgent piracy risk in the Straits of Malacca, Sulu and Celebes Sea and surrounding waters. If these piracy attacks result in regions in which our vessels are deployed being named on the Joint War Committee Listed Areas, war risk insurance premiums payable for such coverage may increase significantly and such insurance coverage may be more difficult to obtain. In addition, crew costs, including costs which may be incurred to the extent we employ on-board armed security guards and escort vessels, could increase in such circumstances. 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 and results of operations.

A cyber-attack could materially disrupt our business

We rely on information technology systems and networks in our operations and the administration of our business. Cyber-attacks have increased in number and sophistication in recent years. Our operations could be targeted by individuals or groups seeking to sabotage or disrupt our information technology systems and networks, or to steal data. A successful cyber-attack could materially disrupt our operations, including the safety of our operations, or lead to unauthorized release of information or alteration of information on our systems. Any such attack or other breach of our information technology systems could have a material adverse effect on our business and results of operations.

Our failure to comply with data privacy laws could damage our customer relationships and expose us to litigation risks and potential fines.

Data privacy is subject to frequently changing rules and regulations, which sometimes conflict among the various jurisdictions and countries in which we provide services and continue to develop in ways which we cannot predict, including with respect to evolving technologies such as cloud computing. The European Union has adopted the General Data Privacy Regulation (or GDPR), a comprehensive legal framework to govern data collection, use and sharing and related consumer privacy rights which took effect in May 2018. The GDPR includes significant penalties for non-compliance. Our failure to adhere to or successfully implement processes in response to changing regulatory requirements in this area could result in legal liability or impairment to our reputation in the marketplace, which could have a material adverse effect on our business, financial condition and results of operations.

The ARC7 LNG carrier newbuildings for the Yamal LNG Project are customized vessels and our financial condition, results of operations and ability to make distributions on our units could be substantially affected if the Yamal LNG Project is abandoned.

On July 9, 2014, the Yamal LNG Joint Venture ordered six internationally-flagged icebreaker LNG carriers for a project located on the Yamal Peninsula in Northern Russia (or the Yamal LNG Project), two of which newbuilding carriers delivered in 2018. The Yamal LNG Project is a joint venture between Russia-based Novatek OAO (or Novatek) (50.1%), France-based Total S.A. (20%), China-based China National Petroleum Corporation (20%) and Silk Road Fund (9.9%).

The four remaining ARC7 LNG carrier newbuildings ordered by the Yamal LNG Joint Venture, which are scheduled for delivery during the remainder of 2019, are being specifically built for the Arctic requirements of the Yamal LNG Project and will have limited redeployment opportunities to operate as conventional trading LNG carriers if the project is abandoned or cancelled. If the project is abandoned or cancelled after commencement of operations, the Yamal LNG Joint Venture may be unable to reach an agreement with the shipyard allowing for the termination of the shipbuilding contracts (since no such optional termination right exists under these contracts), change the vessel specifications to reflect those applicable to more conventional LNG carriers and which do not incorporate ice-breaking capabilities, or find suitable alternative employment for the newbuilding vessels on a long-term basis with other LNG projects or otherwise.

The Yamal LNG Project may be abandoned for various reasons, including, among others:

- failure to achieve expected operating results;
- changes in demand for LNG;
- adverse changes in Russian regulations or governmental policy relating to the project or the export of LNG;
- technical challenges of completing and operating the complex project, particularly in extreme Arctic conditions;
- labor disputes; or
- environmental regulations or potential claims.

If the project is abandoned, proceeds if any, received from limited Yamal LNG project sponsor guarantees and potential alternative employment, if any, of the vessels and from potential sales of components and scrapping of the vessels likely would fall substantially short of the cost of the vessels to the Yamal LNG Joint Venture. Any such shortfall could have a material adverse effect on our financial condition, results of operations and ability to make cash distributions to unitholders.

Sanctions against key participants in the Yamal LNG Project could impede completion or performance of the Yamal LNG Project, which could have a material adverse effect on us.

The U.S. Treasury Department's Office of Foreign Assets Control (or OFAC) placed Russia-based Novatek, a 50.1% owner of the Yamal LNG Project, on the Sectoral Sanctions Identifications List. OFAC also previously imposed sanctions on an investor in Novatek and these sanctions also remain in effect. The current restrictions on Novatek prohibit U.S. persons (and their subsidiaries) from participating in debt financing transactions of greater than 60 days maturity with Novatek and, by virtue of Novatek's 50.1% ownership interest, the Yamal LNG Project. The European Union also imposed certain sanctions on Russia. These sanctions require a European Union license or authorization before a party can provide certain technologies or technical assistance, financing, financial assistance, or brokering with regard to these technologies. However, the technologies being currently sanctioned by the EU appear to focus on oil exploration projects, not gas projects. In addition, OFAC and other governments or organizations may impose additional sanctions on Novatek, the Yamal LNG Project or other project participants, which may further hinder the ability of the Yamal LNG Project to receive necessary financing. Although we believe that we are in compliance with all applicable sanctions, laws and regulations, and intend to maintain such compliance, the scope of these sanctions laws may be subject to change. Future sanctions may prohibit the Yamal LNG Joint Venture from performing under its contracts with the Yamal LNG Project, which could have a material adverse effect on our financial condition, results of operations and ability to make cash distributions on our units.

Failure of the Yamal LNG Project to achieve expected results could lead to a default under the time-charter contracts by the charter party.

The charter party under the Yamal LNG Joint Venture's time-charter contracts for the Yamal LNG Project is Yamal Trade Pte. Ltd., a wholly-owned subsidiary of Yamal LNG, the project's sponsor. If the Yamal LNG Project does not achieve expected results, the risk of charter party default may increase. Any such default could adversely affect our results of operations and ability to make cash distributions on our units. If the charter party defaults on the time-charter contracts, we may be unable to redeploy the vessels under other time-charter contracts or may be forced to scrap the vessels.

We assume credit risk by entering into agreements with unrated entities.

Some of our vessels are chartered to unrated entities and some of these unrated entities will use revenue generated from the sale of the shipped gas to pay their shipping and other operating expenses, including the charter fees. The price of the gas may be subject to market fluctuations and the LNG supply may be curtailed by start-up delays and stoppages. If the revenue generated by the charterer is insufficient to pay the charter fees, we may be unable to realize the expected economic benefit from these charter agreements. In addition, some of our financing related to certain of our LNG carrier newbuildings are with unrated entities. Any inability of these entities to meet their obligations under the financing arrangements, could have an adverse effect on our liquidity and potentially delay the deliveries of certain of our LNG carrier newbuildings.

The marine energy transportation industry is subject to substantial environmental and other regulations, which may significantly limit our operations or increase our expenses.

Our operations are affected by extensive and changing international, national and local environmental protection laws, regulations, treaties and conventions in force in international waters, the jurisdictional waters of the countries in which our vessels operate, as well as the countries of our vessels' registration, including those governing oil spills, discharges to air and water, and the handling and disposal of hazardous substances and wastes. Many of these requirements are designed to reduce the risk of oil spills and other pollution. In addition, we believe that the heightened environmental, quality and security concerns of insurance underwriters, regulators and charterers will lead to additional regulatory requirements, including enhanced risk assessment and security requirements and greater inspection and safety requirements on vessels. We expect to incur substantial expenses in complying with these laws and regulations, including expenses for vessel modifications and changes in operating procedures.

These requirements can affect the resale value or useful lives of our vessels, require a reduction in cargo capacity, ship modifications or operational changes or restrictions, lead to decreased availability of insurance coverage for environmental matters or result in the denial of access to certain jurisdictional waters or ports, or detention in certain ports. Under local, national and foreign laws, as well as international treaties and conventions, we could incur material liabilities, including cleanup obligations, in the event that there is a release of petroleum or other hazardous substances from our vessels or otherwise in connection with our operations. We could also become subject to personal injury or property damage claims relating to the release of or exposure to hazardous materials associated with our operations. In addition, failure to comply with applicable laws and regulations may result in administrative and civil penalties, criminal sanctions or the suspension or termination of our operations, including, in certain instances, seizure or detention of our vessels. For further information about regulations affecting our business and related requirements on us, please read “Item 4 – Information on the Partnership: B. Operations - Regulations.”

Exposure to currency exchange rate fluctuations will result in fluctuations in our cash flows and operating results.
We are paid in Euros under some of our charters, and certain of our vessel operating expenses and general and administrative expenses currently are denominated in Euros, which is primarily a function of the nationality of our crew and administrative staff. We also make payments under two Euro-denominated term loans. If the amount of our Euro-denominated obligations exceeds our Euro-denominated revenues, we must convert other currencies, primarily the U.S. Dollar, into Euros. An increase in the strength of the Euro relative to the U.S. Dollar would require us to convert more U.S. Dollars to Euros to satisfy those obligations, which would cause us to have less cash available for distribution to unitholders. In addition, if we do not have sufficient U.S. Dollars, we may be required to convert Euros into U.S. Dollars for distributions to unitholders. An increase in the strength of the U.S. Dollar relative to the Euro could cause us to have less cash available for distribution in this circumstance. We have not entered into currency swaps or forward contracts or similar derivatives to mitigate this risk.

Because we report our operating results in U.S. Dollars, changes in the value of the U.S. Dollar relative to the Euro and Norwegian Kroner also result in fluctuations in our reported revenues and earnings. In addition, under U.S. accounting guidelines, all foreign currency-denominated monetary assets and liabilities such as cash and cash equivalents, accounts receivable, restricted cash, accounts payable, accrued liabilities, advances from affiliates and long-term debt, are revalued and reported based on the prevailing exchange rate at the end of the period. This revaluation historically has caused us to report significant unrealized foreign currency exchange gains or losses each period. The primary source for these gains and losses is our Euro-denominated term loans and our Norwegian Kroner-denominated (or NOK) bonds.
Exposure to interest rate fluctuations will result in fluctuations in our cash flows and operating results.
We are exposed to the impact of interest rate changes primarily through our borrowings that require us to make interest payments based on LIBOR, EURIBOR or NIBOR. Significant increases in interest rates could adversely affect our operating margins, results of operations and our ability to service our debt. In addition, there is uncertainty as to the continued use of LIBOR in the future. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. These reforms and other pressures may cause LIBOR to be eliminated or to perform differently than in the past. The consequences of these developments cannot be entirely predicted but could include an increase in the cost of our variable rate indebtedness and obligations. In accordance with our risk management policy, we use interest rate swaps to reduce our exposure to market risk from changes in interest rates. The principal objective of these contracts is to minimize the risks and costs associated with our floating-rate debt.

In addition, we are exposed to credit loss in the event of non-performance by the counterparties to the interest rate swap agreements. For further information about our financial instruments at December 31, 2018, that are sensitive to changes in interest rates, please read "Item 11 – Quantitative and Qualitative Disclosures About Market Risk."

Many of our seafaring employees are covered by collective bargaining agreements and the failure to renew those agreements or any future labor agreements may disrupt our operations and adversely affect our cash flows.

A significant portion of our seafarers, and the seafarers employed by Teekay Corporation and its other affiliates that crew some of our vessels, are employed under collective bargaining agreements. While some of our labor agreements have recently been renewed, crew compensation levels under future collective bargaining agreements may exceed existing compensation levels, which would adversely affect our results of operations and cash flows. We may be subject to labor disruptions in the future if our relationships deteriorate with our seafarers or the unions that represent them. Our collective bargaining agreements may not prevent labor disruptions, particularly when the agreements are being renegotiated. Any labor disruptions could harm our operations and could have a material adverse effect on our business, results of operations and financial condition and our ability to make cash distributions to unitholders.

Teekay Corporation and certain of our joint venture partners may be unable to attract and retain qualified, skilled employees or crew necessary to operate our business, or may have to pay substantially increased costs for its employees and crew.

Our success depends in large part on Teekay Corporation’s and certain of our joint venture partners’ ability to attract and retain highly skilled and qualified personnel. In crewing our vessels, we require technically skilled employees with specialized training who can perform physically demanding work. The ability to attract and retain qualified crew members under a competitive industry environment continues to put upward pressure on crew manning costs.

If we are not able to increase our charter rates to compensate for any crew cost increases, our financial condition and results of operations may be adversely affected. Any inability we experience in the future to hire, train and retain a sufficient number of qualified employees could impair our ability to manage, maintain and grow our business.
Due to our lack of diversification, adverse developments in our LNG or LPG marine transportation businesses could reduce our ability to make distributions to our unitholders.
We rely exclusively on the cash flow generated from our LNG and LPG carriers that operate in the LNG or LPG transportation businesses. Due to our lack of diversification, an adverse development in the LNG or LPG shipping industry would have a significantly greater impact on our financial condition and results of operations than if we maintained more diverse assets or lines of business.
Teekay Corporation and its affiliates may engage in competition with us.
Teekay Corporation and its affiliates and joint ventures, including its equity-accounted investee, Teekay Offshore Partners L.P. (or Teekay Offshore), may engage in competition with us. Pursuant to an omnibus agreement between Teekay Corporation, Teekay Offshore, us and other related parties, Teekay Corporation, Teekay Offshore and their respective controlled affiliates (other than us and our subsidiaries) generally have agreed not to own, operate or charter LNG carriers without the consent of our General Partner. The omnibus agreement, however, allows Teekay Corporation, Teekay Offshore or any of such controlled affiliates to:

- acquire LNG carriers and related time-charters as part of a business if a majority of the value of the total assets or business acquired is not attributable to the LNG carriers and time-charters, as determined in good faith by the Board of Directors of Teekay Corporation or the Board of Directors of Teekay Offshore's general partner; however, if at any time Teekay Corporation or Teekay Offshore completes such an acquisition, it must offer to sell the LNG carriers and related time-charters to us for their fair market value plus any additional tax or other similar costs to Teekay Corporation or Teekay Offshore that would be required to transfer the LNG carriers and time-charters to us separately from the acquired business; or
- own, operate and charter LNG carriers that relate to a bid or award for an LNG project that Teekay Corporation or any of its subsidiaries submits or receives; however, at least 180 days prior to the scheduled delivery date of any such LNG carrier, Teekay Corporation must offer to sell the LNG carrier and related time-charter to us, with the vessel valued at its "fully-built-up cost," which represents the aggregate expenditures incurred (or to be incurred prior to delivery to us) by Teekay Corporation to acquire or construct and bring such LNG carrier to the condition and location necessary for our intended use, plus a reasonable allocation of overhead costs related to the development of such a project and other projects that would have been subject to the offer rights set forth in the omnibus agreement but were not completed.

If we decline the offer to purchase the LNG carriers and time-charters described above, Teekay Corporation or Teekay Offshore may own and operate the LNG carriers, but may not expand that portion of its business.

In addition, pursuant to the omnibus agreement, Teekay Corporation, Teekay Offshore or any of their respective controlled affiliates (other than us and our subsidiaries) may:

- acquire, operate or charter LNG carriers if our General Partner has previously advised Teekay Corporation or Teekay Offshore that the Board of Directors of our General Partner has elected, with the approval of its conflicts committee, not to cause us or our subsidiaries to acquire or operate the carriers;
- acquire up to a 9.9% equity ownership, voting or profit participation interest in any publicly traded company that owns or operates LNG carriers; and
- provide ship management services relating to LNG carriers.

During 2018, there was a change in control of Teekay Offshore, which gives Teekay Offshore the right to elect to terminate the omnibus agreement. Termination of the omnibus agreement could have an adverse effect on our business, results of operations and financial condition and our ability to make cash distributions to unitholders. We have not received any indication from Teekay Offshore that it intends to terminate the omnibus agreement.

Our General Partner and its other affiliates own a controlling interest in us and have conflicts of interest and limited fiduciary duties, which may permit them to favor their own interests to those of unitholders.

Teekay Corporation, which owns and controls our General Partner, indirectly owns our 2% general partner interest and as at December 31, 2018 owned 31.8% of our common units. The directors and officers of our General Partner have a fiduciary duty to manage our General Partner in a manner beneficial to Teekay Corporation. Furthermore, certain directors and officers of our General Partner are directors or officers of affiliates of our General Partner. Conflicts of interest may arise between Teekay Corporation and its affiliates, including our General Partner, on the one hand, and us and our unitholders, on the other hand. As a result of these conflicts, our General Partner may favor its own interests and the interests of its affiliates over the interests of our unitholders. These conflicts include, among others, the following situations:

- neither our partnership agreement nor any other agreement requires our General Partner or Teekay Corporation to pursue a business strategy that favors us or utilizes our assets, and Teekay Corporation’s officers and directors have a fiduciary duty to make decisions in the best interests of the shareholders of Teekay Corporation, which may be contrary to our interests;

- executive officers of Teekay Gas Group Ltd., our recently formed subsidiary, and three of the directors of our General Partner also currently serve as officers or directors of Teekay Corporation;
- our General Partner is allowed to take into account the interests of parties other than us, such as Teekay Corporation, in resolving conflicts of interest, which has the effect of limiting its fiduciary duty to our unitholders;
- our General Partner has limited its liability and restricted its fiduciary duties under the laws of the Republic of the Marshall Islands, while also restricting the remedies available to our unitholders, and as a result of purchasing units, unitholders are treated as having agreed to the modified standard of fiduciary duties and to certain actions that may be taken by our General Partner, all as set forth in our partnership agreement;
- our General Partner determines the amount and timing of our asset purchases and sales, capital expenditures, borrowings, issuances of additional partnership securities and reserves, each of which can affect the amount of cash that is available for distribution to our unitholders;
- in some instances, our General Partner may cause us to borrow funds in order to permit the payment of cash distributions, even if the purpose or effect of the borrowing is to make incentive distributions to affiliates to Teekay Corporation;
- our General Partner determines which costs incurred by it and its affiliates are reimbursable by us;
- our partnership agreement does not restrict our General Partner from causing us to pay it or its affiliates for any services rendered to us on terms that are fair and reasonable or entering into additional contractual arrangements with any of these entities on our behalf;
- our General Partner controls the enforcement of obligations owed to us by it and its affiliates; and
- our General Partner decides whether to retain separate counsel, accountants or others to perform services for us.

The fiduciary duties of the officers and directors of our General Partner may conflict with those of the officers and directors of Teekay Corporation.

Our General Partner has limited fiduciary duties to manage our business in a manner beneficial to us and our partners. Our General Partner has a Corporate Secretary but does not have a Chief Executive Officer or a Chief Financial Officer. The Corporate Secretary and the non-independent director of our General Partner also serve as officers or directors of Teekay Corporation and/or other affiliates of Teekay Corporation. Consequently, these officers and directors may encounter situations in which their fiduciary obligations to Teekay Corporation or its other affiliates, on one hand, and us, on the other hand, are in conflict. The resolution of these conflicts may not always be in the best interest of us or our unitholders.

Because we are organized under the laws of the Marshall Islands, it may be difficult to serve us with legal process or enforce judgments against us, our directors or our management.

We are organized under the laws of the Marshall Islands, and all of our assets are located outside of the United States. In addition, certain of our General Partner's directors and officers are non-residents of the United States, and all or a substantial portion of the assets of these non-residents are located outside the United States. As a result, it may be difficult or impossible to bring an action against us or against these individuals in the United States. Even if successful in bringing an action of this kind, the laws of the Marshall Islands and of other jurisdictions may prevent or restrict the enforcement of a judgment against our assets or the assets of our general partner or its directors and officers.

As a Marshall Islands entity with our headquarters in Bermuda, and with a majority of our subsidiaries being Marshall Islands entities and also having subsidiaries in other offshore jurisdictions, our operations may be subject to economic substance requirements of the European Union, which could harm our business.

Finance ministers of the EU rate jurisdictions for tax transparency, governance, real economic activity and corporate tax rate. Countries that do not adequately cooperate with the finance ministers are put on a “grey list” or a “blacklist”. Various countries, including the Republic of the Marshall Islands and Bermuda, are currently on the blacklist.

EU member states have agreed upon a set of measures, which they can choose to apply against the listed countries, including increased monitoring and audits, withholding taxes, special documentation requirements and anti-abuse provisions. The European Commission has stated it will continue to support member states' efforts to develop a more coordinated approach to sanctions for the listed countries in 2019. EU legislation prohibits EU funds from being channelled or transited through entities in countries on the blacklist.

We are a Marshall Islands limited partnership with our headquarters in Bermuda. A majority of our subsidiaries are Marshall Islands entities and many of our subsidiaries are either organized or registered in Bermuda. It is difficult to determine how the EU blacklisting of these jurisdictions will affect our business. These jurisdictions have enacted or may enact economic substance laws and regulations with which we may be obligated to comply. We understand that recently-adopted Bermudian legislation requires each Bermudian-registered entity to maintain a substantial economic presence in Bermuda and provides that a registered entity that carries on a relevant activity may comply with the economic substance requirements if (i) it is directed and managed in Bermuda, (ii) its core income-generating activities are undertaken in Bermuda with respect to the relevant activity, (iii) it maintains adequate physical presence in Bermuda, (iv) it has adequate full-time employees in Bermuda with suitable qualifications and (v) it incurs adequate operating expenditures in Bermuda in relation to the relevant activity. We do not know what actions the Marshall Islands may take, if any, to remove itself from the list; whether the EU will remove the Marshall Islands or Bermuda from the list; how quickly the EU would react to any changes in legislation of the Marshall Islands, Bermuda or other applicable jurisdictions; or how EU banks or other counterparties will react while we or any of our subsidiaries remain as entities organized and existing or registered under the laws of blacklisted countries. The effect of the EU blacklist, and any noncompliance by us with any legislation adopted by applicable countries to achieve removal from the list, could have a material adverse effect on our business, financial condition and operating results.

Our joint venture arrangements impose obligations upon us but limit our control of the joint ventures, which may affect our ability to achieve our joint venture objectives.

For financial or strategic reasons, we conduct a portion of our business through joint ventures. Generally, we are obligated to provide proportionate financial support for the joint ventures although our control of the business entity may be substantially limited. Due to this limited control, we generally have less flexibility to pursue our own objectives through joint ventures or to access available cash of the joint ventures than we would with our own subsidiaries. There is no assurance that our joint venture partners will continue their relationships with us in the future or that we will be able to achieve our financial or strategic objectives relating to the joint ventures and the markets in which they operate. In addition, our joint venture partners may have business objectives that are inconsistent with ours, experience financial and other difficulties that may affect the success of the joint venture or be unable or unwilling to fulfill their obligations under the joint ventures, which may affect our financial condition or results of operations.

Tax Risks

In addition to the following risk factors, you should read “Item 10 – Additional Information: Taxation” for a more complete discussion of the expected material U.S. federal and non-U.S. income tax considerations relating to us and the ownership and disposition of our units.

U.S. tax authorities could treat us as a “passive foreign investment company,” which could have adverse U.S. federal income tax consequences to U.S. holders.

A non-U.S. entity treated as a corporation for U.S. federal income tax purposes will be treated as a “passive foreign investment company” (or PFIC), for such purposes in any taxable year for which either (a) at least 75% of its gross income consists of “passive income,” or (b) at least 50% of the average value of the entity’s assets is attributable to assets that produce or are held for the production of “passive income.” For purposes of these tests, “passive income” includes dividends, interest, gains from the sale or exchange of investment property and rents and royalties (other than rents and royalties that are received from unrelated parties in connection with the active conduct of a trade or business). By contrast, income derived from the performance of services does not constitute “passive income.”

