

Second-Party Opinion

Seaspan Sustainability-Linked Bond Framework



Evaluation Summary

Sustainalytics is of the opinion that the Seaspan Sustainability-Linked Bond Framework aligns with the Sustainability-Linked Bond Principles 2020. This assessment is based on the following:

- Selection of Key Performance Indicators (KPIs)** Seaspan Sustainability-Linked Bond Framework includes one KPI: The aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources (see Table 1). Sustainalytics considers the KPI chosen to be adequate based on its consideration for the materiality, its relevance to Seaspan’s business and ability to be benchmarked.
- Calibration of Sustainability Performance Targets (SPTs)** Sustainalytics considers the SPTs to be aligned with the issuer’s sustainability strategy. Sustainalytics further considers the SPT to be moderately ambitious, indicating that the planned investments in LNG and LNG dual-fuel vessels are expected to achieve a moderate emissions reduction over the existing conventional fleet.
- Bond Characteristics** Seaspan has disclosed that its SLB will contain the characteristics of a conventional bond, with the added clause that failure to achieve its SPT will result in the Company paying a penalty of 0.5% (50 basis points) on the principal payment upon maturity. Sustainalytics highlights that the bond structure is binary, contains only a potential negative adjustment, and is aligned in magnitude with other sustainability-linked bonds in the market.
- Reporting** Seaspan commits to report on an annual basis on its performance on the KPI against the SPT. The Company will publish an annual Sustainability-Linked Bond Performance Report, which will contain up-to-date information on its KPI performance as well as examples of investments undertaken during the year. Sustainalytics finds this to be in line with the market expectations
- Verification** Since the KPI is a measurement of the Company’s expenditure and investment, it is captured within the Company’s financial statements. Seaspan has committed that its spending on retrofitting and purchasing upgraded ships will be verified annually by an external auditor or other third-party reviewer, until the maturity of the bond. This is in line with market expectations.

Evaluation Date	April 9, 2021 ¹
Issuer Location	Hong Kong, China/ Vancouver, Canada

The SPT contribute to the following SDG:



Overview of KPIs and SPTs

KPI	Baseline	SPT	Strength of the KPI	Ambitiousness of SPT
The aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources.	Prior to 2021 no amount had been spent. In 2021, the company entered into commitments for ten alternative fuel vessels.	A total aggregate financial value of new binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative	Adequate	Moderately Ambitious

¹ This is an update a previous Opinion, dated January 18, 2021.

		Fuel Sources, equivalent to the issuance amount.		
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Table of Contents

Scope of Work and Limitations	3
Introduction	4
Sustainalytics’ Opinion	5
Section 1: Sustainalytics’ Opinion on the Alignment of Seaspan Corporation’s Sustainability-Linked Notes with the Sustainability-Linked Bond Principles.....	5
Selection of Key Performance Indicators (KPIs)	5
Calibration of Sustainability Performance Targets (SPTs)	7
Bond Characteristics	8
Reporting	9
Verification	9
Section 2: Assessment of Seaspan Corporation’s Sustainability Strategy	10
Section 3: Impact of the SPTs chosen	11
Conclusion	13
Appendix 1	14

Scope of Work and Limitations

Seaspan Corporation has engaged Sustainalytics to review the SLB Framework and provide an opinion on the alignment of the notes with the Sustainability-Linked Bond Principles (SLBP).²

Sustainalytics' Second-Party Opinion reflects Sustainalytics' independent³ opinion on the alignment of the reviewed SLB Framework with the Sustainability-Linked Bond Principles 2020, as administered by ICMA.

As part of this engagement, Sustainalytics exchanges information with various members of Seaspan Corporation's management team to understand the sustainability impact of their business processes and SPTs, as well as reporting and verification processes of aspects of the SLB Framework. Seaspan Corporation's representatives have confirmed that:

- (1) They understand it is the sole responsibility of issuer to ensure that the information provided is complete, accurate or up to date;
- (2) They have provided Sustainalytics with all relevant information; and
- (3) Any provided material information has been duly disclosed in a timely manner.

Sustainalytics also reviewed relevant public documents and non-public information. This document contains Sustainalytics' opinion of the Bond Framework and should be read in conjunction with the Bond Framework. Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Seaspan Corporation. Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated SPTs of KPIs but does not measure the KPIs' performance. The measurement and reporting of the KPIs is the responsibility of the Bond issuer. No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument either in favor or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Seaspan Corporation has made available to Sustainalytics for the purpose of this Second-Party Opinion.

The Second-Party Opinion is valid for issuances aligned with the respective Framework for which the Second-Party Opinion was written and aligned with the methodology to calculate the KPI performance outlined in the Second-Party Opinion up to 24 months or until one of the following occurs:

- (1) A material change to the external benchmarks⁴ against which targets were set;
- (2) A material corporate action (such as material M&A or change in business activity) which has a bearing on the achievement of the SLBs or the materiality of the KPI.

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² The Sustainability Linked Bond Principles (SLBP) were launched by ICMA in June 2020. They are administered by the ICMA and are available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Sustainability-Linked-Bond-Principles-June-2020-100620.pdf>

³ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics' hallmarks is integrity, another is transparency.

⁴ Benchmarks refers to science based benchmarks

Introduction

Seaspan Corporation (Seaspan, the “Company”, or the “Issuer”) is the largest independent containership lessor in the world. Seaspan charters vessels primarily on long-term, fixed-rate time charters to the world’s largest container shipping companies and counts on an operating fleet of 127 containerships. Headquartered in Hong Kong, with global offices Vancouver and Mumbai, the Company has approximately 5,000 employees globally.

