

Cunning with coin

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In a seascape regularly buffeted by external shocks – pandemics, inflationary pressures, volatile oil prices, and shifting trade-war dynamics – maintaining tight, disciplined control over operating expenses (opex) has long been a strategic imperative for shipping firms. That’s because managing costs is key to both short-term profitability and long-term competitive advantage across the industry.

From the cost-cutting imperative of 2014 to 2019, through the surge in costs driven by COVID-19, and on to the current period of restraint, the past decade has witnessed considerable volatility. As circumstances changed, shipping companies have struggled at times to master their cost base and fully understand the factors that matter most in managing their short- and long-term costs.

Over the past 15 years, BCG’s Shipping Benchmark Initiative (SBI)¹ has worked with 60+ shipping companies to capture spending data and analyze key trends that have affected the industry’s opex. After examining the data, we seek to answer two critical questions in this article. What trends and factors affected the industry’s opex and, thus, its profitability over the past decade? And which levers should shipping companies pull to maintain and strengthen their cost discipline and competitive advantage in the future?

A decade of cost-cutting

Over the past decade, opex spending across the shipping industry has been highly variable, falling from 2014 to 2019, rising for the next two years, and then falling again

in 2022-24 (exhibit 1). A number of positive and negative factors affected how shipping companies managed their costs. Some, such as inflationary pressures and freight rate cycles, were systemic; others, notably the COVID-19 pandemic, were one-off impacts.

A cost-cutting paradigm driven by low freight rates from 2015 onward defined the pre-COVID-19 era. From 2014 to 2019, inflation-adjusted opex fell by an average of 2.7% annually, led by a 2.5% drop in crew costs, which account for 50% to 60% of total costs.

This period’s focused cost-cutting trend is evident in data for all vessel classes within containers, dry bulks, and tankers, indicating a rigorous industry-wide commitment to cost discipline. In 2014-19, the industry achieved a cumulative 13% decrease in opex, adjusted for inflation. And the inflation-adjusted vessel opex as a share of charter rate – the daily amount paid to shipowners for the use of a vessel – was five percentage points lower than it would have been if opex had simply grown at the rate of inflation, making the industry more profitable overall (exhibit 2).

The pandemic rewired income statements in ways that few shipping companies anticipated. From 2019 to 2021, even

after adjusting for inflation, opex rose by 2.5% annually across the industry, with the container and dry bulk segments climbing especially quickly at 3.6% and 4.0% per year, respectively.

The cost increase was driven by two factors. First, as a direct result of the pandemic, two types of expenses rose significantly. In 2019-21, driven by travel restrictions, quarantining, and testing, crewing costs rose by 2.6% annually, adjusted for inflation, and freight forwarding costs increased by 11.6% annually, largely owing to pandemic-related disruptions to global supply chains. Despite representing just 60% of typical opex costs, crew and forwarding costs together caused 68% of the 2019-to-2021 rise in opex for dry bulk ships and 87% of the 2019-to-2021 rise for tankers (exhibit 3).

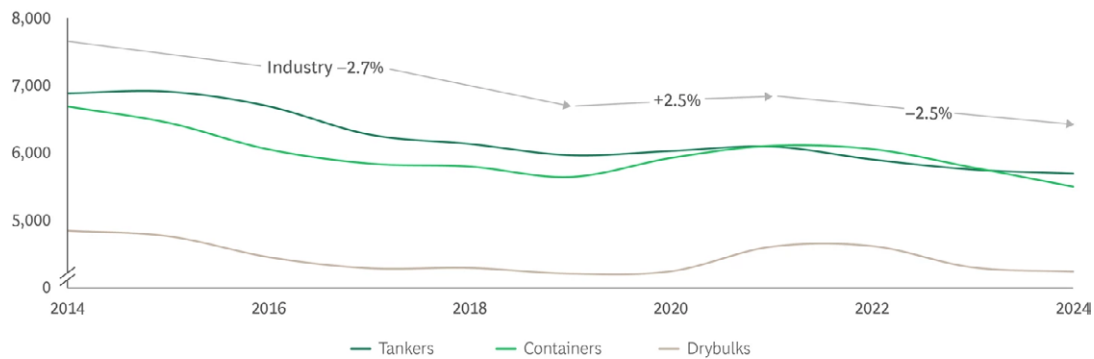
In contrast, these costs were responsible for just 51% of the increase in opex

¹ To help shipping companies navigate the ever-shifting global seascape, BCG partners with global shipping companies through SBI to run class-by-class opex analyses and to help companies maintain cost excellence. Working directly with companies to collect granular opex data, SBI serves as a value-adding clearing-house that delivers customized, actionable insights. Upward of 60 global shipowners and managers participate in the benchmark annually; all shipping companies are invited to join.