There are legal uncertainties involved in determining whether the income derived from our time-chartering activities constitutes rental income or income derived from the performance of services, including the decision in Tidewater Inc. v. United States, 565 F.3d 299 (5th Cir. 2009), which 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 Internal Revenue Code of 1986, as amended (or the Code). However, the Internal Revenue Service (or IRS) stated in an Action on Decision (AOD 2010-01) that it disagrees with, and will not acquiesce to, the way that the rental versus services framework was applied to the facts in the Tidewater decision, and in its discussion stated that the time charters at issue in Tidewater would be treated as producing services income for PFIC purposes. The IRS’s statement with respect to Tidewater cannot be relied upon or otherwise cited as precedent by taxpayers. Consequently, in the absence of any binding legal authority specifically relating to the statutory provisions governing PFICs, there can be no assurance that the IRS or a court would not follow the Tidewater decision in interpreting the PFIC provisions of the Code. Nevertheless, based on our and our subsidiaries’ current assets and operations, we intend to take the position that we are not now and have never been a PFIC. No assurance can be given, however, that this position would be sustained by a court if contested by the IRS, or that we would not constitute a PFIC for any future taxable year if there were to be changes in our assets, income or operations.

If the IRS were to determine that we are or have been a PFIC for any taxable year during which a U.S. Holder (as defined below under "Item 10 – Additional Information: Material U.S. Federal Income Tax Considerations") held units, such U.S. Holder would face adverse tax consequences. For a more comprehensive discussion regarding the tax consequences to U.S. Holders if we are treated as a PFIC, please read "Item 10 – Additional Information: Material U.S. Federal Income Tax Considerations – United States Federal Income Taxation of U.S. Holders – Consequences of Possible PFIC Classification."

We are subject to taxes, which reduces our cash available for distribution to partners.

We or our subsidiaries are subject to tax in certain jurisdictions in which we or our subsidiaries are organized, own assets or have operations, which reduces the amount of our cash available for distribution. In computing our tax obligations in these jurisdictions, we are required to take various tax accounting and reporting positions on matters that are not entirely free from doubt and for which we have not received rulings from the governing authorities. We cannot assure you that upon review of these positions, the applicable authorities will agree with our positions. A successful challenge by a tax authority could result in additional tax imposed on us or our subsidiaries, further reducing the cash available for distribution. We have established reserves in our financial statements that we believe are adequate to cover our liability for any such additional taxes. We cannot assure you, however, that such reserves will be sufficient to cover any additional tax liability that may be imposed on our subsidiaries. In addition, changes in our operations or ownership could result in additional tax being imposed on us or on our subsidiaries in jurisdictions in which operations are conducted. For example, Teekay Corporation indirectly owns less than 50% of the value of our outstanding units but has voting control of us and therefore we believe that we do not satisfy the requirements of the exemption from U.S. taxation under Section 883 of the Code and our U.S. source income is subject to taxation under Section 887 of the Code. The amount

of such tax will depend upon the amount of income we earn from voyages into or out of the United States, which is not within our complete control.
Unitholders may be subject to income tax in one or more non-U.S. countries, including Canada, as a result of owning our units if, under the laws of any such country, we are considered to be carrying on business there. Such laws may require unitholders to file a tax return with, and pay taxes to, those countries.
Unitholders may be subject to tax in one or more countries, including Canada, as a result of owning our units if, under the laws of any such country, we are considered to be carrying on business there. If unitholders are subject to tax in any such country, unitholders may be required to file a tax return with, and pay taxes to, that country based on their allocable share of our income. We may be required to reduce distributions to unitholders on account of any withholding obligations imposed upon us by that country in respect of such allocation to unitholders. The United States may not allow a tax credit for any foreign income taxes that unitholders directly or indirectly incur.

Item 4.Information on the Partnership
A. Overview, History and Development
Overview and History
Teekay LNG Partners L.P. is an international provider of marine transportation services for LNG, LPG and crude oil. We were formed in 2004 by Teekay Corporation (NYSE: TK), a portfolio manager of marine services to the global oil and natural gas industries, to expand its operations in the LNG shipping sector. Our primary strategy focuses on servicing our customers through our fleet of LNG and LPG carriers under medium to long-term, fixed-rate charters. In executing our strategy, we may engage in vessel or business acquisitions or enter into joint ventures and partnerships with companies that provide increased access to emerging opportunities from global expansion of the LNG and LPG sectors. We seek to leverage the expertise, relationships and reputation of Teekay Corporation and its affiliates to pursue these opportunities in the LNG and LPG sectors and may consider other opportunities to which our competitive strengths are well suited, including entering into the LNG receiving and regasification terminal business.

Please see “Item 5 – Operating and Financial Review and Prospects: Management’s Discussion and Analysis of Financial Condition and Results of Operations – Significant Developments in 2018 and Early 2019.”

As of December 31, 2018, our fleet, excluding newbuildings, consisted of 43 LNG carriers (including the six MALT LNG Carriers, four RasGas 3 LNG Carriers, four Angola LNG Carriers, three Pan Union LNG Carriers, one Exmar LNG Carrier and two ARC7 LNG carriers (or the Yamal LNG Carriers) that are all accounted for under the equity method), 29 LPG and multi-gas carriers (including the 22 Exmar LPG Carriers that are accounted for under the equity method), one Suezmax-class crude oil tanker, and one Handymax product tanker, all of which are double-hulled. Our fleet is relatively young and has an average age of approximately eight years for our LNG carriers, approximately eight years for our LPG and multi-gas carriers and approximately 12 years for our conventional tankers (Suezmax and Handymax), compared to world averages of 10, 15 and 10 years, respectively, as of December 31, 2018. As at December 31, 2018, we had six LNG carrier newbuildings scheduled for delivery in 2019, and one LNG receiving and regasification terminal under construction scheduled for completion in 2019.

Our fleets of LNG and LPG carriers (excluding newbuildings but including equity-accounted vessels) currently have approximately 7.2 million and 0.9 million cubic meters of total capacity, respectively. The aggregate capacity of our conventional tanker fleet is approximately 0.2 million deadweight tonnes (or dwt).

We were formed under the laws of the Republic of The Marshall Islands as a limited partnership, Teekay LNG Partners L.P., on November 3, 2004, and maintain our principal executive offices at 4th Floor, Belvedere Building, 69 Pitts Bay Road, Hamilton, HM 08, Bermuda. Our telephone number at such address is (441) 298-2530.
B. Operations
Our Fleet and Our Charters

We generate revenues by charging customers for the transportation of their LNG, LPG and crude oil using our vessels. The majority of these services are provided through either a time-charter or bareboat charter contract, where vessels are chartered to customers for a fixed period of time at rates that are generally fixed but may contain a variable component based on inflation, interest rates or current market rates.

Our vessels and our regasification terminal under construction in Bahrain primarily operate under fixed-rate contracts with major energy and utility companies. As of December 31, 2018, the average remaining term for these contracts, including assets under construction, was approximately 10 years for our LNG carriers and regasification terminal, approximately two years for our LPG carriers and approximately half a year for our conventional tanker (Handymax), subject, in certain circumstances, to termination or vessel purchase rights.

“Hire” rate refers to the basic payment from the customer for the use of a vessel. Hire is payable monthly, in advance, in U.S. Dollars or Euros, as specified in the charter. The hire rate generally includes two components – a capital cost component and an operating expense component. The capital cost component typically approximates the amount we are required to pay under vessel financing obligations and, for two of our conventional tankers, adjusts for changes in the floating interest rates relating to the underlying vessel financing. The operating expense component, which adjusts annually for inflation, is intended to compensate us for vessel operating expenses. In addition, we may receive additional revenues beyond the fixed hire rate when current market rates exceed specified amounts under our time-charter contracts for two of our Suezmax tankers.

Hire payments may be reduced or, under some charters, we must pay liquidated damages, if the vessel does not perform to certain of its specifications, such as if the average vessel speed falls below a guaranteed speed or the amount of fuel consumed to power the vessel under normal circumstances exceeds a guaranteed amount.

When a vessel is “off-hire” – or not available for service – the customer generally is not required to pay the hire rate and we are responsible for all costs. Prolonged off-hire may lead to vessel substitution or termination of the time-charter. A vessel will typically be deemed to be off-hire if it is in dry dock unless our contract specifies drydocking is not considered off-hire. We must periodically dry dock each of our vessels for inspection, repairs and maintenance and any modifications to comply with industry certification or governmental requirements. In addition, a vessel generally will be deemed off-hire if there is a loss of time due to, among other things: operational deficiencies; equipment breakdowns; delays due to accidents, crewing strikes, certain vessel detentions or similar problems; or our failure to maintain the vessel in compliance with its specifications and contractual standards or to provide the required crew.

Liquefied Natural Gas Segment

LNG Carriers

The LNG carriers in our liquefied natural gas segment compete in the LNG market. LNG carriers are usually chartered to carry LNG pursuant to time-charter contracts, where a vessel is hired for a fixed period of time and the charter rate is payable to the owner on a monthly basis. LNG shipping historically has been transacted with long-term, fixed-rate time-charter contracts. LNG projects require significant capital expenditures and typically involve an integrated chain of dedicated facilities and cooperative activities. Accordingly, the overall success of an LNG project depends heavily on long-range planning and coordination of project activities, including marine transportation. Most shipping requirements for new LNG projects continue to be provided on a long-term basis, though the levels of spot voyages (typically consisting of a single voyage), short-term time-charters and medium-term time-charters have grown in the past few years. The amount of LNG traded on a spot and short-term basis (defined as contracts with a duration of 4 years or less) has increased from approximately 10% of total LNG supply in 2010 to approximately 30% in 2018.

In the LNG market, we compete principally with other private and state-controlled energy and utilities companies that generally operate captive fleets, and independent ship owners and operators. Many major energy companies compete directly with independent owners by transporting LNG for third parties in addition to their own LNG. Given the complex, long-term nature of LNG projects, major energy companies historically have transported LNG through their captive fleets. However, independent fleet operators have been obtaining an increasing percentage of charters for new or expanded LNG projects as some major energy companies have continued to divest non-core businesses.

LNG carriers transport LNG internationally between liquefaction facilities and import terminals. After natural gas is transported by pipeline from production fields to a liquefaction facility, it is supercooled to a temperature of approximately negative 260 degrees Fahrenheit. This process reduces its volume to approximately 1/600th of its volume in a gaseous state. The reduced volume facilitates economical storage and transportation by ship over long distances, enabling countries with limited natural gas reserves or limited access to long-distance transmission pipelines to import natural gas. LNG carriers include a sophisticated containment system that holds the LNG and provides insulation to reduce the amount of LNG that boils off naturally. The natural boil off is either used as fuel to power the engines on the ship or it can be reliquefied and put back into the tanks. LNG is transported overseas in specially built tanks in double-hulled ships to a receiving terminal, where it is offloaded and stored in insulated tanks. In regasification facilities at the receiving terminal, the LNG is returned to its gaseous state (or regasified) and then shipped by pipeline for distribution to natural gas customers.

With the exception of the Arctic Spirit and Polar Spirit, which are the only two ships in the world that utilize the Ishikawajima Harima Heavy Industries Self Supporting Prismatic Tank IMO Type B (or IHI SPB) independent tank technology, our fleet uses two of the Gaz Transport and Technigaz (or GTT) membrane containment systems. The GTT membrane systems are used in the majority of LNG tankers now being constructed. New LNG carriers generally have an expected lifespan of approximately 35 to 40 years. Unlike the oil tanker industry, there are currently no regulations that require the phase-out from trading of LNG carriers after they reach a certain age. As at December 31, 2018, our LNG carriers, excluding newbuilding vessels but including equity-accounted vessels, had an average age of approximately eight years, compared to the world LNG carrier fleet average age of approximately 10 years. In addition, as at that date, there were approximately 555 vessels in the world LNG fleet and approximately 136 additional LNG carriers under construction or on order for delivery through 2022.

The following table provides additional information about the LNG carriers in our operating fleet as of December 31, 2018.

Vessel	Capacity	Delivery	Our Ownership	Contract Type	Charterer	Expiration of Charter[1]
	(cubic meters)					
Operating LNG carriers: Consolidated						

Hispania Spirit	137,814	2002	100%	Time-charter	Shell Spain LNG S.A.U.	Sep. 2022(2)
Catalunya Spirit	135,423	2003	100%	Time-charter	Gas Natural SDG	Aug. 2023(2)
Galicia Spirit	137,814	2004	100%	Time-charter	Uniòn Fenosa Gas	Jul. 2029(3)
Madrid Spirit	135,423	2004	100%	Time-charter	Shell Spain LNG S.A.U.	Dec. 2024(2)
Al Marrouna	149,539	2006	70%	Time-charter	Ras Laffan Liquefied Natural Gas Company Ltd.	Oct. 2026(4)
Al Areesh	148,786	2007	70%	Time-charter	Ras Laffan Liquefied Natural Gas Company Ltd.	Jan. 2027(4)
Al Daayen	148,853	2007	70%	Time-charter	Ras Laffan Liquefied Natural Gas Company Ltd.	Feb. 2027(4)
Tangguh Hiri	151,885	2008	69%	Time-charter	The Tangguh Production Sharing Contractors	Jan. 2029
Tangguh Sago	155,000	2009	69%	Time-charter	The Tangguh Production Sharing Contractors	May 2029
Arctic Spirit	87,305	1993	99%	Time-charter	Petrobras LNG Ltd.	May 2022
Polar Spirit	87,305	1993	99%	Time-charter	Petrobras LNG Ltd.	Apr. 2019
Wilforce	155,900	2013	99%	Bareboat	Awilco LNG ASA	Dec. 2019(5)
Wilpride	155,900	2013	99%	Bareboat	Awilco LNG ASA	Dec. 2019(5)
Creole Spirit	173,000	2016	100% – Capital lease(6)	Time-charter	Cheniere Marketing, LLC	Feb. 2021
Oak Spirit	173,000	2016	100% – Capital lease(6)	Time-charter	Cheniere Marketing, LLC	Aug. 2021
Torben Spirit	173,400	2017	100% – Capital lease(6)	Time-charter	Gas Natural SDG	Dec. 2021
Magellan Spirit	165,700	2009	100% – Chartered-in(13)	Time-charter	Trafigure Maritime Logistics Pte Ltd.	Mar. 2019
Macoma	173,000	2017	99% – Capital lease(6)	Time-charter	Shell Tankers (Singapore) Private Ltd.	Oct. 2023(8)
Murex	173,000	2017	99% – Capital lease(6)	Time-charter	Shell Tankers (Singapore) Private Ltd.	Oct. 2024(8)
Magdala	173,000	2018	99% – Capital lease(6)	Time-charter	Shell Tankers (Singapore) Private Ltd.	Jan. 2026(8)
Myrina	173,000	2018	99% – Capital lease(6)	Time-charter	Shell Tankers (Singapore) Private Ltd.	May 2024(8)
Megara	173,000	2018	99% – Capital lease(6)	Time-charter	Shell Tankers (Singapore) Private Ltd.	Jul. 2026(8)
Bahrain Spirit	173,000	2018	100%	Time-charter	Bahrain LNG W.L.L.	Jul. 2039
Sean Spirit	174,000	2018	100%	Time-charter	BP Gas Marketing Limited	Dec. 2025(15)
Equity-Accounted						
Al Huwaila	214,176	2008	40%	Time-charter	Ras Laffan Liquefied Natural Gas Company Ltd.	May 2033(2)
Al Kharsaah	214,198	2008	40%	Time-charter	Ras Laffan Liquefied Natural Gas Company Ltd.	Jun. 2033(2)
Al Shamal	213,536	2008	40%	Time-charter	Ras Laffan Liquefied Natural Gas Company Ltd.	May 2033(2)

Al Khuwair	213,101	2008	40%	Time-charter	Ras Laffan Liquefied Natural Gas Company Ltd.	Jul. 2033(2)
Excalibur	138,034	2002	49%	Time-charter	Excelerate Energy LP	Mar. 2022
Soyo	160,400	2011	33%	Time-charter	Angola LNG Supply Services LLC	Aug. 2031(2)
Malanje	160,400	2011	33%	Time-charter	Angola LNG Supply Services LLC	Sep. 2031(2)
Lobito	160,400	2011	33%	Time-charter	Angola LNG Supply Services LLC	Oct. 2031(2)
Cubal	160,400	2012	33%	Time-charter	Angola LNG Supply Services LLC	Jan. 2032(2)
Meridian Spirit	165,700	2010	52%	Time-charter	Total E&P Norge AS Mansel Limited	Nov. 2030(9)
Magellan Spirit	165,700	2009	52%	Time-charter	Teekay LNG Partners L.P.(13)	Sep. 2020
Marib Spirit	165,500	2008	52%	Time-charter	Yemen LNG Company Limited(10)	Mar. 2029(9)
Arwa Spirit	165,500	2008	52%	Time-charter	Yemen LNG Company Limited(10)	Apr. 2029(9)
Methane Spirit	165,500	2008	52%	Time-charter	Osaka Gas	Jul. 2020(14)
Woodside Donaldson	165,500	2009	52%	Time-charter	Pluto LNG Party Limited	Jun. 2026(11)
Pan Asia	174,000	2017	30%	Time-charter	Methane Services Limited	Oct. 2037(12)
Pan Americas	174,000	2018	30%	Time-charter	Methane Services Limited	Jan. 2038(12)
Pan Europe	174,000	2018	20%	Time-charter	Methane Services Limited	Jul. 2038(12)
Eduard Toll	172,600	2018	50%	Time-charter	Yamal Trade PTE Ltd.	Dec. 2045(2)
Rudolf Samoylovich	172,600	2018	50%	Time-charter	Yamal Trade PTE Ltd.	Dec. 2045(2)
	7,179,292					

(1) Each of our time-charters are subject to certain termination and purchase provisions.
(2) The charterer has two options to extend the term for an additional five years each.
(3) The charterer has one option to extend the term for an additional five years.
(4) The charterer has three options to extend the term for an additional five years each.
(5) The charterer has an option to extend or decrease the term for 60 days and to purchase the vessel on any purchase option date. If no purchase option has been exercised by the charterer during the charter period, the charterer has an obligation to purchase each vessel at a fixed price at the end of the charter period.
(6) We are the lessee for these obligations related to capital leases and will be required to purchase the vessel after the end of the lease terms for a fixed price.
(7) The charterer has four options to extend the term for an additional 180 days, 180 days, one year and one year, respectively.
(8) The charterer has four options to extend the term for an additional three years each.
(9) The charterer has three options to extend the term for one, five and five additional years, respectively.
(10) Please see "Item 5 – Operating and Financial Review and Prospects: Management's Discussion and Analysis of Financial Condition and Results of Operations – Significant Developments in 2018 and early 2019: Charter Contracts for MALT LNG Carriers" relating to the status of this charter contract.
(11) The charterer has four options to extend the term for an additional five years each.
(12) The charterer has five options to extend the term for an additional two years each.
(13) The Magellan Spirit is chartered-in from the Teekay LNG-Marubeni Joint Venture, until September 2020.
(14) The charterer has one option to extend the term for an additional one year.
(15) The charterer has the right to terminate the charter contract after seven years.

The following table provides information about our LNG carrier newbuildings as of December 31, 2018. Charters for these vessels typically commence upon delivery of the vessels.

Vessel	Capacity (cubic meters)	Scheduled Delivery Date	Shipyard	Our Ownership	Charterer	Length of Charter
Consolidated						
Yamal Spirit	174,000	Jan. 2019(1)	HHI Sambo(2)	100%	Yamal Trade PTE. Ltd.	15 years
Equity-Accounted						
Pan Africa	174,000	Jan. 2019(1)	Hudong(3)	20%	Methane Services Limited	20 years(5)
Nikolay Yevgenov	172,600	Jun. 2019	DSME(4)	50%	Yamal Trade PTE Ltd.	26 years(6)
Vladimir Voronin	172,600	Aug. 2019	DSME(4)	50%	Yamal Trade PTE Ltd.	26 years(6)
Georgiy Ushakov	172,600	Oct. 2019	DSME(4)	50%	Yamal Trade PTE Ltd.	26 years(6)
Yakov Gakkel	172,600	Nov. 2019	DSME(4)	50%	Yamal Trade PTE Ltd.	26 years(6)
	1,038,400					

(1) The Yamal Spirit and the Pan Africa delivered in January 2019.
(2) Hyundai Samho Heavy Industries Co.
(3) Hudong-Zhongua Shipbuilding (Group) Co. Ltd.
(4) Daewoo Shipbuilding & Marine Engineering Co. Ltd.
(5) The charterer has five options to extend the term for an additional two years each.
(6) The charterer has two options to extend the term for an additional five years each.

The following table presents the percentage of our consolidated voyage revenues from LNG customers that accounted for more than 10% of our consolidated voyage revenues during 2018, 2017 and 2016.

	Year Ended December 31, 2018	2017	2016
Royal Dutch Shell Plc(1)	23 %	12%	12%
Ras Laffan Liquefied Natural Gas Company Ltd.	14 %	16%	18%
Cheniere Marketing International LLP	12 %	14%	Less than 10%
The Tangguh Production Sharing Contractors	Less than 10%	11%	11%

(1) Includes its subsidiaries Shell Spain LNG S.A.U. and Shell Tankers (Singapore) Private Ltd.

No other LNG customer accounted for 10% or more of our consolidated voyage revenues during any of these periods. The loss of any significant customer or a substantial decline in the amount of services requested by a significant customer could harm our business, financial condition and results of operations.

Other Assets

We have a 30% ownership interest in an LNG receiving and regasification terminal under construction in Bahrain. The construction of this terminal is expected to be completed in mid-2019 and will be operated under a 20-year agreement with National Oil & Gas Authority (or Nogaholding).

Liquefied Petroleum Gas Segment

LPG and Multi-gas Carriers

LPG shipping involves the transportation of three main categories of cargo: liquid petroleum gases, including propane, butane and ethane; petrochemical gases, including ethylene, propylene and butadiene; and ammonia.

In the LPG market, we compete principally with independent ship owners and operators, and other private and state-controlled energy and chemical companies that generally operate captive fleets.

As of December 31, 2018, our LPG and multi-gas carriers (including equity-accounted vessels) had an average age of approximately eight years, compared to the world LPG carrier fleet average age of approximately 15 years. As of that date, the worldwide LPG tanker fleet consisted of approximately 1,451 vessels and approximately 74 additional LPG vessels were on order for delivery through 2022. LPG carriers range in size from approximately 100 to approximately 88,000 cubic meters. Approximately 47% of the vessels in the worldwide fleet are less than 5,000 cubic meters in size. New LPG carriers generally have an expected lifespan of approximately 30 to 35 years.

LPG carriers are mainly chartered to carry LPG on time-charters, contracts of affreightment or spot voyage charters. The two largest consumers of LPG are residential users and the petrochemical industry. Residential users, particularly in developing regions where electricity and gas pipelines are not developed, do not have fuel switching alternatives and generally are not LPG price sensitive. The petrochemical industry, however, has the ability to switch between LPG and other feedstock fuels depending on price and availability of alternatives.

The following table provides information about our LPG and multi-gas carriers in our operating fleet as of December 31, 2018.