Seaspan intends to issue a Sustainability-Linked Bond (SLB) in April 2021 where the coupon rate of the bond is tied to the achievement of the Sustainability Performance Targets for one KPI: the aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources. The KPI measures Seaspan’s investment in upgraded as well as newly-built vessels that have the capability to run on alternative and/or low-carbon fuel sources. The KPIs pertains to Seaspan’s capital expenditure over a period starting from the issuance of the bond, with the principal amount adjustment occurring at maturity, and specifically excluding expenditures financed under other SLBs or other green- or sustainability-labeled instruments.

Seaspan has engaged Sustainalytics to review the SLB Framework and provide an opinion on the alignment of the bond framework with the Sustainability-Linked Bond Principles (SLBP).⁵ This document is an update of the review published January 2021, reflecting updated bond characteristics and clarifying the calculation of the SPT for a new issuance.⁶

The KPI and SPT used by Seaspan are defined in Tables 1 and 2 below.

Table 1: KPI Definitions

KPI	Definition
The aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources.	Seaspan’s investment, measured in USD, in upgraded as well as newly- built vessels that have the capability to run on alternative fuel sources. Alternative fuel sources are intended to result in lower-carbon emissions than comparable conventional fuel sources. Liquefied natural gas, bio- or electro-methane, hydrogen, biodiesel, liquefied petroleum gas (LPG), and ammonia are cited by the Framework as examples of low-carbon/alternative fuels.

Table 2: SPT and Past Performance

KPI	Historic annual spent	SPT 2025
The aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources.	Prior to 2021, no amount had been spent on retrofitting or acquiring alternative fuel vessels. In January 2021, Seaspan issued an SLB, with a target of spending USD 200 million on such vessels, and in 2021, it has entered into binding commitments for 10 dual-fuel LNG vessels.	A total aggregate financial value of new binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources, of the equivalent to the issuance amount. ^{7,8}

⁵ The Sustainability Linked Bond Principles (SLBP) were launched by ICMA in June 2020. They are administered by the ICMA and are available at: <https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/>

⁶ The January 2021 SPO is available at: <https://www.sustainalytics.com/sustainable-finance/wp-content/uploads/2021/01/Seaspan-Sustainability-Linked-Bond-Second-Party-Opinion.pdf>

⁷ The April 2021 issuance amount was equivalent to USD 300 million.

⁸ During the course of marketing and pricing its April 2021 SLB, Seaspan upsized the issuance from USD 200 million.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Alignment of Seaspan Sustainability-Linked Bond Framework with the Sustainability-Linked Bond Principles.

Sustainalytics is of the opinion that the Sustainability-Linked Bond Framework align with the five core components of the Sustainability-Linked Bond Principles 2020 (SLBP).



Selection of Key Performance Indicators (KPIs)

Relevance and Materiality of KPIs

Sustainalytics in its assessment of materiality and relevance considers i) whether an indicator speaks to a material impact of the issuer business on environment or social issues, and ii) to what portion of impact the KPI is applicable.

Sustainalytics considers the one KPI, the aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources, to be material and relevant given:

- Sustainalytics notes that the KPI is based on expenditure, not a sustainability metric. While expenditures on qualifying vessels are anticipated to deliver environmental benefits, this is not measured directly by the KPI.
- Sustainalytics identifies risks from emissions, effluents and waste as one of the most material issues to which companies in the shipping sector are exposed. The International Maritime Organization (IMO) and many countries are beginning to further tighten carbon emission thresholds for the shipping industry.⁹ To comply with the changing regulations means companies must be prepared to make costly upfront investments such as installing scrubbers in vessels, purchasing relatively less emissions-intensive fuels and converting systems to provide the capability to run on such fuels.
- Apart from the kind of fuel used, a ship's emissions can depend largely on several factors relating to its daily operation and maintenance such as voyage speed optimization, trim and draught management, maintenance of its engines, hull, bulbous bow, propellers, scrubber systems etc. Seaspan is, however, a containership lessor, leasing 100% of its fleet, and therefore it has little or no control over the vessel's speed and trade routes. Therefore, due to Seaspan's business model, the most material ways for the Company to drive environmental impact are improving physical factors relating to efficiency (such as cargo loadability or design efficiency) and equipping its vessels with systems that enable them to run on alternative or low-carbon fuels.

Sustainalytics recognizes that, in the short term, the decarbonization of the shipping sector will rely upon the use of LNG as a lower-carbon fuel source, as part of an eventual transition to carbon neutrality. Seaspan has disclosed that the first contributions to its KPI will likely take the form of LNG or dual-fuel ships.

- IMO anticipates a sharp growth in emissions from the international shipping sector and hence in 2018, adopted emissions reduction targets (refer to section 3). Sustainalytics views LNG as a transition fuel for the shipping industry given that the commercial development and scale of truly low-carbon fuels are limited in scope and availability.¹⁰ It is estimated that, compared to traditional fuels such as heavy fuel oil, LNG enables up to 25% reduction in CO₂ emissions on a tank-to-wheel basis when burned in high-pressure injection fuel engines, given low methane slip throughout the supply chain and during

⁹ European Commission, Reducing emissions from the shipping sector, accessed in September 2020, at: https://ec.europa.eu/clima/policies/transport/shipping_en

¹⁰ Shell, Decarbonization shipping: All hands on deck https://www.shell.com/energy-and-innovation/the-energy-future/decarbonising-shipping/_jcr_content/par/toptasks.stream/1594141914406/b4878c899602611f78d36655ebff06307e49d0f8/decarbonising-shipping-report.pdf

combustion within the ship engine; up to 40% reduction in NO_x in new ships; and close to 100% reduction in SO_x and particulate matter.¹¹ However, it is acknowledged that the shipping industry must make rapid progress related to the uptake of low-carbon fuels such as hydrogen, ammonia and methanol in order to enable a decarbonization trajectory that is aligned with a credible and climate-aligned transition.

