

A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the
NOVA – School of Business and Economics.

ZIM – Navigating in a turbulent industry

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Abstract

The purpose of this project is to develop an Equity Research report about ZIM, with the objective of providing a final recommendation regarding its underlying stock. I developed the entire report together with my colleague José Lobato. In order to better understand our work, I recommend the reading of our consolidated report (annexed).

ZIM is a global asset-light container liner shipping company with leadership positions in niche markets, operating a fleet of 87 vessels across five geographic trade zones – ranked 11th among shipping carriers globally, controlling approximately 1,6% of the global shipping capacity, according to *Alphaliner*.

Being inserted in the dynamic shipping industry and only being listed on the *New York Stock Exchange* since January 2021 are two factors that bring relevance and interest to this report.

This first part of the report includes a general overview about the company itself, its main competitors, and the shipping industry. Moreover, the report includes a view around the company key elements regarding its strategy – digital oriented, asset-light model, and ESG commitment. The last chapter of this first part regards a risk analysis of the company in the form of two different scenario analyses.

Keywords: Finance; Valuation; Shipping; Freight-rate; Asset-light; Oversupply

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This report is part of the ... report (annexed) and should be read as an integral part of it.

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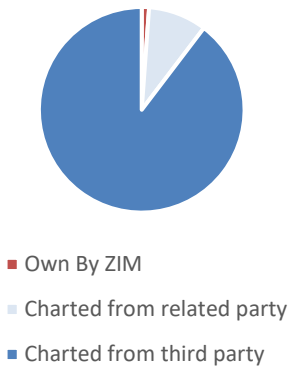
Company Overview

Figure 1 – Company logo



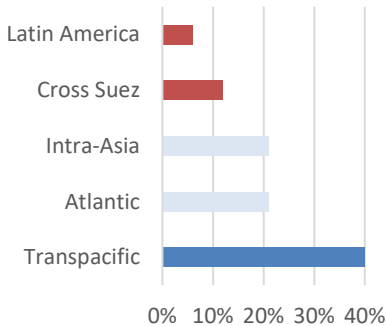
Source: Company website

Figure 2 - Fleet Overview



Source: Company reports

Figure 3 - TEUs carried in 2020 %



Source: Company reports

Brief History

Founded in *Haifa* by the *Jewish Agency* in 1945, ZIM had the main objective of transporting hundreds of immigrants to the emerging *State of Israel*, and only started to focus on the cargo shipping industry in the late 60's. The *Israel Corporation* (owned by the *Ofer* family) acquired 50% position in the company in 1969 but ZIM was only fully privatized in 2004. In January 2021, after years of considering and delaying going public, ZIM finally debuted on the *New York Stock Exchange*.

Business Overview

ZIM is a global asset-light container liner shipping company. Despite being one of the oldest shipping liners, it still provides innovative seaborne transportation and logistics services with a reputation of industry leading transit times, schedule reliability and service excellence. As a result of being a customer-centric company, ZIM relies heavily on business and artificial intelligence to better understand and meet customer needs.

Following an asset-light model (chartering 98.9% of its fleet) enables ZIM to differentiate from its competitors (chartered-in on average 56% of their fleet, according to *Alphaliner*) and benefit from a flexible cost structure and operational efficiency.

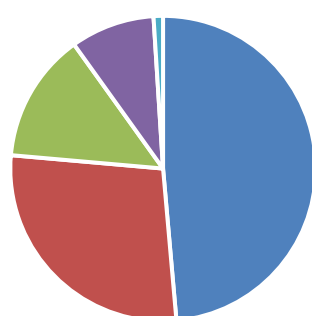
As of December 31, 2020, ZIM had a fleet of 87 vessels (total capacity of 374,636 TEUs and average capacity per vessel of approximately 4,400 TEUs) and operated a global network of 69 weekly lines, calling at 307 ports in more than 80 countries across five geographic trade zones: Transpacific (40% of TEUs carried in 2020), Atlantic (21%), Intra-Asia (21%), Cross Suez (12%) and Latin America (6%). ZIM's network is significantly enhanced by cooperation agreements with other companies, where the strategic operational collaboration signed with the *2M Alliance*, formed by the two largest global carriers (*Maersk* and *MSC*), stands out.

With a highly diverse and global customer base (30,080 customers), in 2020, ZIM's 10 largest clients represented approximately 16% of its freight revenues. On the other hand, 75% of its top 20 customers in 2020 have a relationship with the company lasting longer than 10 years, which reinforces ZIM's strong reputation and customer focus.

Ownership Structure and Dividend Policy

ZIM is traded in the New York Stock Exchange under the ticker “ZIM”. Since the company had its IPO earlier this year, let us use Equity of December 13th, 2021 as a proxy for Market Capitalization, which is \$5 896 million, represented by 115 million outstanding shares (post-IPO). Its principal owners are Kenon Holdings Ltd. (27.8%), Deutsche Bank AG – London Branch (13.7%) and Danaos Corporation (8.9%). The latter one is a publicly traded company of large-sized containership chartering, meaning that ZIM can benefit from finer lease agreements to comply with its charter-in strategy. There is also one Special State Share owned by the State of Israel, which imposes certain restrictions¹ on operations and grants Israel veto power over transfers of certain assets. Moreover, this share restricts the ability of a shareholder to gain control of ZIM, possibly leading to volatility in share price as well as affecting operations. Also, the State of Israel currently dictates that the company must maintain a minimum fleet of 11 owned vessels, which is not met, and therefore it is expected that ZIM will expand its owned fleet.

Figure 4 – Ownership Structure



- Retail
- Kenon Holdings
- Deutsche Bank
- Danaos Corporation
- Executive/Directors

Source: Company reports

ZIM will pay an annual dividend in 2021 of \$2 per share, which represents an ordinary payout ratio of 45% regarding the 2020 net income. The company CEO announced his plans to follow the same payout ratio in the next years, which gives a positive sign to investors regarding their financial position. Regarding some of its competitors – Matson (USA), Yang Ming (Taiwan), Wan Hai (Taiwan) and Evergreen (Taiwan), ZIM ranks at top when it comes to dividend per share². As of 11th December 2021, ZIM and Matson have a dividend yield of 19,34% and 1,42% respectively, therefore it is clear that the Israel based company represents a wiser option when accounting for dividend investing. Also, the other companies on the list do not have a regular dividend payment, for example, Evergreen paid dividends in 2021, but the last time this happened was in 2018. Being said, the prospects of future dividends from ZIM come as both predictable and rich.

Board of Directors and Senior Management

The Board of Directors is composed by nine people, and the key directors are Yair Seroussi – Chairman, also Chairman of major and reputable Israeli companies; Dr. Karsten Liebing – Member, served as Managing Partner of Hammonia Reederei GmbH & Co. KG, a vessel management company; Birger Johannes Meyer-Gloeckner – Member, served in various senior positions at the CONTI Group, a shipping consultancy, and ZIM has been chartering vessels from companies affiliated with them; Yoav Moshe Sebba – Member, joined the XT Group, a global shipping and holdings company;

¹ Includes the composition of the Board of Directors and nationality of the CEO, among others.

² Due to the recent listing of ZIM, the dividend yield should not be taken as granted, since the share price has risen over 300% in 2021.

Dimitrios Chatzis – Member, is the father of the CFO of Danaos Corp. and all related vessel charter agreements followed his appointment.

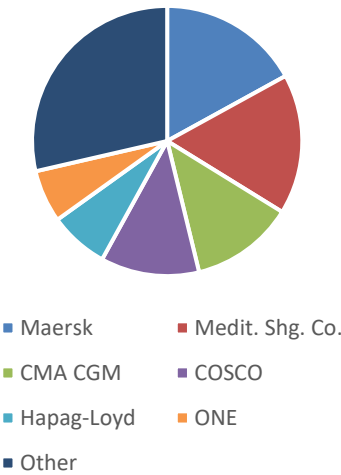
With reference to Senior Management, the most relevant employees are Eli Glickman – CEO, served as CEO of Israeli Electric Corp. and Deputy CEO of Cellular Orange Communication; Xavier Destriau – CFO, served as CFO Asia and VP at CMA CGM, a major container shipping company.

Having such a specialized and experienced team with experts from basically all the areas that interact with ZIM’s business reinforces our believes that ZIM will keep the pace of its industry, maintaining their market share in the following years. In addition, the networking synergies that arise from the Board composition will aid the company when considering the vessel chartering business model.

Industry Overview

The Shipping Industry

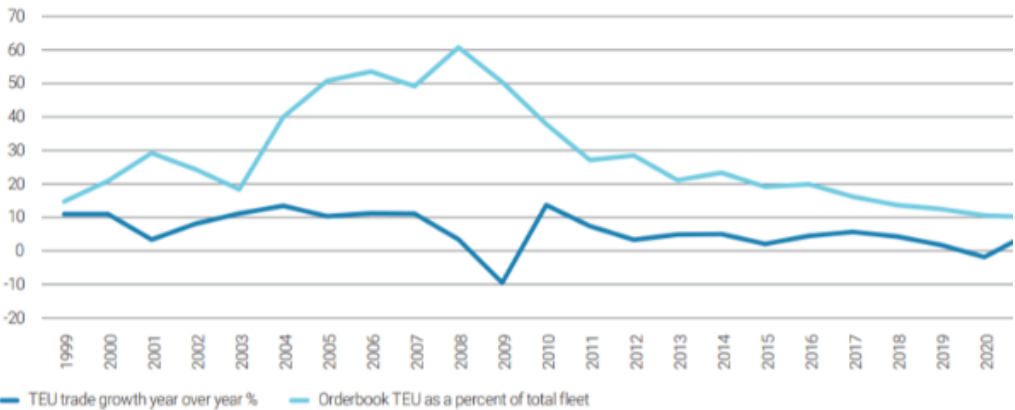
Figure 5 – Shipping Industry Market Share



Source: Bloomberg

The shipping industry is responsible for the carriage of around 90% of world trade. There are significant barriers that difficult the entrance of new players since it is a capital and technology intensive industry as well as a high-input and high-risk one. The shipping operations mainly depend on the freight and charter rates as well as the bunker prices (fuel costs). The shipping market has a long trade cycle, and the pace of new developments is slow, which makes M&A’s an attractive way to enhance competitiveness. In fact, market concentration is increasing in the recent years through M&A’s and alliances (the four biggest companies represent 58% of the world capacity, according to *Alphaliner*).

Figure 6 – Vessel Order Flow vs Demand Growth



Source: AlixPartners – Shipping Outlook

Last three decades: boom-and-bust loop

Figure 7 – Fleet Growth – YOY change in TEU capacity (%)



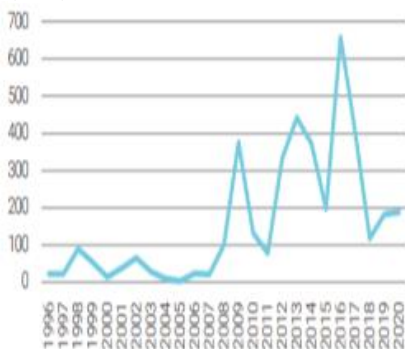
Source: AlixPartners – Shipping Outlook

It is possible to observe a cycle during the last decades. During times of macroeconomic growth, freight rates rise, and shipping companies reinvest their profits in new and bigger vessel orders. Then the economy enters a downturn. Less demand leads to lower freight rates and shipping companies find themselves burdened with debt and idle vessels. The arriving of the previously placed orders aggravates the oversupply problem, which pushes rates even lower. Consequently, carriers tumble into bankruptcy or are acquired by bigger ones.

Current rates: What drives them?

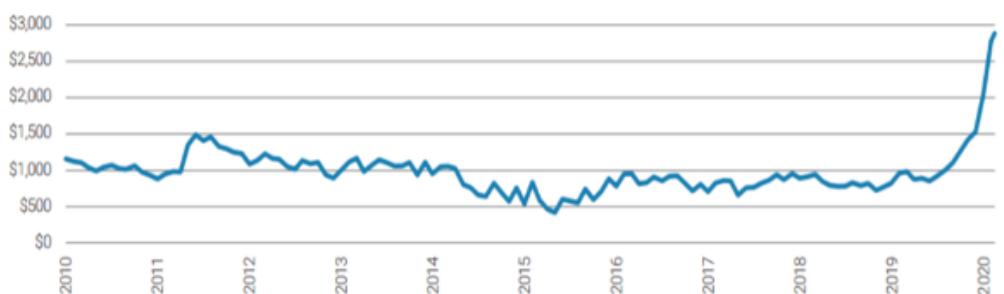
The current historically high freight rates (192% annual growth during 2021) result from a combination of both macroeconomics and industry related factors that led to under supply. On one side, as a consequence of the Covid-19 pandemic, the industry has been facing equipment shortages, hard demand shocks, and close or not fully operating ports (mainly in China, which represents roughly 18% of the world trade). As a result of it, a container spends about 20% longer in the system, affecting positively the freight rates. On the other side, carriers have been adopting measures in the last years to control the supply and solve past lower rates cycles. Since the last financial crisis, the order flow of new vessels decreased substantially relative to the demand evolution. In addition, vessels demolition was intensified in the past ten years. Both measures combined justify the growth slowdown of the world supply capacity, and consequent rise of freight and charter rates. This supply discipline was only possible due to the increasing market concentration. The shipping industry could be in front of a new era of sustainable profitability, but it is unlikely that such discipline can last longer, as the main companies are already starting to place new vessel orders to profit from such high rates. Since these orders take on average two years to be delivered, we believe that freight and charter rates will remain high in the short-term but will eventually go back to similar pre-pandemic levels around 2023 (as demonstrated in *Revenues*).

Figure 8 – Demolitions in TEU capacity (000s)



Source: AlixPartners – Shipping Outlook

Figure 9 – Shanghai Containerized Freight Index (SCFI)



Source: Bloomberg

Competitors

In terms of revenues, since the freight rates are imposed by the market, shipping companies can only differ from each other significantly in terms of capacity. Consequently, ZIM main competitors are the other liners with similar fleets (market share) such as Evergreen (5,9%), Yang Ming (2,6%), Wan Hai (1,7%) and Matson (0,3%). The first conclusion is the fact that even between peers, the capacity available differs significantly (heterogeneous industry at the top). Between companies, we should focus our comparison on costs (margins) to better assess profitability (figure 10).

Figure 10 – Peers Profitability Assessment

		2020	2019	2018			2020	2019	2018
Evergreen	EBITDA Margin	27%	13%	5%	Wan Hai	EBITDA Margin	23%	11%	8%
	EBIT Margin	17%	2%	0%		EBIT Margin	16%	4%	1%
	Net Margin	12%	0%	-1%		Net Margin	13%	3%	1%
Yang Ming	EBITDA Margin	24%	10%	0%	Matson	EBITDA Margin	16%	10%	12%
	EBIT Margin	13%	-1%	-5%		EBIT Margin	12%	6%	7%
	Net Margin	8%	-3%	-6%		Net Margin	8%	4%	5%
		2020	2019	2018					
ZIM	EBITDA Margin	25%	10%	3%					
	EBIT Margin	18%	5%	-1%					
	Net Margin	13%	0%	-4%					

Source: Bloomberg

From the table above we can conclude that no competitor outperformed ZIM in terms of profitability in 2020 (net margin). It is important to notice that even in an industry where size is crucial as showed in this report, ZIM was able to achieve a net margin similar to Evergreen (that is almost 4x as big in size) and significantly higher than Yang Ming (that is almost 2x as big than ZIM). This strong performance in terms of profitability enhances ZIM's effort around cost efficiency. By having an asset-light model, ZIM has the agility to charter only the vessels that they need to match demand. Consequently, during the year they use almost 100% of their capacity unlike their rivals that own a larger part of their fleet, so even if they do not part of their vessels, they still need to pay them (depreciations).