Vessel	Capacity	Delivery	Our Ownership	Contract Type	Charterer	Expiration of Charter
	(cubic meters)					
Operating LPG carriers:						
Consolidated						
Pan Spirit	10,000	2009	99%	Spot	Spot market	—
Cathinka Spirit	10,000	2009	99%	Spot	Spot market	—
Camilla Spirit	10,000	2011	99%	Spot	Spot market	—
Unikum Spirit	12,000	2011	99%	Spot	Spot market	—
Vision Spirit	12,000	2011	99%	Spot	Spot market	—
Napa Spirit	10,200	2003	99%	Spot	Spot market	—
Sonoma Spirit	8,000	2003	99%	Spot	Spot market	—
Equity-Accounted						
Temse	12,030	1995	50% – Capital lease	Time-charter	An international fertilizer company	Jan. 2020
Libramont	38,455	2006	50%	Time-charter	An international fertilizer company	May 2026
Sombeke	38,447	2006	50%	Time-charter	An international fertilizer company	Jun. 2027
Touraine	39,270	1996	50%	Time-charter	An international energy company	Nov. 2019(2)
Bastogne	35,229	2002	50%	Time-charter	An international energy company	Jun. 2019
Eupen	38,961	1999	50%	Spot	Spot market	—
Brussels	35,454	1997	50%	Time-charter	An international energy company	Jul. 2019
Antwerpen	35,223	2005	50% – Chartered-in	Time-charter	An international energy company	Mar. 2019
BW Tokyo	83,270	2009	50% – Chartered-in	Time-charter	An international trading company	Mar. 2019
Waregem	38,189	2014	50%	Time-charter	An international trading company	Nov. 2019(3)
Warinsart	38,213	2014	50%	Time-charter	An international energy company	Feb. 2020(3)
Waasmunster	38,245	2014	50%	Time-charter	An international energy company	Aug. 2019(3)

Warisoulx	38,000	2015	50%	Time-charter	An international trading company	May 2019
Kaprijke	38,000	2015	50%	Time-charter	An international fertilizer company	Dec. 2025
Knokke	38,000	2016	50%	Time-charter	An international energy company	Mar. 2021(4)
Kontich	38,000	2016	50%	Time-charter	An international energy company	Jul. 2021(4)
Kortrijk	38,000	2016	50%	Time-charter	An international trading company	Dec. 2019
Kallo	38,000	2017	50% – Capital lease(1)	Time-charter	An international energy company	Jan. 2020(3)

Kruibeke	38,000	2017	50% – Capital lease[1]	Time-charter	An international trading company	Feb. 2020[3]
Kapellen	38,000	2018	50% – Capital lease[1]	Time-charter	An international energy company	Sep. 2019[2]
Koksijde	38,000	2018	50% – Capital lease[1]	Time-charter	An international trading company	Jul. 2019
Wepion	38,000	2018	50%	Time-charter	An international energy company	Nov. 2020[3]
	923,186					

(1) Exmar LPG BVBA, in which we have a 50% ownership interest, is the lessee for these obligations related to capital leases and will be required to purchase the vessel after the end of the lease terms for a fixed price.
(2) The charterer has one option to extend the term for an additional six months.
(3) The charterer has one option to extend the term for an additional one year.
(4) The charterer has one option to extend the term for an additional five years.

No LPG customer accounted for 10% or more of our consolidated voyage revenues during any of 2018, 2017, or 2016. The loss of any significant customer or a substantial decline in the amount of services requested by a significant customer could harm our business, financial condition and results of operations.

Conventional Tanker Segment

As of December 31, 2018, our conventional tankers had an average age of approximately 12 years, compared to the average age for the world conventional tanker fleet of approximately 10 years. New conventional tankers generally have an expected lifespan of approximately 25 to 30 years, based on estimated hull fatigue life.

The following table provides additional information about our conventional oil tankers in our operating fleet as of December 31, 2018.

Tanker[1]	Capacity (dwt)	Delivery	Our Ownership	Contract Type	Charterer	Expiration of Charter
Operating Conventional tankers:						
Toledo Spirit	159,342	2005	100% – Capital lease[2]	Time-charter	CEPSA	Jan. 2019[2]
Alexander Spirit	40,083	2007	100%	Time-charter	Caltex Australian Petroleum Pty Ltd.	Sep. 2019
	199,425					

(1) The Toledo Spirit is a Suezmax tanker, and the Alexander Spirit is a Handymax tanker.
(2) We were the lessee for this obligation related to capital lease. The charterer, Compania Espanole de Petroleos, S.A. (or CEPSA), who is also the owner, had the right to terminate the time-charter contract 13 years after the original delivery date without penalty. CEPSA sold the Toledo Spirit in January 2019 and the associated charter contract with CEPSA concurrently terminated. Please read "Item 18 – Financial Statements: Note 5a – Chartered-in Vessels."

No conventional tanker customer accounted for 10% or more of our consolidated voyage revenues during 2018, 2017, and 2016. The loss of any significant customer or a substantial decline in the amount of services requested by a significant customer could harm our business, financial condition and results of operations.

Business Strategies

Our primary long-term business objective is to expand our core businesses globally in order to service our customers' growing gas transportation requirements which we believe will add long-term value for our unitholders. Our operating cash flows remain largely stable and growing, supported by a large and well-diversified portfolio of fee-based contracts with high-quality counterparties.

We intend to achieve our long-term business objective, as stated above, by executing the following strategies:

- Provide superior customer service by maintaining high reliability, safety, environmental and quality standards. LNG and LPG project operators seek LNG and LPG transportation partners that have a reputation for high reliability, safety, environmental and quality standards. We seek to leverage our own and Teekay Corporation's operational expertise to create a sustainable competitive advantage with consistent delivery of superior customer service.

- Expand our LNG and LPG business globally. We seek to capitalize on opportunities emerging from the global expansion of the LNG and LPG sectors by selectively targeting:
- projects that involve medium to long-term, fixed-rate charters;
- cost-effective LNG and LPG newbuilding contracts;
- joint ventures and partnerships with companies that may provide increased access to opportunities in attractive LNG and LPG importing and exporting geographic regions;
- strategic vessel and business acquisitions; and
- specialized projects in adjacent areas of the business, including floating storage units.

Safety, Management of Ship Operations and Administration

Teekay Corporation, through its subsidiaries, assists us in managing our ship operations, other than the vessels owned or chartered-in by our joint ventures with Exmar, which are commercially and technically managed by Exmar, and two of the Angola LNG Carriers, which are commercially and technically managed by NYK Energy Transport (Atlantic) Ltd. Safety and environmental compliance are our top operational priorities. We operate our vessels in a manner intended to protect the safety and health of the employees, the general public and the environment. We seek to manage the risks inherent in our business and are committed to eliminating incidents that threaten the safety and integrity of our vessels, such as groundings, fires, collisions and oil spills. In 2007, Teekay Corporation introduced a behavior-based safety program called "Safety in Action" to further enhance the safety culture in our fleet. We are also committed to reducing our emissions and waste generation. In 2008, Teekay Corporation introduced the Quality Assurance and Training Officers (or QATO) program to conduct rigorous internal audits of our processes and provide the seafarers with onboard training. In 2010, Teekay Corporation introduced a safety leadership program for our employees titled "Operational Leadership, The Journey" which sets out Teekay Corporation's operational expectations, the responsibilities of individual employees and our commitment to empowering our employees to work safely and live Teekay Corporation's vision through a positive and responsible attitude.

Key performance indicators facilitate regular monitoring of our operational performance. Targets are set on an annual basis to drive continuous improvement, and indicators are reviewed monthly to determine if remedial action is necessary to reach the targets.

Teekay Corporation has achieved certification under the standards reflected in International Standards Organization's (or ISO) 9001 for Quality Assurance, ISO 14001 for Environment Management Systems, Occupational Health and Safety Advisory Services 18001 for Occupational Health and Safety, and the IMO's International Management Code for the Safe Operation of Ships and Pollution Prevention (or ISM Code) on a fully integrated basis. As part of Teekay Corporation's compliance with the ISM Code, all of our vessels' safety management certificates are maintained through ongoing internal audits performed by our certified internal auditors and intermediate external audits performed by the classification society DNV-GL. Subject to satisfactory completion of these internal and external audits, certification is valid for five years.

In addition to our operational experience, Teekay Corporation's in-house global shore staff performs, through its subsidiaries, the full range of technical, commercial and business development services for our LNG, LPG and conventional operations. The staff also provides administrative support to our operations in finance, accounting and human resources. We believe this arrangement affords a safe, efficient and cost-effective operation. Vessel management services are provided by subsidiaries of Teekay Corporation, located in various offices around the world. These include critical vessel management functions such as:

- vessel maintenance (including repairs and dry docking) and certification;

- crewing by competent seafarers;
- procurement of stores, bunkers and spare parts;
- management of emergencies and incidents;
- supervision of shipyard and projects during construction of newbuildings and conversions;
- insurance; and
- financial management services.

These functions are supported by onboard and onshore systems for maintenance, inventory, purchasing and budget management.

In addition, Teekay Corporation's day-to-day focus on cost control is applied to our operations. In 2003, Teekay Corporation and two other shipping companies established a purchasing cooperation agreement called the TBW Alliance, which leverages the purchasing power of the combined fleets, mainly in such commodity areas as marine lubricants, coatings and chemicals and gases. Through our arrangements with Teekay Corporation, we benefit from this purchasing alliance.

We believe that the generally uniform design of some of our existing and newbuilding vessels and the adoption of common equipment standards provide operational efficiencies, including with respect to crew training and vessel management, equipment operation and repair, and spare parts ordering.

Risk of Loss, Insurance and Risk Management

The operation of any ocean-going vessel carries an inherent risk of catastrophic marine disasters, death or injury of persons and property losses caused by adverse weather conditions, mechanical failures, human error, war, terrorism, piracy and other circumstances or events. In addition, the transportation and transfer/lightering of crude oil, petroleum products, LNG and LPG are subject to the risk of spills and to business interruptions due to political circumstances in foreign countries, hostilities, labor strikes, sanctions and boycotts. The occurrence of any of these events may result in loss of revenues or increased costs.

We carry hull and machinery (marine and war risks) and protection and indemnity insurance coverage to protect against most of the accident-related risks involved in the conduct of our business. Hull and machinery insurance covers loss of or damage to a vessel due to marine perils such as collision, grounding and weather. Protection and indemnity insurance indemnifies us against liabilities incurred while operating vessels, including injury to our crew or third parties, cargo loss and pollution. The current maximum amount of our coverage for pollution is $1 billion per vessel per incident. We also carry insurance policies covering war risks (including piracy and terrorism) and, for some of our LNG carriers, loss of revenues resulting from vessel off-hire time due to a marine casualty.

We believe that our current insurance coverage is adequate to protect against most of the accident-related risks involved in the conduct of our business and that we maintain appropriate levels of environmental damage and pollution insurance coverage. However, we cannot guarantee that all covered risks are adequately insured against, that any particular claim will be paid or that we will be able to procure adequate insurance coverage at commercially reasonable rates in the future. More stringent environmental regulations have resulted in increased costs for, and may result in the lack of availability of, insurance against risks of environmental damage or pollution.

In our operations, we use Teekay Corporation’s thorough risk management program that includes, among other things, risk analysis tools, maintenance and assessment programs, a seafarers' competence training program, seafarers' workshops and membership in emergency response organizations. We believe that we benefit from Teekay Corporation’s commitment to safety and environmental protection because certain of its subsidiaries assist us in managing our vessel operations.

Flag, Classification, Audits and Inspections

Our vessels are registered with reputable flag states, and the hull and machinery of all of our vessels have been “Classed” by one of the major classification societies and members of International Association of Classification Societies Ltd. (or IACS): Bureau Veritas (or BV), Lloyd’s Register of Shipping, the American Bureau of Shipping or DNV-GL.

The applicable classification society certifies that the vessel’s design and build conforms to the applicable Class rules and meets the requirements of the applicable rules and regulations of the country of registry of the vessel and the international conventions to which that country is a signatory. The classification society also verifies throughout the vessel’s life that it continues to be maintained in accordance with those rules. In order to validate this, the vessels are surveyed by the classification society, in accordance to the classification society rules, which in the case of our vessels follows a comprehensive five-year special survey cycle, renewed every fifth year. During each five-year period the vessel undergoes annual and intermediate surveys, the scrutiny and intensity of which is primarily dictated by the age of the vessel. As our vessels are modern and we have enhanced the resiliency of the underwater coatings of each vessel hull and marked the hull to facilitate underwater inspections by divers, their underwater areas are inspected in a dry-dock at five-year intervals. In-water inspection is carried out during the second or third annual inspection (e.g. during an Intermediate Survey).

In addition to class surveys, the vessel's flag state also verifies the condition of the vessel during annual flag state inspections, either independently or by additional authorization to class. Also, port state authorities of a vessel's port of call are authorized under international conventions to undertake regular and spot checks of vessels visiting their jurisdiction.

Processes followed onboard are audited by either the flag state or classification society acting on behalf of the flag state to ensure that they meet the requirements of the ISM Code. We also follow an internal process of internal audits undertaken annually at each office and vessel.

We follow a comprehensive inspections and audit regime supported by our sea staff, shore-based operational and technical specialists and members of our QATO program. We carry out two internal inspections and one internal audit annually, which helps ensure us that:

- our vessels and operations adhere to our operating standards;
- the structural integrity of the vessel is being maintained;
- machinery and equipment is being maintained to give reliable service;
- we are optimizing performance in terms of speed and fuel consumption; and
- our vessel's appearance supports our brand and meets customer expectations.

Our customers also often carry out vetting inspections under the Ship Inspection Report Program, which is a significant safety initiative introduced by the Oil Companies International Marine Forum to specifically address concerns about sub-standard vessels. The inspection results permit charterers to screen a vessel to ensure that it meets their general and specific risk-based shipping requirements.

We believe that the heightened environmental and quality concerns of insurance underwriters, regulators and charterers will generally lead to greater scrutiny, inspection and safety requirements on all vessels in the oil tanker, LNG and LPG carrier markets and will accelerate the scrapping or phasing out of older vessels throughout these markets.

Overall, we believe that our relatively new, well-maintained and high-quality vessels provide us with a competitive advantage in the current environment of increasing regulation and customer emphasis on quality of service.

Regulations

General

Our business and the operation of our vessels are significantly affected by international conventions and national, state and local laws and regulations 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 change frequently, we cannot predict the ultimate cost of compliance or their impact on the resale price or useful life of our vessels. Additional conventions, laws, and regulations may be adopted that could limit our ability to do business or increase the cost of our doing business and that may materially affect our operations. We are required by various governmental and quasi-governmental agencies to obtain permits, licenses and certificates with respect to our operations. Subject to the discussion below and to the fact that the kinds of permits, licenses and certificates required for the operations of the vessels we own will depend on a number of factors, we believe that we will be able to continue to obtain all permits, licenses and certificates material to the conduct of our operations.

International Maritime Organization (or IMO)

The IMO is the United Nations' agency for maritime safety and prevention of pollution. IMO regulations relating to pollution prevention for oil tankers have been adopted by many of the jurisdictions in which our tanker fleet operates. Under IMO regulations and subject to limited exceptions, a tanker must be of double-hull construction in accordance with the requirements set out in these regulations, or be of another approved design ensuring the same level of protection against oil pollution. All of our tankers are double-hulled.

Many countries, but not the United States, have ratified and follow the liability regime adopted by the IMO and set out in the International Convention on Civil Liability for Oil Pollution Damage, 1969, as amended (or CLC). Under this convention, 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 (e.g. crude oil, fuel oil, heavy diesel oil or lubricating oil), subject to certain defenses. The right to limit liability to specified amounts that are periodically revised is forfeited under the CLC when the spill is caused by the owner's actual fault or when the spill is caused by the owner's intentional or reckless conduct. Vessels trading to contracting states must provide evidence of insurance covering the limited liability of the owner. In jurisdictions where the CLC has not been adopted, various legislative regimes or common law governs, and liability is imposed either on the basis of fault or in a manner similar to the CLC.

IMO regulations also include the International Convention for Safety of Life at Sea (or SOLAS), including amendments to SOLAS implementing the International Ship and Port Facility Security Code (or ISPS), the ISM Code, the International Convention on Load Lines of 1966, and, specifically with respect to LNG and LPG carriers, the International Code for Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (the IGC Code). SOLAS provides rules for the construction of and the equipment required for commercial vessels and includes regulations for their safe operation. Flag states which have ratified the convention and the treaty generally employ the classification societies, which have incorporated SOLAS requirements into their class rules, to undertake surveys to confirm compliance.

SOLAS and other IMO regulations concerning safety, including those relating to treaties on training of shipboard personnel, lifesaving appliances, radio equipment and the global maritime distress and safety system, are applicable to our operations. Non-compliance with IMO regulations, including SOLAS, the ISM Code, ISPS and the IGC Code, may subject us to increased liability or penalties, may lead to decreases in available insurance coverage for affected vessels and may result in the denial of access to or detention in some ports. For example, the United States Coast Guard (or USCG) and European Union authorities have indicated that vessels not in compliance with the ISM Code will be prohibited from trading in U.S. and European Union ports. The ISM Code requires vessel operators to obtain a safety management certification for each vessel they manage, evidencing the ship owner's development and maintenance of an extensive safety management system. Each of the existing vessels in our fleet is currently ISM Code-certified, and we expect to obtain safety management certificates for each newbuilding vessel upon delivery.

LNG and LPG carriers are also subject to regulation under the IGC Code. Each LNG and LPG carrier must obtain a certificate of compliance evidencing that it meets the requirements of the IGC Code, including requirements relating to its design and construction. Each of our LNG and LPG carriers is currently IGC Code compliant, and each of the shipbuilding contracts for our LNG carrier newbuildings and for the LPG carrier newbuildings requires IGC Code compliance prior to delivery. Amendments to the IGC Code, aligning wheelhouse window fire-rating requirements with those in SOLAS chapter II-2, were adopted in 2016 and are expected to enter into force on January 1, 2020.

In addition, the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (or the IGF Code), which entered into force on January 1, 2017, is mandatory for ships fueled by gases or other low-flashpoint fuels, and sets out mandatory provisions for the arrangement, installation, control and monitoring of machinery, equipment and systems using low-flashpoint fuel.

Annex VI of the IMO’s International Convention for the Prevention of Pollution from Ships (or MARPOL) (or Annex VI) sets limits on sulfur oxide and nitrogen oxide (or NOx) emissions from ship exhausts and prohibits emissions of ozone depleting substances, emissions of volatile compounds from cargo tanks and the incineration of specific substances. Annex VI also includes a world-wide cap on the sulfur content of fuel oil and allows for special "emission control areas" (or ECAs) to be established with more stringent controls on sulfur emissions.

Annex VI provides for a three-tier reduction in NOx emissions from marine diesel engines, with the final tier (or Tier III) to apply to engines installed on vessels constructed on or after January 1, 2016 and which operate in the North American ECA or the U.S. Caribbean Sea ECA as well as ECAs designated in the future by the IMO. In October 2016 the IMO’s Marine Environment Protection Committee (or MEPC) approved the designation of the North Sea (including the English Channel) and the Baltic Sea as ECAs for NOx emissions; these ECAs and the related amendments to Annex VI of MARPOL (with some exceptions) entered into effect on January 1, 2019. This requirement will be applicable for new ships constructed on or after January 1, 2021 if they visit the Baltic or North Sea (including the English Channel) and requires the future trading area of a ship to be assessed at the contract stage. There are exemption provisions to allow ships with only Tier II engines, to navigate in a NOx Tier III ECA if the ship is departing from a shipyard where the ship is newly built or visiting a shipyard for conversion/repair/maintenance without loading/unloading cargoes.

Effective January 1, 2020, Annex VI imposes a global limit for sulphur in fuel oil used on board ships of 0.50% m/m (mass by mass), regardless of whether a ship is operating outside a designated ECA. To comply with this new standard, ships may utilize different fuels containing low or zero sulphur (e.g. LNG or biofuels), or utilize exhaust gas cleaning systems, known as “scrubbers.” Amendments to the information to be included in bunker delivery notes relating to the supply of marine fuel oil to ships fitted with alternative mechanisms to address sulphur emission requirements (e.g. scrubbers) became effective January 1, 2019. At present, we have not installed any scrubbers on our existing fleet and we intend to switch over to burning low sulphur fuel from January 1, 2020.

As of March 1, 2018, amendments to Annex VI impose new requirements on ships of 5,000 gross tonnage and above to collect fuel oil consumption data for ships, as well as certain other data including proxies for transport work; the amendments also set forth criteria for determining whether cargo residues are harmful to the marine environment and a new Garbage Record Book format

IMO regulations required that, as of January 1, 2015, all vessels operating within ECAs worldwide recognized under MARPOL Annex VI must comply with 0.1% sulfur requirements. In addition, LSMGO is more expensive than HFO and this impacts the costs of operations. Our exposure to increased cost is in our spot trading vessels, although our competitors bear a similar cost increase as this is a regulatory item applicable to all vessels. All required vessels in our fleet trading to and within regulated low sulfur areas are able to comply with fuel requirements. The global cap on the sulfur content of fuel oil is currently 3.5%, to be reduced to 0.5% by January 1, 2020.

The IMO has issued guidance regarding protecting against acts of piracy off the coast of Somalia. We comply with these guidelines.

The IMO's Ballast Water Management Convention entered into force on September 8, 2017. As of December 31, 2018, there were 79 contracting states to the convention. The convention stipulates two standards for discharged ballast water. The D-1 standard covers ballast water exchange while the D-2 standard covers ballast water treatment. The convention requires the implementation of either the D-1 or D-2 standard. There will be a transitional period from the entry into force to the International Oil Pollution Prevention (or IOPP) renewal survey in which ballast water exchange (reg. D-1) can be employed. The IMO’s Marine Environment Protection Committee (or MEPC) agreed to a compromise on the implementation dates for the D-2 discharge standard: ships constructed on or after September 8, 2017 must comply with the D-2 standard upon delivery. Existing ships should be D-2 compliant on the first IOPP renewal following entry into force if the survey is completed on or after September 8, 2019, or a renewal IOPP survey is completed on or after September 8, 2014 but prior to September 8, 2017. Ships should be D-2 compliant on the second IOPP renewal survey after September 8, 2017 if the first renewal survey after that date is completed prior to September 8, 2019 and if the previous two conditions are not met. Vessels will be required to meet the discharge standard D-2 by installing an approved Ballast Water Management System (or BWMS). Besides the IMO convention, ships sailing in U.S. waters are required to employ a type-approved BWMS which is compliant with USCG regulations. The USCG has approved a number of BWMS - Alfa Laval (Sweden), Ocean Saver (Norway), Sunrui (China), Optimarin (Norway), Ecochlor (USA), Erma First (Greece), Hyundai Heavy Industries Co. Ltd. (Korea), Qingdao Headway Technology Co. Ltd. (China), and JFE Engineering Corporation (Japan), out of which first two makers are under Teekay' s approved list for retrofit. We estimate that the installation of approved BWMS may cost between $2 million and $3 million per vessel.

Amendments to MARPOL Annex VI that makes the data collection system for fuel oil consumption of ships mandatory were adopted at the 70th session of the MEPC held in October 2016 and entered into force on March 1, 2018. The amendments require operators to update the vessels Ship Energy Efficiency Management Plan (or SEEMP) to include a part II describing the ship specific methodology that will be used for collecting and measuring data for fuel oil consumption, distance travelled, hours underway, ensuring data quality is maintained and the processes that will be used to report the data to the Administration. This must be verified as compliant on or before December 31, 2018, with the first data collection period being for the 2019 calendar year. A Confirmation of Compliance will be issued by the administration/registered organization, which must be kept on board the ship.