EXHIBIT 1

Shipping Industry Opex Has Varied Considerably over the Past Decade

Inflation-adjusted opex per day (2020 \$)



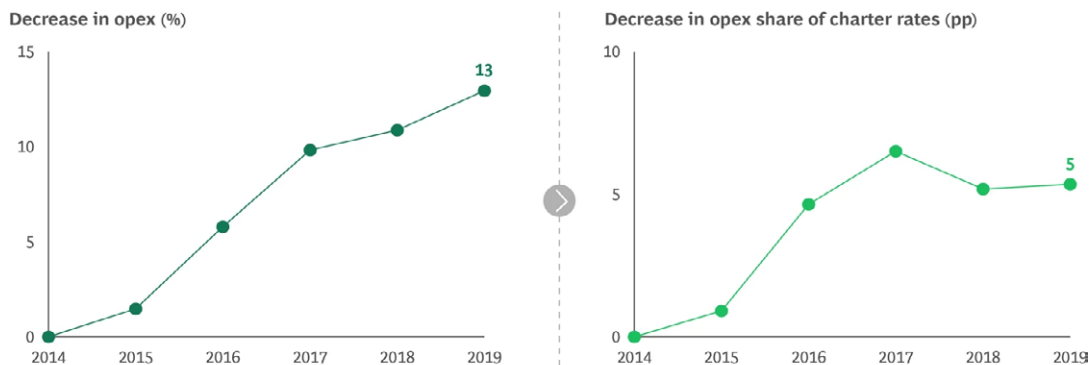
Sources: International Monetary Fund; BCG Shipping Benchmark Initiative.

Note: Opex calculated as the arithmetic mean of vessel-class average opex within each vessel type, neutralizing changes in fleet composition over time.

EXHIBIT 2

Cost-Cutting Reduced Opex by 13% and Lowered Opex as a Share of Charter Rates by 5 Percentage Points

Cumulative inflation-adjusted Opex reductions since 2014



Sources: Clarkson; International Monetary Fund; BCG Shipping Benchmark Initiative.

Note: Charter rates are based on actual data as of August 2024 and reflect half-year and full-year rates. The charter rates are aggregated based on Clarkson's data on tanker, drybulk, and container segments, and are aggregated based on fleet-size-weighted averages to create an adapted benchmark similar to the ClarkSea Index and aligned with the opex methodology applied in the BCG Shipping Benchmarking Initiative. The baseline is assumed to grow in line with the IMF Consumer Price Index. pp = percentage points.

for container ships. This difference was due largely to the second factor – the rapid increase in shipping revenues, which led to a relaxation of cost discipline, especially for container and dry bulk vessels. By the end of 2021, the Containerized Freight Index had risen above 5,000 points, more than 400% above pre-COVID-19 levels. This trend encouraged companies to shift their strategic focus from cost minimization to revenue optimization. As the benchmark shows, container ships and dry bulkers saw the greatest increases in revenue conditions and the largest increases in both pandemic- and non-pandemic-related costs such as lube oil and insurance.

The pandemic affected not only relative industry performance between companies but also relative performance within a company's fleet. Intra-fleet variance, which measures the variation in opex performance across similar vessels under the same owner, is a key indicator of a fleet's overall efficiency and shipowners' ability to predict their fleet performance. During the pandemic, this metric rose to its highest level since the benchmark's inception, exposing many fleets' lack of contingency plans amid disruptions (exhibit 4).