ZIM's Strategy

The backbone of ZIM's strategy includes three key elements: digital-oriented, asset-light global niche carrier and ESG committed, which offers clear differentiation amongst competitors, allowing the company to provide innovative and premium services. The performance and implementation success of such strategies are, therefore, crucial for the

company to maintain its market share in the next years (which is assumed in the valuation), since increasing it significantly is not credible with the actual industry concentration and competition level.

Digital-oriented

In order to provide the highest level of customer service, the company has implemented an innovative, data-driven strategy using artificial and business intelligence, to better understand the clients' needs, without compromising the long-standing reputation of the distinct personal approach to customer relations.

Furthermore, the company has formed several partnerships and collaborations with third-party start-ups to create internal tools for cyber security and operations, as well as expanding services to clients. Most companies are major players at their domain, such as: WAVES – blockchain technology; Konfidas – cyber-security. A worthy example is the investment and partnership with Ladingo, a one-stop-shop for Cross Border shipments, complementing the strategic cooperation with Asian giant Alibaba to ultimately gain footprint in adjacent and new markets, grow revenue and provide added value to customers. These partnerships reinforce our opinion that ZIM will maintain its market share in the following years by constantly keeping updated with the latest industry trends to better respond to demand. Regarding our model, we believe that this strategy justifies our forecast on *Value-Added Services*.

Asset-light Niche Carrier model

ZIM operates a fleet close to 100 vessels, nearly all chartered-in (figure 11), granting operational agility. This asset-light model enables the company to benefit from a flexible cost structure as demand flows, as previously discussed on *Competitors*. To strengthen this unique approach, the Board of Directors, Senior Management, and key shareholders have strong relationships with many shipping companies, creating synergies when it comes to manage the chartering of vessels, such as the long-term chartering deal with Seaspan of 10 vessels. The operations are set across five geographic trade zones, creating commercial agility, where ZIM strives to increase and sustain profitability by competing in niche trade lanes where the market is underserved. The operational agility mentioned above is related to this topic since ZIM can easily embark into new trade lanes opportunistically. During Q2 2021, the company created nine new lines to capitalize on ecommerce trends. Even though this strategy enhances ZIM's cost efficiency and agility during bad times, in a prosper industry context as the one faced nowadays, higher charter rates lead to higher fleet costs (mainly depreciations) which heavily affects ZIM's margins,




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Figure 11 – Fleet Structure

Company	% Chartered
Maersk	43,3%
CMA CGM	59,2%
COSCO	47,4%
Hapag-Lloyd	41,0%
Evergreen	49,4%
Yang Ming	66,8%
Wan Hai	41,5%
ZIM	98,8%

Source: Alphaliner

as demonstrated in *Costs*, in comparison with ZIM's main competitors (that charter a smaller portion of their fleet as showed in figure 11).

ESG commitment

The company started presenting sustainability reports since 2018 as a mean to express the increasing efforts regarding sustainability. The SEC stated this year that corporate disclosures on ESG issues will be a high priority so a rational investor should value ZIM's commitment in order to protect its interests and the company future success.

Moreover, ZIM complies with environmental requirements and takes part on many international agreements aiming sustainability. This means that its operations uphold and advance a set of principles regarding ESG: eliminate corruption risks – creation of the Code of Ethics and promote whistleblowing; promote diversity – hiring of people with disabilities and achieve gender diversity; continuous reduction of the environmental impacts of operations – usage of fuel with low sulphur content, which is more expensive, and change bunker fuel vessels with natural gas ones, all including full compliance with the IMO 2020 Regulations (direct impact described in *Costs – Fuel and lubricants*).

However, due to the nature of shipping, ZIM might transport dangerous and hazardous (D&H) cargo which may be related to “sin companies”, from ammunition to radioactive isotopes. Yet, the company developed and implemented *ZIMGuard*, an artificial intelligence-based screening software to detect and identify problems related with these types of cargo before loading to vessels, undertaking that D&H cargo is handled with stricter processes. Investments like *ZIMGuard* demonstrate the company's effort to comply with the current legislations to avoid future penalizations or fines that can compromise ZIM's success and the investor's interest.

“(...) increasing efforts to put sustainability, (...) at the forefront of everything we do”

Eli Glickman (CEO) about treating oceans and communities with care and responsibility

ZIM Risks

The operation of a vessel by any company includes general risks such as mechanical failure, collision, property and cargo loss or damage. Business interruptions, that can be related with many reasons (political, hostilities, labor strikes, among others) represent a general risk as well. ZIM, in line with the industry practices, maintains an adequate insurance coverage against its main general risks, although not all of them can be covered.

Apart from the industry general risks, ZIM's business, financial condition and results from operations may be resentfully affected by the following key risks, associated to the systematic risk of the industry, as well as to the nature of ZIM itself. Therefore, an

investment made in the company might incur into a loss. Consequently, we assessed two different future scenarios to better understand the impact of these risks in our valuation.

Competition and Exposure to the chartering market – Scenario 1

The container shipping environment, especially in recent years, is marked by instability and uncertainty as result of global economic conditions and other factors, including geopolitical trends, US-China trade restrictions, and the COVID-19 pandemic. Besides, competition may intensify even further, and certain larger competitors may be better positioned and have greater resources than ZIM, influencing its market position and financial performance.

On top of that, the company's fleet is substantially chartered-in, making ZIM highly sensitive to fluctuations in the charter market. Charter prices are expected to keep growing in the near future, thus the cost associated with vessels shall rise as well. Nevertheless, ZIM may also face difficulties in chartering/owning enough large vessels to support the growth strategy due to the possible shortage of vessel supply.

All these risks could reflect in a decrease of the market share of ZIM, in terms of capacity (worldwide standard), which will affect the TEUs carried. Our company in analysis gathers 1,6% of the capacity market share, granting it the 11th place in the ranking. With respect to our model, this would influence the growth rate that TEUs carried are attached to. Further, this hypothesis represents a critic against ZIM's business model, because capacity is directly related to the number of vessels the fleet has. Since most of this fleet is chartered-in, we might expect constraints in renewing/signing new leases, affecting the TEUs carried. We then

Figure 12 – Scenario 1 – Original Model comparison

	Scenario 1		Our Model	
	2023	2024	2023	2024
TEUs carried (in millions)	3,187	3,264	3,235	3,378
% growth	2,86%	2,41%	4,42%	4,42%
Total Revenues	\$5 521,53	\$5 801,67	\$5 605,27	\$6 005,21
Cargo Handling Costs	-\$645,23	-\$662,00	-\$645,23	-\$662,00
# Employees	4146	4246	4209	4395
Vessels	\$1 224,93	\$1 263,54	\$1 174,98	\$1 231,84
# vessels	98	100	99	103
average cost per vessel	\$21,13	\$21,28	\$19,96	\$20,05
depreciation per vessel	-\$8,58	-\$8,64	-\$8,10	-\$8,14
Containers and handling equipment	\$639,05	\$754,22	\$639,05	\$780,68
% revenues	12%	13%	11%	13%
TEUs carried (in millions)	3,187	3,264	3,235	3,378
cost per TEU (thousands)	\$200,53	\$231,09	\$197,53	\$231,09
depreciation per TEU (thousands)	-\$94,30	-\$108,67	-\$92,89	-\$108,67
	Scenario 1	Our Model		
	Steady State (2028)			
Core RONIC	14,8%	15,9%		
Core ROIC	14,8%	15,9%		

Source: Own estimates

assume that ZIM will decrease its market share from 1,7% to 0,6% between 2023-2024 because

essentially all freight is chartered-in, and the company faces difficulties in getting the necessary vessels to answer demand, so the peers take over this lack of capacity. In order to impact the TEUs carried growth rate with market share, we employed the following proxy: using 2022 as reference, the respective growth rate is 4,42%, the 2023's rate will be $4,42\% * \frac{1,1\%}{1,7\%}$, where we assume that ZIM's market share drops to 1,1%; lastly the 2024's rate accounts for $4,42\% * \frac{0,6\%}{1,1\%}$. Varying the TEUs carried will affect the whole model, not only for the financials attached to this metric, but also due to the relations with % of total revenue. In the figure X, we may compare the principal impacted accounts of this scenario with our model as standard.

For Income Statement affairs, as we may check, total revenue decreases when compared to the model, because there is less cargo being transported. In addition, Cargo Handling Costs keeps its values since this account is more dependent to freight rates rather than capacity itself, whereas the number of employees drops resulting from the TEUs carried decline. This makes the Core Result worse than our model's – a decrease of 71,33% in 2023 and a weak rebound of 3,77% in 2024, against the respective -69,84% in 2023 and 7,39% in 2024 from our standard. At this point, the revenues of the competition should outperform ZIM's.

Furthermore, Balance Sheet wise, the number of vessels is slightly below our model. However, as discussed above, the shrink in ZIM's capacity will negatively affect future lease agreements with carriers, prompting a rise in the average cost per vessel³. Moreover, the cost per TEU, under the "Containers and handling equipment" category, slightly rises in 2023 as consequence of TEUs carried.

Nonetheless, these changes are not notable, thus we expect the RONIC and ROIC to vary accordingly – a difference of approximately 1,1%.

To finish, we computed the share price fair value in this scenario which comes as **\$64,53**, and heeding for the reference date, still represents an investment with remarkable potential.

Future global capacity – Scenario 2

With the current lack of vessels and containers, companies are investing in these bottlenecks, as previously discussed. In the next years, the industry can face again problems regarding excess supply, which will consequently hurt future freight rates. Even

³ In this scenario we assume that in 2023 the cost per vessel decreases 30%. The rate in our model is -40%.

though our main forecast already accounts to a natural grow from the supply side (30% and 40% decrease in 2022 and 2023 freight rates growth, respectively), it is still important to analyze different growth rates since our valuation is extremely dependent on the freight rate levels, as demonstrated in the sensitive analysis below (figure 43).

In this over supply scenario, we will compare the impact of a decrease in the freight rate growth levels of 31% and 41% in 2022 and 2023, respectively, with our original forecast (highlighted with blue in the figure below) assuming that demand levels (TEUs carried) will remain the same in both. Revenues will be directly affected, resulting in \$8 818,87 million (1,43% decrease) and \$5 433,11 million (3,07% decrease) in each year, respectively. Operating expenses and cost of services will naturally decrease according with revenues due to its correlation. Therefore, the main difference regarding our original model is related with the G&A expenses, where salaries stand out, and depreciations.

Figure 13 – Freight Rate Growth – Share Price Sensitive Analysis

		2023 Freight Rate Growth				
		-38%	-39%	-40%	-41%	-42%
2022 Freight Rate Growth	-28%	\$101,09	\$92,70	\$84,40	\$76,19	\$68,12
	-29%	\$93,69	\$85,50	\$77,41	\$69,44	\$61,63
	-30%	\$86,35	\$78,37	\$70,51	\$62,79	\$55,29
	-31%	\$79,07	\$71,32	\$63,71	\$56,29	\$49,13
	-32%	\$71,88	\$64,37	\$57,04	\$49,96	\$43,22

Source: Own estimates

These expenses are related with TEUs carried in each year (demand) and not with the freight rates, so, if the rates decrease but the demand levels stay stable (as assumed in this scenario), these expenses will remain the same, resulting in lower net incomes in the following years. In fact, although revenues decrease only 1,43% and 3,07% in each year, the net income will decrease 5% and 13%, respectively, which explains the estimated share price of \$56,29, in comparison with the previously estimated of \$70,51. As the whole industry is also extremely aligned with the freight rates, this scenario would affect ZIM's competitors in a similar way. A greater decrease than expected on Freight Rate growth rates will significantly harm the share price, and as we observe an investment made today should result in a loss.

“ZIM INTEGRATED SHIPPING SERVICES LTD.”

“COMMERCE & LOGISTICS”

COMPANY REPORT

14 DECEMBER 2021

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Navigating in a turbulent industry

ZIM will stay afloat during the freight rate waves

- Since its IPO in January 2021, ZIM has risen over 300%. Its price reached an all-time high of \$62.20, nevertheless the recent uncertainty in the markets made the stock plunge to \$49.48, resulting in a finer buying price for a security that is expected to rise even further.
- The shipping industry is facing abnormal lucrative times as a result of a positive conjuncture, mainly regarding the current pandemic as well as imbalances between supply and demand. Although TEUs carried remained stable, freight rates skyrocketed (192% annual growth) during this period, reaching historical levels across the industry.
- ZIM's asset-light model is a clear *Blue Ocean* strategy in comparison with its peers. Chartering its entire fleet granted agility to handle its costs efficiently, outperforming its main rivals in terms of net revenue margins (13%).
- In terms of revenues, the company is expected to reach an annual growth rate in 2021 of 206.64% (\$12 239 million) that eventually will stable towards a nominal long-term growth rate of 5.4%. The estimated long-term ROIC of 15.9% illustrates ZIM's ability to stay competitive within the shipping industry in the following years, representing a value-added asset for any investor.

Company description

ZIM is a global asset-light container liner shipping company with leadership positions in niche markets, operating a fleet of 87 vessels across five geographic trade zones (ranked 11th among shipping carriers globally, controlling approximately 1.6% of the global shipping capacity, according to *Alphaliner*).

Recommendation: **BUY**

Price Appreciation 35.5%
Dividend Yield (2022) 13.8%

Price Target FY22: **\$70.51**

Total Shareholder Return 49.3%

Price (as of 14-12-2021) **\$49.48**

Bloomberg: ZIM:US

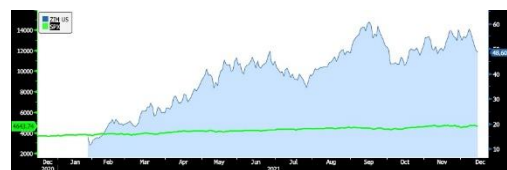
52-week range (\$) \$11.34-\$62.20

Market Cap (\$m) \$5 896

Outstanding Shares (m) 115

Source: Bloomberg

S&P500/ZIM



Source: Bloomberg

(Values in \$ millions, except per share)	2020	2021	2022
Revenues	3991	12239	8946
EBITDA	993	4625	2792
Net Income	528	3009	1569
EPS	5	26	13
EBITDA Margin	25%	38%	31%
Net Margin	13%	25%	18%
ROIC	43%	183%	60%
FCF	207	2011	1785

Source: Annual Report and own estimates

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Company Overview

Brief History

Figure 1 – Company logo



Source: Company website

Founded in *Haifa* by the *Jewish Agency* in 1945, ZIM had the main objective of transporting hundreds of immigrants to the emerging *State of Israel*, and only started to focus on the cargo shipping industry in the late 60's. The *Israel Corporation* (owned by the *Ofer* family) acquired 50% position in the company in 1969 but ZIM was only fully privatized in 2004. In January 2021, after years of considering and delaying going public, ZIM finally debuted on the *New York Stock Exchange*.