The IMO has also adopted an International Code for Ships Operating in Polar Waters (or Polar Code) which deals with matters regarding the design, construction, equipment, operation, search and rescue and environmental protection in relation to ships operating in waters surrounding the two poles. The Polar Code includes both safety and environmental provisions. The Polar Code and related amendments entered into force in January 2017. The Polar Code is mandatory for new vessels built after January 1, 2017. For existing ships, this code will be applicable from the first intermediate or renewal survey, whichever occurs first, beginning on or after January 1, 2018.

MARPOL Annex I also states that oil residue may be discharged directly from the sludge tank to the shore reception facility through standard discharge connections. They may also be discharged to the incinerator or to an auxiliary boiler suitable for burning the oil by means of a dedicated discharge pump. Amendments to Annex I expand on the requirements for discharge connections and piping to ensure residues are properly disposed of. Annex I is applicable for existing vessels with a first renewal survey beginning on or after January 1, 2017.

Amendments to MARPOL Annex V were adopted at the 70th session of the MEPC held in October 2016 and entered into force on March 1, 2018. The changes include criteria for determining whether cargo residues are harmful to the marine environment and a new Garbage Record Book (or GRB) format with a new garbage category for e-waste. Solid bulk cargo as per regulation VI/1-1.2 of SOLAS, other than grain, shall now be classified as per the criteria in the new Appendix I of MARPOL Annex V, and the shipper shall then declare whether or not the cargo is harmful to the marine environment. A new form of the GRB has been included in Appendix II to MAROL Annex V. The GRB is now divided into two parts: Part I - for all garbage other than cargo residues, applicable to all ships. PART II - for cargo residues only applicable to ships carrying solid bulk cargo. These changes are reflected in the vessels latest revised GRB.

MSC 91 adopted amendments to SOLAS Regulation II-2/10 to clarify that a minimum of two-way portable radiotelephone apparatus for each fire party for fire-fighters' communication shall be carried on board. These radio devices shall be of explosion proof type or intrinsically safe type. All existing ships built before July 1, 2014 should comply with this requirement by the first safety equipment survey after July 1, 2018. All new vessels constructed (keel laid) on or after July 1, 2014 must comply with this requirement at the time of delivery. Amendments to SOLAS Regulation II-1/2/-12 on protection against noise. Regulation II-2/1 and II 2/10 on firefighting and new Regulation XI-12-1 on harmonization of survey periods of cargo ships not subject to the ESP code become effective January 1, 2020.

As per MSC. 338(91), requirements have been highlighted for audio and visual indicators for breathing apparatus which will alert the user before the volume of the air in the cylinder has been reduced to no less than 200 liters. This applies to ships constructed on or after July 1, 2014. Ships constructed before July 1, 2014 must comply no later than July 1, 2019.

Cyber-related risks are operational risks that are appropriately assessed and managed in accordance with the safety management requirements of the ISM Code. Cyber risks are required to be appropriately addressed in our safety management system no later than the first annual verification of the company's Document of Compliance after January 1, 2021.

The IMO continues to review and introduce new regulations; as such, it is impossible to predict what additional requirements, if any, may be adopted by the IMO and what effect, if any, such regulations might have on our operations.

European Union (or EU)

The EU has adopted legislation that: bans from European waters manifestly sub-standard vessels (defined as vessels that have been detained twice by EU port authorities, in the preceding two years); creates obligations on the part of EU member port states to inspect minimum percentages of vessels using these ports annually; provides for increased surveillance of vessels posing a high risk to maritime safety or the marine environment; and 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.

Two regulations, that are part of the implementation of the Port State Control Directive, came into force on January 1, 2011 and introduce a ranking system (published on a public website and updated daily) displaying shipping companies operating in the EU with the worst safety records. The ranking is judged upon the results of the technical inspections carried out on the vessels owned be a particular shipping company. Those shipping companies that have the most positive safety records are rewarded by subjecting them to fewer inspections, while those with the most safety shortcomings or technical failings recorded upon inspection will in turn be subject to a greater frequency of official inspections to their vessels.

The EU has, by way of Directive 2005/35/EC, which has been amended by Directive 2009/123/EC, created a legal framework for imposing criminal penalties in the event of discharges of oil and other noxious substances from ships sailing in its waters, irrespective of their flag. This relates to discharges of oil or other noxious substances from vessels. Minor discharges shall not automatically be considered as offences, except where repetition leads to deterioration in the quality of the water. The persons responsible may be subject to criminal penalties if they have acted with intent, recklessly or with serious negligence and the act of inciting, aiding and abetting a person to discharge a polluting substance may also lead to criminal penalties.

The EU has adopted a Directive requiring the use of low sulfur fuel. Since January 1, 2015, vessels have been required to burn fuel with sulfur content not exceeding 0.1% while within EU member states' territorial seas, exclusive economic zones and pollution control zones that are included in SOX Emission Control Areas. Other jurisdictions have also adopted similar regulations. Since January 1, 2014, the California Air Resources Board has required vessels to burn fuel with 0.1% sulfur content or less within 24 nautical miles of California. China also established emission control areas and continues to establish such areas, restricting the maximum sulfur content of the fuel to be used by vessels within those areas, which limits become progressively stricter over time. Since January 1, 2017, all core ports within the three China ECAs (e.g. Tianjin, Qinhuangdao, Tangshan, Huanghua, Shenzhen, Guangzhou, Zhuhai, Shanghai, Ningbo-Zhoushan, Suzhou and Nantong) have implemented the low sulfur bunker requirements. It is anticipated that commencing January 1, 2018 all ports within the three China ECAs will have implemented the low sulfur bunker requirements.

The EU Ship Recycling Regulation entered into force on December 30, 2013. It aims to prevent, reduce and minimize accidents, injuries and other negative effects on human health and the environment when ships are recycled and the hazardous waste they contain is removed. The legislation applies to all ships flying the flag of an EU country and to vessels with non-EU flags that call at an EU port or anchorage. It sets out responsibilities for ship owners and for recycling facilities both in the EU and in other countries. Each new ship is required to have on board an inventory of the hazardous materials (such as asbestos, lead or mercury) it contains in either its structure or equipment. The use of certain hazardous materials is forbidden. Before a ship is recycled, its owner must provide the company carrying out the work with specific information about the vessel and prepare a ship recycling plan. Recycling may only take place at facilities listed on the EU 'List of facilities'. In 2014, the Council Decision 2014/241/EU authorized EU countries having ships flying their flag or registered under their flag to ratify or to accede to the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships. The EU Ship Recycling Regulation generally entered into force on December 31, 2018, with certain provisions applicable from December 31, 2020. Compliance timelines are as follows: EU-flagged new-buildings were required to have onboard a verified Inventory of Hazardous Materials (or IHM) with a Statement of Compliance at the latest by December 31, 2018, existing EU-flagged vessels are required to have onboard a verified IHM with a Statement of Compliance at the latest by December 31, 2020, non-EU-flagged vessels calling at EU ports are also required to have onboard a verified IHM with a Statement of Compliance latest by December 31, 2020. The EU Commission adopted a European List of approved ship recycling facilities, as well as four further implementing decisions dealing with certification and other administrative requirements set out in the EU Ship Recycling Regulation.

China

China has also established ECAs in the Pearl River Delta, the Yangtze River Delta and the Bohai Sea area with restrictions limiting sulfur content not to exceed 0.5% in such ECAs, with such limit decreasing over time.

All the key ports within the three China ECAs (e.g. Tianjin, Qinhuangdao, Tangshan, Huanghua, Shenzhen, Guangzhou, Zhuhai, Shanghai, Ningbo-Zhoushan, Suzhou and Nantong) have implemented the low sulfur bunker requirements.

Commencing January 1, 2018, ships berthing (excluding one hour after berthing and one hour before departure) at all ports within the China ECAs are required to use fuel with sulphur contents at or below 0.5%. These limitations applied to the entire period vessels are in port within China ECAs effective January 1, 2019.

China will complete an assessment of the effectiveness of the introduced measures by the end of 2019. Based on the results of such assessment possible further enforcement of regulations limiting SOx emission in ECA's may be implemented reducing the sulfphur content to 0.1% for ships in the ECA, extending the boundaries of the ECAs or introducing new control measures.

United States

The United States has enacted an extensive regulatory and liability regime for the protection and cleanup of the environment from oil spills, including discharges of oil cargoes, bunker fuels or lubricants, primarily through the Oil Pollution Act of 1990 (or OPA 90) and the Comprehensive Environmental Response, Compensation and Liability Act (or CERCLA). OPA 90 affects all owners, bareboat charterers, and operators whose vessels trade to the United States or its territories or possessions or whose vessels operate in United States waters, which include the U.S. territorial sea and 200-mile exclusive economic zone around the United States. CERCLA applies to the discharge of "hazardous substances" rather than "oil" and imposes strict joint and several liability upon the owners, operators or bareboat charterers of vessels for cleanup costs and damages arising from discharges of hazardous substances. We believe that petroleum products, LNG and LPG should not be considered hazardous substances under CERCLA, but additives to oil or lubricants used on LNG or LPG carriers might fall within its scope.

Under OPA 90, vessel owners, operators and bareboat charters are "responsible parties" and are jointly, severally and strictly liable (unless the oil spill results solely from the act or omission of a third party, an act of God or an act of war and the responsible party reports the incident and reasonably cooperates with the appropriate authorities) for all containment and cleanup costs and other damages arising from discharges or threatened discharges of oil from their vessels. These other damages are defined broadly to include:

- natural resources damages and the related assessment costs;
- real and personal property damages;
- net loss of taxes, royalties, rents, fees and other lost revenues;

- lost profits or impairment of earning capacity due to property or natural resources damage;
- net cost of public services necessitated by a spill response, such as protection from fire, safety or health hazards; and
- loss of subsistence use of natural resources.

OPA 90 limits the liability of responsible parties in an amount it periodically updates. The liability limits do not apply if the incident was proximately caused by violation of applicable U.S. federal safety, construction or operating regulations, including IMO conventions to which the United States is a signatory, or by the responsible party's 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. Liability under CERCLA is also subject to limits unless the incident is caused by gross negligence, willful misconduct or a violation of certain regulations. We currently maintain for each of our vessels pollution liability coverage in the maximum coverage amount of $1 billion per incident. A catastrophic spill could exceed the coverage available, which could harm our business, financial condition and results of operations.

Under OPA 90, with limited exceptions, all newly built or converted tankers delivered after January 1, 1994 and operating in U.S. waters must be double-hulled. All of our tankers are double-hulled.

OPA 90 also requires owners and operators of vessels to establish and maintain with the USCG evidence of financial responsibility in an amount at least equal to the relevant limitation amount for such vessels under the statute. The USCG has implemented regulations requiring that an owner or operator of a fleet of vessels must demonstrate evidence of financial responsibility in an amount sufficient to cover the vessel in the fleet having the greatest maximum limited liability under OPA 90 and CERCLA. Evidence of financial responsibility may be demonstrated by insurance, surety bond, self-insurance, guaranty or an alternate method subject to approval by the USCG. Under the self-insurance provisions, the shipowner or operator must have a net worth and working capital, measured in assets located in the

United States against liabilities located anywhere in the world, that exceeds the applicable amount of financial responsibility. We have complied with the USCG regulations by using self-insurance for certain vessels and obtaining financial guaranties from a third party for the remaining vessels. If other vessels in our fleet trade into the United States in the future, we expect to obtain guaranties from third-party insurers.

OPA 90 and CERCLA permit individual U.S. states to impose their own liability regimes with regard to oil or hazardous substance pollution incidents occurring within their boundaries, and some states have enacted legislation providing for unlimited strict liability for spills. Several coastal states, such as California and Alaska, require state-specific evidence of financial responsibility and vessel response plans. We intend to comply with all applicable state regulations in the ports where our vessels call.

Owners or operators of vessels, including tankers operating in U.S. waters, are required to file vessel response plans with the USCG, and their tankers are required to operate in compliance with their USCG approved plans. Such response plans must, among other things:

- 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”;
- describe crew training and drills; and
- identify a qualified individual with full authority to implement removal actions.

All our vessels have USCG approved vessel response plans. In addition, we conduct regular oil spill response drills in accordance with the guidelines set out in OPA 90. The USCG has announced it intends to propose similar regulations requiring certain vessels to prepare response plans for the release of hazardous substances.

OPA 90 and CERCLA do not preclude claimants from seeking damages resulting from the discharge of oil and hazardous substances under other applicable law, including maritime tort law. Such claims could include attempts to characterize the transportation of LNG or LPG aboard a vessel as an ultra-hazardous activity under a doctrine that would impose strict liability for damages resulting from that activity. The application of this doctrine varies by jurisdiction.

The U.S. Clean Water Act (or the Clean Water Act) also prohibits the discharge of oil or hazardous substances in U.S. navigable waters and imposes strict liability in the form of penalties for unauthorized discharges. The Clean Water Act imposes substantial liability for the costs of removal, remediation and damages and complements the remedies available under OPA 90 and CERCLA discussed above.

Our vessels that discharge certain effluents, including ballast water, in U.S. waters must obtain a Clean Water Act permit from the Environmental Protection Agency (or EPA) titled the “Vessel General Permit” and comply with a range of effluent limitations, best management practices, reporting, inspections and other requirements. The Vessel General Permit incorporated USCG requirements for ballast water exchange and includes specific technology-based requirements for vessels, and includes an implementation schedule to require vessels to meet the ballast water effluent limitations by the first dry docking after January 1, 2016, depending on the vessel size. The Vessel Incidental Discharge Act (or VIDA) was signed into law on December 4, 2018 and establishes a new framework for the regulation of vessel incidental discharges under the Clean Water Act. VIDA requires the U.S. EPA to develop performance standards for incidental discharges and requires the USCG to develop regulations within two years of the EPA’s promulgation of standards. Under VIDA, all provisions of the Vessel General Permit remain in force and effect as currently written until the USCG regulations are finalized. Vessels that are constructed after December 1, 2013 are subject to the ballast water numeric effluent limitations. Several U.S. states have added specific requirements to the Vessel General Permit and, in some cases, may require vessels to install ballast water treatment technology to meet biological performance standards.

Various states in the United States, including California, have implemented additional regulations relating to the environment and operation of vessels. California Biofouling Management Plan requirements are as follows: developing and maintaining a Biofouling Management Plan, developing and maintaining a Biofouling Record Book, mandatory biofouling management of the vessel’s wetted surfaces, mandatory biofouling management for vessels that undergo an extended residency period (e.g. remain in the same location for 45 or more days). All vessel calling at California water were required to submit the "Annual Marine Invasive Reporting Form" by October 1, 2017 and should have CA-Biofouling management plan after a vessel’s first regularly scheduled out-of-water maintenance (e.g. dry dock) after January 1, 2018, or upon delivery on or after January 1, 2018.

New Zealand

New Zealand's Craft Risk Management Standard (or CRMS) requirements are based on the IMO's guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species.

Marine pests and diseases brought in on vessel hulls (or biofouling) are a threat to New Zealand's marine resources. From May 15, 2018, all vessels arriving in New Zealand will need to have a clean hull. Vessels staying up to 20 days and only visiting designated ports (places of first arrival) will be allowed a slight amount of biofouling. Vessels staying longer and visiting other places will only be allowed a slime layer and goose barnacles.

Greenhouse Gas Regulation

In February 2005, the Kyoto Protocol to the United Nations Framework Convention on Climate Change (or the Kyoto Protocol) took effect. Pursuant to the Kyoto Protocol, adopting countries are required to implement national programs to reduce emissions of greenhouse gases. In December 2009, more than 27 nations, including the United States, entered into the Copenhagen Accord. The Copenhagen Accord is non-binding but is intended to pave the way for a comprehensive, international treaty on climate change. In December 2015 the Paris Agreement (or the Paris Agreement) was adopted by a large number of countries at the 21st Session of the Conference of Parties (commonly known as COP 21, a conference of the countries which are parties to the United Nations Framework Convention on Climate Change; the COP is the highest decision-making authority of this organization). The Paris Agreement, which entered into force on November 4, 2016, deals with greenhouse gas emission reduction measures and targets from 2020 in order to limit the global temperature increases to well below 2^{o} Celsius above pre-industrial levels. Although shipping was ultimately not included in the Paris Agreement, it is expected that the adoption of the Paris Agreement may lead to regulatory changes in relation to curbing greenhouse gas emissions from shipping.

In July 2011, the IMO adopted regulations imposing technical and operational measures for the reduction of greenhouse gas emissions. These new regulations formed a new chapter in Annex VI and became effective on January 1, 2013. The new technical and operational measures imposed by these new regulations include the “Energy Efficiency Design Index” (or the EEDI), which is mandatory for newbuilding vessels, and the “Ship Energy Efficiency Management Plan,” which is mandatory for all vessels. In October 2016, the IMO’s MEPC adopted updated guidelines for the calculation of the EEDI. In October 2014, the IMO’s MEPC agreed in principle to develop a system of data collection regarding fuel consumption of ships. In October 2016, the IMO adopted a mandatory data collection system under which vessels of 5,000 gross tonnage and above are to collect fuel consumption and other data and to report the aggregated data so collected to their flag state at the end of each calendar year. The new requirements entered into force on March 1, 2018. All vessels are required to submit fuel consumption data to their respective administration/registered organizations for onward submission to the IMO for analysis and to help with decision making on future measures. The amendments require operators to update the vessels SEEMP to include a part II describing the ship specific methodology that will be used for collecting and measuring data for fuel oil consumption, distance travelled, hours underway and processes that will be used to report the data to the Administration, in order to ensure data quality is maintained. The vessels were required to be verified as compliant on or before December 31, 2018, with the first data collection period being for the 2019 calendar year. A Confirmation of Compliance will be issued by the administration/registered organization, which must be kept on board the ship. The IMO also approved a roadmap for the development of a comprehensive IMO strategy on reduction of greenhouse gas emissions from ships with an initial strategy adopted on April 13, 2018 and a revised strategy to be adopted in 2023.

The EU also has indicated that it intends to propose an expansion of an existing EU emissions trading regime to include emissions of greenhouse gases from vessels, and individual countries in the EU may impose additional requirements. The EU has adopted Regulation (EU) 2015/757 on the monitoring, reporting and verification (or MRV) of CO2 emissions from vessels (or the MRV Regulation), which entered into force on July 1, 2015. The MRV Regulation aims to quantify and reduce CO2 emissions from shipping. It lists the requirements on the MRV of carbon dioxide emissions and requires ship owners and operators to annually monitor, report and verify CO2 emissions for vessels larger than 5,000 gross tonnage calling at any EU and EFTA (Norway and Iceland) port (with a few exceptions, such as fish-catching or fish-processing vessels). Data collection takes place on a per voyage basis and started January 1, 2018. The reported CO2 emissions, together with additional data, such as cargo and energy efficiency parameters, are to be verified by independent verifiers and sent to a central inspection database hosted by the European Maritime Safety Agency (or EMSA) to collate all the data applicable to the EU region. Companies responsible for the operation of large ships using EU ports are required to report their CO2 emissions. While the EU was considering a proposal for the inclusion of shipping in the EU Emissions Trading System as from 2021 (in the absence of a comparable system operating under the IMO), it appears that the decision to include shipping may be deferred until 2023.

In the United States, the EPA issued an “endangerment finding” regarding greenhouse gases under the U.S. Clean Air Act. While this finding in itself does not impose any requirements on our industry, it authorizes the EPA to regulate directly greenhouse gas emissions through a rule-making process. In addition, climate change initiatives are being considered in the United States Congress and by individual states. Any passage of new climate control legislation or other regulatory initiatives by the IMO, EU, the United States or other countries or states where we operate that restrict emissions of greenhouse gases could have a significant financial and operational impact on our business that we cannot predict with certainty at this time.

Vessel Security

The ISPS was adopted by the IMO in December 2002 in the wake of heightened concern over worldwide terrorism and became effective on July 1, 2004. The objective of ISPS is to enhance maritime security by detecting security threats to ships and ports and by requiring the development of security plans and other measures designed to prevent such threats. Each of the existing vessels in our fleet currently complies with the requirements of ISPS and Maritime Transportation Security Act of 2002 (U.S. specific requirements). Procedures are in place to inform the relevant reporting regimes such as Maritime Security Council Horn of Africa (or MSCHOA), the Maritime Domain Awareness for Trade - Gulf of Guinea (or MDAT-GoG), the Information Fusion Center (or IFC) whenever our vessels are calling in the Indian Ocean Region, or West Coast of Africa (or WAC) or SE Asia high risk areas respectively. In order to mitigate the security risk, security arrangements are required for vessels which travel through these high risk areas.

C. Organizational Structure

Our sole General Partner is Teekay GP L.L.C., which is a wholly-owned indirect subsidiary of Teekay Corporation (NYSE: TK). Teekay Corporation also owns 31.8% of our outstanding publicly-traded common units. Teekay Corporation also controls its publicly-listed subsidiary Teekay Tankers Ltd. (NYSE: TNK) and owns 49% of the general partner interest and 13.8% of the outstanding publicly-traded common units of Teekay Offshore Partners L.P. (NYSE: TOO).

Please read Exhibit 8.1 to this Annual Report for a list of our subsidiaries as at December 31, 2018.

D. Property, Plant and Equipment

Other than our vessels and our 30% interest, through the Bahrain LNG Joint Venture, in an LNG receiving and regasification terminal under construction, we do not have any material property.

Please see “Item 4 – Information on the Partnership: Our Fleet and Our Charters” for a description of our vessels, and “Item 18 – Financial Statements: Note 5 – Chartered-in Vessels" and "Note 10 – Long-Term Debt” for information about major encumbrances against our vessels.

E. Taxation of the Partnership

The expected material U.S federal income tax considerations applicable to us changed significantly effective as of January 1, 2019, due to our election to be taxed as a corporation, rather than as a partnership, for U.S. federal income tax purposes. The discussion included herein is with regard to the material U.S. federal income tax considerations that may be relevant to us and our unitholders in 2019 and future years. For a discussion on material U.S. federal income tax considerations during 2018 that may have been relevant to us and our unitholders who were individual citizens or residents of the United States, please read “Item 10. Additional Information – Taxation-United States Tax Consequences” in our Annual Report on Form 20-F for the year ended December 31, 2017.

United States Taxation

The following is a discussion of the expected material U.S. federal income tax considerations applicable to us effective January 1, 2019. This discussion is based upon the provisions of the Code, legislative history, applicable U.S. Treasury Regulations (or Treasury Regulations), judicial authority and administrative interpretations, all as in effect on the date of this Annual Report, and which are subject to change, possibly with retroactive effect, or are subject to different interpretations. Changes in these authorities may cause the tax consequences to vary substantially from the consequences described below.

Election to be Taxed as a Corporation. We have elected to be taxed as a corporation for U.S. federal income tax purposes effective January 1, 2019. As such, we are subject to U.S. federal income tax on our income to the extent it is from U.S. sources or otherwise is effectively connected with the conduct of a trade or business in the United States as discussed below.

Taxation of Operating Income. We expect that substantially all of our gross income and the gross income of our corporate subsidiaries will be attributable to the transportation of LNG, LPG, ammonia, crude oil and related products. For this purpose, gross income attributable to transportation (or Transportation Income) includes income derived from, or in connection with, the use (or hiring or leasing for use) of a vessel to transport cargo, or the performance of services directly related to the use of any vessel to transport cargo, and thus includes both time-charter and bareboat charter income.