KPI Characteristics

Sustainalytics in its assessment of the KPI characteristics considers i) whether a clear and consistent methodology is used, ii) whether the issuer follows an externally recognized definition, iii) whether the KPIs are a direct measure of the performance of the issuer on the material environmental or social issue, and iv) if applicable, whether the methodology can be benchmarked to an external contextual benchmark.¹²

Seaspan's KPI, the aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources, measures the Company's investments and expenditures to upgrade and acquire vessels that have the capability to run on alternative or low-carbon fuels. The KPI is a summation of the cost incurred or amount invested (in USD) by Seaspan in order to upgrade and acquire vessels that can run on lower-carbon emissions fuels, including dual-fuel vessels, over the five-year period from the issuance of the bond (2021) to the maturity date (2026). Sustainalytics considers Seaspan's definition and methodology to calculate KPI performance to be clear and consistent while noting some ambiguity related to the magnitude of environmental impact associated with it, which will depend on the fuel selected. Sustainalytics notes that LNG has the potential to achieve emissions reductions of up to 25% compared to conventional fuels; that biofuels provide a range of reductions which could, in theory, reach 100%; and that hydrogen and hydrogen-derived fuels may provide near-100% reductions depending on the source of energy inputs. Sustainalytics notes the following with respect to the specific fuel types cited in the Framework:

- The Issuer has disclosed that the likely qualifying expenditures or investments it makes will be to acquire vessel(s) with high-pressure, dual-fuel engines that will run primarily on LNG (where infrastructure allows) in combination with a pilot fuel, which is intended to be low-sulphur heavy fuel oil, ultra-low sulphur fuel oil, or marine gas oil. LNG is recognized as having lower emissions than conventional fuels, and is anticipated to be a key part of the shipping sector's transition. Refer to section 3 for further discussion of LNG technology.
- LPG, primarily a mixture of propane, butane and other light hydrocarbons, is one of the alternative fuel options defined in the Framework. LPG has higher CO₂ emissions than LNG during combustion due to its carbon content, even though LPG is sulphur-free and offers significant reductions of nitrous oxide (NO_x) and particulate matter. While acknowledging this limitation, Sustainalytics recognizes the potential for LPG to act as a bridge to low-carbon fuel sources, notably ammonia, since the installation of LPG systems in a ship may be suitable for future conversion to these fuels.

Seaspan has communicated to Sustainalytics that dual-fuel vessels will be chartered and, as a result, Seaspan has limited or no control over the speed and fuel of the vessels. However, as per Seaspan's communication with its clients and the fact that the cost of the upgrade or acquisition of dual-fuel vessels will be reflected in the charter costs, Seaspan anticipates that the charterers will use of the alternative fuel technology.

Seaspan's planned investments relate to the onboard use of alternative fuels. While uptake of some of these fuels faces additional constraints related to bunkering, storage and safety features, in particular hydrogen or ammonia, these challenges are out of the scope of this program. Sustainalytics notes that these future considerations will be crucial to transition to low-carbon fuels for the company and the industry. Although this KPI is a measure of financial expenditures, it is directly related to the number of new and refurbished low-carbon ships introduced to Seaspan's fleet. While noting the difficulties in directly comparing levels of investment, Sustainalytics considers the number of ships to be well-suited for comparison to both Seaspan's existing fleet as well as industry-wide trends in ship technology and the selected KPI to, therefore able to be suitably benchmarked.

¹¹ Elengy, LNG: an energy of the future, accessed on September 2020, at: [https://www.elengy.com/en/lng/lng-an-energy-of-the-future.html#:~:text=Compared%20to%20traditional%20heavy%20fuel,SO2\)%20and%20fine%20particle%20emissions.](https://www.elengy.com/en/lng/lng-an-energy-of-the-future.html#:~:text=Compared%20to%20traditional%20heavy%20fuel,SO2)%20and%20fine%20particle%20emissions.)

¹² External contextual benchmarks provide guidance on the alignment with ecological system boundaries. This criterion is not applied to social KPIs or impact areas for which such contextual benchmarks are not available.

Overall Assessment

In Sustainalytics’ opinion, the selected KPI is adequate, and the definition of the KPI is clear in relation to how it is being measured. Nevertheless, some ambiguity is noted in relation to the sustainability benefits which will result from progress on the KPI, based on the wide variety of potential fuels and technologies which may be selected by Seaspan, including those which may be developed over the coming decades. Sustainalytics highlights the role that LNG is anticipated to play in the transition of the shipping sector to low-carbon fuels, as Seaspan’s short-term expenditures will be directed towards LNG ships.

The aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources	Not Aligned	Adequate	Strong	Very strong
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Calibration of Sustainability Performance Targets (SPTs)

Alignment with Issuer’s Sustainability Strategy

Seaspan has set the following SPT for its one KPI:

- A total aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources of the equivalent to the issuance amount, by the maturity of the bond, specifically excluding expenditures financed under other SLBs or other green- or sustainability-labelled instruments.