Business Overview

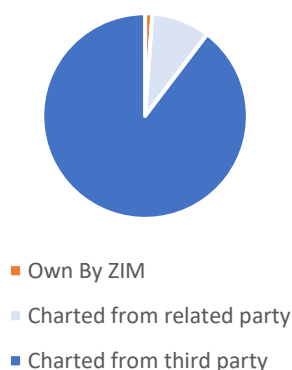
ZIM is a global asset-light container liner shipping company. Despite being one of the oldest shipping liners, it still provides innovative seaborne transportation and logistics services with a reputation of industry leading transit times, schedule reliability and service excellence. As a result of being a customer-centric company, ZIM relies heavily on business and artificial intelligence to better understand and meet customer needs.

Following an asset-light model (chartering 98.9% of its fleet) enables ZIM to differentiate from its competitors (chartered-in on average 56% of their fleet, according to *Alphaliner*) and benefit from a flexible cost structure and operational efficiency.

As of December 31, 2020, ZIM had a fleet of 87 vessels (total capacity of 374,636 TEUs and average capacity per vessel of approximately 4,400 TEUs) and operated a global network of 69 weekly lines, calling at 307 ports in more than 80 countries across five geographic trade zones: Transpacific (40% of TEUs carried in 2020), Atlantic (21%), Intra-Asia (21%), Cross Suez (12%) and Latin America (6%). ZIM's network is significantly enhanced by cooperation agreements with other companies, where the strategic operational collaboration signed with the *2M Alliance*, formed by the two largest global carriers (*Maersk* and *MSC*), stands out.

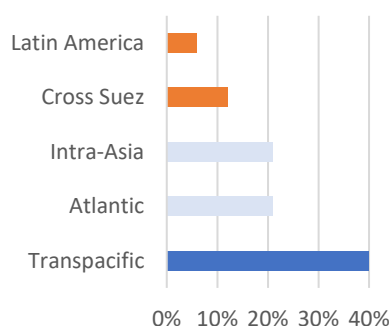
With a highly diverse and global customer base (30,080 customers), in 2020, ZIM's 10 largest clients represented approximately 16% of its freight revenues. On the other hand, 75% of its top 20 customers in 2020 have a relationship with the company lasting longer than 10 years, which reinforces ZIM's strong reputation and customer focus.

Figure 2 - Fleet Overview



Source: Company reports

Figure 3 - TEUs carried in 2020 %

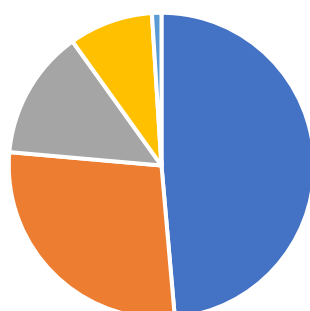


Source: Company reports

Ownership Structure and Dividend Policy

ZIM is traded in the *New York Stock Exchange* under the ticker “ZIM”. Since the company had its IPO earlier this year, let us use Equity of December 13th, 2021 as a proxy for Market Capitalization, which is \$5 896 million, represented by 115 million outstanding shares (post-IPO). Its principal owners are *Kenon Holdings Ltd.* (27.8%), *Deutsche Bank AG – London Branch* (13.7%) and *Danaos Corporation* (8.9%). The latter one is a publicly traded company of large-sized containership chartering, meaning that ZIM can benefit from finer lease agreements to comply with its charter-in strategy. There is also one Special State Share owned by the State of Israel, which imposes certain restrictions¹ on operations and grants Israel veto power over transfers of certain assets. Moreover, this share restricts the ability of a shareholder to gain control of ZIM, possibly leading to volatility in share price as well as affecting operations. Also, the *State of Israel* currently dictates that the company must maintain a minimum fleet of 11 owned vessels, which is not met, and therefore it is expected that ZIM will expand its owned fleet.

Figure 4 – Ownership Structure



- Retail
- Kenon Holdings
- Deutsche Bank
- Danaos Corporation
- Executive/Directors

Source: Company reports

ZIM will pay an annual dividend in 2021 of \$2 per share, which represents an ordinary payout ratio of 45% regarding the 2020 net income. The company CEO announced his plans to follow the same payout ratio in the next years, which gives a positive sign to investors regarding their financial position. Regarding some of its competitors – *Matson* (USA), *Yang Ming* (Taiwan), *Wan Hai* (Taiwan) and *Evergreen* (Taiwan), ZIM ranks at top when it comes to dividend per share². As of 13th December 2021, ZIM and *Matson* had a dividend yield of 19.34% and 1.42% respectively, therefore it is clear that the Israel based company represents a wiser option when accounting for dividend investing. Also, the other companies on the list do not have a regular dividend payment, for example, *Evergreen* payed dividends in 2021, but the last time this happened was in 2018. Being said, the prospects of future dividends from ZIM come as both predictable and rich.

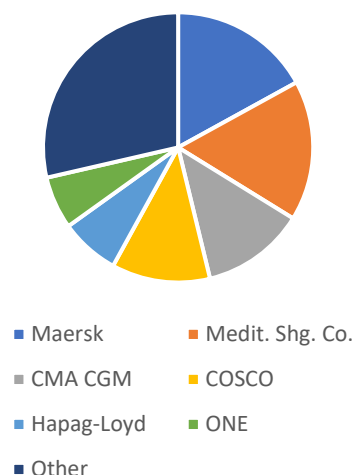
Board of Directors and Senior Management

The Board of Directors is composed by nine people, and the key directors are Yair Seroussi – Chairman, also Chairman of major and reputable Israeli companies; Dr. Karsten Liebing – Member, served as Managing Partner of *Hammonia Reederei GmbH & Co. KG*, a vessel management company; Birger Johannes Meyer-Gloeckner – Member, served in various senior positions at the *CONTI Group*, a shipping consultancy, and ZIM has been chartering vessels from companies

¹ Includes the composition of the Board of Directors and nationality of the CEO, among others.

² Due to the recent listing of ZIM, the dividend yield should not be taken as granted, since the share price has risen over 300% in 2021.

Figure 5 – Shipping Industry Market Share



Source: Bloomberg

affiliated with them; Yoav Moshe Sebba – Member, joined the *XT Group*, a global shipping and holdings company; Dimitrios Chatzis – Member, is the father of the CFO of *Danaos Corp.* and all related vessel charter agreements followed his appointment.

With reference to Senior Management, the most relevant employees are Eli Glickman – CEO, served as CEO of *Israeli Electric Corp.* and Deputy CEO of *Cellular Orange Communication*; Xavier Destriau – CFO, served as CFO Asia and VP at *CMA CGM*, a major container shipping company.

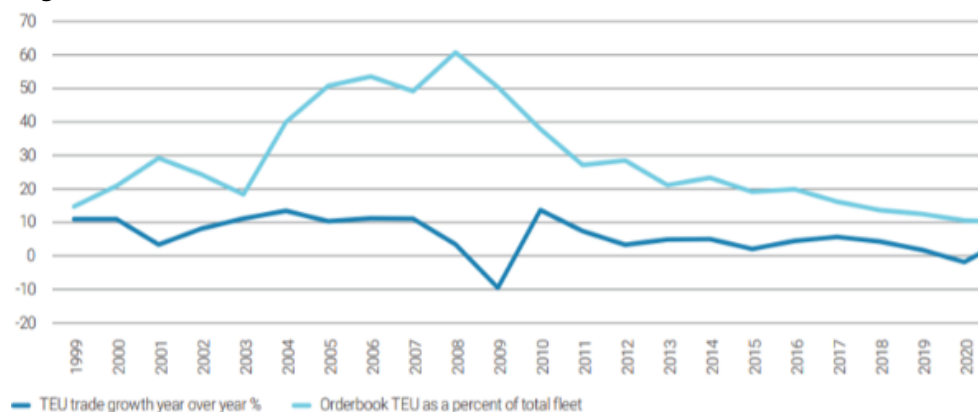
Having such a specialized and experienced team with experts from basically all the areas that interact with ZIM's business reinforces our believes that ZIM will keep the pace of its industry, maintaining their market share in the following years. In addition, the networking synergies that arise from the Board composition will aid the company when considering the vessel chartering business model.

Industry Overview

The Shipping Industry

The shipping industry is responsible for the carriage of around 90% of world trade. There are significant barriers that difficult the entrance of new players since it is a capital and technology intensive industry as well as a high-input and high-risk one. The shipping operations mainly depend on the freight and charter rates as well as the bunker prices (fuel costs). The shipping market has a long trade cycle, and the pace of new developments is slow, which makes M&A's an attractive way to enhance competitiveness. In fact, market concentration is increasing in the recent years through M&A's and alliances (the four biggest companies represent 58% of the world capacity, according to *Alphaliner*).

Figure 6 – Vessel Order Flow vs Demand Growth



Source: AlixPartners – Shipping Outlook

Last three decades: boom-and-bust loop

It is possible to observe a cycle during the last decades. During times of macroeconomic growth, freight rates rise, and shipping companies reinvest their profits in new and bigger vessel orders. Then the economy enters a downturn. Less demand leads to lower freight rates and shipping companies find themselves burdened with debt and idled vessels. The arriving of the previously placed orders aggravates the oversupply problem, which pushes rates even lower. Consequently, carriers tumble into bankruptcy or are acquired by bigger ones.

Current rates: What drives them?

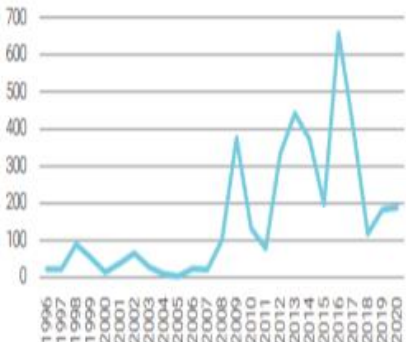
The current historically high freight rates (192% annual growth during 2021) result from a combination of both macroeconomics and industry related factors that led to under supply. On one side, as a consequence of the Covid-19 pandemic, the industry has been facing equipment shortages, hard demand shocks, and close or not fully operating ports (mainly in China, which represents roughly 18% of the world trade). As a result of it, a container spends about 20% longer in the system, affecting positively the freight rates. On the other side, carriers have been adopting measures in the last years to control the supply and solve past lower rates cycles. Since the last financial crisis, the order flow of new vessels decreased substantially relative to the demand evolution. In addition, vessels demolition was intensified in the past ten years. Both measures combined justify the growth slowdown of the world supply capacity, and consequent rise of freight and charter rates. This supply discipline was only possible due to the increasing market concentration. Next, the shipping industry could be in front of a new era of sustainable profitability, but it is unlikely that such discipline can last longer, as the main companies are already starting to place new vessel orders to profit from such high rates. Since these orders take on average two years to be delivered, we believe that freight and charter rates will remain high in the short-term but will eventually go back to similar pre-pandemic levels around 2023 (as demonstrated in *Revenues*).

Figure 7 – Fleet Growth – YOY change in TEU capacity (%)



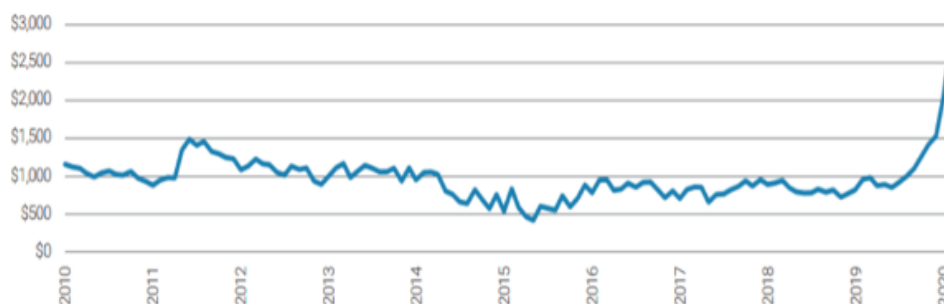
Source: AlixPartners – Shipping Outlook

Figure 8 – Demolitions in TEU capacity (000s)



Source: AlixPartners – Shipping Outlook

Figure 9 – Shanghai Containerized Freight Index (SCFI)



Source: Bloomberg

Competitors

In terms of revenues, since the freight rates are imposed by the market, shipping companies can only differ from each other significantly in terms of capacity. Consequently, ZIM main competitors are the other liners with similar fleets (market share) such as *Evergreen* (5.9%), *Yang Ming* (2.6%), *Wan Hai* (1.7%) and *Matson* (0.3%). The first conclusion is the fact that even between peers, the capacity available differs significantly (heterogeneous industry at the top). Between companies, we should focus our comparison on costs (margins) to better interpret profitability. (Figure 10).

Figure 10 – Peers Profitability Assessment

		2020	2019	2018			2020	2019	2018
Evergreen	EBITDA Margin	27%	13%	5%	Wan Hai	EBITDA Margin	23%	11%	8%
	EBIT Margin	17%	2%	0%		EBIT Margin	16%	4%	1%
	Net Margin	12%	0%	-1%		Net Margin	13%	3%	1%
Yang Ming	EBITDA Margin	24%	10%	0%	Matson	EBITDA Margin	16%	10%	12%
	EBIT Margin	13%	-1%	-5%		EBIT Margin	12%	6%	7%
	Net Margin	8%	-3%	-6%		Net Margin	8%	4%	5%
		2020	2019	2018					
ZIM	EBITDA Margin	25%	10%	3%					
	EBIT Margin	18%	5%	-1%					
	Net Margin	13%	0%	-4%					

Source: Bloomberg

From the table above we can conclude that no competitor outperformed ZIM in terms of profitability in 2020 (net margin). It is important to notice that even in an industry where size is crucial as showed in this report, ZIM was able to achieve a net margin similar to *Evergreen* (that is almost 4x as big in size) and significantly higher than *Yang Ming* (that is almost 2x as big than ZIM). This strong performance in terms of profitability enhances ZIM's effort around cost efficiency. By having an asset-light model, ZIM has the agility to charter only the vessels that they need to match demand. Consequently, during the year they use almost 100% of their capacity unlike their rivals that own a larger part of their fleet, so even if they do not part of their vessels, they still need to pay them (depreciations).

ZIM's Strategy

The backbone of ZIM's strategy includes three key elements: digital-oriented, asset-light global niche carrier and ESG committed, which offers clear differentiation amongst competitors, allowing the company to provide innovative and premium services. The performance and implementation success of such strategies are, therefore, crucial for the company to maintain its market share in

the next years (which is assumed in the valuation), since increasing it significantly is not credible with the actual industry concentration and competition level.

Digital-oriented

In order to provide the highest level of customer service, the company has implemented an innovative, data-driven strategy using artificial and business intelligence, to better understand the clients' needs, without compromising the long-standing reputation of the distinct personal approach to customer relations.