Fifty percent (50%) of Transportation Income that either begins or ends, but that does not both begin and end, in the United States (or U.S. Source International Transportation Income) is considered to be derived from sources within the United States. Transportation Income that both begins and ends in the United States (or U.S. Source Domestic Transportation Income) is considered to be 100% derived from sources within the United States. Transportation Income exclusively between non-U.S. destinations is considered to be 100% derived from sources outside the United States. Transportation Income derived from sources outside the United States generally is not subject to U.S. federal income tax.

Based on our current operations and the operations of our subsidiaries, we expect most of our Transportation Income to be from sources outside the United States and not subject to U.S. federal income tax. However, we have earned over $64.5 million of U.S. Source International Transportation Income annually, and we expect that we will continue to earn an increasing amount of such income in future years. Our U.S. Source International Transportation Income or U.S. Source Domestic Transportation Income is subject to U.S. federal income taxation under either the net basis and branch profits taxes or the 4% gross basis tax, each of which is discussed below, unless the exemption from U.S.

taxation under Section 883 of the Code (or the Section 883 Exemption) applies.

The Section 883 Exemption. In general, the Section 883 Exemption provides that if a non-U.S. corporation satisfies the requirements of Section 883 of the Code and the Treasury Regulations thereunder, it will not be subject to the net basis and branch profits taxes or the 4% gross basis tax described below on its U.S. Source International Transportation Income. The Section 883 Exemption does not apply to U.S. Source Domestic Transportation Income.

We do not believe that we will be able to qualify for the Section 883 Exemption and therefore our U.S. Source International Transportation Income will not be exempt from U.S. federal income taxation.

Net Basis Tax and Branch Profits Tax. If the Section 883 Exemption does not apply, our U.S. Source International Transportation Income may be treated as effectively connected with the conduct of a trade or business in the United States (or Effectively Connected Income) if we have a fixed place of business in the United States and substantially all of our U.S. Source International Transportation Income is attributable to regularly scheduled transportation or, in the case of income derived from bareboat charters, is attributable to a fixed place of business in the United States. Based on our current operations, none of our potential U.S. Source International Transportation Income is attributable to regularly scheduled transportation or is derived from bareboat charters attributable to a fixed place of business in the United States. As a result, we do not anticipate that any of our U.S. Source International Transportation Income will be treated as Effectively Connected Income. However, there is no assurance that we will not earn income pursuant to regularly scheduled transportation or bareboat charters attributable to a fixed place of business in the United States in the future, which will result in such income being treated as Effectively Connected Income. U.S. Source Domestic Transportation Income generally will be treated as Effectively Connected Income. However, we do not anticipate that a material amount of our income has been, or will be, U.S. Source Domestic Transportation Income.

Any income we earn that is treated as Effectively Connected Income would be subject to U.S. federal corporate income tax (the statutory rate for 2018 onwards is 21%) and a 30% branch profits tax imposed under Section 884 of the Code. In addition, a branch interest tax could be imposed on certain interest paid or deemed paid by us.

On the sale of a vessel that has produced Effectively Connected Income, we generally would be subject to the net basis and branch profits taxes with respect to our gain recognized up to the amount of certain prior deductions for depreciation that reduced Effectively Connected Income. Otherwise, we would not be subject to U.S. federal income tax with respect to gain realized on sale of a vessel, provided the sale is considered to occur outside of the United States under U.S. federal income tax principles.

The 4% Gross Basis Tax. We believe we were not subject to the 4% Gross Basis Tax in 2018 because we were treated as a parthership for U.S. tax purposes in 2018. If the Section 883 Exemption does not apply in 2019 and future years when we are treated as a corporation for U.S. tax purposes and we are not subject to the net basis and branch profits taxes described above, we will be subject to a 4% U.S. federal income tax on our gross U.S. Source International Transportation Income, without benefit of deductions. If we had been treated as a corporation in 2018, we estimate that, in this event, we would have been subject to less than $1.4 million of U.S. federal income tax based on the amount of U.S. Source International Transportation Income we earned for 2018. We expect the amount of our liability for U.S. federal income tax on our U.S. Source International Transportation Income to increase in 2019 and subsequent years, based on our expected U.S. Source International Transportation Income. The amount of such tax for which we are liable in any year will depend upon the amount of income we earn from voyages into or out of the United States in such year, however, which is not within our complete control.

Marshall Islands Taxation

Because we and our controlled affiliates do not, and we do not expect that we and our controlled affiliates will, conduct business, operations, or transactions in the Republic of the Marshall Islands, neither we nor our controlled affiliates are subject to income, capital gains, profits or other taxation under current Marshall Islands law, other than taxes, fines, or fees due to (i) the incorporation, dissolution, continued existence, merger, domestication (or similar concepts) of legal entities registered in the Republic of the Marshall Islands, (ii) filing certificates (such as certificates of incumbency, merger, or redomiciliation) with the Marshall Islands registrar, (iii) obtaining certificates of good standing from, or certified copies of documents filed with, the Marshall Islands registrar, (iv) compliance with Marshall Islands law concerning vessel ownership, such as tonnage tax, or (v) non-compliance with requests made by the Marshall Islands registrar of corporations relating to our books and records and the books and records of our subsidiaries. As a result, distributions by controlled affiliates to us are not subject to Marshall Islands taxation.

Other Taxation

We and our subsidiaries are subject to taxation in certain non-U.S. jurisdictions because we or our subsidiaries are either organized, or conduct business or operations, in such jurisdictions, but we do not expect any such tax to be material. However, we cannot assure this result as tax laws in these or other jurisdictions may change, or we may enter into new business transactions relating to such jurisdictions, which could affect our tax liability. Please read “Item 18 – Financial Statements: Note 11 – Income Tax.”

Item 4A. Unresolved Staff Comments

Not applicable.

Item 5. Operating and Financial Review and Prospects

Management’s Discussion and Analysis of Financial Condition and Results of Operations

Overview

Teekay LNG Partners L.P. is an international provider of marine transportation services focusing on LNG and LPG. Our primary strategy focuses on servicing customers through our fleet of LNG and LPG carriers under medium to long-term, fixed-rate charters. In executing our strategy, we may engage in vessel or business acquisitions or enter into joint ventures and partnerships with companies that provide increased access to emerging opportunities from global expansion of the LNG and LPG sectors. We seek to leverage the expertise, relationships and reputation of Teekay Corporation and its affiliates to pursue these opportunities in the LNG and LPG sectors and may consider other opportunities to which our competitive strengths are well suited. As of December 31, 2018, we had a fleet of 49 LNG carriers (including six LNG carrier newbuildings), 29 LPG/multi-gas carriers and two conventional tankers. Our ownership interests in these vessels range from 20% to 100%. In addition to our fleet, we have a 30% ownership interest in an LNG receiving and regasification terminal in Bahrain, which is currently under construction.

SIGNIFICANT DEVELOPMENTS IN 2018 AND EARLY 2019

Quarterly Distributions

We intend to increase our quarterly cash distributions on our common units by 36% in 2019, commencing with the distribution for the quarter ended March 31, 2019, as part of a balanced capital allocation strategy. Any increase in the level of quarterly distributions is subject to approval by the board of directors of our general partner (or Board of Directors).

Common Unit Repurchase Program

In December 2018, we announced that our Board of Directors had authorized a common unit repurchase program of up to $100 million of our common units. Common units may be repurchased in the open market or privately-negotiated transactions or otherwise at times and prices considered appropriate by us. The timing of any purchases and the exact number of common units to be purchased under the common unit repurchase program will be dependent on market conditions and other factors.

During December 2018 and January 2019, we repurchased 0.3 million and 0.8 million of our common units for $3.7 million and $9.3 million, respectively.

Change in Tax Structure

During the special meeting of common unitholders held on December 18, 2018, the proposal to allow us to elect to be treated as a corporation, instead of a partnership, for U.S. federal income tax purposes, and other proposals included in the related proxy statement, were approved by unitholders. As a result, effective January 1, 2019, the Partnership will be treated as a corporation for U.S. federal income tax purposes and commencing in 2019, common and preferred unitholders will receive Form 1099s instead of Schedule K-1s relating to distributions taxable as dividends. The Partnership will remain a master limited partnership, all other provisions of the Partnership's limited partnership agreement remain in effect.

This change to our status for U.S. federal income tax purposes should not result in the Partnership recognizing a tax related gain or loss. While some investors may incur a tax gain on conversion, any gain recognized for U.S. tax purposes is expected to result in tax benefits to investors that are expected to reduce the taxable portion of cash distributions paid by us in the future.

LNG Carrier Newbuildings

Consolidated Fleet

Six of our LNG carrier newbuildings, the Magdala, Myrina, Megara, Bahrain Spirit FSU, Sean Spirit and Yamal Spirit delivered in February 2018, May 2018, July 2018, August 2018, December 2018 and January 2019, respectively. Upon delivery, the Magdala, Myrina and Megara were sold to third parties and leased back under 10-year bareboat charter contracts with purchase obligations for each respective vessel and concurrently commenced their six, eight and eight-year charter contracts with Royal Dutch Shell Plc (or Shell), respectively. The Bahrain Spirit FSU commenced its 21-year charter contract with the Bahrain LNG Joint Venture in September 2018 and the Sean Spirit commenced its 13-year charter contract (which the charterer has a cancellation option after seven years) with BP Plc in December 2018. In January 2019, the Yamal Spirit LNG carrier newbuilding was delivered and concurrently commenced its 15-year charter time-contract with Yamal Trade Pte. Ltd. Upon delivery of the vessel, the Partnership sold and leased back the vessel under a sale-leaseback financing transaction, which the Partnership secured on January 18, 2019.

Pan Union Joint Venture

In January 2018, July 2018 and January 2019, the Pan Union Joint Venture took delivery of its second, third and fourth LNG carrier newbuildings, the Pan Americas, Pan Europe and Pan Africa, respectively. Upon delivery, the vessels commenced their 20-year charter contracts with Shell. We have ownership interest in these vessels ranging from 20% to 30% through the Pan Union Joint Venture.

Yamal LNG Joint Venture

In January 2018, the Yamal LNG Joint Venture took delivery of its first ARC7 LNG carrier newbuilding, the Eduard Toll. In September 2018, the Yamal LNG Joint Venture took delivery of its second ARC7 LNG carrier newbuilding, Rudolf Samoylovich, earlier than the scheduled November 2018 delivery date to service the project’s second LNG train. Upon delivery, the vessels commenced their 28-year and 27-year charter contracts with Yamal Trade Pte, respectively. Ltd. The Yamal LNG Joint Venture currently has four remaining ARC7 LNG carrier newbuildings that are scheduled for delivery in 2019. The Yamal LNG Joint Venture has secured financing in place for its four remaining ARC7 LNG carrier newbuildings.

Excelsior Joint Venture

In January 2018, we sold our 50% ownership interest in the Excelsior Joint Venture to a third party for gross proceeds of approximately $54 million. We recognized a gain on the sale of our ownership interest of $5.6 million, which was recorded in equity income for the year ended December 31, 2018.

Re-chartering Activities

In March 2018, upon its scheduled redelivery to us from Teekay Corporation, we re-chartered the Polar Spirit LNG carrier to an Asian-based energy company for a period of approximately three months and then subsequently secured employment for the vessel beginning in July 2018 for nine months with a subsidiary of Petroliam Nasional Berhad (or Petronas). In addition, we secured a four-year charter contract for the Arctic Spirit LNG carrier, also with a subsidiary of Petronas, which commenced immediately upon its scheduled redelivery from Teekay Corporation to us in May 2018. In May 2018, we agreed to a six-month charter extension of the Torben Spirit LNG carrier to December 2018 with a major energy company, which was further extended for an additional three years from the six-month extension that ended in December 2018.

Teekay Nakilat Capital Lease

We own a 70% interest in the Teekay Nakilat Joint Venture, which wholly owns a subsidiary that was the lessee under three separate 30-year capital lease arrangements with a third party for three LNG carriers (or the RasGas II LNG Carriers). Under the terms of the leases, the lessor claimed tax depreciation on the capital expenditures it incurred to acquire these vessels and paid the Teekay Nakilat Joint Venture as lessee an upfront benefit of $60.9 million at the lease inception. As is typical in these leasing arrangements, tax and change of law risks were assumed by the lessee. As described in "Item 18 - Financial Statements: Note 14b - Commitments and Contingencies," during the year ended December 31, 2018, the lessor made a determination that additional rentals were due under the leases following a challenge by the UK taxing authority and the Teekay Nakilat Joint Venture paid $63 million to the lessor, at foreign exchange rates at the dates of payment, to satisfy this tax indemnification liability in full. Of this amount, $53 million was expensed in other expense in our consolidated statements of income for the year ended December 31, 2018, which was in addition to the $12.7 million tax indemnification guarantee recorded as at December 31, 2017, with the remaining difference relating to foreign currency exchange gain.

LPG Carrier Newbuildings

In March, May and July 2018 our 50%-owned Exmar LPG Joint Venture, took delivery of its seventh, eighth and ninth LPG carrier newbuildings in the past four years, the Kapellen, Koksijde and Wepion, respectively. The Kapellen, Koksijde and Wepion are on short-term charter contracts. The Kapellen and Koksijde were financed through sale-leaseback financing transactions and in July 2018 the Exmar LPG Joint Venture completed a three-year, $35 million debt financing for the Wepion.

Conventional Tankers

In February 2018 and January 2019, CEPSA, the charterer and owner of our capital leased vessels, the Teide Spirit and Toledo Spirit, sold these vessels to third parties. As a result of these sales, we returned the vessels to CEPSA and the full amount of the associated obligations related to the capital lease were concurrently extinguished. In addition, we incurred associated seafarer severance payments in 2018 of approximately $1.8 million upon the sale of the Teide Spirit and approximately $1.8 million in 2019 for the sale of the Toledo Spirit.

On October 9, 2018, we sold the African Spirit Suezmax tanker for net proceeds of $12.8 million. On December 5, 2018, we sold the European Spirit Suezmax tanker for net proceeds of $15.7 million. During 2018, prior to the sale of these vessels, we recorded further aggregate write-downs on these two Suezmax tankers totaling $7.9 million (December 31, 2017 – $25.1 million).

Bond Issuance and Refinancings

In July 2018, we refinanced our 106.8 million Euro-denominated debt facility maturing in 2018 with a new EUR 100 million debt facility maturing in 2024, which is collateralized by a first-priority mortgage on one of our LNG carriers, the Madrid Spirit. In August 2018, we issued, in the Norwegian bond market, NOK 850 million in senior unsecured bonds that mature in August 2023. The aggregate principal amount of the bonds was equivalent to $102.0 million and all interest and principal payments have been swapped into U.S. Dollars at a fixed interest rate of 7.89%. We used the net proceeds from the bond offering to repay NOK 900 million in senior unsecured bonds that matured in September 2018 and for general corporate purposes. In November 2018, we refinanced our $190 million revolving credit facility, which was scheduled to mature in November 2018, with a new $225 million revolving credit facility maturing in November 2020 at an interest rate of LIBOR plus 1.40%. In December 2018, we refinanced our $100 million facility relating to the Bahrain Spirit FSU by completing a $109 million guaranteed private placement bond maturing in August 2030 at a fixed interest rate of 4.41%. In January 2019, we refinanced our $106 million debt facility relating to the Sean Spirit by issuing a $106 million bond maturing in December 2030 at a fixed interest rate of 4.71%.

Equity-Accounted Joint Venture's Financings and Refinancings
In September 2018, the Teekay LNG-Marubeni Joint Venture completed the refinancing of its existing $306.5 million U.S. Dollar-denominated term loan which was scheduled to mature in September 2019 with a new $306.5 million U.S. Dollar-denominated loan agreement maturing in December 2023 at an interest rate of LIBOR plus margins ranging from 1.00% to 2.25%. The loan is collateralized by first-priority statutory mortgages over the Marib Spirit, Arwa Spirit, Methane Spirit and Magellan Spirit LNG carriers, first priority pledges or charges of all the issued shares of the respective vessel owning subsidiaries and is guaranteed by us and Marubeni Corporation on a several basis. In March 2019, the Excalibur Joint Venture amended its $60 million debt facility which extended the loan maturity from November 2019 to December 2021 and lowered the cost of financing.

Charter Contracts for MALT LNG Carriers

Two of the six MALT LNG Carriers in our 52%-owned Teekay LNG-Marubeni Joint Venture, the Marib Spirit and Arwa Spirit, are under long-term charters with YLNG. Due to the political unrest in Yemen, YLNG decided to temporarily close operation of its LNG plant in Yemen in 2015. As a result, commencing January 1, 2016, the Teekay LNG-Marubeni Joint Venture agreed to successive deferral arrangements with YLNG pursuant to which a portion of the charter payments were deferred. Concurrent with the anticipated expiry of the most current deferral arrangement, which is expected to occur within the first half of 2019, the Teekay LNG-Marubeni Joint Venture intends to enter into a further agreement with YLNG pursuant to which the Teekay LNG-Marubeni Joint Venture and YLNG will suspend the two charter contracts for a period of up to three years. Should the LNG plant in Yemen resumes operations during such suspended term, it is intended that YLNG will be required to repay the applicable deferred amounts plus interest over a period of installments. However, we make no assurance whether or when the LNG plant will resume operations and, accordingly, if YLNG will be able to repay all or any portion of the deferred amounts. Our proportionate share of the estimated impact of the charter payment deferral for 2019 compared to the original charter rates earned prior to

January 1, 2016 is estimated to be a reduction to equity income ranging from $7 million to $8 million per quarter, which we expect will be partially offset by sub-chartering employment for the Marib Spirit and Arwa Spirit in 2019.

In September 2018, the Teekay LNG-Marubeni Joint Venture agreed to charter its LNG carrier, the Magellan Spirit, to us for two years at a fixed rate. In turn, we will charter the Magellan Spirit in the spot market or secure a short-term charter for this vessel. The Magellan Spirit was employed on a charter contract until March 21, 2019 at a charter rate that was significantly higher than the charter-in rate. As of the completion of the Magellan Spirit's charter contract in March 21, 2019, we have been in discussions on securing a new charter contract for this vessel.

Commercial Management Agreement for Multi-gas Vessels

On February 25, 2019, we entered into a commercial management agreement (or CMA) with a third-party commercial manager (or the Manager) whereby the Manager agreed to commercially manage and employ our seven multi-gas vessels, with such transition to occur over a period between February 2019 and April 2019. We have the ability to withdraw our vessels from the Manager at any time subject to the requirements provided in the CMA.

IMPORTANT FINANCIAL AND OPERATIONAL TERMS AND CONCEPTS

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

Voyage Revenues. Voyage revenues currently include revenues from charters accounted for under operating and direct financing leases. Voyage revenues are affected by hire rates and the number of calendar-ship-days a vessel operates. Voyage revenues are also affected by the mix of business between time and voyage charters. Hire rates for voyage charters are more volatile than for time charters, as they are typically tied to prevailing market rates at the time of a voyage.

Voyage Expenses. Voyage expenses are all expenses unique to a particular voyage, including any fuel expenses, port fees, cargo loading and unloading expenses, canal tolls, agency fees and commissions. Voyage expenses are typically paid by the customer under charters and by us under voyage charters.

Net Voyage Revenues. Net voyage revenues represent voyage revenues less voyage expenses. Because the amount of voyage expenses we incur for a particular charter depends upon the type of the charter, we use net voyage revenues to improve the comparability between periods of reported revenues that are generated by the different types of charters. We principally use net voyage revenues, a non-GAAP financial measure, because it provides more meaningful information to us about the deployment of our vessels and their performance than voyage revenues, the most directly comparable financial measure under GAAP.

Vessel Operating Expenses. Under all types of charters and contracts for our vessels, except for bareboat charters, we are responsible for vessel operating expenses, which include crewing, ship management services, repairs and maintenance, insurance, stores, lube oils and communication expenses. The two largest components of our vessel operating expenses are crew costs and repairs and maintenance. We expect these expenses to increase as our fleet matures and to the extent that it expands.

Income from Vessel Operations. To assist us in evaluating our operations by segment, we analyze the income we receive from each segment after deducting operating expenses, but prior to the inclusion or deduction of equity income, interest expense, taxes, foreign currency and derivative gains or losses and other income. For more information, please read “Item 18 – Financial Statements: Note 4 – Segment Reporting.”

Dry docking. We must periodically dry dock each of our vessels for inspection, repairs and maintenance and any modifications required to comply with industry certification or governmental requirements. Generally, we dry dock each of our vessels every two and a half to five years, depending upon the type of vessel and its age. We capitalize certain costs incurred during dry docking and amortize those costs on a straight-line basis from the completion of a dry docking to the estimated completion of the next dry docking. We include in capitalized dry docking those costs incurred as part of the dry docking to meet classification and regulatory requirements. We expense costs related to routine repairs and maintenance performed during dry docking. The number of dry dockings undertaken in a given period and the nature of the work performed determine the level of dry-docking expenditures.

Depreciation and Amortization. Our depreciation and amortization expense typically consists of the following three components:

- charges related to the depreciation of the historical cost of our fleet (less an estimated residual value) over the estimated useful lives of our vessels;
- charges related to the amortization of dry-docking expenditures over the useful life of the dry dock; and
- charges related to the amortization of the fair value of the time-charters acquired in a 2004 acquisition of four LNG carriers (over the expected remaining terms of the charters).

Revenue Days. Revenue days are the total number of calendar days our vessels were in our possession during a period less the total number of off-hire days during the period associated with major repairs, dry dockings or special or intermediate surveys. Consequently, revenue days represents the total number of days available for the vessel to earn revenue. Idle days, which are days when the vessel is available to earn revenue, yet is not employed, are included in revenue days. We use revenue days to explain changes in our net voyage revenues between periods.

Calendar-Ship-Days. Calendar-ship-days are equal to the total number of calendar days that our vessels were in our possession during a period. As a result, we use calendar-ship-days primarily in explaining changes in vessel operating expenses and depreciation and amortization.

Utilization. Utilization is an indicator of the use of our fleet during a given period and is determined by dividing our revenue days by our calendar-ship-days for the period.