Sustainalytics considers the SPTs to be aligned with Seaspan’s sustainability strategy (please refer to Section 2 for analysis of the credibility of Seaspan’s sustainability strategy). Seaspan has identified emission reduction of its fleet as one of its primary environmental objectives¹³. The company’s initiative – ‘Seaspan’s Action on Vessel Energy Reduction’ (SAVER) aims to continuously improve the efficiency of its fleet by ensuring its ships are maintained and equipped with fuel and energy-saving systems. As a part of the SAVER vessel initiative, Seaspan is exploring the feasibility of installing low-carbon propulsion systems. As described above, using alternatives fuels such as LNG can result in a 25% reduction of CO₂ emissions, while other low-carbon fuels have the potential to fully decarbonize maritime shipping.

Strategy to Achieve the SPTs

Seaspan intends to achieve the SPT through the following strategy:

- Seaspan will achieve its KPI through qualifying capital expenditures on ship acquisitions, and potentially through the cost of retrofits. The Company has disclosed that the equivalent to the issuance amount (USD 300 million) equates approximately to the costs to procure one-to-three new LNG-powered vessels.
- The acquisition of dual-fuel vessels provides a way to increase the use of lower-carbon fuels in applications where operating vessels that are powered solely by alternative fuels would not be feasible or desirable for charterers.
- Seaspan, as a lessor of container vessels, has little or no control over its ships’ speed and trade routes. Therefore, its focus lies in ensuring its ships are well maintained and fitted with the technology necessary to reduce emissions, making acquisition and retrofits a relevant strategy to achieve the desired sustainability outcomes.

Ambitiousness, Baseline and Benchmarks

To determine the ambitiousness of the SPTs, Sustainalytics considers whether the SPTs go beyond business as usual trajectory, ii) how the SPTs compare to targets set by peers, iii) and how the SPTs compare with science.¹⁴

¹³ Seaspan’s Environmental Effort Presentation provided to Sustainalytics in September 2020.

¹⁴ We refer here to contextual benchmarks, that indicate the alignment of targets with ecosystem boundaries.

- The target established is based on Seaspan spending the equivalent to the issuance amount on eligible vessels, including new ships as well as refurbishment costs until maturity of the bond. Failure to spend a minimum of USD 300 million on retrofitting or acquiring ships that can run on alternative fuels will result in Seaspan paying a higher principal payment at maturity of the bond (see Bond Characteristics, below).
- Seaspan has confirmed that none of its vessels currently use alternative fuel. While it has over the last several months placed orders for 10 dual-fuel LNG vessels, this past expenditure is excluded from the SPT.
- It is estimated that currently, there are less than 100 LNG-fuelled container ships in operation or on order worldwide.¹⁵ This makes up less than 1% of the approximately 5,144 container ships in operation in 2018.¹⁶ Sustainalytics views this value as supporting the ambitiousness of Seaspan’s SPT.
- Seaspan has confirmed that the size of the April 2021 bond issuance is USD 300 million. Sustainalytics considers committing an equivalent amount to acquiring ships that run on alternate fuel to be substantial. Nevertheless, Sustainalytics notes that the USD 300 million figure is not based on any external benchmark and has been selected based on Seaspan’s internal strategy and plans. From the end of 2011 to 2017, Seaspan grew its fleet from 65 vessels to 89 vessels (4 vessels per year).
- Since the SPT is defined in terms of total investments in vessels running on alternative fuels (with a baseline of zero operating vessels and ten committed orders for dual-fuel LNG vessels as of April 2021), Sustainalytics considers this to be moderately ambitious knowing that the planned investments in LNG and LNG dual-fuel vessels are expected to achieve a moderate emissions reduction over the existing conventional fleet, aligning with the IMO’s CO₂ emissions trajectory.¹⁷ Sustainalytics is of the opinion that an ambitious target would focus further on investments in low-carbon fuelled vessels, capable of alignment with the IMO’s decarbonization trajectory in the medium-term (2030) and/or long-term (2050), such as ammonia, hydrogen or renewables, while noting that in light of current commercially available technologies that Seaspan’s expenditure commitments are anticipated to drive innovation in this space.

Overall Assessment

Sustainalytics considers the SPT to align with Seaspan Corporation’s sustainability strategy and considers Seaspan’s SPT to be Moderately Ambitious and representative of a commitment to improving the carbon efficiency of the shipping sector. In Sustainalytics’ opinion, a highly ambitious target would focus on increasing investments in vessels that run on low-carbon or zero-carbon fuels.

<p>A total aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources of the equivalent to the issuance amount (The aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources)</p>	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious
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Bond Characteristics

Seaspan Corporation’s SLB will contain the characteristics of a conventional bond. Failure by Seaspan to enter into binding contracts of a value of the equivalent to the issuance amount to retrofit and/or acquire vessels that can run on alternative fuels at the maturity of the bond will result in the company paying a penalty upon maturity. This penalty will increase the principal payment upon maturity by 0.5% (50 basis points). Sustainalytics notes (i) that the bond characteristics are binary, without graduated outcomes, (ii) that there is no potential for Seaspan to

¹⁵ SEA-LNG, LNG as a marine fuel 2019/ 2020, at: https://sea-lng.org/wp-content/uploads/2020/02/200214_SEALNG2019reviewDIGITAL_compressed.pdf

¹⁶ UNCATAD, Review of Maritime Transport, 2018, at: https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf

¹⁷ IMO’s trajectories assess emissions ‘per transport work’ using metrics such as CO₂/tonne-nautical mile

improve its interest rate, and (iii) that the penalty rate is aligned with other sustainability-linked bonds in the market.