Furthermore, the company has formed several partnerships and collaborations with third-party start-ups to create internal tools for cyber security and operations, as well as expanding services to clients. Most companies are major players at their domain, such as: *WAVES* – blockchain technology; *Konfidas* – cyber-security. A worthy example is the investment and partnership with *Ladingo*, a one-stop-shop for cross border shipments, complementing the strategic cooperation with Asian giant *Alibaba* to ultimately gain footprint in adjacent and new markets, grow revenue and provide added value to customers. These partnerships reinforce our opinion that ZIM will maintain its market share in the following years by constantly keeping updated with the latest industry trends to better respond to demand. Regarding our model, we believe that this strategy justifies our forecast on *Value-Added Services*.

Asset-light Niche Carrier model

ZIM operates a fleet close to 100 vessels, nearly all chartered-in (Figure 11), granting operational agility. This asset-light model enables the company to benefit from a flexible cost structure as demand flows, as previously discussed on *Competitors*. To strengthen this unique approach, the Board of Directors, Senior Management, and key shareholders have strong relationships with many shipping companies, creating synergies when it comes to manage the chartering of vessels, such as the long-term chartering deal with Seaspan of 10 vessels. The operations are set across five geographic trade zones, creating commercial agility, where ZIM strives to increase and sustain profitability by competing in niche trade lanes where the market is underserved. The operational agility mentioned above is related to this topic since ZIM can easily embark into new trade lanes opportunistically. During Q2 2021, the company created nine new lines to capitalize on ecommerce trends. Even though this strategy enhances ZIM's cost efficiency and agility during bad times, in a prosper industry context as the one faced nowadays, higher charter rates lead to higher fleet costs (mainly depreciations) which affects ZIM's margins,





Figure 11 – Fleet Structure

Company	% Chartered
Maersk	43,3%
CMA CGM	59,2%
COSCO	47,4%
Hapag-Loyd	41,0%
Evergreen	49,4%
Yang Ming	66,8%
Wan Hai	41,5%
ZIM	98,8%

Source: Alphaliner

as demonstrated in *Costs*, in comparison with ZIM's main competitors (that charter a smaller portion of their fleet as showed in Figure 11).

ESG commitment

The company started presenting sustainability reports since 2018 as a mean to express the increasing efforts regarding sustainability. The SEC stated this year that corporate disclosures on ESG issues will be a high priority so a rational investor should value ZIM's commitment in order to protect its interests and the company future success.

Moreover, ZIM complies with environmental requirements and takes part on many international agreements aiming sustainability. This means that its operations uphold and advance a set of principles regarding ESG: eliminate corruption risks – creation of the Code of Ethics and promote whistleblowing; promote diversity – hiring of people with disabilities and achieve gender diversity; continuous reduction of the environmental impacts of operations – usage of fuel with low sulphur content, which is more expensive, and change bunker fuel vessels with natural gas ones, all including full compliance with the IMO 2020 Regulations (direct impact described in *Costs – Fuel and lubricants*).

However, due to the nature of shipping, ZIM might transport dangerous and hazardous (D&H) cargo which may be related to “sin companies”, from ammunition to radioactive isotopes. Yet, the company developed and implemented *ZIMGuard*, an artificial intelligence-based screening software to detect and identify problems related with these types of cargo before loading to vessels, undertaking that D&H cargo is handled with stricter processes. Investments like *ZIMGuard* demonstrate the company's effort to comply with the current legislations to avoid future penalizations or fines that can compromise ZIM's success and the investor's interest.

“(…) increasing efforts to put sustainability, (…) at the forefront of everything we do”

Eli Glickman (CEO) about treating oceans and communities with care and responsibility

Value drivers and Forecasts

Core Business Result Forecast

▪ Revenues

ZIM's revenue comes mostly from Containerized Cargo (87.48% of revenues in 2020), which refers to the transportation of cargo using standard intermodal containers. Nevertheless, there are also Value-Added Services, that includes the logistic and digital-wise offering of the company to provide a “door-to-door”

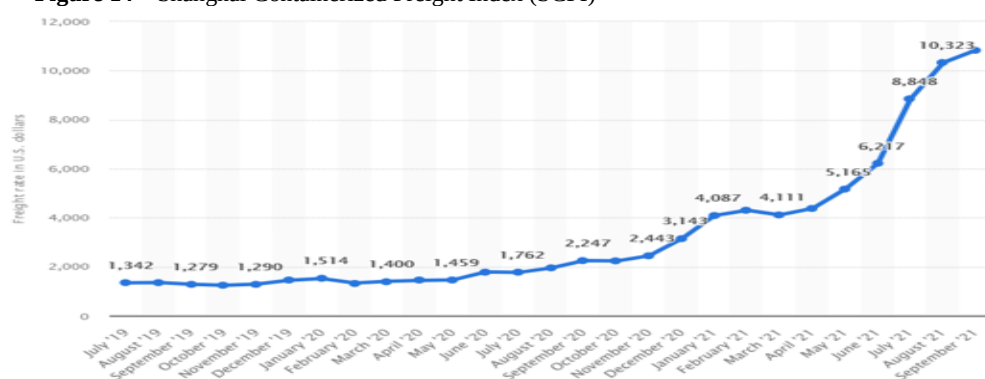
delivery, on top of Containerized Cargo. As discussed on *Strategy – Digital-Oriented*, the technological developments ZIM has been undertaking will make Valued-Added Services more relevant, therefore we expect a rise in % of Containerized Cargo between 2020 and 2021 (14.91%).

As aforementioned, the revenues from Containerized Cargo drive from the freight rates practiced and the quantity carried, measured in TEUs (twenty-foot container unit).

Freight Rates

As a result of the high competition level of the shipping industry, companies have almost no influence on the freight rates, which are largely established by the freight market (the *Shanghai Containerized Freight Index* is used in this report, as an industry practise). Freight rates are extremely hard to forecast due to the numerous factors that impacts them (demand, supply, oil prices, port congestion, type of vessel and nature of goods, government intervention, location, seasonality, among others). With that in mind, we opted to forecast only the global revenues, using a global average freight rate based on the SCFI, instead of forecasting each trade zone. This option follows the philosophy “*the more estimations made, the more estimation errors*”. According to the company report, the average freight rate in 2020 was \$1229. To arise a reasonable growth rate for 2021, let us use the SCFI (Figure 14).

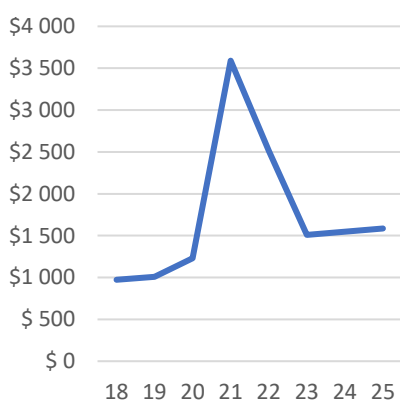
Figure 14 – Shanghai Containerized Freight Index (SCFI)



Source: Bloomberg

We computed the freight rate by averaging the rates between January 2021 (\$3143) and September 2021 (\$10323), resulting in an average freight rate in 2021 of \$3590. This calculation serves as proxy for the whole year, since we do not know how ZIM operated in detail regarding the massive growth of freight rates in 2021. Therefore, our freight rate growth for 2021 is 192.11%. As previously detailed in *Current Rates: What drives them?* We believe that these past and current years' volatilities will eventually tend to pre-Covid levels until 2024, mainly due to the expansion of capacity among shipping companies and returning to

Figure 12 – Forecasted average Freight Rates

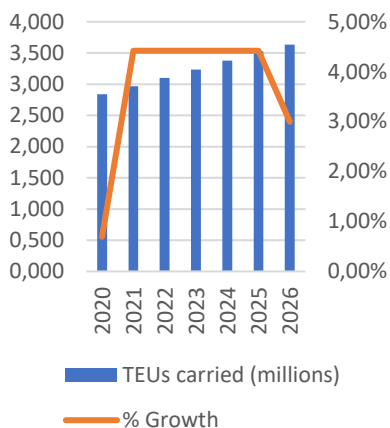


Source: Own Estimates

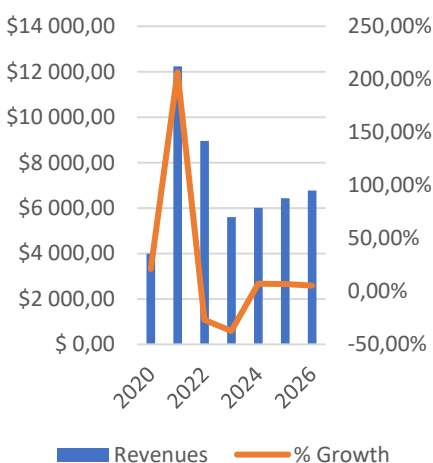
Figure 13 – IMF Inflation Forecast

2021	2022	2023	2024	2025	2026
4,30%	3,50%	2,70%	2,60%	2,50%	2,30%

Source: IMF

Figure 15 – TEUs carried Forecast

Source: Own estimates

Figure 16 – Total Revenues Forecast

Source: Own Estimates

normality. Thus, a reasonable growth rate for 2022 and 2023 would be -30% and -40%, respectively. Also, major industry experts, such as Daniel Richards from MSI underpins that “freight rates will not fall below pre-pandemic levels, (...) but will not be substantially higher after 2023.”³ For the remaining years, we assume that the freight rate market will vary according to inflation (figure 13).

TEUs Carried

We are convinced that the container shipping industry is concentrated as it is mature, with well-established players. Consequently, we reckon that it is unwise to anticipate great variations on ZIM's market share, on top of what was previously discussed in *ZIM's Strategy*. Therefore, this metric is influenced by worldwide demand rather than business operations. It is expected that sea transportation will remain the leader in bulk transportation, since it is the cheapest way of transporting goods across the world. In contrast, air transportation, even though it is outstandingly faster than sea carrying, it is as expensive. Not only, air transportation goods are likely to be in low quantity, thus it will be impossible to compete against the huge capacity sea freighting has. As said, TEUs carried for the future will follow the expected industry rise of 4.42%⁴ as proxy for the CAGR for the period 2021-2025. The further years will have a growth rate embedded of 3%, which is aligned with the forecasted global GDP growth rate⁵, respecting the correlation between the shipping industry and the world output. Having all in mind, we reckon that the industry is growing as a whole, so it is not expectable that ZIM can be outperformed by any competitor in terms of TEUs carried, relative to total capacity available.

Revenues Outline

Following the freight rate and TEUs carried forecast, revenues will have an astonishing increase in FY2021 (206.64% in comparison with 2020) reaching \$12 239 million, mainly driven by the freight rate increase, since the quantity carried only increased 4.42%. In the next two years, revenues will tend to decrease to \$5 605 million in FY2023, backed by the freight rate's decrease to slightly above pre-pandemic levels. From FY2024 onwards, revenues will follow the inflation and the global GDP CAGR, reaching, from FY2026 on, the nominal long-term growth rate of the economy of 5.4%.

It is worth to highlight that freight rates and the TEUs carried are paramount in our vision and will influence how ZIM's financial records will perform in the future, as

³ Source: Reuters

⁴ "Cargo Shipping Market" 2021 report. Source: MarketWatch

⁵ Source: World Bank, HSBC estimates

the whole business heavily depends on them. Also, by following the same approach, we reckon that revenues of container shipping companies will most likely differ based on capacity, which consequently impacts TEUs carried (since the freight rates are dictated by the market and not by each company). Therefore, as we do not predict significant variations in the industry's market share, the revenues of competitors should also grow at the same rate of ZIM's.

Costs

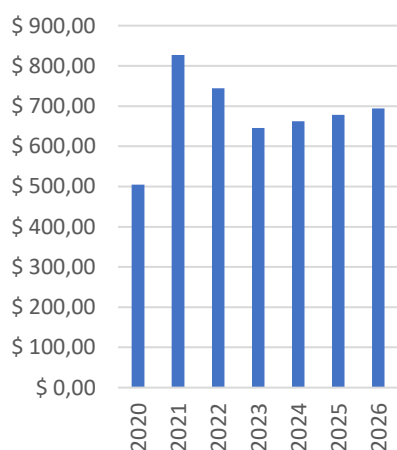
Expenses related to cargo handling

Refers primarily the cost relating to the loading and discharge of containers, transport of empty containers, land transportation and transshipment of cargo charged by the ports. Historically, this is the most relevant expense in terms of revenue, averaging 40.48% of revenues from 2018 to 2020. We developed our own method to forecast this account since the industry is predicted to face abnormal years until FY2024, and this is the main operational cost that ZIM has. Assuming that approximately one third of these costs are correlated with the freight rates, we forecasted the future average costs per 1 million TEUs carried, adjusted by one third of the freight rate growth until FY2024, in order to better represent the industry reality. From FY2024 on, the average cost per 1 million TEUs carried is entirely adjusted to inflation. Cargo handling costs heavily depend on capacity (market share) since it justifies the bargaining power between each company and the ports. Consequently, peers like Evergreen and Yang Ming have and will maintain better margins in comparison with ZIM. On the other side, in the forecasted years, ZIM will keep outperforming competitors like Matson, as well as the rest of the companies that compose this industry, since it will remain its bargaining power as a consequence of its capacity.

Slots purchase and hire of vessels

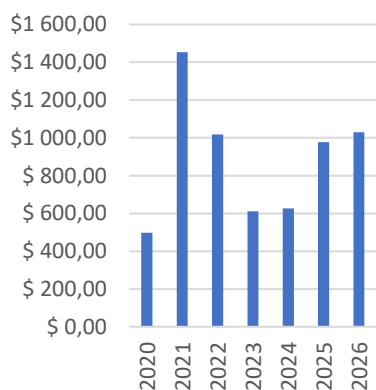
Within the container shipping industry, it is usual for companies to purchase slots from each other, in order to fill a vessel's full capacity. In addition, ZIM's business model, as it soundly depends on vessel chartering, creates the hire of vessels expense – charges that the company pays to vessel owners for hiring their vessels. Besides, due to the nature of the hiring contracts, ZIM generally does not incur into additional costs for crew provisioning, maintenance, repair, or hull insurance with respect to these vessels, discarding the company from extra expenses. Due to the tight relation with the freight rate, until FY2024, the account is calculated in accordance with the rate increase. From FY2025 onwards, we assume a 15.20% of revenues that better represents the shipping industry reality. Comparing to its peers, this account is less impactfull to them (ZIM's asset-light model versus

Figure 17 – Cargo Handling Costs Forecast (\$ millions)



Source: Own estimates

Figure 18 – Slot purchase and hire of vessels Forecast



Source: Own estimates

owning their vessels) so the main difference is only the service fee paid by ZIM which is not relevant if we analyze the costs as a whole.

Fuel and lubricants

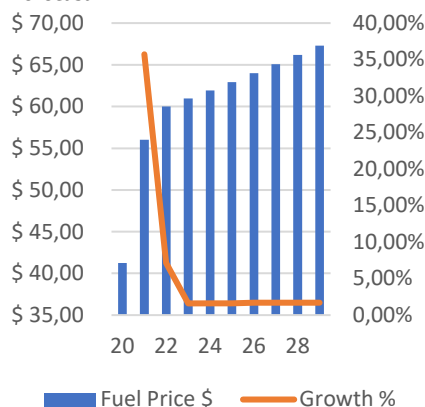
Expenses related to consumption of fuel to supply all the operating vessels and other oil-based lubricants required for the operation of the vessels.