RESULTS OF OPERATIONS

Items You Should Consider When Evaluating Our Results of Operations

Some factors that have affected our historical financial performance and may affect our future performance are listed below:

- The amount and timing of dry docking of our vessels can affect our revenues between periods. Our vessels are off-hire at various times due to scheduled and unscheduled maintenance. During 2018, 2017 and 2016, we had 156, 63 and zero scheduled off-hire days, respectively, relating to the dry docking of our vessels which are consolidated for accounting purposes. In addition, certain of our consolidated vessels had unplanned off-hire of 178 days in 2018, 57 days in 2017, and 39 days in 2016 relating to repairs. The financial impact from these periods of off-hire, if material, is explained in further detail below.
- The size of our fleet changes. Our historical results of operations reflect changes in the size and composition of our fleet due to certain vessel deliveries and sales. Please read “Liquefied Natural Gas Segment”, "Liquefied Petroleum Gas Segment" and “Conventional Tanker Segment” below and “Significant Developments in 2018 and Early 2019” above for further details about certain prior and future vessel deliveries and sales.
- Vessel operating and other costs are facing industry-wide cost pressures. The shipping industry continues to forecast a shortfall in qualified personnel, although weak shipping markets and slowing growth may ease officer shortages. We will continue to focus on our manning and training strategies to meet future needs. In addition, factors such as customer demands for enhanced training and physical equipment, pressure on commodity and raw material prices, as well as changes in regulatory requirements could also contribute to operating expenditure increases. We continue to take action aimed at improving operational efficiencies, and to temper the effect of inflationary and other price escalations; however, increases to operational costs may well occur in the future.
- Our financial results are affected by fluctuations in the fair value of our derivative instruments. The change in fair value of our derivative instruments is included in our net income as the majority of our derivative instruments are not designated as hedges for accounting purposes. These changes may fluctuate significantly as interest rates, foreign exchange rates and spot tanker rates fluctuate relating to our interest rate swaps, interest rate swaptions, cross currency swaps and to the agreement we had with Teekay Corporation relating to the time charter contract for the Toledo Spirit Suezmax tanker prior to its sale in 2019. Please read “Item 18 – Financial Statements: Note 12d – Related Party Transactions” and “Note 13 – Derivative Instruments and Hedging Activities.” The unrealized gains or losses relating to changes in fair value of our derivative instruments do not impact our cash flows.
- Our financial results are affected by fluctuations in currency exchange rates. Under GAAP, all foreign currency-denominated monetary assets and liabilities (including cash and cash equivalents, restricted cash, accounts receivable, accounts payable, accrued liabilities, advances from affiliates, and long-term debt) are revalued and reported based on the prevailing exchange rate at the end of the period. These foreign currency translations fluctuate based on the strength of the U.S. Dollar relative mainly to the Euro and NOK and are included in our results of operations. The translation of all foreign currency-denominated monetary assets and liabilities at each reporting date results in unrealized foreign currency exchange gains or losses but do not currently impact our cash flows.
- Certain of our consolidated and equity-accounted vessels earned revenues based partly on spot market rates. Our previously owned conventional tankers, the European Spirit and African Spirit, our seven wholly-owned multi-gas carriers, four of our 52%-owned LNG carriers in the Teekay LNG-Marubeni Joint Venture, and certain of our LPG carriers in our 50%-owned Exmar LPG Joint Venture were either trading or are currently trading in the spot market. Volatility of spot rates will affect our results from period to period.

- We increased our operating and reporting segments from two to three segments. Prior to 2018, we reported our financial results on the basis of two business segments: a liquified gas segment and a conventional tanker segment. During 2018, our Teekay Multi-Gas Pool commenced operations. As part of this initiative, we completed an internal reorganization and revised our reportable segments, as such changes resulted in management viewing the gas fleet and its components differently. As a result, our LPG and multi-gas carriers are now reported in a separate segment apart from our LNG carriers. Effective as of the fourth quarter of 2018, we manage our business and analyze and report our results from operations on the basis of three business segments: the liquefied natural gas segment, the liquefied petroleum gas segment and the conventional tanker segment. All segment information for comparative periods has been retroactively adjusted to conform with the change in segment presentation adopted in 2018. Details of the changes to our results from operations for the year ended December 31, 2018 compared to the year ended December 31, 2017 for each of our segments are provided below.

Year Ended December 31, 2018 versus Year Ended December 31, 2017

Summary

Our consolidated income from vessel operations was $147.8 million for the year ended December 31, 2018, compared to $148.6 million for the year ended December 31, 2017. The primary reasons for this decrease, which are reflected in the table below and described following the table, are as follows:

- lower income from vessel operations from our seven multi-gas carriers and two conventional tankers trading in the spot market in 2018 and the Polar Spirit earning a lower time-charter rate upon redeployment;
- higher general and administrative expenses in 2018 primarily due to an increase in operational staff relating to new vessel deliveries, higher levels of business development activities and increased professional fees; and
- write-downs of goodwill on three conventional vessels and four multi-gas carriers in 2018 and restructuring charges related to the sale of the Teide Spirit in February 2018, net of the initial write-downs of four conventional vessels in 2017;

partially offset by:

- deliveries to us of the Torben Spirit, Macoma, Murex, Magdala, Myrina, Megara, Bahrain Spirit and Sean Spirit LNG carrier newbuildings between February 2017 and December 2018.

Liquefied Natural Gas Segment

As at December 31, 2018, our liquefied natural gas segment fleet, including newbuildings, included 49 LNG carriers, in which our interests ranged from 20% to 100%. However, the table of operating results below only includes the 23 LNG carriers that are accounted for under the consolidation method of accounting and the Magellan Spirit, a vessel chartered-in from the Teekay LNG-Marubeni Joint Venture and excludes one LNG carrier newbuilding under construction as of December 31, 2018, as well as the vessels and other assets accounted for under the equity method in the following table. The comparison of the results from vessels and assets accounted for under the equity method is described below under Equity Income.

		As at December 31, 2018	
Assets accounted for under the equity method of accounting	Ownership Percentage	# of Delivered Vessels	Newbuildings/LNG Terminals Under Construction
Angola Joint Venture	33%	4	—
Bahrain LNG Joint Venture	30%	—	1
Exmar LNG Joint Venture	50%	1	—
Pan Union Joint Venture	20%-30%	3	1
RasGas 3 Joint Venture	40%	4	—
Teekay LNG-Marubeni Joint Venture	52%	6	—
Yamal LNG Joint Venture	50%	2	4
		20	6

The following table of operating results compares our liquefied natural gas segment’s operating results for 2018 and 2017 and compares its net voyage revenues (which is a non-GAAP financial measure) for 2018 and 2017 to voyage revenues, the most directly comparable GAAP financial measure. The following table of operating results also provides a summary of the changes in calendar-ship-days and revenue days for our liquefied natural gas segment:

(in thousands of U.S. Dollars, except revenue days, calendar-ship-days and percentages)	Year Ended December 31, 2018	2017	% Change
Voyage revenues	454,517	365,914	24.2
Voyage expenses	(2,750)	(1,802)	52.6
Net voyage revenues	451,767	364,112	24.1
Vessel operating expenses(2)	(82,952)	(80,245)	3.4
Time-charter hire expense	(7,670)	—	100.0
Depreciation and amortization	(111,360)	(86,592)	28.6
General and administrative expenses(1)(2)	(23,270)	(13,223)	76.0
Income from vessel operations	226,515	184,052	23.1
Equity income	60,228	17,652	241.2
Operating Data:			
Revenue Days (A)	7,425	5,793	28.2
Calendar-Ship-Days (B)	7,570	5,912	28.0
Utilization (A)/(B)	98.1 %	98.0 %	

(1) Includes direct general and administrative expenses and indirect general and administrative expenses (allocated to each segment based on estimated use of resources).

(2) An adjustment has been made during 2018 to reclassify a ship management cost recovery from general and administrative expenses to vessel operating expenses. The 2017 results have also been reclassified to conform to the presentation adopted in 2018.

Our liquefied natural gas segment's total calendar-ship-days increased by 28.0% to 7,570 days in 2018 from 5,912 days in 2017, as a result of the deliveries of the Torben Spirit, Murex, Macoma, Magdala, Myrina, Megara, Bahrain Spirit and Sean Spirit LNG carrier newbuildings between February 2017 and December 2018 and the Magellan Spirit chartered-in from the Teekay LNG-Marubeni Joint Venture commencing in September 2018. During 2018, vessels in this segment were off-hire for scheduled dry dockings of 30 days, unscheduled off-hire for repairs of 49 days and idle for 66 days for repositioning to other charters, compared to vessels in this segment being off-hire for scheduled dry dockings of 63 days, unscheduled off-hire for repairs of 53 days and idle for three days in the same period of the prior year. As a result, our utilization increased slightly to 98.1% for 2018, compared to 98.0% in 2017.

Net Voyage Revenues. Net voyage revenues increased during 2018 compared to 2017, primarily as a result of:

- an increase of $15.0 million due to the delivery of the Magdala and charter contract commencing in February 2018;
- an increase of $13.5 million due to the delivery of the Murex and charter contract commencing in November 2017;
- an increase of $12.8 million due to the Magellan Spirit chartered-in from Teekay LNG-Marubeni Joint Venture in September 2018 and commencing its charter-out employment in October 2018;
- an increase of $12.6 million due to the delivery of the Macoma and charter contract commencing in October 2017;
- an increase of $11.0 million due to the delivery of the Myrina and charter contract commencing in May 2018;
- an increase of $9.7 million due to the delivery of the Torben Spirit and charter contract commencing in March 2017 and earning an increased charter rate during 2018 upon the charterer extending its original contract in 2017;
- an increase of $8.6 million due to the delivery of the Bahrain Spirit in August 2018 and commencement of its charter contract in September 2018;
- an increase of $7.8 million due to the delivery of the Megara and charter commencing in July 2018;
- an increase of $3.8 million due to the impact of the appreciation of the Euro compared to the U.S. Dollar on our Euro-denominated revenue;
- an increase of $2.4 million relating to 35 days of unscheduled off-hire in the second quarter of 2017 due to repairs required for one of our LNG carriers;

- an increase of $2.0 million due to the Hispania Spirit being off-hire for 31 days in the first quarter of 2017 for a scheduled dry docking; and
- an increase of $1.6 million due to mobilization service fees earned commencing in October 2018 relating to our 30%-owned LNG receiving and regasification terminal under construction in Bahrain (however, we had a corresponding increase in vessel operating expenses);

partially offset by:

- a decrease of $5.6 million due to the Polar Spirit earning a lower charter rate upon redeployment after its original charter contract ended during the first quarter of 2018 and 35 days of unscheduled off-hire and idle days during 2018 primarily due to an incident investigation involving a collision with a small vessel and repositioning to other charters;
- a decrease of $3.7 million primarily related to additional revenue recognized during the first quarter of 2017 relating to the accelerated dry docking of two LNG carriers in 2017, the costs of which will be recoverable from the charterer;
- a decrease of $1.9 million due to the Catalunya Spirit being off-hire for 30 days in 2018 for a scheduled dry docking;
- a decrease of $1.7 million relating to amortization of in-process contracts recognized into revenue with respect to our shipbuilding and site supervision contract associated with the four LNG newbuilding carriers in the Pan Union Joint Venture due to the deliveries of the Pan Asia, Pan Americas and Pan Europe LNG carrier newbuildings between October 2017 and July 2018 (however, we had a corresponding decrease in vessel operating expenses); and
- a decrease of $1.4 million relating to 20 days of unscheduled off-hire in the fourth quarter of 2018 for the Madrid Spirit due to repairs.

Vessel Operating Expenses. Vessel operating expenses increased during 2018 compared to 2017, primarily as a result of:

- an increase of $2.4 million due to deliveries of the Bahrain Spirit, Sean Spirit and Torben Spirit;
- an increase of $1.8 million due to the reactivation of the Arctic Spirit from lay-up during the third quarter of 2017; and
- an increase of $1.6 million due to mobilization expenses incurred commencing in October 2018 relating to our 30%-owned LNG receiving and regasification terminal under construction in Bahrain (however, we had a corresponding increase in net voyage revenues);

partially offset by:

- a decrease of $2.4 million due to higher ship management cost recovery in 2018 as a result of the vessels delivered during the year; and
- a decrease of $1.7 million due to lower shipbuilding supervision costs upon the deliveries of Pan Asia, Pan Americas and Pan Europe LNG carrier newbuildings (however, we had a corresponding decrease in net voyage revenues).

Time-charter Hire Expense. Time-charter hire expense increased by $7.7 million as the Magellan Spirit LNG carrier was chartered-in from the Teekay LNG-Marubeni Joint Venture commencing in September 2018.

Depreciation and Amortization. Depreciation and amortization increased by $24.8 million in 2018 compared to 2017 primarily due to the deliveries of the Torben Spirit, Murex, Macoma, Magdala, Myrina, Megara and Sean Spirit.

Equity Income. Equity income increased by $42.6 million in 2018 compared to 2017 as explained below.

(in thousands of U.S. Dollars)	Year Ended December 31,							
	Angola LNG Carriers	Exmar LNG Carriers	MALT LNG Carriers	RasGas 3 LNG Carriers	Pan Union LNG Carriers	Yamal LNG Carriers	Bahrain LNG Joint Venture	Total Equity Income
2018	17,337	9,233	(1,005)	14,730	6,819	9,607	3,507	60,228
2017	16,755	7,397	(16,547)	16,324	496	(1,761)	(5,012)	17,652
Difference	582	1,836	15,542	(1,594)	6,323	11,368	8,519	42,576

The $0.6 million increase in our 33%-owned investment in the four Angola LNG Carriers was primarily due to mark-to-market changes on non-designated derivative instruments. The mark-to-market changes resulted from increases in long-term LIBOR benchmark interest rates for interest rate swaps compared to 2017.

The $1.8 million increase in our 50% investment in the Exmar LNG Carriers was primarily due to a gain of $5.6 million upon the sale of our 50% ownership interest in the Excelsior Joint Venture recorded in equity income, partially offset by lower earnings due to the sale of the Excelsior Joint Venture.

The $15.5 million increase in equity income from our 52% investment in the MALT LNG Carriers was primarily due to higher fleet utilization and higher rates earned as a result of certain vessels that operated in the spot market during 2017 being on short-term charter contracts in 2018.

The $1.6 million decrease in equity income from our 40% investment in the RasGas 3 LNG Carriers was primarily due to higher interest expense due to increase in LIBOR, partially offset by unrealized gains recognized in 2018 relating to its non-designated interest rate swaps compared to unrealized losses in 2017.

The $6.3 million increase in equity income from our investment in the Pan Union LNG Carriers was primarily due to the deliveries of the Pan Union Joint Venture's three LNG carrier newbuildings, the Pan Asia, Pan Americas and Pan Europe, in October 2017, January 2018 and July 2018, respectively, in which we have ownership interests ranging from 20% to 30%.

The $11.4 million increase in equity income from our 50% investment in the Yamal LNG Carriers was primarily due to the deliveries of the Yamal LNG Joint Venture's first two ARC7 LNG carrier newbuildings, the Eduard Toll and Rudolf Samoylovich, in January 2018 and September 2018, respectively, partially offset by ineffectiveness recognized on hedged-accounted interest rate swaps.

The $8.5 million increase in our 30%-owned investment in the Bahrain LNG Joint Venture was primarily due to unrealized gains on designated and non-designated derivative instruments recorded in earnings in 2018 compared to losses recorded in earnings in 2017 due to mark-to-market changes and the sub-charter income earned in 2018 on the Bahrain Spirit.

Liquified Petroleum Gas Segment

As at December 31, 2018, our liquefied petroleum gas segment fleet included 29 LPG and multi-gas carriers, in which our interests ranged from 50% to 99%. However, the table of operating results below only includes the seven multi-gas carriers that are accounted for under the consolidation method of accounting and excludes 22 vessels in the Exmar LPG Joint Venture accounted for under the equity method. The comparison of the results from vessels and assets accounted for under the equity method are described below under Equity Loss.

The following table of operating results compares our liquefied petroleum gas segment’s operating results for 2018 and 2017 and compares its net voyage revenues (which is a non-GAAP financial measure) for 2018 and 2017 to voyage revenues, the most directly comparable GAAP financial measure. The following table of operating results also provides a summary of the changes in calendar-ship-days and revenue days for our liquefied petroleum gas segment:

(in thousands of U.S. Dollars, except revenue days, calendar-ship-days and percentages)	Year Ended December 31,		% Change
	2018	2017	
Voyage revenues	23,922	19,769	21.0
Voyage expenses	(15,907)	(1,218)	1,206.0
Net voyage revenues	8,015	18,551	(56.8)
Vessel operating expenses	(20,932)	(3,083)	578.9
Depreciation and amortization	(7,748)	(8,433)	(8.1)
General and administrative expenses(1)	(2,932)	(2,411)	21.6
Write-down of goodwill and vessels	(33,790)	—	100.0
(Loss) income from vessel operations	(57,387)	4,624	(1,341.1)
Equity loss	(6,682)	(7,863)	(15.0)
Operating Data:			
Revenue Days (A)	2,249	2,445	(8.0)
Calendar-Ship-Days (B)	2,555	2,445	4.5
Utilization (A)/(B)	88.0 %	100.0 %	

(1)

Includes direct general and administrative expenses and indirect general and administrative expenses (allocated to each segment based on estimated use of resources).

Our liquefied petroleum gas segment's total calendar-ship-days increased by 4.5% to 2,555 days in 2018 from 2,445 days in 2017, as a result of the acquisition of the Sonoma Spirit in April 2017. During 2018, vessels in this segment were off-hire for scheduled dry dockings of 97 days, unscheduled off-hire for repairs of 97 days and idle for 112 days for repositioning to other charters, compared to vessels in this segment not being off-hire or idle in the same period of the prior year. As a result, our utilization decreased to 88.0% for 2018, compared to 100.0% in 2017.

Net Voyage Revenues. Net voyage revenues decreased by $10.5 million during 2018 compared to 2017, primarily related to recognition of previous upfront payments received from I.M. Skaugen SE (or Skaugen) during the fourth quarter of 2017 upon termination of charterer contracts with Skaugen.

Vessel Operating Expenses. Vessel operating expenses increased by $17.8 million during 2018 compared to 2017, primarily due to six multi-gas carriers, which were previously on bareboat charter contracts, incurring operating expenses following their redelivery to us from Skaugen during 2017.

Write-down of Goodwill and Vessels. Write-down of vessels of $33.0 million in 2018 were due to the write-downs of the Camilla Spirit, Cathinka Spirit, Napa Spirit and Pan Spirit multi-gas carriers as a result of our evaluation of alternative strategies for these assets, the charter rate environment at the time and the outlook for charter rates for these vessels. In 2018, we conducted our annual goodwill impairment review and concluded that our liquefied petroleum gas segment was impaired and recorded an impairment charge of $0.8 million for the year ended December 31, 2018.

Equity Loss. The $1.2 million improvement in equity loss from our 50% ownership interest in Exmar LPG BVBA (or the Exmar LPG Joint Venture) was primarily due to the impairment losses recorded on the Courcheville and Temse during 2017, partially offset by lower spot rates earned during 2018 compared to 2017 for certain vessels and the sale of the Courcheville in January 2018.

Conventional Tanker Segment

As at December 31, 2018, our conventional tanker fleet included one Suezmax-class double-hulled conventional crude oil tanker, which we lease under capital lease and one Handymax Product tanker, which we own. Two of our conventional tankers, the African Spirit and European Spirit, have been trading in the spot market since the termination of their respective fixed-rate charters in November 2017 and August 2017, respectively. The African Spirit, European Spirit and Toledo Spirit were sold in October 2018, December 2018, and January 2019, respectively. The following table of operating results compares our conventional tanker segment's operating results for 2018 and 2017, and compares its net voyage revenues (which is a non-GAAP financial measure) for 2018 and 2017 to voyage revenues, the most directly comparable GAAP financial measure. The following table of operating results also provides a summary of the changes in calendar-ship-days and revenue days for our conventional tanker segment:

(in thousands of U.S. Dollars, except revenue days, calendar-ship-days and percentages)	Year Ended December 31,		% Change
	2018	2017	
Voyage revenues	32,323	46,993	(31.2)
Voyage expenses	(9,580)	(5,182)	84.9
Net voyage revenues	22,743	41,811	(45.6)
Vessel operating expenses	(13,774)	(18,211)	(24.4)
Depreciation and amortization	(5,270)	(10,520)	(49.9)
General and administrative expenses(1)	(2,310)	(2,507)	(7.9)
Write-down of vessels	(20,863)	(50,600)	(58.8)
Restructuring charges	(1,845)	—	100.0
Loss from vessel operations	(21,319)	(40,027)	(46.7)
Operating Data:			
Revenue Days (A)	1,328	1,868	(28.9)
Calendar-Ship-Days (B)	1,389	1,904	(27.0)
Utilization (A)/(B)	95.6 %	98.1 %	

(1) Includes direct general and administrative expenses and indirect general and administrative expenses (allocated to each segment based on estimated use of corporate resources).

Our conventional tanker segment's total calendar ship days decreased by 27.0% to 1,389 days in 2018 from 1,904 days in 2017 primarily as a result of the sales of the Asian Spirit, Teide Spirit, European Spirit and African Spirit in March 2017, February 2018, October 2018 and December 2018, respectively. During 2018, the European Spirit was off-hire for 29 days for a scheduled dry docking and 17 days for repairs and the African Spirit and Alexander Spirit had a total of 15 days of unscheduled off-hire due to repairs, compared to 34 idle days for the Asian Spirit after its firm charter contract ended in January 2017 and two unscheduled off-hire days for the African Spirit for repairs during the same period in 2017. As a result, our utilization decreased to 95.6% in 2018 compared to 98.1% in 2017.

Net Voyage Revenues. Net voyage revenues decreased during 2018 compared to 2017, primarily as a result of:

- a decrease of $9.5 million due to the sales of the Asian Spirit and Teide Spirit; and
- a decrease of $8.4 million as the fixed-rate charter contracts for the European Spirit and African Spirit expired in August and November 2017, respectively, and the vessels earned lower spot rates until they were sold in October and December of 2018, respectively.

Vessel Operating Expenses. Vessel operating expenses decreased during 2018 compared to 2017 by $4.4 million primarily as a result of the sales of the Asian Spirit, Teide Spirit, European Spirit and African Spirit.

Depreciation and Amortization. Depreciation and amortization decreased during 2018 compared to 2017 by $5.3 million primarily as a result of the sales of the Asian Spirit and Teide Spirit, and the reclassification of the European Spirit and African Spirit to vessels held for sale during 2017.

Write-down of vessels. During 2018, we recorded write-downs of $20.9 million. We recorded a write-down of $13.0 million on the Alexander Spirit conventional tanker to its estimated fair value, using an appraised value, as a result of changes in our expectations of the vessel's future opportunities once its current contract ends in 2019. We also recorded write-downs of $7.9 million on a combined basis on the European Spirit and African Spirit Suezmax tankers as a result of declines in the estimated fair market values of these vessels held for sale. During 2017, we recorded write-downs of $50.6 million. We recorded a write-down of $25.5 million on a combined basis in respect of the Teide Spirit and Toledo Spirit upon the charterer of the Teide Spirit, which is the same charterer of the Toledo Spirit, giving formal notification to us of its intention to terminate its charter contract. In addition, we recorded write-downs of $25.1 million on a combined basis in respect of the European Spirit and African Spirit upon their original contracts ending in 2017 and the vessels being marketed for sale.

Restructuring Charges. The restructuring charges of $1.8 million incurred in 2018 relate to seafarer severance costs upon CEPSA’s sale of the Teide Spirit, our vessel related to capital lease.

Other Operating Results

General and Administrative Expenses. General and administrative expenses increased to $28.5 million for 2018, from $18.1 million for 2017, primarily due to an increase in operational staff relating to new vessel deliveries, higher levels of business development activities, an increase in professional fees primarily due to the lease dispute for our RasGas II LNG Carriers as described above in "Significant Developments in 2018 and Early 2019 – Teekay Nakilat Capital Lease" and due to claims against Skaugen for damages and losses for our multi-gas carriers previously on charter to them.