Reporting

Seaspan commits to report on an annual basis on its performance on the KPI against the STP. Seaspan will publish an annual Sustainability-Linked Bond Performance Report which will contain up-to-date information on its KPI performance as well as examples of investments undertaken during the year. Sustainalytics finds this to be in line with the SLB Principles. Sustainalytics further encourages Seaspan to publish and keep readily available and easily accessible any information enabling investors to monitor the level of ambition of the KPI, such as future evolution of its definition of low-carbon fuel as alternative technologies mature.



Verification

Since the KPI is a measurement of the Company's expenditure or investment to retrofit existing vessels as well as purchase new vessels that can run on low-carbon and alternative fuels, it is captured within the Company's financial statements, particularly their income and expense statements and their balance sheet. Seaspan has committed that its spending on retrofitting and purchasing upgraded ships will be verified annually by either an external auditor or external Second-Party Opinion provider such as Sustainalytics until the maturity of the bond.

Section 2: Assessment of Seaspan's Sustainability Strategy

Credibility of Seaspan Sustainability Strategy

Seaspan's sustainability strategy focuses on increasing fuel efficiency of its fleet by improving design and operation of its vessels thereby reducing GHG emissions. The company has stated a commitment to ensuring it complies with all relevant regional, national, and international maritime policies and required certifications. Seaspan's sustainability performance is demonstrated through the following efforts, as documented in its Annual Report 2018 as well as in other internal documents provided to Sustainalytics or otherwise made publicly available:

- Seaspan's SAVER Vessel Initiative aims to improve efficiency of its vessels through a combination of vessel configurations, operations and machinery adjustments and improvements. Some of these adjustments and improvements include – improving hull and propeller efficiency, optimization of its hull, bow, propeller, frequency-controlled energy efficient systems, trim and draught optimization etc. As a result of its SAVER initiative, Seaspan reports a reduction in carbon emissions of more than 25% since 2012, equivalent to the abatement of 9.2 million tons of CO₂.¹⁸ Sustainalytics recognizes this program to be most directly aligned with the objectives of the SLB.
- Seaspan has communicated to Sustainalytics that in addition to updating its environment policy, the Company has made a commitment to redevelop its ESG strategy by the fourth quarter of 2020 and issue its inaugural, public facing ESG document in 2021.
- Seaspan has installed scrubbers on ten of its vessels, while all of its vessels have switched to low sulphur fuel oil to comply with IMO's new regulation on sulphur emissions.¹⁹
- The Company has also created a comprehensive inventory of hazardous materials to monitor hazardous waste onboard its vessels. This is in compliance with EU regulations and the Hong Kong Convention, and the Company has committed to creating a Ship Recycling Plan. As of 2016, Seaspan had recycled four of its vessels.

Sustainalytics considers Seaspan's ongoing initiatives to represent reasonable approach to improving its sustainability performance, and notes that the Company has demonstrated continued efforts to achieve its current sustainability targets and has committed to establishing more stringent and quantitative ESG goals. In particular, Sustainalytics highlights the Company's efforts to improve vessel efficiency, such as through the SAVER initiative and the commitment to report ESG metrics within the next year. Sustainalytics is of the view that the target, KPI and investments identified as part of this issuance, as referenced in Section 1, will further support Seaspan to advance its sustainability strategy.

Seaspan's Environmental and Social Risk Management

While Sustainalytics recognizes that the Seaspan's defined targets are impactful, we acknowledge that a company operating in the maritime industry must manage certain environmental and social risks related to the operation of its vessels. Some of the most material ESG risks that shipping companies must manage include risk from regulatory changes, air and water pollution (including non-GHG emissions, ballast water discharge, and waste/spills), negative effects on marine biodiversity and health and safety risks for its employees. In the following section, Sustainalytics comments on Seaspan's ability to mitigate such risks:

- The Company complies with conventions such as the IMO's International Convention for the Prevention of Pollution from Ships ("MARPOL"), which imposes liability for pollution in international waters and signatory's territorial waters. Seaspan's fleet of vessels complies with international maritime environmental laws and regulations, which mandate a variety of reporting and analysis. Seaspan's corporate affairs are governed by the Company's own articles of incorporation and bylaws, as well as by the Marshall Islands Business Corporations Act ("BCA").²⁰
- Seaspan has received certification verifying its ongoing compliance and commitments to minimizing potential environmental impact of its operations, specifically with ISO 140001:2015 certification. The Company has highlighted to Sustainalytics its ambition to further develop its environmental strategy and environmental risk management approach. This approach will also involve the updating of its environmental policy, which will aim to further implement its ISO 14000 Environmental Management System and develop reporting environmental metrics and development of appropriate targets. Key considerations will include the continued compliance of its assets and operations with local and international environmental legislation and will be supported by the establishment of targets to reduce GHG emissions.

¹⁸ Seaspan's Environmental Effort Presentation provided to Sustainalytics in September 2020.