As mentioned in *Strategy – ESG*, ZIM's commitment regarding the environment and legislation will translate in higher fuel expenses during the next years, due to the transition to fuel with low sulphur content (which is more expensive than the bunker fuel currently used) as well as the use of natural gas vessels. ZIM should take advantage of the high profits between 2020 and FY22 to finance these transitions. Even though fuel is a key cost, this constantly higher expense throughout the years will not mean that ZIM will be outperformed by its peers, since we believe that all companies within this industry will eventually make this transition to comply with governmental regulations. We accounted the fuel price variations in our estimates⁶. See Figure 19 for fuel price forecast. For the remaining years of forecasting, we assume that these expenses will account for 13.82% of total revenue, resulting from the constant fuel price growth rate.

Other operating expenses

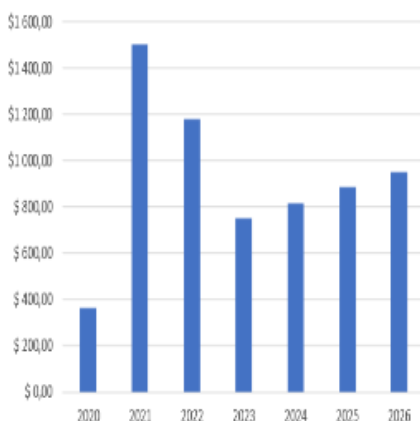
These expenses represent the sum of several: port and canal expenses (5.18% of total revenue in 2020) consists of charges for a variety of services, including berthing, tug services and utilities, as well as canal dues ZIM pays to the operators of the Panama and Suez Canals; costs of related services and sundry (2.52%) – comprises mainly the expenses of subsidiaries that provide shipping-agent, logistics, forwarding and customs clearance services. There are also costs related to fleet equipment, insurance, maintenance and repair of vessels, wages and expenses relating to seagoing personnel, as well as agents' salaries and commissions. It is worth mentioning that these latter expenses are not relevant for the company as they account for less than 1% of total revenue individually. Following the same line of thought, Other operating expenses will retain the average % of total revenue in the 2018-2020 period: 15.65%, throughout the forecast. Regarding competitors, the outstanding size Maersk and MSC have (the two biggest companies), for example, allows them to construct and operate under their own ports, reducing some of these costs. Nevertheless, the peers who we

Figure 19 – Fuel Price and Growth Forecast



Source: World Bank

Figure 20 – Fuel Expenses Forecast



Source: Own estimates

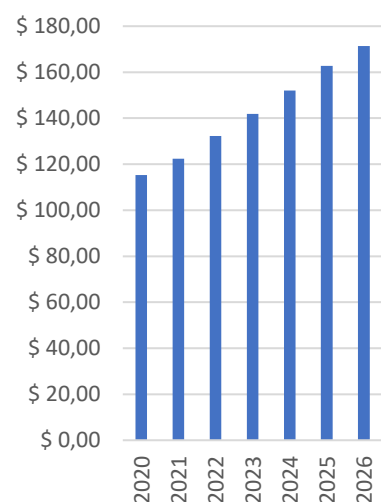
⁶ Our method consists of multiplying the $t - 1$ % of total revenue with t % of fuel price growth until 2025. For example, the 2021 fuel and lubricants expense is computed using the 2020's % of total revenue (9.06%) multiplied by 2021's fuel price growth (1 + 35.72%).

point out to be closer to ZIM (Matson, Yang Ming, Wan Hai and Evergreen) also incur into these expenses and do not outperform ZIM.

Salaries

This segment relates the compensation of the administrative personnel. There are three key elements that impact the expense: number of employees, salary per employee, and TEUs carried per employee. We anticipate the number of employees to vary according to the expected TEUs carried. Since ZIM is an established company (operating since 1945), we believe that efficiency regarding the number of employees and TEUs carried is also set, resulting from years of experience, and learning curves. In addition, ZIM carried a respectable Total Capacity to Workforce ratio when comparing to its peers in 2020 – 108 TEUs per employee. The closest company in terms of capacity – Wan Hai, records 83 TEUs for the same ratio; and Matson a poor number of only 15 TEUs. Also, Yang Ming, although superior in capacity, outperforms ZIM in the same ratio slightly with 113 TEUs. On the other hand, Evergreen stakes a 140 TEUs per employee, but its size is considerably greater than ZIM's. Being said, the productivity of ZIM is above the mean of the mentioned list, and it shall reflect into lower relative costs in salaries, on average, when comparing to its peers.

Figure 21 - Salaries Forecast



Source: Own estimates

Regarding TEUs carried per employee, we realize that this ratio fluctuated around 0.77, and for forecasting matters, it is safe to assume that efficiency will stay the same due to ZIM's 75 years of accumulated experience. Also, salary per employee follows the same observation in the ratio above, thus we believe that a reasonable forecasted salary per employee will contain the average salary per employee between adjusted to inflation (due to ZIM's commitment towards its employees). See Figure 21 for Salaries forecast.

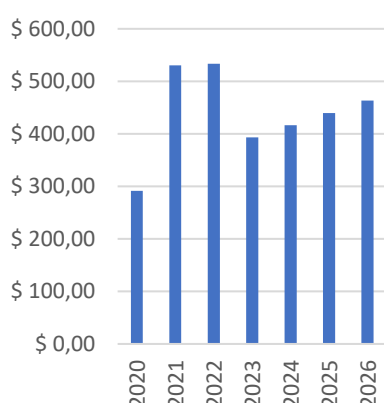
Other G&A expenses

The rest of General & Administrative expenses represented an average of 1.33% of total revenue along the 2018-2020 period and due to its lack of significance will keep this percentage for the forecast. Includes depreciation and amortization related to computers and communication equipment and software, fees paid to consultants and advisers, and travel and vehicle expenses.

Depreciation

Consists of depreciation of operating assets, primarily vessels, containers, and chassis. To perform a forecast, we will assume that this expense will follow the average % of PPE between 2019 and 2020, which is 18.81%. The year 2018 was discarded since in 2019 ZIM adopted the IFRS16, resulting in higher values of

Figure 22 - Depreciation Forecast



Source: Own estimates

depreciation, thus the significant increase in 2019 relates to accounting matters. Even though ZIM charters-in most of the fleet, the accounting standards coerce the company to record depreciation and amortization as an expense just as owning the fleet would require. Hence, we do not predict any significant relative changes when comparing these costs with competitors, since what matters in this caption is the number of vessels, which varies positively across companies.

Costs Overview

Total costs, as expected, since the main ones are correlated with the freight rates, are going to follow the same tendency as revenues, stabilizing towards the nominal long-term growth rate around FY2026. It is important to point that the operational costs, from FY2026 onwards, will be 82.14% of revenues, lower than the historical margins of approximately 89%. This is mainly a consequence of ZIM's efforts regarding efficiency, where the asset-light model has an important role.

The Israel based company has a clear difference when comparing to its peers, as the asset-light business model comes into part – varying the number of vessels will make depreciation expenses flexible, but the company faces more exposure to chartering rates. This model performs well during normal conditions, however, during times of high freight rate growth, like we are experiencing nowadays, this strategy may turn dangerous as costs rise. Here, owning the fleet will be beneficial because companies do not have to pay for higher charter rates, but in case of demand shocks, they do not have the adaptability ZIM has, and therefore will be paying for vessels with unused capacity.

Nevertheless, ZIM has been recently purchasing vessels in order to decrease its exposure, as well as to cope with the State of Israel imposition. About chartering itself, the networking synergies that ZIM has and is taking advantage of will provide ZIM the protection of charter rate increases.

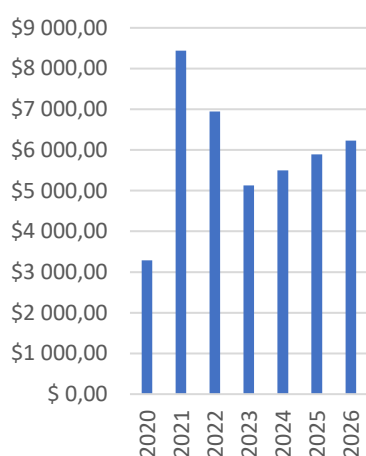
Core Invested Capital Forecast

▪ Vessels

Investment in Vessels is key in container shipping, thus it is expected that it will represent a large portion of the Invested Capital - around 55% in 2020.

Here we have identified a clear difference between ZIM and its peers: the average cost per vessel of ZIM is expected to be higher than companies with owned fleet, not only for the volatility of charter rates and lease period agreements, but also for the fact that ships, although costly to own, have a corresponding high lifespan (around 40 years) and thus this expense can be deferred throughout the period.

Figure 23 – Total Costs Forecast



Source: Own estimates

Nevertheless, the depreciation per vessel also accounts for polarities between ZIM and competitors, bringing a positive aspect to the table, since having an adaptable number of vessels also grants the flexibility in depreciation expenses, which is unlikely to happen if the fleet is owned. Therefore, we expect higher average costs per vessel for ZIM in 2022 when comparing to peers, before the industry returns to normality. The urge in global demand and the lack of capacity made container shipping companies acquire more vessels, which will be delivered in the two years. Here is where ZIM will outperform its peers, since returning to normality results in a beneficial environment for the Israel based company to undertake its leasing model, and competitors with more capacity may face overcapacity problems, meaning that they will be depreciating an asset that is not being efficiently used. In Figure 24, we can observe the forecasted fleet composition⁷.

Figure 24 – Forecasted Vessel Chartering details

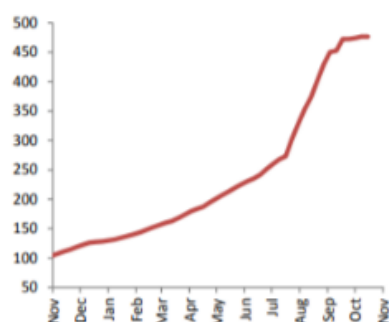
	2020	2021	2022	2023	2024	2025
Vessels already chartered before 30/12/2020	87	87	39	39	39	39
Total Vessels needed		91	95	99	103	108
New vessels ordered		4	55	37	26	11
1 year		3	33	22	16	7
5 years		1	22	15	20	4
Cost per Vessel order in year X (in millions\$)	\$13,84	\$44,98	\$31,49	\$18,89	\$19,38	\$19,87
% growth		225%	-30%	-40%	2,60%	2,50%
Average Cost of Vessel (in millions\$)	\$13,84	\$15,16	\$24,38	\$19,96	\$20,05	\$20,07

Source: Annual Report and own estimates

In 2020, there were 87 vessels, 48 of which were chartered for a period up to 1 year, 38 had chartering periods between 1 and 5 years and 1 that is own by the company. Starting in FY2021, the difference between the vessels already chartered and the vessels needed for that year gives us information about how many new vessels should ZIM charter, with respect to the 60/40 ratio. Regarding the charter costs per vessel order, for FY2021, we used the data provided by Kontiki Shipbrokers (from where we drove a 225% average annual growth rate that led to an average charter cost per vessel of \$44.48 million in that year). The charter rate forecast for the remaining years, although difficult to estimate, followed the same approach as the freight rates forecast, since both rates follow the same mechanics.

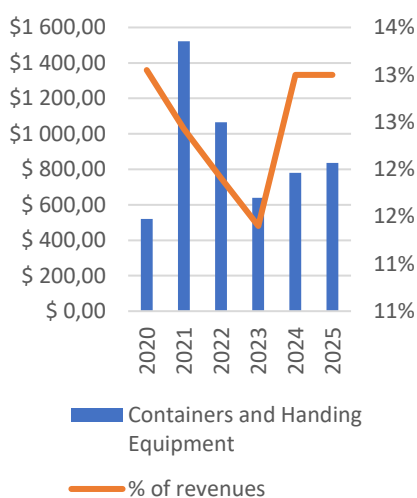
As we can observe in our forecast, the fleet will tend to expand during the years to satisfy the increasing demand as expected. In addition, charter rates also tend

Figure 25 – Charter Rates 2020 - 2021

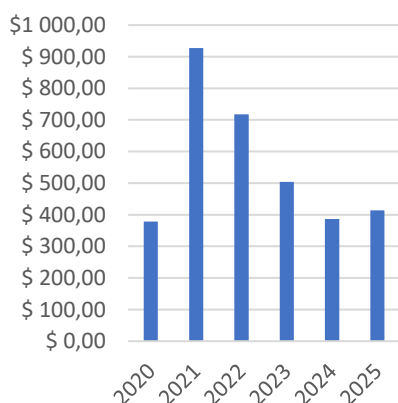


Source: Kontiki Shipbrokers

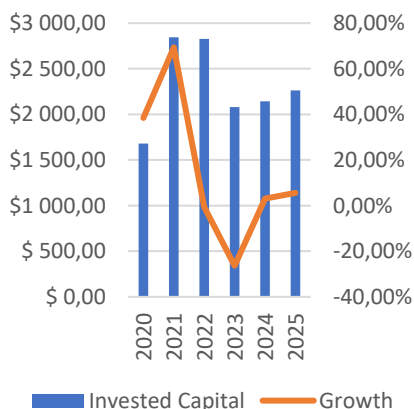
⁷ The number of vessels needed for each year regarding the forecasted TEUs carried is: $\frac{\text{TEUs carried in year X}}{\text{Average Annual Cargo per Vessel}}$

Figure 26 – Containers and Handling equipment Forecast


Source: Own estimates

Figure 27 – Working Capital Forecast


Source: Own estimates

Figure 28 – Total Invested Capital Forecast


Source: Own estimates

to increase, which directly affects the average cost per vessel, from where we can point that (we will go back to this argument in *ZIM Risks*), in theory, owning a part of the fleet could decrease future vessel costs for ZIM, in contrast to chartering their entire fleet.

▪ Containers and Handling equipment

This financial record represented approximately 30% of the Core Business Invested Capital in the 2018-2020 period, making it the second largest asset class.

By observing both the TEUs carried and cost per TEU between 2019 and 2020, we notice that while ZIM freighted essentially the same TEUs (less than 1% change), the cost per TEU rose around 16%. Thus, we believe that Containers and Handling equipment are more influenced by freight rates rather than capacity since revenues are heavily affected by freight rates. Consequently, it is coherent to assume that this account will keep the freight rate growth pace until FY2024, and from then onwards, 13% of revenues. This way permits us to incorporate the volatility of the rates as the main driver of this record. Due to its deep connection with freight rates, we reckon that the differences between ZIM and its peers are related with capacity instead of cost management.