Interest Expense. Interest expense increased to $128.3 million for 2018, from $80.9 million for 2017. Interest expense primarily reflects interest incurred on our long-term debt and obligations related to capital leases. This increase was primarily the result of:

- an increase of $37.1 million primarily due to deliveries of the Torben Spirit, Murex, Macoma, Magdala, Myrina, Megara, Bahrain Spirit and Sean Spirit during 2018 and 2017;
- an increase of $7.6 million as a result of higher LIBOR rates, net of principal debt repayments, as compared to the same periods of the prior year; and
- an increase of $3.7 million due to decreases in capitalized interest as a result of vessels delivered during 2018 and 2017.

Realized and Unrealized Gain (Loss) on Non-Designated Derivative Instruments. Net realized and unrealized gains (losses) on non-designated derivative instruments increased to $3.3 million for 2018, from $(5.3) million for 2017 as set forth in the table below.

(in thousands of U.S. Dollars)	Year Ended December 31,					
	2018			2017		
	Realized gains (losses)	Unrealized gains (losses)	Total	Realized gains (losses)	Unrealized gains (losses)	Total
Interest rate swap agreements	(14,654)	31,061	16,407	(18,825)	12,393	(6,432)
Interest rate swaption agreements	—	2	2	—	945	945
Interest rate swap and swaption agreements termination	(13,681)	—	(13,681)	(610)	—	(610)
Toledo Spirit time-charter derivative	1,480	(930)	550	678	110	788
	(26,855)	30,133	3,278	(18,757)	13,448	(5,309)

As at December 31, 2018 and 2017, we had interest rate swap agreements, excluding our swap agreements with future commencement dates, with aggregate average net outstanding notional amounts of approximately $919 million and $837 million, respectively, with average fixed rates of 3.3% and 3.5%, respectively. The increases in realized losses relating to our interest rate swaps from 2018 to 2017 were primarily due to an interest rate swap termination in 2018, partially offset by decreases in our settlement payments as a result of the expiration of certain interest rate swaps, which were not renewed, and an increase in LIBOR compared to 2017.

During 2018, we also recognized unrealized gains on our interest rate swap agreements associated with our U.S. Dollar-denominated long-term debt. This resulted from $4.1 million of unrealized gains relating to increases in long-term forward LIBOR benchmark interest rates relative to the beginning of 2018 and reclassification of $8.8 million of previously recognized unrealized losses to realized losses related to actual cash settlements of our interest rate swaps.

During 2018, we recognized unrealized gains on our interest rate swap agreements associated with our Euro-denominated long-term debt. This resulted from reclassification of $19.5 million of previously recognized unrealized losses to realized losses related to actual cash settlements of our interest rate swaps, of which $13.7 million was due to the termination of one of our interest rate swap agreements related to the refinancing of one of our debt facilities, partially offset by $1.3 million of unrealized losses relating to decreases in long-term forward EURIBOR benchmark interest rates relative to the beginning of 2018.

The Toledo Spirit time-charter derivative is the agreement with Teekay Corporation under which Teekay Corporation paid us any amounts payable to the charterer of the Toledo Spirit as a result of spot rates being below the fixed rate, and we paid Teekay Corporation any amounts payable to us by the charterer of the Toledo Spirit as a result of spot rates being in excess of the fixed rate. Please read “Item 18 – Financial Statements: Note 12d – Related Party Transactions." The realized gain of $1.5 million for 2018 relates to lower earnings on our profit-loss-sharing agreement for the Toledo Spirit (we had corresponding decrease in net voyage revenues). During 2018, we recognized unrealized losses on our Toledo Spirit time-charter derivative contract of $0.9 million. This resulted from a reclassification of previously recognized unrealized gains to realized gains of $1.5 million, partially offset by $0.6 million of unrealized gains relating to decreases in the projected forward tanker rates in the tanker market, relative to the beginning of 2018. The Toledo Spirit was sold in early 2019, and as a result, the derivative agreement ended at that time.

During 2017, we recognized unrealized gains on our interest rate swap and swaption agreements associated with our U.S. Dollar-denominated long-term debt. This resulted from reclassification of $10.9 million of previously recognized unrealized losses to realized losses related to actual cash settlements of our interest rate swaps, partially offset by $2.6 million of unrealized losses relating to decreases in long-term forward LIBOR benchmark interest rates, relative to the beginning of 2017.

During 2017, we also recognized unrealized gains on our interest rate swap agreements associated with our Euro-denominated long-term debt. This resulted from reclassification of $7.9 million of previously recognized unrealized losses to realized losses related to actual cash settlements of our interest rate swaps, partially offset by $2.8 million of unrealized losses relating to decreases in long-term forward EURIBOR benchmark interest rates, relative to the beginning of 2017.

The projected forward average tanker rates in the tanker market decreased slightly at December 31, 2017 compared to the beginning of 2017, which resulted in $0.1 million of unrealized gains on our Toledo Spirit time-charter derivative.

Please see “Item 5 – Operating and Financial Review and Prospects: Critical Accounting Estimates – Valuation of Derivative Instruments,” which explains how our derivative instruments are valued, including the significant factors and uncertainties in determining the estimated fair value and why changes in these factors result in material variances in realized and unrealized gain (loss) on non-designated derivative instruments.

Foreign Currency Exchange Gains (Losses). Foreign currency exchange gains (losses) were $1.4 million and $(26.9) million for 2018 and 2017, respectively. These foreign currency exchange gains (losses) are due primarily to the relevant period-end revaluation of our NOK-denominated debt and our Euro-denominated term loans for financial reporting purposes into U.S. Dollars, net of the realized and unrealized gains and losses on our cross currency swaps. Gains on NOK-denominated and Euro-denominated monetary liabilities reflect a stronger U.S. Dollar against the NOK and Euro on the date of revaluation or settlement compared to the rate in effect at the beginning of the period. Losses on NOK-denominated and Euro-denominated monetary liabilities reflect a weaker U.S. Dollar against the NOK and Euro on the date of revaluation or settlement compared to the rate in effect at the beginning of the period.

For 2018, foreign currency exchange gains (losses) included realized gains of $42.3 million upon maturity of our NOK bonds in 2018, $42.3 million unrealized gains from the transfer of previously recognized unrealized losses to realized losses related to our cross currency swaps associated with the NOK bond which matured in 2018, unrealized gains on the revaluation of our NOK-denominated debt of $19.2 million and unrealized gains on the revaluation of our Euro denominated, non-U.S. Dollar-denominated cash, restricted cash, working capital and debt of $9.8 million. These gains were partially offset by $(42.3) million of realized losses related to the maturity of our cross currency swaps associated with the NOK bonds which matured in 2018, $(42.3) million of unrealized losses from the transfer of previously recognized unrealized gains to realized gains related to the maturity of the NOK bonds in 2018, unrealized losses on our cross currency swaps of ($21.1) million relating to depreciation of long-term NOK forward exchange rates and decreases in long-term forward NIBOR benchmark interest rates relative to the beginning of 2018 and ($6.5) million of realized losses on our cross currency swaps.

For 2017, foreign currency exchange (losses) gains included $(25.7) million of realized losses related to the maturity of our cross currency swaps associated with the NOK bonds which matured in 2017, $(25.7) million of unrealized losses from the transfer of previously recognized unrealized gains to realized gains related to the maturity of the NOK bonds in 2017, realized losses of $(9.3) million on our cross currency swaps, the unrealized losses on the revaluation of our NOK-denominated debt of $(17.6) million, and unrealized losses on the revaluation of our Euro-denominated cash, restricted cash and debt of $(23.3) million. These losses were partially offset by realized gains of $25.7 million upon the maturity of our NOK bonds in 2017, $25.7 million unrealized gains from the transfer of previously recognized unrealized losses to realized losses related to our cross currency swaps associated with the NOK bond which matured in 2017, unrealized gains of $23.3 million on our cross currency swaps primarily due to appreciation of long-term NOK forward exchange rates and increases in long-term forward NIBOR benchmark interest rates relative to the beginning of 2017.

Other Comprehensive (Loss) Income (or OCI). OCI was $(1.1) million in 2018 compared to $4.0 million in 2017, due to changes in the valuation of interest rate swaps accounted for using hedge accounting within the Teekay Nakilat Joint Venture, in which we own a 70% interest, and certain of our equity-accounted joint ventures.

Year Ended December 31, 2017 versus Year Ended December 31, 2016

Liquefied Natural Gas Segment

As at December 31, 2017, our liquefied natural gas segment fleet, including newbuildings, consisted of 50 LNG carriers, in which our interests ranged from 20% to 100%. However, the table of operating results below only includes the 18 LNG carriers that were accounted for under the consolidation method of accounting and excludes six LNG carrier newbuildings under construction as of December 31, 2017 and the following vessels and other assets accounted for under the equity method in the following table. The comparison of the results from vessels and assets accounted for under the equity method is described below under Equity Income.

Assets accounted for under the equity method of accounting	Ownership Percentage	As at December 31, 2017 # of Delivered Vessels	Newbuildings/LNG Terminals Under Construction
Angola Joint Venture	33%	4	—
Bahrain LNG Joint Venture	30%	—	1
Exmar LNG Joint Venture	50%	2	—
Pan Union Joint Venture	20%-30%	1	3
RasGas 3 Joint Venture	40%	4	—
Teekay LNG-Marubeni Joint Venture	52%	6	—
Yamal LNG Joint Venture	50%	—	6
		17	10

The following table of operating results compares our liquefied natural gas segment's operating results for 2017 and 2016, and compares its net voyage revenues (which is a non-GAAP financial measure) for 2017 and 2016 to voyage revenues, the most directly comparable GAAP financial measure. The following table of operating results also provides a summary of the changes in calendar-ship-days and revenue days for our liquefied natural gas segment:

(in thousands of U.S. Dollars, except revenue days, calendar-ship-days and percentages)	Year Ended December 31, 2017	2016	% Change
Voyage revenues	365,914	314,591	16.3
Voyage expenses	(1,802)	(449)	301.3
Net voyage revenues	364,112	314,142	15.9
Vessel operating expenses	(80,245)	(65,371)	22.8
Depreciation and amortization	(86,592)	(72,190)	20.0
General and administrative expenses(1)	(13,223)	(13,955)	(5.2)
Income from vessel operations	184,052	162,626	13.2
Equity Income	17,652	48,633	(63.7)
Operating Data:			
Revenue Days (A)	5,793	5,178	11.9
Calendar-Ship-Days (B)	5,912	5,244	12.7
Utilization (A)/(B)	98.0%	98.7%	

(1) Includes direct general and administrative expenses and indirect general and administrative expenses (allocated to each segment based on estimated use of resources).

Our liquefied natural gas segment's total calendar-ship-days increased by 12.7% to 5,912 days in 2017 from 5,244 days in 2016, as a result of the deliveries of the Creole Spirit and Oak Spirit during 2016 and the deliveries of the Torben Spirit, Macoma, and Murex during 2017. During 2017, three of our consolidated vessels in this segment had 53 unscheduled off-hire days for repairs, two vessels were off-hire for scheduled dry dockings of 63 days, and the Torben Spirit was idle for three days prior to its charter contract commencement, compared to three consolidated vessels in this segment having 39 unscheduled off-hire days for repairs, and the Creole Spirit and Oak Spirit being idle for 12 days and 15 days, respectively, prior to their charter contract commencements in 2016. As a result, our utilization decreased to 98.0% for 2017, compared to 98.7% in 2016.

Net Voyage Revenues. Net voyage revenues increased during 2017 compared to 2016, primarily as a result of:

- an increase of $16.6 million due to the Oak Spirit charter contract commencing in August 2016;
- an increase of $13.5 million due to the Torben Spirit charter contract commencing in March 2017;

- an increase of \$8.4 million due to the Creole Spirit charter contract commencing in February 2016;
- an increase of \$6.9 million primarily related to additional revenue recognized relating to the accelerated dry docking of two LNG carriers, the costs of which will be recoverable from the charterer, and higher pass-through operating expenses due to timing of main engine maintenance (however, we had corresponding increases in vessel operating expenses relating to the engine maintenance);
- an increase of \$3.5 million due to the Macoma charter contract commencing in October 2017;

- an increase of $3.0 million relating to amortization of in-process contracts recognized as revenue with respect to our shipbuilding and site supervision contract associated with the four LNG newbuilding carriers in the Pan Union Joint Venture (however, we had corresponding increases in vessel operating expenses); and
- an increase of $2.4 million due to the Murex charter contract commencing in November 2017;

partially offset by:

- a decrease of $2.4 million relating to 35 days of unscheduled off-hire in the second quarter of 2017 due to repairs required for one of our LNG carriers; and
- a net decrease of $0.5 million due to the Hispania Spirit being off-hire for 31 days in the first quarter of 2017 for a scheduled dry docking, partially offset by a reduction in a performance claim recorded in 2016.

Vessel Operating Expenses. Vessel operating expenses increased during 2017 compared to 2016, primarily as a result of:

- an increase of $6.0 million due to the deliveries of the Creole Spirit, Oak Spirit and Torben Spirit;
- an increase of $3.0 million in relation to our agreement to provide shipbuilding and site supervision costs associated with the four LNG newbuilding carriers in the Pan Union Joint Venture (however, we had corresponding increases in net voyage revenues);
- an increase of $3.0 million for two of our LNG carriers as a result of the timing of main engine maintenance (however, we had corresponding increases in net voyage revenues); and
- an increase of $2.0 million for certain of our LNG carriers due to the timing of repairs and maintenance.

Depreciation and Amortization. Depreciation and amortization increased by $14.4 million in 2017 compared to 2016 primarily due to the deliveries of the Creole Spirit,Oak Spirit, Torben Spirit, Macoma, and Murex, and higher dry-dock amortization due to dry dockings of our LNG carriers.

Equity Income. Equity income decreased by $31.0 million in 2017 compared to 2016 as explained below.

(in thousands of U.S. Dollars)	Year Ended December 31,						
	Angola LNG Carriers	Exmar LNG Carriers	MALT LNG Carriers	RasGas 3 LNG Carriers	Pan Union LNG Carriers	Other	Total Equity Income
2017	16,755	7,397	(16,547)	16,324	496	(6,773)	17,652
2016	15,713	9,038	4,503	19,817	(104)	(334)	48,633
Difference	1,042	(1,641)	(21,050)	(3,493)	600	(6,439)	(30,981)

The $1.0 million increase in our 33% investment in the four Angola LNG Carriers was primarily due to an increase in unrealized gains on non-designated derivative instruments due to mark-to-market changes. The mark-to-market changes resulted from changes in long-term LIBOR benchmark interest rates for interest rate swaps compared to 2016.

The $1.6 million decrease in our 50% investment in the Exmar LNG Carriers was primarily due to the Excalibur being off-hire in 2017 for a scheduled dry docking.

The $21.1 million decrease in equity income from our 52% investment in the MALT LNG Carriers was primarily due to a settlement payment awarded to the joint venture in 2016 for the disputed contract termination relating to the Magellan Spirit, of which our proportionate share was $20.3 million; and a further deferral effective August 2016 of a portion of the charter payments for the Marib Spirit and Arwa Spirit that are chartered to service the YLNG plant in Yemen, which has been closed since 2015. These decreases were partially offset by higher fleet utilization in the second half of 2017 due to commencements of short-term charter contracts for certain vessels which were previously trading in the spot market.

The $3.5 million decrease in equity income from our 40% investment in the RasGas 3 LNG Carriers was primarily due to higher interest expense resulting from the completion of debt refinancing in December 2016.

The $0.6 million increase in equity income from our investment in the Pan Union LNG Carriers was primarily due to the delivery of the Pan Union Joint Venture's first LNG carrier newbuilding, the Pan Asia, in October 2017.

The $6.4 million decrease in our other equity-accounted investments was primarily due to unrealized losses on interest rate swaps relating to our 30% ownership interest in the Bahrain LNG Joint Venture in 2017, and higher crew training expenses for the Yamal LNG Joint Venture in preparation for its vessel deliveries which commenced in 2018.

Liquefied Petroleum Gas Segment

As at December 31, 2017, our liquefied petroleum gas segment fleet, including newbuildings, consisted of 30 LPG/multi-gas carriers, in which our interests ranged from 50% to 99%. However, the table of operating results below only includes the seven multi-gas carriers that are accounted for under the consolidation method of accounting and excludes 20 delivered vessels and three newbuildings in the Exmar

LPG Joint Venture accounted for under the equity method. The comparison of the results from vessels and assets accounted for under the equity method are described below under Equity (Loss) Income.

The following table of operating results compares our liquefied petroleum gas segment's operating results for 2017 and 2016 and compares its net voyage revenues (which is a non-GAAP financial measure) for 2017 and 2016, to voyage revenues, the most directly comparable GAAP financial measure. The following table of operating results also provides a summary of the changes in calendar-ship-days and revenue days for our liquefied petroleum gas segment:

(in thousands of U.S. Dollars, except revenue days, calendar-ship-days and percentages)	Year Ended December 31,		% Change
	2017	2016	
Voyage revenues	19,769	21,939	(9.9)
Voyage expenses	(1,218)	—	100.0
Net voyage revenues	18,551	21,939	(15.4)
Vessel operating expenses	(3,083)	(16)	19,168.8
Depreciation and amortization	(8,433)	(7,894)	6.8
General and administrative expenses(1)	(2,411)	(2,055)	17.3
Income from vessel operations	4,624	11,974	(61.4)
Equity (loss) income	(7,863)	13,674	(157.5)
Operating Data:			
Revenue Days (A)	2,445	2,196	11.3
Calendar-Ship-Days (B)	2,445	2,196	11.3
Utilization (A)/(B)	100.0 %	100.0 %	

Our liquefied petroleum gas segment's total calendar-ship-days increased by 11.3% to days 2,445 days in 2017 from days 2,196 days in 2016 as a result of our acquisition of the Sonoma Spirit in 2017.

Net Voyage Revenues. Net voyage revenues decreased during 2017 compared to 2016, primarily as a result of:

- a decrease of $15.1 million due to uncertainty of collection for outstanding hire receivable relating to our six LPG carriers on charter to Skaugen in 2017;

partially offset by:

- an increase of $10.3 million due to the prepaid lease payments received from Skaugen in prior periods, which were previously deferred and then recognized in 2017 upon the termination of the charter contracts for five of our LPG carriers that were on charter with Skaugen; and
- an increase of $1.4 million due to the acquisition of the Sonoma Spirit in April 2017.

Vessel Operating Expenses. Vessel operating expenses increased during 2017 compared to 2016 by $3.1 million primarily due to six LPG carriers, which were previously on bareboat charter contracts, incurring operating expenses following their redelivery to us from Skaugen during 2017, and the acquisition of the Sonoma Spirit.

Equity (Loss) Income. The $21.5 million decrease in equity income from our 50% ownership interest in the Exmar LPG Joint Venture was primarily due to more vessels trading in the spot market at lower rates during 2017 compared to higher fixed rates earned in 2016. Other factors that caused the decrease included the scheduled dry dockings of the Eupen and Brussels in the second and third quarters of 2017, respectively, vessel write-downs of the Courcheville and Temse recorded in 2017, and the sale of the Brugge Venture in January 2017. These decreases were partially offset by revenues earned from five LPG carrier newbuildings that delivered to the Exmar LPG Joint Venture between February 2016 and July 2017, and a write-down of the Brugge Venture recorded in 2016.

Conventional Tanker Segment

As at December 31, 2017, our conventional tanker fleet included four Suezmax-class double-hulled conventional crude oil tankers and one Handymax Product tanker, three of which we own (including the European Spirit and African Spirit which were classified as held for sale) and two of which we lease under capital leases. Three of our five conventional tankers operate under fixed-rate charters, the European Spirit and African Spirit were trading in the spot market in August and November 2017, respectively, as we continued to market those vessels for sale.

The following table of operating results compares our conventional tanker segment's operating results for 2017 and 2016 and compares its net voyage revenues (which is a non-GAAP financial measure) for 2017 and 2016 to voyage revenues, the most directly comparable GAAP financial measure. The following table of operating results also provides a summary of the changes in calendar-ship-days and revenue days for our conventional tanker segment:

(in thousands of U.S. Dollars, except revenue days, calendar-ship-days and percentages)	Year Ended December 31, 2017	2016	% Change
Voyage revenues	46,993	59,914	(21.6)
Voyage expenses	(5,182)	(1,207)	329.3
Net voyage revenues	41,811	58,707	(28.8)
Vessel operating expenses(2)	(18,211)	(22,503)	(19.1)
Depreciation and amortization	(10,520)	(15,458)	(31.9)
General and administrative expenses(1)(2)	(2,507)	(3,189)	(21.4)
Write-down and loss on sale of vessels	(50,600)	(38,976)	29.8
(Loss) income from vessel operations	(40,027)	(21,419)	86.9
Operating Data:			
Revenue Days (A)	1,868	2,439	(23.4)
Calendar-Ship-Days (B)	1,904	2,439	(21.9)
Utilization (A)/(B)	98.1 %	100.0 %	

(1) Includes direct general and administrative expenses and indirect general and administrative expenses (allocated to each segment based on estimated use of corporate resources).

(2) An adjustment was made during 2018 to reclassify a ship management cost allocation recovery from general and administrative expenses to vessel operating expenses. The 2017 and 2016 results have also been reclassified to conform to the presentation adopted in 2018.

Our conventional tanker segment's total calendar ship days decreased by 21.9% to 1,904 days in 2017 from 2,439 days in 2016 primarily as a result of the sales of the Bermuda Spirit, Hamilton Spirit and Asian Spirit in April 2016, May 2016 and March 2017, respectively. During 2017, the Asian Spirit was idle for 34 days between the time its firm charter contract ended in January 2017 and the time the vessel was sold and the European Spirit was off-hire for two days for vessel maintenance, compared to no off-hire days during 2016. As a result, our utilization decreased to 98.1% in 2017 compared to 100.0% in 2016

Net Voyage Revenues. Net voyage revenues decreased during 2017 compared to 2016, primarily as a result of:

- a decrease of $14.0 million primarily due to the sales of the Bermuda Spirit, Hamilton Spirit, and Asian Spirit;
- a decrease of $2.1 million as the fixed-rate charter contracts for the European Spirit and African Spirit expired in August and November 2017, respectively, and the vessels earned lower spot rates during the periods after their respective contracts expired; and
- a decrease of $1.3 million due to lower revenues earned by the Toledo Spirit in 2017 relating to the profit-sharing agreement between us and CEPSA (however, we had a corresponding decrease in our realized loss on our associated derivative contract with Teekay Corporation; therefore, this decrease and future increases or decreases related to this agreement did not and will not affect our cash flow or net income).

Vessel Operating Expenses. Vessel operating expenses decreased during 2017 compared to 2016 primarily as a result of the sales of the Bermuda Spirit, Hamilton Spirit and Asian Spirit.

Depreciation and Amortization. Depreciation and amortization decreased during 2017 compared to 2016 primarily as a result of the sales of the Bermuda Spirit, Hamilton Spirit and Asian Spirit, the reclassification of the European Spirit to held for sale in the second quarter of 2017, and the vessel write-down of the African Spirit recorded in the third quarter of 2017.