¹⁹ As of 1st January 2020 IMO limits Sulphur in fuel oil to 0.50% mass by mass (m/m) as compared to the previous limit of 3.50% m/m. Read more: <http://www.imo.org/en/MediaCentre/HotTopics/GHG/Documents/2020%20sulphur%20limit%20FAQ%202019.pdf>

²⁰ Seaspan Corporation, SEC Form 20-F, March 2019, at: <https://www.seaspancorp.com/ir-dashboard/financial-information/sec-filings/>

- Recognizing the importance of limiting air pollution from the international shipping sector, which is almost entirely powered by highly polluting bunker fuels such as heavy fuel oil or diesel, Seaspan is committed to exploring pathways to meet the IMO's GHG targets. As part of this effort, the Company has installed scrubber systems on some of its vessels, is working towards improving new vessel designs, modifying its existing vessels to make them more fuel efficient and is exploring the use of alternative fuels.
- Seaspan is compliant with the International Convention for the Control and Management of Ships' Ballast Water and Sediments or the BWM Convention, which are regulations to control the transfer of potentially invasive species.²¹ All new vessels delivered to Seaspan post 2014 have Ballast Water Treatment System installed, and the Company is in the process of retrofitting its older vessels the same.
- Seaspan has a Health and Safety Policy²² in place which is applicable to all its ship and shore staff. The policy calls for the implementation of a Safety Management System which promotes safe working practices and working environment and continual improvement of its safety management practices. Seaspan also ensures compliance with the International Convention for the Safety of Life at Sea (SOLAS)²³.
- Seaspan applies a series of enterprise-wide policies across its operations and assets, including a Standard of Business Conduct Policy²⁴ and Quality Policy²⁵. Under these policies, the Company strives to enforce ethical standards and a culture of accountability, set up risk control measures and violation reporting mechanisms, protect and improve community relations and health, safety, environment, and quality.

Based on these policies, standards and compliance to various laws and conventions, Sustainalytics is of the opinion that Seaspan has implemented adequate measures and is well-positioned to manage and mitigate environmental and social risks commonly associated with its operations.

Section 3: Impact of the SPTs Chosen

The decarbonization of the shipping sector

In 2019, the shipping sector accounted for 3% of global GHG emissions and 9% of transport-related emissions.²⁶ The IMO estimates that by 2050 maritime emissions could grow by 50-250%.²⁷ Recognizing the need to reduce GHG emissions from the maritime sector, in order to align with the Paris climate goal, IMO in 2018 set emission reduction targets for the shipping sector. The IMO aims to reduce by 2050 the CO₂ intensity across international shipping by 70%, absolute emissions by at least 50% compared to 2008 levels,²⁸ and has set a new limit for sulphur in fuel oil used.²⁹ Achieving these targets will require large amounts of capital investment. One study estimates that a total investment of USD 1.65 trillion will be required by 2050 to decarbonize the shipping sector.³⁰ Sustainalytics is of the opinion that Seaspan's investment in retrofitting and acquiring vessels that can run on alternative fuels will contribute to steering the shipping sector towards a low carbon future.

²¹ International Maritime Organization, Ballast water management - the control of harmful invasive species, accessed in September 2020, at: <http://www.imo.org/en/MediaCentre/HotTopics/BWM/Pages/default.aspx>

²² Seaspan, Policy: Health and Safety, June 2020, available at <https://www.seaspancorp.com/wp-content/uploads/2020/08/PL-005-Health-Safety-Policy.pdf>

²³ SOLAS is an international maritime treaty which sets minimum safety standards in the construction, equipment and operation of merchant ships.

²⁴ Atlas Corp's Standards of Business Conduct Policy Document. Provided by Seaspan to Sustainalytics.

²⁵ Seaspan Quality Policy, accessed September 2020, available at <https://www.seaspancorp.com/wp-content/uploads/2020/08/PL-016-Quality-Policy.pdf>

²⁶ IRENA, New Report Identifies Clean Energy Options for Global Shipping Industry, October 2019, at:

<https://www.irena.org/newsroom/articles/2019/Oct/New-Report-Identifies-Clean-Energy-Options-for-Global-Shipping-Industry>

²⁷ International Maritime Organization, Third IMO Greenhouse Gas Study 2014, at: https://gmn.imo.org/wp-content/uploads/2017/05/GHG3-Executive-Summary-and-Report_web.pdf

²⁸ International Maritime Organization, Greenhouse Gas Emissions, accessed in September 2020, at:

<http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/GHG-Emissions.aspx>

²⁹ The new limit effective from 1st January 2020 limits Sulphur in fuel oil to 0.50% mass by mass (m/m) as compared to the previous limit of 3.50% m/m. Read more: <http://www.imo.org/en/MediaCentre/HotTopics/GHG/Documents/2020%20sulphur%20limit%20FAQ%202019.pdf>

³⁰ Shell, Decarbonizing shipping, 2020, at: https://www.shell.com/energy-and-innovation/the-energy-future/decarbonising-shipping/_jcr_content/par/toptasks.stream/1594141914406/b4878c899602611f78d36655ebff06307e49d0f8/decarbonising-shipping-report.pdf

Considerations regarding the use of LNG fuel

Many financial market participants and analysts of the shipping sector believe that LNG will play an important role as a transition fuel in the next decade.³¹ According to estimates provided by DNV GL, in 2014, there were approximately 119 LNG fueled ships in operation or on order.³² This figure has increased to about 358 LNG fueled ships currently in operation or on order by mid-2019.³³ However, this makes up only a small fraction of the entire international maritime fleet, estimated to be over 50,000 vessels in 2019.³⁴

Sustainalytics highlights the following considerations with regards to Seaspan’s use of high-pressure, dual-fuel engines that will primarily run on LNG:

- Sustainalytics notes that the high-pressure gas injection system injects gas into the cylinder late in the compression stroke at a high pressure and avoids methane slip by injecting the gas after the exhaust valve closes, unlike the low-pressure system. However, this system leads to higher burned gas temperatures and relatively higher generation of NO_x emissions, which may require aftertreatments like EGR or SCR.³⁵ The ships will also be equipped with a boil-off gas (BOG) management system to recover BOG and maintain the LNG tank pressures.
- Seaspan intends that the vessels be operated with the main engine in shaft generator/power take-off (PTO) mode where the additional energy in the main engine can produce electricity and minimize auxiliary engine fuel consumption during voyages. Sustainalytics notes that auxiliary engines are intended to be low-pressure Otto cycle type which may exhibit higher methane slip, however, Seaspan plans to operate auxiliary engines on sustainable biofuels or synthetic fuels in future to minimize its environmental impact.