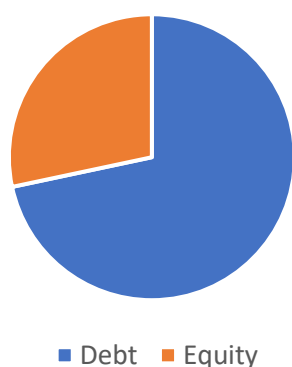
▪ Working Capital

Analysing ZIM's working capital position allows us to better understand the liquidity, operational efficiency, and short-term financial health of the company in the future years. Let us start with Operating cash, which we assume it will be 5% of total revenue for all forecasting years. This high percentage is due to the fact that container shipping companies should have enough cash to pay expenses related with ports, forwarding, fees, and other costs that cannot be postponed, as well as account for the seasonality of the industry itself. Next, it takes ZIM around 39 days to collect its receivables and 56 days to settle payments. Note that in 2020, this Cash Conversion Cycle has deteriorated, due to the pandemic, and it is expected to remain this way until the end of 2023. Nevertheless, this metric still records a positive number, which positively affects ZIM's cash flow management. After this year, ZIM's Cash Conversion Cycle returns to healthier levels, which means that the company is able to postpone its payables in relation with its receivables. Regarding its peers, if we consider the pre-pandemic period, ZIM was only outperformed by Wan Hai in terms of CCC (-12 days against -21 days) and there is no sign that this trend will change in the future, if we take into account ZIM's effort regarding efficiency and established partnerships, previously mentioned.

Non-Core Business Forecast

In regard to the Non-Core Business, specifically the Non-Core result, we will assume that it will follow an average of the 2018-2020 period, which was around \$21 million times the inflation factor. Besides, non-core adjustments will be null in the future and total OCI will stay as an average of the period mentioned above. The invested capital in the non-core business is mainly allocated to Other Investments, Investments in associates and employee benefits. The first two are forecasted assuming the last three years' average and a link to inflation. In contrast, the latter will be valued as 61% of Salaries – also the 2018-2020 average. Furthermore, the Assets classified as held for sale, although it had high values in 2018 and 2019, in the following year there were vessels sold, leaving the account to 0, and for simplicity we will assume that will remain null through the forecast.

Figure 29 – Target Capital Structure – 2022 onwards



Source: Own estimates

Financing Activities and Capital Structure Forecast

Net Financing and Equity

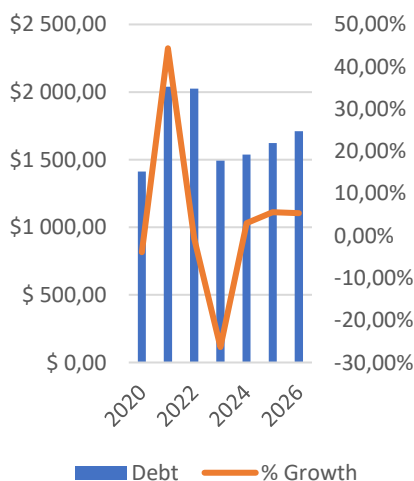
This metric is achieved by adding Debt and Minority interests, net of Excess cash. Further, Minority interests, due to its lack of significance, will resemble an average of the 2018-2020 period – \$6,29 million, for forecasting affairs.

Then, we will assume that starting 2021 the company has a target D/E ratio of 2.53, because we will import to our model the deleveraging strategy that ZIM is keen on following. This value comes from the average of D/E ratios in 2020 of the following four container shipping companies: Matson (USA, 2.02), Yang Ming (Taiwan, 4.37), Wan Hai (Taiwan, 1.46) and Evergreen (Taiwan, 2.29). A 2,53 D/E ratio implies that Debt is about 72% of the Total Invested Capital and Equity the remaining 28%. Moreover, the chosen ratio represents the need of Debt for the high capital expenditure requirements these companies face, without compromising the shareholders' value and dividends. Finally, excess cash will amount to \$125 million adjusted to inflation every year, due to ZIM's liquidity obligations related with its creditors. Future debt will, therefore, be forecasted as a result of these three assumptions (target capital structure ratio, excess cash amount and transactions with shareholders).

Financing Result

We may arrive at this result by adding the company's financial expenses with the respective statutory taxes. These expenses come from the previous year's Debt

Figure 30 – Net Financing Forecast



Source: Own estimates

value, thus we computed the % of debt of previous year for 2019 and 2020. Both numbers are similar, therefore we will define an average of the percentages (11.87%) as proxy for calculating future financial expenses. Furthermore, the statutory taxes serve as offset to decrease these costs, and account for 23% (Israeli tax rate) of the total expense amount.

Valuation Outcome

Weighted Average Cost of Capital

Figure 31 – WACC Estimation

ZIM	
Risk-free rate	1,45%
Market Risk Premium	6,75%
Statutory Tax Rate	23,00%
Return on Debt	8,61%
β Debt	1,06
β Equity	1,40
Return on Equity	10,90%
WACC	7,84%

Source: Own estimates, Bloomberg, and KPMG forecast

The WACC is the minimum return rate that the company is expected to pay, on average, to all its security holders, in order to finance itself. An accurate estimation of it is therefore crucial for our valuation model since all company future cash flows (including the terminal value) will be discounted according to it. The WACC considers the relative weights of each component of the capital structure (equity and debt). From our perspective, ZIM has a WACC of 7.84%, decomposed as follows.

▪ Cost of Equity

We used the Capital Asset Pricing Model to calculate ZIM's cost of equity. Normally, we would estimate the company Beta based on a regression between ZIM's historical closing stock prices and a market representative index (SP 500 in this case) using the US 10Y treasury bonds as risk-free rate. Since ZIM only went public in January 2021, it was not accurate to base our estimation in such small sample, so we developed our own estimation of ZIM's Beta.

Figure 32 – Equity Beta Estimation

Matson	
β levered	0,96
Yang Ming	
β levered	1,4
Wan Hai	
β levered	1,18
Evergreen	
β levered	1,34
ZIM	
β levered (average peers)	1,29
β levered (regression)	1,98
β levered (our view)	1,4

Source: Own estimates and Bloomberg

Firstly, we selected four close competitors of the company with more reliant stock samples: Matson (USA), Wan Hai (Taiwan), Yang Ming (Taiwan) and Evergreen (Taiwan). We applied the CAPM to each one, using the SP500 index in the Matson case, and the TWSE index with the remaining three companies that are listed in the Taiwan Stock Exchange. Then, we averaged the unlevered Betas and incorporated them with ZIM's capital structure, resulting in a 1.29 average Beta. We also applied the CAPM to ZIM's small sample (less than 1 year) against the SP500 index, which resulted in a 1,98 Beta with, as expected, a high standard error of roughly 1.17. Finally, after analysing our results, we believe that a Beta of approximately 1.4 represents our view of the company and its industry, since the container shipping industry is cyclical – more volatile than the benchmark, because when the market is performing badly, the clients of ZIM (and its peers) are spending less. Therefore, we arrive at a cost of equity of 10.90%. Regarding

competitors, Matson has the lowest Cost of Equity of the list, and the Taiwan based companies all share the same 18%-19% values.

▪ Cost of Debt

We can arrive to the cost of debt by analysing the table below – which exposes the total Debt⁸ ZIM has in detail.

Each tranche of debt has an Effective interest – the cost of that specific tranche; and carrying amount associated – the value of outstanding debt related to the tranche. Therefore, the payout for creditors excluding default probability is 9.32%. Further, ZIM has a High Yield 2 default risk, and its probability of default is 1.05%⁹. By having a greater than 0 probability of default, the Cost of Debt decreases, as we will check, since the expected value of the return of debt also shrinks, resulting from the possible miss of payments to creditors.

Figure 33 – Debt Overview

Type of debt	Original currency	Fixed / Variable	Effective interest	Year of maturity	Face value	Carrying amount	Weighted Cost of Debt
Series 1 notes	U.S. dollars	Fixed	7%	2023	\$302,20	\$297,80	1,14%
Series 2 notes	U.S. dollars	Fixed	7,90%	2023	\$130,40	\$125,90	0,54%
Tranche E loan	U.S. dollars	Fixed	8,70%	2026	\$73,40	\$52,20	0,25%
Other	U.S. dollars	Fixed	9,40%	2021 - 2025	\$56,20	\$56,20	0,29%
Long-term liabilities	U.S. dollars		-	2021 - 2022	\$3,40	\$3,40	0,00%
Short-term credit from Total	U.S. dollars	Fixed	2,70%	2021	\$122,50 \$688,10	\$122,50 \$658,00	0,18%
Lease liabilities	Mainly U.S. dollars	Fixed	10,80%	2021 - 2036	\$1 174,00	\$1 174,00	6,92%
Total					\$1 862,10	\$1 832,00	9,32%

Source: Annual Report and Own estimates

When companies enter debt, it is usual that they are subject to some covenants – measures creditors impose to better protect their investment. In the case of ZIM, there is only one relevant covenant, which is the enforcement of having a minimum monthly liquidity of \$125 million (in 2020, ZIM had \$570 million in Cash & Equivalents). As mentioned above, the amount of outstanding debt ZIM faces reaches \$1 832 million, yet we assume that the loss given default will be the difference between this amount and the Cash & Equivalents financial record, adjusted to percentage using the Total Face Value of Debt¹⁰, which is 68%. After all, the Cost of Debt is 8.61%. When comparing to peers, ZIM has a remarkably higher debt cost (Matson and the Taiwanese companies share similar value

⁸ Cost of Debt: *Total Weighted Cost of Debt – Loss Given Default * Default Probability.*

⁹ Source: Bloomberg

¹⁰ $\frac{\text{Total Carrying Amount} - \text{Cash \& Equivalents}}{\text{Total Face Value of Debt}}$

around 1,5%). Due to the deleveraging vision ZIM has, it is expected that this cost will reduce in exchange for a higher Cost of Equity, converging to industry average.

Discounted Cash Flow

The DCF model accounts the sum of all Free Cash Flow until the steady-state year (2028, including) conveyed to the present using the WACC rate (7.84%). Let us perform the walkthrough of the model (see Figure 34).

Figure 34 – Free Cash Flows Forecast

in millions \$	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Core Business											
Core Business	\$3,23	\$85,78	\$540,39	\$3 163,68	\$1 753,41	\$528,83	\$567,94	\$365,57	\$373,07	\$393,10	\$414,20
Change Core Invested Capital		\$195,20	\$474,13	\$1 175,68	-\$12,72	-\$739,37	\$68,80	\$125,55	\$126,11	\$132,89	\$140,02
Core Free Cash Flow	\$3,23	-\$109,42	\$66,26	\$1 988,01	\$1 766,14	\$1 268,20	\$499,14	\$240,03	\$246,95	\$260,21	\$274,18
Non-Core Business											
Non-Core Business	-\$51,66	\$11,27	\$134,32	\$12,90	\$13,50	\$13,98	\$14,45	\$14,92	\$15,36	\$15,81	\$16,28
Change Non-Core Invested Capital		-\$39,41	-\$7,05	-\$10,26	-\$5,53	-\$5,45	-\$5,78	-\$6,13	-\$4,96	-\$5,24	-\$5,53
Non-Core Free Cash Flow	-\$51,66	\$50,68	\$141,37	\$23,16	\$19,03	\$19,42	\$20,24	\$21,05	\$20,33	\$21,06	\$21,81
Financial											
Financial Result	-\$78,32	-\$120,70	-\$145,81	-\$167,41	\$0,00	-\$184,54	-\$135,78	-\$139,91	-\$147,72	-\$155,66	-\$164,02
Change in Debt		\$183,17	-\$57,86	-\$1 605,76	\$2 219,34	-\$533,82	\$45,16	\$85,58	\$86,83	\$91,49	\$96,39
Change in Equity		-\$27,37	\$524,93	\$2 771,17	-\$2 237,59	-\$211,00	\$17,85	\$33,83	\$34,32	\$36,16	\$38,10
Comprehensive Income	-\$126,75	-\$23,65	\$528,90	\$3 009,17	\$1 766,91	\$358,27	\$446,61	\$240,59	\$240,71	\$253,25	\$266,46
Financing Cash Flow	\$48,43	\$58,74	-\$207,63	-\$2 011,17	-\$1 785,16	-\$1 287,63	-\$519,38	-\$261,08	-\$267,28	-\$281,26	-\$295,99
Free Cash Flow	-\$48,43	-\$58,74	\$207,63	\$2 011,17	\$1 785,16	\$1 287,63	\$519,38	\$261,08	\$267,28	\$281,26	\$295,99

Source: Own estimates

Here, the Free Cash Flow is the sum of Core and Non-Core Free Cash Flow. We know that the Core and Non-Core Business Result brings cash to the company, nevertheless we still must account for the balance sheet records' variation each year, which represent both investments and expenses related to ZIM's operations, previously discussed. Therefore, the FCF for Core/Non-Core Business formula is:

$$FCF = \text{Core (Non Core) Business Result} - \text{Change in Core (Non Core) Invested Capital}.$$

Moreover, a steady-state scenario exists when the following conditions are met:

- A stable sales' growth rate from year to year, and this same growth rate must be aligned with the nominal long term growth rate of the economy
- The return on the invested capital needs to be stable from year to year as well.

Figure 35 – Steady-State

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Sales' Growth Rate	1,6%	21,0%	206,6%	-26,9%	-37,3%	7,1%	7,0%	5,4%	5,4%	5,4%
Core Business Growth Rate	-2552,4%	530,0%	485,4%	-44,6%	-69,8%	7,4%	-35,6%	2,0%	5,4%	5,4%
Core RONIC		232,9%	553,3%	-120,0%	9625,7%	-5,3%	-294,1%	6,0%	15,9%	15,9%
Core ROIC	8,1%	43,1%	183,0%	60,4%	18,3%	26,4%	16,5%	15,9%	15,9%	15,9%

Steady state

Source: Own estimates

Figure 36 – Valuation Metrics

Terminal Value	\$7 350,26
PV Terminal Value	\$4 019,06
Core DCF	\$5 367,58
Non Core Book Value (2020)	\$134,32
Enterprise Value	\$9 520,96
Equity	\$8 108,38
Net Debt Book Value	\$1 412,58

Source: Own estimates

By checking figure 35, we notice that it is in 2028 that these requirements congregate. The sales growth rate (5.4%) is equal to the nominal long term growth rate of the economy, as expected inflation for 2028 is 2.30% and Global GDP growth rate is 3%. Further, the 15.9% steady-state Core Return on Invested Capital represents a reasonable rate that includes, in our view, the value of the strategy ZIM obeys.

Now, to get the Core DCF, we applied the NPV formula with the inputs above mentioned, returning \$5 367 million. Note that the Non-Core Business will be regarded as the 2020 book value - \$132 million (see Figure 36).

The next step is to calculate the Terminal Value and then compute its present value, arriving at a PV Terminal Value of \$4 019 million. Now, it is possible to calculate the Enterprise Value of ZIM arriving at \$9 520 million. By netting this value with the Net Debt Book Value of 2020 (\$1 412 million), we secure an Equity value of \$8 108 million. Aligned with the 115 million shares outstanding, our estimated fair value of the share price is **\$70,51**.