Write-down of vessels. During 2017, we recorded write-downs of $50.6 million. During the second quarter of 2017, we recorded a write-down of the European Spirit of $12.6 million to its estimated fair value as we commenced marketing the vessel for sale upon the charterer notifying us it was redelivering the vessel to us upon completion of its charter contract in August 2017. During the third quarter of 2017, we recorded a write-down of the African Spirit of $12.5 million to its estimated fair value as we received notification from the charterer in August 2017 that it would redeliver the vessel to us upon completion of its charter contract in November 2017. In August 2017, the charterer of the Teide Spirit gave formal notification to us of its intention to terminate its charter contract subject to certain conditions being met and third-party approvals being received. Based on our prior experience with the charterer, we expected in 2017 that the charterer would cancel the charter contract for the Toledo Spirit. We recorded a $25.5 million write-down on a combined basis in respect of the Teide Spirit and Toledo Spirit in 2017. During 2016, we incurred losses on the sales of the Bermuda Spirit and Hamilton Spirit of $27.4 million, and recorded a write-down of $11.5 million to its estimated fair value for the Asian Spirit upon completion of its charter contract and marketing the vessel for sale.

Other Operating Results

General and Administrative Expenses. General and administrative expenses decreased to $18.1 million for 2017, from $19.2 million for 2016, primarily due to lower levels of business development activities in 2017 compared to 2016, which was partially offset by reimbursement from the Bahrain LNG Joint Venture in 2016 of our proportionate share of certain costs we paid, including pre-operation, engineering and financing-related expenses, upon the joint venture securing debt financing in the fourth quarter of 2016.

Interest Expense. Interest expense increased to $80.9 million for 2017, from $58.8 million for 2016. Interest expense primarily reflects interest incurred on our long-term debt and obligations related to capital leases. This increase was primarily the result of:

- an increase of $16.3 million primarily relating to interest incurred on the obligations related to capital leases for the Creole Spirit, Oak Spirit, Torben Spirit, Murex, and Macoma commencing upon their deliveries in 2016 and 2017;
- an increase of $4.6 million as a result of our issuances of NOK bonds in October 2016 and January 2017, net of our NOK bond repurchases in October 2016 and the maturity of certain of the NOK bonds in May 2017; and
- an increase of $4.1 million as a result of interest expense accretion on the Pan Union Joint Venture crew training and site supervision obligation, and higher LIBOR rates net of debt principal repayments;

partially offset by:

- a decrease of $4.1 million due to increases in capitalized interest relating to additional advances and capital contributions to the Yamal LNG Joint Venture and Bahrain LNG Joint Venture for newbuilding installments and construction costs.

Realized and Unrealized Loss on Non-Designated Derivative Instruments. Net realized and unrealized losses on non-designated derivative instruments decreased to $5.3 million for 2017, from $7.2 million for 2016 as set forth in the table below.

(in thousands of U.S. Dollars)	Year Ended December 31,					
	2017			2016		
	Realized gains (losses)	Unrealized gains (losses)	Total	Realized gains (losses)	Unrealized gains (losses)	Total
Interest rate swap agreements	(18,825)	12,393	(6,432)	(25,940)	15,627	(10,313)
Interest rate swaption agreements	—	945	945	—	(164)	(164)
Interest rate swaption agreements termination	(610)	—	(610)	—	—	—
Toledo Spirit time-charter derivative	678	110	788	(654)	3,970	3,316
	(18,757)	13,448	(5,309)	(26,594)	19,433	(7,161)

As at December 31, 2017 and 2016, we had interest rate swap agreements, excluding our swap agreements with future commencement
dates, with aggregate average net outstanding notional amounts of approximately $837 million and $755 million, respectively, with average fixed rates of 3.5% and 3.8%, respectively. The decreases in realized losses relating to our interest rate swaps from 2016 to 2017 was primarily due to an increase in LIBOR compared to the prior year, which decreased our settlement payments, and the expiration of certain interest rate swaps, which were not renewed.

During 2017, we recognized unrealized gains on our interest rate swap and swaption agreements associated with our U.S. Dollar-denominated long-term debt. This resulted from reclassification of $10.9 million of previously recognized unrealized losses to realized losses related to actual cash settlements of our interest rate swaps, partially offset by $2.6 million of unrealized losses relating to decreases in long-term forward LIBOR benchmark interest rates, relative to the beginning of 2017.

During 2017, we also recognized unrealized gains on our interest rate swap agreements associated with our Euro-denominated long-term debt. This resulted from reclassification of $7.9 million of previously recognized unrealized losses to realized losses related to actual cash settlements of our interest rate swaps, partially offset by $2.8 million of unrealized losses relating to decreases in long-term forward EURIBOR benchmark interest rates, relative to the beginning of 2017.

The projected forward average tanker rates in the tanker market decreased slightly at December 31, 2017 compared to the beginning of 2017, which resulted in $0.1 million of unrealized gains on our Toledo Spirit time-charter derivative.

The Toledo Spirit time-charter derivative is the agreement with Teekay Corporation under which Teekay Corporation paid us any amounts payable to the charterer of the Toledo Spirit as a result of spot rates being below the fixed rate, and we paid Teekay Corporation any amounts payable to us by the charterer of the Toledo Spirit as a result of spot rates being in excess of the fixed rate. The Toledo Spirit was sold in early 2019 and as a result, the derivative agreement ended at that time.

During 2016, we recognized unrealized gains on our interest rate swap and swaption agreements associated with our U.S. Dollar-denominated long-term debt. This resulted from transfers of $17.9 million of previously recognized unrealized losses to realized losses related to actual cash settlements of our interest rate swaps, partially offset by $3.7 million of unrealized losses relating to decreases in long-term forward LIBOR benchmark interest rates relative to the beginning of 2016.

During 2016, we also recognized unrealized gains on our interest rate swap agreements associated with our Euro-denominated long-term debt. This resulted from transfers of $8.1 million of previously recognized unrealized losses to realized losses related to actual cash settlements of our interest rate swaps, partially offset by $6.7 million of unrealized losses relating to decreases in long-term forward EURIBOR benchmark interest rates, relative to the beginning of 2016.

The projected forward average tanker rates in the tanker market decreased at December 31, 2016 compared to the beginning of 2016, which resulted in $4.0 million of unrealized gains on our Toledo Spirit time-charter derivative.

Please see “Item 5 – Operating and Financial Review and Prospects: Critical Accounting Estimates – Valuation of Derivative Instruments,” which explains how our derivative instruments are valued, including the significant factors and uncertainties in determining the estimated fair value and why changes in these factors result in material variances in realized and unrealized gain (loss) on non-designated derivative instruments.

Foreign Currency Exchange Gains. Foreign currency exchange (losses) gains were $(26.9) million and $5.3 million for 2017 and 2016, respectively. These foreign currency exchange gains were due primarily to the relevant period-end revaluation of our NOK-denominated debt and our Euro-denominated term loans for financial reporting purposes into U.S. Dollars, net of the realized and unrealized gains and losses on our cross currency swaps. Gains on NOK-denominated and Euro-denominated monetary liabilities reflect a stronger U.S. Dollar against the NOK and Euro on the date of revaluation or settlement compared to the rate in effect at the beginning of the period. Losses on NOK-denominated and Euro-denominated monetary liabilities reflect a weaker U.S. Dollar against the NOK and Euro on the date of revaluation or settlement compared to the rate in effect at the beginning of the period.

For 2017, foreign currency exchange (losses) gains included $(25.7) million of realized losses related to the maturity of our cross currency swaps associated with the NOK bonds which matured in 2017, $(25.7) million of unrealized losses from the transfer of previously recognized unrealized gains to realized gains related to the maturity of the NOK bonds in 2017, realized losses of $(9.3) million on our cross currency swaps, the unrealized losses on the revaluation of our NOK-denominated debt of $(17.6) million, and unrealized losses on the revaluation of our Euro-denominated cash, restricted cash and debt of $(23.3) million. These losses were partially offset by realized gains of $25.7 million upon the maturity of our NOK bonds in 2017, $25.7 million unrealized gains from the transfer of previously recognized unrealized losses to realized losses related to our cross currency swaps associated with the NOK bond which matured in 2017, unrealized gains of $23.3 million on our cross currency swaps primarily due to appreciation of long-term NOK forward exchange rates and increases in long-term forward NIBOR benchmark interest rates relative to the beginning of 2017.

For 2016, foreign currency exchange gains (losses) included realized gains of $16.8 million on the repurchase of a portion of our NOK bonds maturing in 2017, the transfer of $17.7 million of previously recognized unrealized losses to realized losses related to our cross currency swaps associated with the NOK bond repurchase, unrealized gains of $11.2 million on our cross currency swaps primarily due to appreciation of long-term NOK forward exchange rates and increases in long-term forward NIBOR benchmark interest rates relative to the beginning of 2016, and $5.4 million on the revaluation of our Euro-denominated cash, restricted cash and debt. These gains were partially offset by transfers of $(16.8) million of previously recognized unrealized gains to realized gains related to the repurchase of the NOK bonds in October 2016, $(17.7) million of realized losses related to the termination of our cross currency swaps associated with the NOK bond repurchase, $(9.1) million realized losses on settlements of our cross currency swaps and a $(2.2) million loss on the revaluation of our NOK-denominated debt.

Other Comprehensive Income (or OCI). OCI was $4.0 million in 2017 compared to $2.8 million in 2016, due to changes in the valuation of interest rate swaps accounted for using hedge accounting within the Teekay Nakilat Joint Venture, in which we own a 70% interest, and certain of our equity-accounted joint ventures.

Liquidity and Cash Needs

Our business model is to employ the majority of our vessels on fixed-rate contracts primarily with large energy companies and their transportation subsidiaries. Our primary liquidity needs for 2019 through 2020 include payment of our quarterly distributions, including payments of distributions on our common units and Series A and Series B Preferred Units, funding any common unit repurchases we may undertake, operating expenses, dry-docking expenditures, debt service costs, scheduled repayments of long-term debt, bank debt maturities and the funding of general working capital requirements. We anticipate that our primary sources of funds for our short-term liquidity needs will be cash flows from operations, proceeds from debt and capital lease financings and dividends we expect to receive from our equity-accounted joint ventures. For 2019 through 2020, we expect that our existing liquidity, combined with the cash flow we expect to generate from our operations and receive as dividends from our equity-accounted joint ventures, will be sufficient to finance the majority of our liquidity needs, including the equity portion of our committed capital expenditures. Our remaining liquidity needs include the requirement to refinance our loan facilities maturing in 2020. We already have committed debt financing in place for all of our existing growth projects, including: our wholly-owned LNG carrier newbuilding to be chartered on a 15-year charter contract to Yamal Trade Pte. Ltd. (which was delivered in January 2019); one LNG carrier under construction in the Pan Union Joint Venture (which was delivered in January 2019); all four ARC7 LNG carriers under construction for the Yamal LNG Joint Venture; and the assets of the Bahrain LNG Joint Venture formed for the development of an LNG receiving and regasification terminal in Bahrain.

Our ability to continue to expand the size of our fleet over the long term is dependent upon our ability to generate operating cash flow, obtain long-term bank borrowings, sale-leaseback financing and other debt, as well as our ability to raise debt or equity financing through public or private offerings.

Our revolving credit facilities, term loans and obligations related to capital leases are described in the "Credit Facilities and Capital Leases" section below and in "Item 18 – Financial Statements: Note 5 – Chartered-in Vessels and Note 10 – Long-Term Debt."

As at December 31, 2018, our consolidated cash and cash equivalents were $149.0 million, compared to $244.2 million at December 31, 2017. Our total liquidity, which consists of cash, cash equivalents and undrawn credit facilities, was $324.6 million as at December 31, 2018, compared to $433.6 million as at December 31, 2017. The decrease in total consolidated liquidity was primarily due to funding of our committed projects, including capital contributions into the Pan Union Joint Venture and Teekay LNG-Marubeni Joint Venture, and payment of the tax indemnification liability in our consolidated Teekay Nakilat Joint Venture during 2018. The decrease in total consolidated liquidity was partially offset by cash generated from operations, proceeds from our sale-leaseback transactions completed during 2018, proceeds from the sales of the European Spirit and African Spirit and proceeds from the sale of our 50% ownership interest in the Excelsior Joint Venture.

As at December 31, 2018, we had a working capital deficit of $32.8 million, which includes $24.0 million of current obligations related to capital leases relating to the Toledo Spirit, which was sold by the owner in January 2019 to a third party, resulting in the extinguishment of the remaining lease obligation without any cash flow impact directly relating to such extinguishment. We expect to manage our working capital deficit primarily with net operating cash flow and dividends from our equity-accounted joint ventures, debt refinancings, and, to a lesser extent, existing undrawn revolving credit facilities. As at December 31, 2018, we had undrawn revolving credit facilities of $175.6 million. Please read “Item 18 - Financial Statements: Note 14a - Commitments and Contingencies” for information about required funding over the next 12 months.

As described under “Item 4 – Information on the Partnership: B. Operations - Regulations,” passage of any climate control legislation or other regulatory initiatives that restrict emissions of greenhouse gases could have a significant financial and operational impact on our business, which we cannot predict with certainty at this time. Such regulatory measures could increase our costs related to operating and maintaining our vessels and require us to install new emission controls, acquire allowances or pay taxes related to our greenhouse gas emissions, or administer and manage a greenhouse gas emissions program. In addition, increased regulation of greenhouse gases may, in the long term, lead to reduced demand for oil and gas and reduced demand for our services.

Cash Flows. The following table summarizes our cash flow for the periods presented:

(in thousands of U.S. Dollars)	Year Ended December 31,		
	2018	2017	2016
Net cash flow from operating activities	131,198	218,750	194,362
Net cash flow from financing activities	385,085	643,951	178,019
Net cash flow used for investing activities	(632,854)	(766,439)	(343,208)

Operating Cash Flows. Net cash flow from operating activities decreased to $131.2 million in 2018 from $218.8 million in 2017, primarily due to the payment of the tax indemnification liability in our consolidated Teekay Nakilat Joint Venture; decrease in cash flows from our seven multi-gas carriers; decrease in cash flows from our two conventional tankers trading in the spot market and then sold in 2018; the Polar Spirit earning a lower time-charter rate upon redeployment; the sales of the Asian Spirit and Teide Spirit conventional tankers in March 2017 and February 2018, respectively; and decrease in dividends received from our equity-accounted joint ventures. These decreases were partially offset by an increase in cash flows generated by the deliveries to us of the Torben Spirit, Macoma, Murex, Magdala, Myrina, Megara, Bahrain Spirit and Sean Spirit LNG carriers between February 2017 and December 2018 and the Magellan Spirit chartered-in from the Teekay LNG-Marubeni Joint Venture commencing its charter-out employment in October 2018.

Net cash flow from operating activities increased to $218.8 million in 2017 from $194.4 million in 2016, primarily due to the deliveries of our LNG carrier newbuildings and commencement of their charter contracts during 2016 and 2017; an increase in the amount of dividends received from our equity-accounted joint ventures; six days of scheduled off-hire during the first quarter of 2016 due to an in-water survey for the Catalunya Spirit; and the timing of settlement of advances to and from affiliates. These increases were partially offset by the sales of the Bermuda Spirit, Hamilton Spirit and Asian Spirit in April 2016, May 2016 and March 2017, respectively; reduced revenues in 2017 for uncollected hire invoices relating to our six LPG carriers on charter to Skaugen; 35 days of unscheduled off-hire in the second quarter of 2017 due to repairs required for one of our LNG carriers; the Hispania Spirit being off-hire for 31 days in the first quarter of 2017 for a scheduled dry docking; lower spot rates earned by the European Spirit and African Spirit after their fixed-rate charter contracts expired in August and November 2017, respectively; an increased amount of dry-docking expenditures in 2017; and one additional calendar day in the first quarter of 2016.

Net cash flow from operating activities depends upon the timing and amount of dry-docking expenditures, repair and maintenance activity, the impact of vessel additions and dispositions on operating cash flows, foreign currency rates, changes in interest rates, timing and amounts of dividends received from equity-accounted investments, fluctuations in working capital balances and spot market hire rates (to the extent we have vessels operating in the spot tanker market or our hire rates are partially affected by spot market rates). The number of vessel dry dockings tends to vary each period depending on the vessels' maintenance schedule.

Our equity-accounted joint ventures are generally required to distribute all available cash to their owners. However, the timing and amount of dividends from each of our equity-accounted joint ventures may not necessarily coincide with the operating cash flow generated from each respective equity-accounted joint venture. The timing and amount of dividends distributed by our equity-accounted joint ventures are affected by the timing and amounts of debt repayments in the joint ventures, capital requirements of the joint ventures, as well as any cash reserves maintained in the joint ventures for operations, capital expenditures and/or as required under financing agreements.

Financing Cash Flows. Net cash flow from financing activities decreased to $385.1 million in 2018 from $644.0 million in 2017 primarily due to an increase in debt prepayments and repayments including settlement of related swaps of $540.8 million primarily in relation to completion of refinancings during 2018; $370.1 million of net proceeds we received from the sale-leaseback financing transactions for the deliveries of the Magdala, Myrina and Megara during 2018, compared to $656.9 million in 2017; $164.4 million increase in net proceeds from equity offerings due to the issuance of our Series B Preferred Units in October 2017; increase in repayments of obligations related to capital leases of $17.7 million due to sale-leaseback financing transactions completed during 2018 and 2017; a $13.7 million increase in cash distributions paid as a result of the issuance of our Series B Preferred Units in October 2017; and $3.8 million used to repurchase common units during 2018. These decreases in cash flows from financing activities were partially offset by a $769.2 million increase in net proceeds from the issuance of long-term debt for refinancings completed in 2018 and the timing of drawdowns on certain of our existing debt facilities.

Net cash flow from financing activities increased to $644.0 million in 2017 from $178.0 million in 2016 primarily as a result of: a total of $366.9 million in lower debt prepayments and repayments as the term loans associated with the sales of the Bermuda Spirit and Hamilton Spirit were prepaid in 2016; an increase of $301.6 million in proceeds from the sale-leaseback financing transactions completed on our LNG carrier newbuildings during 2017; and $43.7 million higher net proceeds from equity offerings due to the issuance of our Series B Preferred Units in October 2017. These increases in cash flows from financing activities were partially offset by: a $215.9 million decrease in net proceeds from the issuance of long-term debt, primarily due to the timing of drawdowns on certain of our existing debt facilities; a $20.4 million increase in capital lease repayments during 2017 due to the sale-leaseback financing transactions completed in 2016 and 2017; and a $11.2 million increase in cash distributions paid as a result of the issuance of our Series A Preferred Units in October 2016.

Investing Cash Flows. Net cash flow used for investing activities decreased to $632.9 million in 2018 compared to $766.4 million in 2017 primarily due to $686.1 million cash expenditures for vessels and equipment, primarily for newbuilding installment payments and shipbuilding supervision costs for our LNG carrier newbuildings during 2018, compared to $708.6 million during 2017; our contribution of $40.5 million to our equity-accounted joint ventures during 2018, compared to $183.9 million during 2017, primarily to fund project expenditures in the Yamal LNG Joint Venture, the Bahrain LNG Joint Venture, and the Pan Union Joint Venture, and for working capital requirements for the Teekay LNG-Marubeni Joint Venture; and net proceeds received from the sale of our 50% ownership interest in the Excelsior Joint Venture in March 2018 of $54.4 million and proceeds from the sales of the African Spirit and European Spirit in October 2018 and December 2018, respectively, of $28.5 million compared to $20.6 million of proceeds from the sale of the Asian Spirit in March 2017. These decreases in cash used for investing activities were partially offset by $92.3 million return of capital we received in 2017 from the RasGas 3 Joint Venture and the Yamal LNG Joint Venture upon completion of their debt refinancings.

Net cash flow used for investing activities increased to $766.4 million in 2017 compared to $343.2 million in 2016. During 2017, we used $708.6 million in cash, primarily for scheduled newbuilding installment payments and shipbuilding supervision costs for our LNG carrier newbuildings compared to $345.8 million during 2016; in March 2017, we received $20.6 million in proceeds from the sale of the Asian Spirit, compared to $94.3 million from the sales of the Bermuda Spirit and Hamilton Spirit in April 2016 and May 2016, respectively; we contributed $183.9 million to our equity-accounted joint ventures in 2017 compared to $120.9 million during 2016, primarily to fund newbuilding installments in the Yamal LNG Joint Venture and project expenditures for the Bahrain LNG project; and during 2017, our receipts from direct financing leases were decreased by $10.5 million, primarily due to our lease payment deferral agreement with Awilco. These increases in cash used for investing activities were partially offset by $40.3 million and $52.0 million returns of capital we received in 2017 from the RasGas 3 Joint Venture and the Yamal LNG Joint Venture, respectively, upon completion of their debt refinancings, compared to $5.5 million of distributions we received during 2016 as a repayment of a shareholder loan from the Exmar LPG Joint Venture.

Credit Facilities and Capital Leases

Our revolving credit facilities, term loans and obligations related to capital leases are described in "Item 18 – Financial Statements: Note 5 – Chartered-in Vessels and Note 10 – Long-Term Debt." Our term loans, revolving credit facilities and obligations related to capital leases contain covenants and other restrictions typical of debt financing secured by vessels, including, among others, one or more of the following that restrict the ship-owning subsidiaries from:

- incurring or guaranteeing indebtedness;
- changing ownership or structure, including mergers, consolidations, liquidations and dissolutions;
- making dividends or distributions if we are in default;
- making capital expenditures in excess of specified levels;
- making certain negative pledges and granting certain liens;
- selling, transferring, assigning or conveying assets;
- making certain loans and investments; and

• entering into a new line of business.

Certain loan agreements require (a) that minimum levels of tangible net worth and aggregate liquidity be maintained, (b) that we maintain certain ratios of vessel values as it relates to the relevant outstanding loan principal balance, (c) that we do not exceed a maximum amount of leverage and (d) certain of our subsidiaries to maintain restricted cash deposits. As at December 31, 2018, we had three facilities with an aggregate outstanding loan balance of $442.2 million that require us to maintain minimum vessel-value-to-outstanding-loan-principal-balance ratios ranging from 115% to 135%, which as at December 31, 2018 ranged from 132% to 198%. The vessel values used in calculating these ratios are the appraised values provided by third parties where available or prepared by us based on second-hand sale and purchase market data. Since vessel values can be volatile, our estimate of market value may not be indicative of either the current or future price that could be obtained if the related vessel was actually sold. Our ship-owning subsidiaries may not, among other things, pay dividends or distributions if they are in default under their term loans or revolving credit facilities and one of the term loans in the Teekay Nakilat Joint Venture requires it to satisfy a minimum vessel value to outstanding loan principal balance ratio to pay dividends. In addition, we guarantee certain obligations related to capital leases, which require us to maintain minimum levels of tangible net worth and aggregate liquidity, and not to exceed a maximum amount of leverage. As at December 31, 2018, we and our affiliates were in compliance with all covenants relating to our credit facilities and capital leases.

Contractual Obligations and Contingencies

The following table summarizes our contractual obligations as at December 31, 2018:

	Total	2019	2020	2021	2022	2023	Beyond 2023
	(in millions of U.S. Dollars)						
U.S. Dollar-Denominated Obligations:							
Long-term debt:(1)							
Scheduled repayments	610.6	108.6	102.7	71.3	58.9	55.3	213.8
Repayments at maturity	830.2	3.3	368.8	166.9	5.0	—	286.2
Commitments related to capital leases(2)	1,734.2	143.7	118.7	117.8	117.0	116.3	1,120.7
Commitments related to operating leases(3)	284.7	47.6	39.9	23.9	23.9	23.9	125.5
Newbuilding installments/shipbuilding supervision(4)	652.2	652.2	—	—	—	—	—
Total U.S. Dollar-denominated obligations	4,111.9	955.4					