Diane Arcas Göçmez - Shipping & Logistics MBA

In a market where container ships can cost up to 150 million USD and account for 90% of global trade (Albertijn, Bessler and Drobetz, 2011), shipping is capital-intensive. External factors heavily influence its cyclical nature; its global nature leads to challenges in securing vessels and assets; its fragmented nature with a less corporate outlook creates more volatility, resulting in fewer investment-grade entities, which makes financing even more challenging for lenders and investors (Harwood, 2018).

1. Financial challenges faced by the Shipping Sector

1. Following the 2008 crisis and Basel I, traditional bank lending has dropped due to restrictions on the banking regulatory system(Orestis Schinas, 2018)and higher capital requirements (Harwood, 2020). Basel IV introduces new asset risk ratings and higher return thresholds, increasing margins for shipping loans, which might further reduce EU banks' shipping exposure, particularly impacting small businesses(Harwood, 2020) (Zolotas A., 2024)
2. The IMO 2050 GHG targets of net-zero emissions(Imo.org, 2023) with enforcement of existing tax schemes, e.g. EU ET(EU Commission, 2024), requires high upfront investment costs of e.g. retrofitting ships, purchasing eco-ships resulting in an increasing need for funding(ShipUniverse.com, 2024).
3. Geopolitical Tensions disrupt cargo flows and trade routes. After the Russian invasion of Ukraine and subsequent sanctions, shipping companies are facing higher operational costs from rerouting (e.g., Romania) and rising insurance premiums(ShipUniverse.com,2025c); revenue disruptions due to high inflation and currency devaluations, reduced cargo volumes, trade losses and disrupted supply and demand (OECD, 2022). The disruptions to payment systems and the credit risk due to banks' exposure to frozen Russian assets have culminated in a global banking crisis and liquidity pressures, with an increased risk attributed to shipping caught at the core of the sanctions(OECD, 2024).

Traditional and alternative financing in shipping

Bank loans

Bank lending stands at 62% by the end of 2023(Petropoulos, 2024a), making it still the most important source of capital despite the 2008 GFC.

Mortgage-backed commercial loans offer low rates with predictable payments of 5 to 7 years and potential tax benefits. Ownership is not affected. However, a deposit is typically 20-40% of the ship's value, and the ship is pledged as collateral.

Corporate lending offers large sums, fixed terms and low rates, using the corporate balance sheet as collateral. It may include a revolving credit limit for flexibility and short-term needs but with a higher interest rate. Strong financials and potential covenants are needed with rigid repayments, and limits might be withdrawn if repayments are missed or covenants breached. Large loans are syndicated among banks, carry higher rates and longer approval times therefore reserved for large companies(Stopford,2009). In 2017, CMA CGM utilised a revolving credit facility of

USD 205 million with its core banking partners to finance 9 22.000 teu ships(News, 2017).

Export credit scheme: Export credit schemes with or without government backing are widely used (Hardwood,2020). It offers cost-effective financing with long repayment periods however, the approval process can be long. In 2023, among the top 40 banks, China Exim ranked second, and KFW IPEX third(Petropoulos, 2024a). KfW IPEX-Bank contributed to financing the USD 4 billion Hapag-Lloyd new building programme(KfW-ipex-bank.de, 2025). Government-backed ECAs face political and economic risks in unstable regions(ShipUniverse.com, 2025b).

Financing shipping in the capital markets-

IPO: An IPO provides substantial funding, is a lengthy process and requires high transparency and compliance. Market volatility and geopolitical tensions create volatility in stock prices. For example, in 2015, Hapag cut its prospects for its IPO from 500 million USD to 300 million USD due to weak demand and unfavourable market conditions(Reuters Staff, 2015). IPOs exclude small companies.

Bonds - The principal is paid at bond maturity, providing cashflow advantages and long-term finance, with investment-grade bonds attracting low interest rates. Only worthy private and public shipping companies can raise capital this way(Stopford,2009). In 2021, Maersk issued Euro 500 million in green bonds to finance its green methanol vessels 2021 (slopes, 2021).

Leasing ships

Financial leasing is a long-term arrangement with tax benefits to the lessee and a purchase option at the end of the term, often at a nominal price. Leasing works well for well-established shipping companies (Stopford,2009).

An evolved and very common model is the **sale and leaseback (SLB**) model, which allows shipowners to maintain operational control over their vessels(Cooper, 2021). SLBs often carry lower financing costs than banks, offer higher LTV ratios and create a secure financing structure. They lack strict financial covenants, focusing solely on bareboat payments, but this inflexible payment structure poses a risk during downturns. (Petropoulos, 2024d).

Green finance provides environmental benefits by supporting green projects, reducing companies' exposure to regulatory risks, and creating long-term operational cost savings. It attracts investors, and many governments provide tax benefits, subsidies, and favourable policies for green projects(Petropoulos, 2024b). Four high-profile box ship green finance or bond deals have been in the last 2 years. The challenges are that technological uncertainties lead to a limited availability of green assets, with only a few companies qualifying for green finance (Bockmann, 2022). Nevertheless, green finance is expected to grow and shift financial flows towards low-carbon options (Petropoulos, 2024c)

Other newly developing alternative finance methods worth mentioning are,

Blockchain-enabled asset tokenisation of shipping vessels and containers
SCs can tokenise ships, allowing fractional ownership and easier capital raising. This allows small investors to own shares in ships or cargo(Chandrama Prasad Vishwakarma, 2025). ShipFinex enables fractional ownership of shipping vessels through blockchain. Their application, Eshipfinance.com(Lowry, 2022), appeals to small and medium-sized shipowners but is still at its adoption stage(Bockmann, 2022).

Islamic Finance
It is not globally applicable and not a source my business can use.

2.

The environmental regulations, tax schemes, and associated fines require close monitoring of emissions and other waste produced by ships, rendering the real-time retrieval and analysis of data essential. Furthermore, increasing customer demands for affordable, reliable, and flexible transportation services drive companies to invest in digital transformation to stay competitive. The key areas where digitalisation in maritime benefits my business include cloud computing , IoT and Artificial Intelligence for data analysis(Tijan et al., 2021).

IoT technologies are smart equipment that transfers data without human input(Stylianos Kampakis et al., 2022) and can be installed on the engine and vital equipment for real-time fuel and emissions monitoring while collecting data for preventive maintenance. The sensors collect real-time information on total performance, forecasting when a component can fail, reducing emergency repair costs by 50-70 and preventing secondary damage(ShipUniverse,2025a). IoT tech has to be combined with AI to analyse large amounts of data, which can then predict maintenance needs, design a maintenance plan and help schedule downtimes.
IoT can connect to AI to analyse sea currents, weather patterns, cargo load, and engine performance, providing route adjustments and speed optimisation (ShipUniverse,2025a) to reduce fuel use and CO_2 emissions. A typical %10 fuel reduction per voyage is possible with a %5 reduction in emissions with a %50 lower risk of incurring environmental fines(ShipUniverse.com, 2025a). Initial cost for setting up these systems are considerable but small in relation to the fuel emission and maintenance cost reductions achieved.

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