Sensitivity Analysis

Figure 37 – Re Sensitive Analysis

β_e	1,299	1,400	1,600	1,985
Re	10,22%	10,90%	12,25%	14,85%
WACC	7,64%	7,84%	8,22%	8,96%

Source: Own estimates

Figure 38 – Rd Sensitive Analysis

Default probability	0,88	1,05	1,22	1,5
Rd	8,72%	8,61%	8,49%	8,30%
WACC	7,90%	7,84%	7,77%	7,67%

Source: Own estimates

Figure 39 – WACC Sensitive Analysis

		Re			
		10,22%	10,90%	12,25%	14,85%
Rd	8,72%	7,71%	7,90%	8,28%	9,02%
	8,61%	7,65%	7,84%	8,22%	8,96%
	8,49%	7,58%	7,77%	8,16%	8,89%
	8,30%	7,48%	7,67%	8,05%	8,79%

Source: Own estimates

Figure 40 – WACC-Share price Sensitive Analysis

		WACC				
		7,48%	7,66%	7,84%	8,43%	9,02%
Share Price		\$78,05	\$73,97	\$70,51	\$61,92	\$55,98

Source: Own estimates

In order to analyse how the WACC reacts when variables change, we firstly computed a sensitivity analysis in regard to β_e , hence Re.

Bringing back the chapter *Cost of Equity*, we assume that the β of ZIM may be dispersed across the mentioned peers average β of 1.29 and the ZIM solo regression β of 1.98 – see Figure 37. We realize that the WACC fluctuates heavily with respect to different Re, from 7.96% to 8.96%.

Then, we approached the Cost of Debt using the default risk that ZIM integrates – High Yield 2 (HY2), whose default probability varies between 0.88% and 1.5%. Let us use this interval has mean to impact Rd – see Figure 38. In contrast to Re, the Rd varies slightly, which results in a lower deviation of the WACC (ranging from 7.67% to 7.90%).

Next, we created a matrix – Figure 39, where we combined each Rd and Re (calculated before) obtaining their respective WACC. The range of WACC values varies from 7.48% to 9.02%, according to its sensibility towards the cost of equity and debt. After, we tested the sensibility of the share price relative to WACC. We chose five different WACC values, from the lowest to the highest one obtained in the matrix, and the median being our original model's WACC. Using the security's closing price of the 13th of December 2021 (\$49.47), we conclude that even if ZIM has a higher cost of capital, an investment in this company still resembles a viable opportunity.

Figure 41 – WACC-Growth rate Sensitive Analysis

		WACC				
		7,48%	7,66%	7,84%	8,43%	9,02%
WACC	4,35%	\$67,01	\$64,73	\$62,70	\$57,13	\$52,89
	5,37%	\$77,93	\$73,92	\$70,51	\$61,91	\$55,97
	6,39%	\$109,36	\$97,92	\$89,36	\$71,48	\$61,46

Source: Own estimates

Moreover, we analysed how different growth rates might affect the share price's fair value. Our reasoning to change the growth rate is related to the global GDP growth rate, which we arbitrarily chose 2% and 4%, reflecting two different visions on the overall performance of the world economy in the steady state. These, aligned with inflation, return the different nominal long-term growth rates. After, we created a matrix – Figure 41, where we tested the share price sensibility regarding the previous WACC values and these three growth rates. Again, bringing the reference price of \$49.48, even on low economy growth we believe that ZIM's stock is also undervalued.

ZIM Risks

The operation of a vessel by any company includes general risks such as mechanical failure, collision, property and cargo loss or damage. Business interruptions, that can be related with many reasons (political, hostilities, labor strikes, among others) represent a general risk as well. ZIM, in line with the industry practices, maintains and adequate insurance coverage against its main general risks, although not all of them can be covered.

Apart from the industry general risks, ZIM's business, financial condition and results from operations may be resentfully affected by the following key risks, associated to the systematic risk of the industry, as well as to the nature of ZIM itself. Therefore, an investment made in the company might incur into a loss. Consequently, we assessed two different future scenarios to better understand the impact of these risks in our valuation.

Competition and Exposure to the chartering market – Scenario 1

The container shipping environment, especially in recent years, is marked by instability and uncertainty as result of global economic conditions and other factors, including geopolitical trends, US-China trade restrictions, and the COVID-19 pandemic. Besides, competition may intensify even further, and certain larger competitors may be better positioned and have greater resources than ZIM, influencing its market position and financial performance.

On top of that, the company's fleet is substantially chartered-in, making ZIM highly sensitive to fluctuations in the charter market. Charter prices are expected to keep growing in the near future, thus the cost associated with vessels shall rise as well. Nevertheless, ZIM may also face difficulties in chartering/owning enough large vessels to support the growth strategy due to the possible shortage of vessel supply.

All these risks could reflect in a decrease of the market share of ZIM, in terms of capacity (worldwide standard), which will affect the TEUs carried. Our company in analysis gathers 1.6% of the capacity market share, granting it the 11th place in the ranking. With respect to our model, this would influence the growth rate that TEUs carried are attached to. Further, this hypothesis represents a critic against ZIM's business model, because capacity is directly related to the number of vessels the fleet has. Since most of this fleet is chartered-in, we might expect constraints in renewing/signing new leases, affecting the TEUs carried. We then assume that ZIM will decrease its market share from 1.7% to 0.6% between 2023-2024 because

Figure 42 – Scenario 1 – Original Model comparison

	Scenario 1		Our Model	
	2023	2024	2023	2024
TEUs carried (in millions)	3,187	3,264	3,235	3,378
% growth	2,86%	2,41%	4,42%	4,42%
Total Revenues	\$5 521,53	\$5 801,67	\$5 605,27	\$6 005,21
Cargo Handling Costs	-\$645,23	-\$662,00	-\$645,23	-\$662,00
# Employees	4146	4246	4209	4395
Vessels	\$1 224,93	\$1 263,54	\$1 174,98	\$1 231,84
# vessels	98	100	99	103
average cost per vessel	\$21,13	\$21,28	\$19,96	\$20,05
depreciation per vessel	-\$8,58	-\$8,64	-\$8,10	-\$8,14
Containers and handling equipment	\$639,05	\$754,22	\$639,05	\$780,68
% revenues	12%	13%	11%	13%
TEUs carried (in millions)	3,187	3,264	3,235	3,378
cost per TEU (thousands)	\$200,53	\$231,09	\$197,53	\$231,09
depreciation per TEU (thousands)	-\$94,30	-\$108,67	-\$92,89	-\$108,67
	Scenario 1	Our Model		
	Steady State (2028)			
Core RONIC	14,8%	15,9%		
Core ROIC	14,8%	15,9%		

Source: Own estimates

essentially all freight is chartered-in, and the company faces difficulties in getting the necessary vessels to answer demand, so the peers take over this lack of capacity. In order to impact the TEUs carried growth rate with market share, we employed the following proxy: using 2022 as reference, the respective growth rate is 4,42%, the 2023's rate will be $4,42\% \times \frac{1,1\%}{1,7\%}$, where we assume that ZIM's market share drops to 1,1%; lastly the 2024's rate accounts for $4,42\% \times \frac{0,6\%}{1,1\%}$. Varying the TEUs carried will affect the whole model, not only for the financials attached to this metric, but also due to the relations with % of total revenue. In Figure 42, we may compare the principal impacted accounts of this scenario with our model as standard.

For Income Statement affairs, as we may check, total revenue decreases when compared to the model, because there is less cargo being transported. In addition, Cargo Handling Costs keeps its values since this account is more dependent to freight rates rather than capacity itself, whereas the number of employees drops resulting from the TEUs carried decline. This makes the Core Result worse than our model's – a decrease of 71.33% in 2023 and a weak rebound of 3.77% in 2024, against the respective -69.84% in 2023 and 7.39% in 2024 from our standard. At this point, the revenues of the competition should outperform ZIM's.

Furthermore, Balance Sheet wise, the number of vessels is slightly below our model. However, as discussed above, the shrink in ZIM's capacity will negatively affect future lease agreements with carriers, prompting a rise in the average cost per vessel¹¹. Moreover, the cost per TEU, under the "Containers and handling equipment" category, slightly rises in 2023 as consequence of TEUs carried.

Nonetheless, these changes are not notable, thus we expect the RONIC and ROIC to vary accordingly – a difference of approximately 1.1%.

To finish, we computed the share price fair value in this scenario which comes as **\$64,53**, and heeding for the reference date, still represents an investment with remarkable potential.

Future global capacity – Scenario 2

With the current lack of vessels and containers, companies are investing in these bottlenecks, as previously discussed. In the next years, the industry can face again problems regarding excess supply, which will consequently hurt future freight rates. Even though our main forecast already accounts to a natural grow from the supply side (30% and 40% decrease in 2022 and 2023 freight rates growth, respectively), it is still important to analyze different growth rates since our valuation is extremely dependent on the freight rate levels, as demonstrated in the sensitive analysis below (Figure 43).

In this over supply scenario, we will compare the impact of a decrease in the freight rate growth levels of 31% and 41% in 2022 and 2023, respectively, with our original forecast (highlighted in blue) assuming that demand levels (TEUs carried) will hold the same in both. Hence, revenues will be directly affected, resulting in \$8 818,87 million (1.43% decrease) and \$5 433,11 million (3.07% decrease) in each year, respectively. Nonetheless, operating expenses and cost of services will naturally decrease according with revenues due to its correlation. Therefore, the main difference regarding our original model is related with the G&A expenses, where

¹¹ In this scenario we assume that in 2023 the cost per vessel decreases 30%. The rate in our model is -40%.

salaries stand out, and depreciations.

Figure 43 – Freight Rate Growth – Share Price Sensitive Analysis

		2023 Freight Rate Growth				
		-38%	-39%	-40%	-41%	-42%
2022 Freight Rate Growth	-28%	\$101,09	\$92,70	\$84,40	\$76,19	\$68,12
	-29%	\$93,69	\$85,50	\$77,41	\$69,44	\$61,63
	-30%	\$86,35	\$78,37	\$70,51	\$62,79	\$55,29
	-31%	\$79,07	\$71,32	\$63,71	\$56,29	\$49,13
	-32%	\$71,88	\$64,37	\$57,04	\$49,96	\$43,22

Source: Own estimates

These expenses are related with TEUs carried in each year (demand) and not with the freight rates, so, if the rates decrease but the demand levels stay stable (as assumed in this scenario), these expenses will remain the same, resulting in lower net incomes in the following years. In fact, although revenues decrease only 1.43% and 3.07% in each year, the net income will decrease 5% and 13%, respectively, which explains the estimated share price of \$56,29, in comparison with the previously estimated of \$70.51. As the whole industry is also extremely aligned with the freight rates, this scenario would affect ZIM's competitors in a similar way. A greater decrease than expected on Freight Rate growth rates will significantly harm the share price, and as we observe an investment made today may result in a loss.

Final Recommendation

Regarding our DCF valuation, ZIM will be traded at \$70.51 by December 2022. In addition, the company will also pay dividends of 45% of net income. The container shipping industry, as said, is mature and the barriers of entry are quite high, meaning that it is unlikely that new companies will materialize, whether public or private.

Therefore, the recent IPO of ZIM may resemble a one-of-a-kind opportunity for an investor to enter in this enthusiastic industry at a price significantly below fair value. Since the company is tradable, it has risen over 300%, meaning it is quickly converging towards higher prices. Thus, we recommend **buying** ZIM's stock, which represents a 49.3% gain (35.5% price appreciation and 13.8% dividend yield).

Appendix

Financial Statements

Reformulated Balance Sheet Forecast

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Core Business (in millions)											
Operating Cash	\$162,40	\$164,99	\$199,59	\$612,00	\$447,33	\$280,26	\$300,26	\$321,37	\$338,62	\$356,81	\$375,96
% revenues	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Trade and other receivables	\$381,53	\$322,38	\$525,29	\$547,88	\$567,06	\$582,37	\$490,08	\$502,34	\$513,89	\$525,71	\$537,80
Collection Period	43	35	48	48	48	48	39	39	39	39	39
\$ per day	\$8,97	\$9,19	\$11,05	\$11,52	\$11,93	\$12,25	\$12,57	\$12,88	\$13,18	\$13,48	\$13,79
Inventories	\$70,49	\$60,34	\$52,24	\$183,60	\$134,20	\$84,08	\$90,08	\$96,41	\$101,59	\$107,04	\$112,79
% revenues	2%	2%	1%	2%	2%	2%	2%	2%	2%	2%	2%
Vessels	\$617,43	\$717,94	\$948,00	\$818,24	\$1 373,83	\$1 174,98	\$1 231,84	\$1 287,67	\$1 356,80	\$1 429,65	\$1 506,41
# vessels	68	68	87	91	95	99	103	108	111	115	118
average cost per vessel	\$13,84	\$17,34	\$18,34	\$15,16	\$24,38	\$19,96	\$20,05	\$20,07	\$20,53	\$21,00	\$21,48
depreciation per vessel	-\$4,76	-\$6,78	-\$7,44	-\$6,15	-\$9,89	-\$8,10	-\$8,14	-\$8,14	-\$8,33	-\$8,52	-\$8,72
Containers and handling equipment	\$351,69	\$425,74	\$520,89	\$1 521,55	\$1 065,08	\$639,05	\$780,68	\$835,56	\$880,42	\$927,69	\$977,50
% revenues	11%	13%	13%	12%	12%	11%	13%	13%	13%	13%	13%
TEUs carried (in millions)	2,914	2,822	2,841	2,967	3,098	3,235	3,378	3,527	3,633	3,742	3,855
cost per TEU (thousands)	\$270,77	\$293,74	\$346,04	\$512,81	\$343,77	\$197,53	\$231,09	\$236,87	\$242,32	\$247,89	\$253,59
depreciation per TEU (thousands)	-\$150,10	-\$142,87	-\$162,73	-\$241,15	-\$161,66	-\$92,89	-\$108,67	-\$111,39	-\$113,95	-\$116,57	-\$119,25
Other tangible assets	\$20,99	\$69,10	\$67,13	\$205,85	\$150,47	\$94,27	\$101,00	\$108,10	\$113,90	\$120,02	\$126,46
% revenues	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Intangible assets	\$64,64	\$64,92	\$66,47	\$203,81	\$148,97	\$93,33	\$99,99	\$107,02	\$112,77	\$118,82	\$125,20
% revenues	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Deferred expenses	\$8,98	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00
Trade and other payables	-\$467,76	-\$422,42	-\$398,88	-\$416,03	-\$430,59	-\$442,21	-\$493,76	-\$506,11	-\$517,75	-\$529,66	-\$541,84
Payable Period	57	55	51	51	51	51	56	56	56	56	56
\$ per day	-\$8,22	-\$7,70	-\$7,77	-\$8,10	-\$8,38	-\$8,61	-\$8,84	-\$9,06	-\$9,26	-\$9,48	-\$9,70
Provisions	-\$24,42	-\$18,00	-\$21,42	-\$65,68	-\$48,01	-\$30,08	-\$32,22	-\$34,49	-\$36,34	-\$38,29	-\$40,35
% revenues	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Contract liabilities	-\$126,45	-\$130,28	-\$230,47	-\$706,70	-\$516,55	-\$323,63	-\$346,72	-\$371,10	-\$391,02	-\$412,02	-\$434,14
% revenues	4%	4%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Core Business Invested Capital	\$1 059,51	\$1 254,71	\$1 728,84	\$2 904,52	\$2 891,79	\$2 152,42	\$2 221,22	\$2 346,77	\$2 472,88	\$2 605,77	\$2 745,79
Non-Core Business (in millions)											
Other investments	\$5,28	\$5,32	\$8,03	\$6,21	\$6,42	\$6,60	\$6,77	\$6,94	\$7,10	\$7,26	\$7,43
linked to inflation											
Deferred tax assets	\$1,06	\$1,05	\$1,50	\$1,20	\$1,20	\$1,20	\$1,20	\$1,20	\$1,20	\$1,20	\$1,20
Investments in associates	\$8,75	\$8,44	\$8,44	\$8,55	\$8,84	\$9,08	\$9,32	\$9,55	\$9,77	\$10,00	\$10,23
linked to inflation											
Assets classified as held for sale	\$42,86	\$11,58	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00
Employee Benefits	-\$60,13	-\$67,99	-\$66,63	-\$74,87	-\$80,91	-\$86,77	-\$92,96	-\$99,50	-\$104,84	-\$110,47	-\$116,40
% salaries	61%	65%	58%	61%	61%	61%	61%	61%	61%	61%	61%
Deferred tax liabilities	-\$0,35	-\$0,35	-\$0,34	-\$0,35	-\$0,35	-\$0,35	-\$0,35	-\$0,35	-\$0,35	-\$0,35	-\$0,35
Non-Core Business Invested Capital	-\$2,54	-\$41,95	-\$48,99	-\$59,26	-\$64,79	-\$70,23	-\$76,01	-\$82,15	-\$87,11	-\$92,35	-\$97,89
Total Invested Capital	\$1 056,98	\$1 212,77	\$1 679,85	\$2 845,26	\$2 827,01	\$2 082,19	\$2 145,21	\$2 264,62	\$2 385,77	\$2 513,42	\$2 647,91
Financing (in millions)											
Debt	\$1 371,05	\$1 539,33	\$1 832,06	\$2 163,32	\$1 884,92	\$1 624,33	\$1 388,92	\$1 762,40	\$1 554,35	\$1 947,49	\$1 735,32
Excess Cash	-\$90,06	-\$74,29	-\$426,67	-\$130,38	\$134,94	-\$138,58	\$142,18	-\$145,74	\$149,09	-\$152,52	\$156,03
Minority Interests	\$6,28	\$5,40	\$7,19	\$6,29	\$6,29	\$6,59	\$6,39	\$6,43	\$6,47	\$6,43	\$6,44
Net Financing	\$1 287,27	\$1 470,44	\$1 412,58	\$2 039,24	\$2 026,16	\$1 492,34	\$1 537,50	\$1 623,08	\$1 709,91	\$1 801,40	\$1 897,79
Equity	-\$230	-\$258	\$267	\$806	\$801	\$590	\$608	\$642	\$676	\$712	\$750
D/E	-5,59	-5,71	5,29	2,53	2,53	2,53	2,53	2,53	2,53	2,53	2,53
Transactions with Shareholders				\$238,00	\$1 354,11	\$706,15	\$166,76	\$195,28	\$114,11	\$102,32	\$120,09
Payout Ratio				45,00%	45,00%	45,00%	45,00%	45,00%	45,00%	45,00%	45,00%
	\$1 056,98	\$1 212,77	\$1 679,85	\$2 845,26	\$2 827,01	\$2 082,19	\$2 145,21	\$2 264,62	\$2 385,77	\$2 513,42	\$2 647,91