In this context, the short-term benefits of LNG as a shipping fuel are recognized. However, it is noted that to maximize these benefits, an appropriate selection of technologies and robust operational controls must be in place. Additionally, in the medium- to long-term, the use of LNG must be supplemented with other technologies and fuels to allow for deep decarbonization.

Alignment with/contribution to SDGs

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by 2030. This sustainability linked bond advances the following SDG goals and targets:

KPI	SDG	SDG Target
The aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources	9. Industry, innovation and infrastructure	9.4. By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
	14. Life Below Water	14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

³¹ Shell, Decarbonizing shipping, 2020, at: https://www.shell.com/energy-and-innovation/the-energy-future/decarbonising-shipping/_jcr_content/par/toptasks.stream/1594141914406/b4878c899602611f78d36655ebff06307e49d0f8/decarbonising-shipping-report.pdf

³² DNV GL, LNG as ship fuel, January 2015, at: <https://www.dnvgl.com/maritime/lng/lng-as-ship-fuel-report.html>

³³ DNV GL, DNV GL AFI platform: Tank capacity shows LNG a growing force in large vessel orders, June 2019, at: <https://www.dnvgl.com/news/dnv-gl-afi-platform-tank-capacity-shows-lng-a-growing-force-in-large-vessel-orders-149176>

³⁴ International Chamber of Shipping, Shipping and World Trade, accessed in September 2020, at: <https://www.ics-shipping.org/shipping-facts/shipping-and-world-trade#:~:text=There%20are%20over%2050%2C000%20merchant,seafarers%20of%20virtually%20every%20nationality.>

³⁵ Exhaust Gas Recirculation (EGR) and Selective Catalytic Reduction (SCR) are the two commonly employed forms of engine exhaust after-treatment for NO_x reduction. It is most likely that EGR will be used on the main engines of Seaspan’s vessels, but SCR may also be deployed.

Conclusion

Seaspan intends to issue a Sustainability-Linked Bond which will tie the principal amount due upon maturity to the achievements of the following SPT:

I) A minimum of USD 300 million spent by the maturity of the bond on upgrading and acquiring ships that have the ability to run on alternative fuels.

Sustainalytics performed a review of Seaspan's SLB framework and considers the KPI to be adequate and aligned with the Company's sustainability strategy. Sustainalytics considers Seaspan's SPT to represent a material improvement to the baseline and to be moderately ambitious, noting that the move to LNG-powered vessels represents an important part of the short-term transition of the shipping industry but in the long-term must be coupled with other decarbonization technologies to be aligned with climate goals. Furthermore, Sustainalytics considers reporting and verification commitments to be aligned with market expectations.

Based on the above, Sustainalytics considers Seaspan's SLB to be in alignment with the five core components of the SLBP and the prospective of achievement of the SPT to be impactful.

Appendix 1: Sustainability-Linked Bonds - External Review Form

Section 1. Basic Information

Issuer name: Seaspan Corporation

Sustainability-Linked Bond ISIN: Not yet known

Independent External Review provider's name for second party opinion pre-issuance (sections 2 & 3): Sustainalytics

Completion date of second party opinion pre-issuance: April 9, 2021

Independent External Review provider's name for post-issuance verification (section 4): Not known.

Completion date of post issuance verification: n/a

At the launch of the bond, the structure is:

- a step-up structure a variable redemption structure

Section 2. Pre-Issuance Review

2-1 SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review:

- assessed all the following elements (complete review) only some of them (partial review):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Selection of Key Performance Indicators (KPIs) | <input checked="" type="checkbox"/> Bond characteristics (<i>acknowledgment of</i>) |
| <input checked="" type="checkbox"/> Calibration of Sustainability Performance Targets (SPTs) | <input checked="" type="checkbox"/> Reporting |
| <input checked="" type="checkbox"/> Verification | |

- and confirmed their alignment with the SLBP.

2-2 ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER

- | | |
|--|---|
| <input checked="" type="checkbox"/> Second Party Opinion | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Scoring/Rating |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

2-3 EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW *(if applicable)*

Seaspan intends to issue a Sustainability-Linked Bond which will tie the principal amount due upon maturity to the achievements of the following SPT:

l) A minimum of USD 300 million spent in a period of three years from the date of issuance of the bond, on upgrading and acquiring ships that have the ability to run on alternative fuels.

Sustainalytics performed a review of Seaspan's SLB framework and considers the KPI to be adequate and aligned with the Company's sustainability strategy. Sustainalytics considers Seaspan's SPT to represent a material improvement to the baseline and to be moderately ambitious, noting that the move to LNG-powered vessels represents an important part of the short-term transition of the shipping industry but in the long-term must be coupled with other decarbonization technologies in order to be aligned with climate goals. Furthermore, Sustainalytics considers reporting and verification commitments to be aligned with market expectations.