Reformulated Income Statement Forecast

in millions \$	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Core											
Total Revenues											
Revenues											
Containerized cargo	\$2 835,80	\$2 847,30	\$3 492,20	\$10 651,86	\$7 785,87	\$4 878,00	\$5 226,04	\$5 593,46	\$5 893,77	\$6 210,21	\$6 543,64
Freight rate per TEU (in \$)	\$973	\$1 009	\$1 229	\$3 590	\$2 513	\$1 508	\$1 547	\$1 586	\$1 622	\$1 659	\$1 698
% growth		3,70%	21,80%	192,11%	-30,00%	-40,00%	2,60%	2,50%	2,30%	2,30%	2,30%
TEUs carried (in millions)	2,914	2,822	2,841	2,967	3,098	3,235	3,378	3,527	3,633	3,742	3,855
% growth		-3,18%	0,69%	4,42%	4,42%	4,42%	4,42%	4,42%	3,00%	3,00%	3,00%
Value Added Services	\$412,10	\$452,50	\$499,50	\$1 588,11	\$1 160,81	\$727,27	\$779,16	\$833,94	\$878,71	\$925,89	\$975,60
% of Containerized cargo	14,53%	15,89%	14,30%	14,91%	14,91%	14,91%	14,91%	14,91%	14,91%	14,91%	14,91%
Total Revenues	\$3 247,90	\$3 299,80	\$3 991,70	\$12 239,96	\$8 946,68	\$5 605,27	\$6 005,21	\$6 427,40	\$6 772,49	\$7 136,10	\$7 519,24
Operating expenses and cost of services											
Expenses related to cargo handling	-\$1 379,32	-\$1 421,35	-\$1 432,94	-\$2 454,42	-\$2 306,62	-\$2 087,43	-\$2 236,36	-\$2 393,59	-\$2 522,10	-\$2 657,52	-\$2 800,20
% revenues	-42,47%	-43,07%	-35,90%	-20,05%	-25,78%	-37,24%	-37,24%	-37,24%	-37,24%	-37,24%	-37,24%
Cargo Handling Costs TEU carried adjusted to inflation (both in millions)	-\$473,26	-\$503,69	-\$504,29	-\$827,22	-\$744,49	-\$645,23	-\$662,00	-\$678,55	-\$694,16	-\$710,13	-\$726,46
Slots purchase and hire of vessels	-\$480,37	-\$515,10	-\$497,78	-\$1 454,04	-\$1 017,83	-\$610,70	-\$626,58	-\$976,98	-\$1 029,43	-\$1 084,70	-\$1 142,94
% revenues	-14,79%	-15,61%	-12,47%	-11,88%	-11,38%	-10,90%	-15,20%	-15,20%	-15,20%	-15,20%	-15,20%
Fuel and lubricants	-\$536,63	-\$386,92	-\$361,57	-\$1 504,77	-\$1 178,46	-\$750,14	-\$816,59	-\$888,11	-\$951,55	-\$1 002,64	-\$1 056,47
% revenues	-16,52%	-11,73%	-9,06%	-12,29%	-13,17%	-13,38%	-13,60%	-13,82%	-14,05%	-14,05%	-14,05%
% fuel price growth				35,72%	7,14%	1,60%	1,61%	1,61%	1,68%	1,68%	1,68%
Other Operating Expenses	-\$603,27	-\$487,43	-\$542,82	-\$1 915,32	-\$1 399,99	-\$877,12	-\$939,70	-\$1 005,77	-\$1 059,77	-\$1 116,66	-\$1 176,62
% revenues	-18,57%	-14,77%	-13,60%	-15,65%	-15,65%	-15,65%	-15,65%	-15,65%	-15,65%	-15,65%	-15,65%
Total Operating Expenses and Cost	-\$2 999,60	-\$2 810,80	-\$2 835,10	-\$7 328,56	-\$5 902,90	-\$4 325,39	-\$4 619,23	-\$5 264,44	-\$5 562,85	-\$5 861,52	-\$6 176,22
% revenues	-92,36%	-85,18%	-71,02%	-59,87%	-65,98%	-77,17%	-76,92%	-81,91%	-82,14%	-82,14%	-82,14%
General and administrative expenses											
Salaries	-\$98,28	-\$105,35	-\$115,35	-\$122,41	-\$132,30	-\$141,87	-\$151,99	-\$162,68	-\$171,42	-\$180,62	-\$190,32
# Employees	3682	3687	3794	3860	4031	4209	4395	4589	4727	4869	5015
Salary per Employee	-\$0,03	-\$0,03	-\$0,03	-\$0,03	-\$0,03	-\$0,03	-\$0,03	-\$0,04	-\$0,04	-\$0,04	-\$0,04
TEUs carried per employee (thousands)	0,79	0,77	0,75	0,77	0,77	0,77	0,77	0,77	0,77	0,77	0,77
Other G&A expenses	-\$45,68	-\$46,30	-\$47,48	-\$163,16	-\$119,26	-\$74,72	-\$80,05	-\$85,68	-\$90,28	-\$95,12	-\$100,23
% revenues	-1,41%	-1,40%	-1,19%	-1,33%	-1,33%	-1,33%	-1,33%	-1,33%	-1,33%	-1,33%	-1,33%
Total G&A expenses	-\$143,90	-\$151,60	-\$163,20	-\$285,57	-\$251,55	-\$216,59	-\$232,04	-\$248,36	-\$261,69	-\$275,74	-\$290,55
% revenues	-4,43%	-4,59%	-4,09%	-2,33%	-2,81%	-3,86%	-3,86%	-3,86%	-3,86%	-3,86%	-3,86%
Depreciation	-\$100,20	-\$226,00	-\$291,60	-\$517,16	-\$515,07	-\$376,50	-\$416,35	-\$439,83	-\$463,45	-\$488,33	-\$514,55
% of PP&E	-10,12%	-18,63%	-18,98%	-18,81%	-18,81%	-18,81%	-18,81%	-18,81%	-18,81%	-18,81%	-18,81%
Core Result before taxes	\$4,20	\$111,40	\$701,80	\$4 108,68	\$2 277,16	\$686,80	\$737,59	\$474,77	\$484,50	\$510,52	\$537,93
Statutory Taxes	-\$0,97	-\$25,62	-\$161,41	-\$945,00	-\$523,75	-\$157,96	-\$169,64	-\$109,20	-\$111,44	-\$117,42	-\$123,72
statutory tax rate	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%
Core Result	\$3,23	\$85,78	\$540,39	\$3 163,68	\$1 753,41	\$528,83	\$567,94	\$365,57	\$373,07	\$393,10	\$414,20
Non-Core											
Non-Core Result before taxes	-\$8,20	\$44,05	\$28,30	\$22,30	\$23,08	\$23,71	\$24,32	\$24,93	\$25,50	\$26,09	\$26,69
statutory tax rate	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%
Statutory Taxes	\$1,89	-\$10,13	-\$6,51	-\$5,13	-\$5,31	-\$5,45	-\$5,59	-\$5,73	-\$5,87	-\$6,00	-\$6,14
Non-Core Adjustments	-\$38,41	-\$12,00	\$107,77	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00	\$0,00
Total OCI (exchange differences)	-\$6,94	-\$10,65	\$4,76	-\$4,28	-\$4,28	-\$4,28	-\$4,28	-\$4,28	-\$4,28	-\$4,28	-\$4,28
Non-Core Result	-\$51,66	\$11,27	\$134,32	\$12,90	\$13,50	\$13,98	\$14,45	\$14,92	\$15,36	\$15,81	\$16,28
Financing											
Financial Expenses	-\$101,71	-\$156,75	-\$189,36	-\$217,41	-\$256,72	-\$223,69	-\$192,76	-\$164,83	-\$209,15	-\$184,46	-\$231,11
% debt previous year		-11,43%	-12,30%	-11,87%	-11,87%	-11,87%	-11,87%	-11,87%	-11,87%	-11,87%	-11,87%
Statutory Taxes	\$23,39	\$36,05	\$43,55	\$50,01	\$59,05	\$51,45	\$44,34	\$37,91	\$48,10	\$42,43	\$53,16
statutory tax rate	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%	23,00%
Financing Result	-\$78,32	-\$120,70	-\$145,81	-\$167,41	-\$197,68	-\$172,24	-\$148,43	-\$126,92	-\$161,04	-\$142,03	-\$177,96
Total Comprehensive Income	-\$126,75	-\$23,65	\$528,90	\$3 009,17	\$1 569,23	\$370,57	\$433,97	\$253,58	\$227,39	\$266,88	\$252,52
Inflation Rate				4,30%	3,50%	2,70%	2,60%	2,50%	2,30%	2,30%	2,30%
			41,26	56	60	60,96	61,94	62,94	64	65,08	66,17
Fuel Price Growth				35,72%	7,14%	1,60%	1,61%	1,61%	1,68%	1,68%	1,68%

FCF Forecast

in millions \$	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Core Business											
Core Business	\$3,23	\$85,78	\$540,39	\$3 163,68	\$1 753,41	\$528,83	\$567,94	\$365,57	\$373,07	\$393,10	\$414,20
Change Core Invested Capital		\$195,20	\$474,13	\$1 175,68	-\$12,72	-\$739,37	\$68,80	\$125,55	\$126,11	\$132,89	\$140,02
Core Free Cash Flow	\$3,23	-\$109,42	\$66,26	\$1 988,01	\$1 766,14	\$1 268,20	\$499,14	\$240,03	\$246,95	\$260,21	\$274,18
Non-Core Business											
Non-Core Business	-\$51,66	\$11,27	\$134,32	\$12,90	\$13,50	\$13,98	\$14,45	\$14,92	\$15,36	\$15,81	\$16,28
Change Non-Core Invested Capital		-\$39,41	-\$7,05	-\$10,26	-\$5,53	-\$5,45	-\$5,78	-\$6,13	-\$4,96	-\$5,24	-\$5,53
Non-Core Free Cash Flow	-\$51,66	\$50,68	\$141,37	\$23,16	\$19,03	\$19,42	\$20,24	\$21,05	\$20,33	\$21,06	\$21,81
Financial											
Financial Result	-\$78,32	-\$120,70	-\$145,81	-\$167,41	-\$197,68	-\$172,24	-\$148,43	-\$126,92	-\$161,04	-\$142,03	-\$177,96
Change in Debt		\$183,17	-\$57,86	\$626,66	-\$13,08	-\$533,82	\$45,16	\$85,58	\$86,83	\$91,49	\$96,39
Change in Equity		-\$27,37	\$524,93	\$538,76	-\$5,17	-\$211,00	\$17,85	\$33,83	\$34,32	\$36,16	\$38,10
Comprehensive income	-\$126,75	-\$23,65	\$528,90	\$3 009,17	\$1 569,23	\$370,57	\$433,97	\$253,58	\$227,39	\$266,88	\$252,52
Financing Cash Flow	\$48,43	\$58,74	-\$207,63	-\$2 011,17	-\$1 785,16	-\$1 287,63	-\$519,38	-\$261,08	-\$267,28	-\$281,26	-\$295,99
Free Cash Flow	-\$48,43	-\$58,74	\$207,63	\$2 011,17	\$1 785,16	\$1 287,63	\$519,38	\$261,08	\$267,28	\$281,26	\$295,99
Check	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

Long-term Value-Drivers

WACC	7,84%
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	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Sales' Growth Rate	1,6%	21,0%	206,6%	-26,9%	-37,3%	7,1%	7,0%	5,4%	5,4%	5,4%
Core Business Growth Rate	-2552,4%	530,0%	485,4%	-44,6%	-69,8%	7,4%	-35,6%	2,0%	5,4%	5,4%
Core RONIC		232,9%	553,3%	-120,0%	9625,7%	-5,3%	-294,1%	6,0%	15,9%	15,9%
Core ROIC	8,1%	43,1%	183,0%	60,4%	18,3%	26,4%	16,5%	15,9%	15,9%	15,9%

Steady state

nominal lor	5,4%
Inflation	2,30%
Global GDP	3%

Disclosures and Disclaimers

Report Recommendations

Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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