Based on the above, Sustainalytics considers Seaspan's SLB to be in alignment with the five core components of the SLBP and the prospective of achievement of the SPT to be impactful.

Section 3. Detailed pre-issuance review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

3-1 SELECTION OF KEY PERFORMANCE INDICATORS (KPIs)

Overall comment on the section *(if applicable)*:

In Sustainalytics' opinion the selected KPI is adequate, and the definition of the KPI is clear in relation to how it is being measured. Nevertheless, some ambiguity is noted in relation to the sustainability benefits which will result from progress on the KPI, based on the wide variety of potential fuels and technologies which may be selected by Seaspan, including those which may be developed over the coming decades. Sustainalytics highlights in particular the role that LNG is anticipated to play in the transition of the shipping sector to low-carbon fuels, as Seaspan's short-term expenditures will be directed towards LNG ships.

List of selected KPIs:

- ✓ The aggregate financial value of binding commitments towards vessel acquisitions, newbuildings, and vessel retrofits, which can be powered by Alternative Fuel Sources

Definition, Scope, and parameters

- | | |
|--|---|
| <input checked="" type="checkbox"/> Clear definition of each selected KPIs | <input checked="" type="checkbox"/> Clear calculation methodology |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

Relevance, robustness, and reliability of the selected KPIs

- | | |
|--|--|
| <input checked="" type="checkbox"/> Credentials that the selected KPIs are relevant, core and material to the issuer's sustainability and business strategy. | <input checked="" type="checkbox"/> Evidence that the KPIs are externally verifiable |
| <input checked="" type="checkbox"/> Credentials that the KPIs are measurable or quantifiable on a consistent methodological basis | <input type="checkbox"/> Evidence that the KPIs can be benchmarked |
| <input type="checkbox"/> Other <i>(please specify)</i> : | |

3-2 CALIBRATION OF SUSTAINABILITY PERFORMANCE TARGETS (SPTs)

Overall comment on the section (if applicable):

Sustainalytics considers the SPT to align with Seaspan Corporation's sustainability strategy and considers Seaspan's SPT to be Moderately Ambitious and representative of a commitment to improve the carbon efficiency of the shipping sector. In Sustainalytics' opinion a highly ambitious target would focus on increasing investments in vessels that run on low-carbon or zero-carbon fuels.

Rationale and level of ambition

- | | |
|--|---|
| <input checked="" type="checkbox"/> Evidence that the SPTs represent a material improvement | <input checked="" type="checkbox"/> Credentials on the relevance and reliability of selected benchmarks and baselines |
| <input checked="" type="checkbox"/> Evidence that SPTs are consistent with the issuer's sustainability and business strategy | <input checked="" type="checkbox"/> Credentials that the SPTs are determined on a predefined timeline |
| | <input type="checkbox"/> Other (please specify): |

Benchmarking approach

- | | |
|--|--|
| <input checked="" type="checkbox"/> Issuer own performance | <input type="checkbox"/> Issuer's peers |
| <input type="checkbox"/> reference to the science | <input type="checkbox"/> Other (please specify): |

Additional disclosure

- | | |
|---|--|
| <input type="checkbox"/> potential recalculations or adjustments description | <input checked="" type="checkbox"/> issuer's strategy to achieve description |
| <input checked="" type="checkbox"/> identification of key factors that may affect the achievement of the SPTs | <input type="checkbox"/> Other (please specify): |

3-3 BOND CHARACTERISTICS

Overall comment on the section (if applicable):

Seaspan has disclosed that its SLB will contain the characteristics of a conventional bond, with the added clause that failure to achieve its SPT will result in the Company paying a penalty of 0.5% (50 basis points) on the principal payment upon maturity. Sustainalytics highlights that the bond structure is binary, contains only a potential negative adjustment, and is aligned in magnitude with other sustainability-linked bonds in the market.

Financial impact:

- variation of the coupon
- Variation of the redemption principal
- Other (please specify):

Structural characteristic:

- ...

- ...
- Other *(please specify)*:

3-4 REPORTING

Overall comment on the section *(if applicable)*:

Seaspan commits to report on an annual basis on its performance on the KPI against the SPT. The company will publish an annual Sustainability-Linked Bond Performance Report, which will contain up-to-date information on its KPI performance as well as examples of investments undertaken during the year. Sustainalytics finds this to be in line with the market expectations.

Information reported:

- performance of the selected KPIs
- verification assurance report
- level of ambition of the SPTs
- Other *(please specify)*:

Frequency:

- Annual
- Semi-annual
- Other *(please specify)*:

Means of Disclosure

- Information published in financial report
- Information published in sustainability report
- Information published in ad hoc documents
- Other *(please specify)*:
- Reporting reviewed *(if yes, please specify which parts of the reporting are subject to external review)*:

Where appropriate, please specify name and date of publication in the “useful links” section.

Level of Assurance on Reporting

- limited assurance
- reasonable assurance
- Other *(please specify)*:

USEFUL LINKS *(e.g. to review provider methodology or credentials, to issuer’s documentation, etc.)*

Section 4. Post-issuance verification

Overall comment on the section *(if applicable)*:

Information reported:

- limited assurance
- reasonable assurance
- Other *(please specify)*:

Frequency:

- Annual
- Semi-annual
- Other *(please specify)*:

Material change:

- Perimeter
- KPI methodology
- SPTs calibration

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Named

2015: Best SRI or Green Bond Research or Rating Firm
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