It also revealed an inadequate level of sharing of effective cost-cutting practices – such as coordination of purchasing and

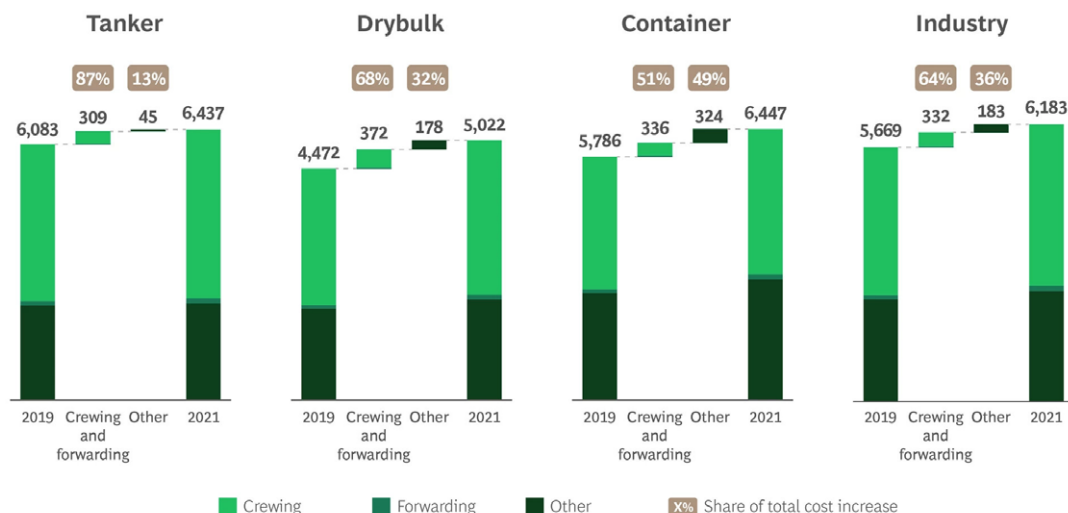
crewing data – among ships within the same fleet. A high degree of intra-fleet variance also correlates with opex underperformance across the entire fleet.

The years following the pandemic pushed the industry back to inflation-adjusted cost decreases, in line with the pre-COVID-19 period. While consumables, lube oil, and maintenance and repair (M&R) – the line items most exposed to inflation – increased following the pandemic, total inflation-adjusted opex actually fell by 2.5%. This was largely because operators managed to keep crew spending flat relative to the exceptionally high levels of 2021 by pulling renewed crew

EXHIBIT 3

Crewing and Freight Forwarding Drove More Than 50% of the Opex Increases During the Pandemic

Nominal opex per day by vessel type, 2021 vs 2019 (\$)



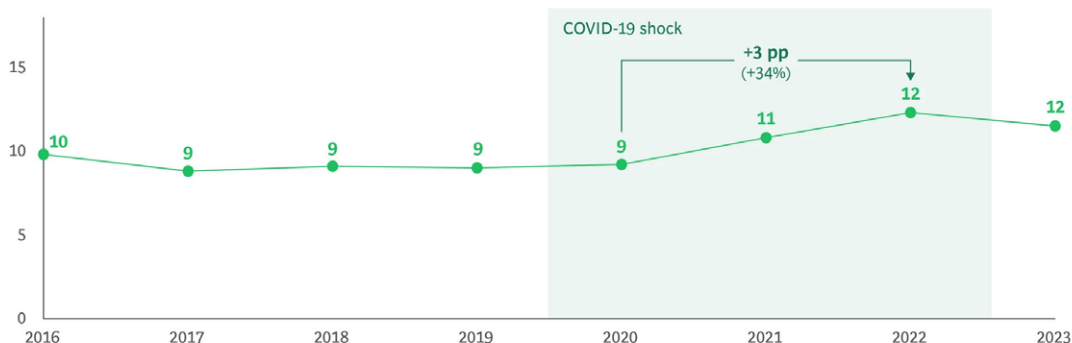
Source: BCG Shipping Benchmark Initiative.

Note: Opex calculated as the arithmetic mean of vessel-class average opex within each vessel type, neutralizing changes in fleet composition over time. Because of rounding, not all nominal daily opex totals for 2021 equal the sum of their reported segment totals.

EXHIBIT 4

Opex Variance Within Fleets Widened Significantly During the Pandemic

Intrafleet opex variance (%)



Source: BCG Shipping Benchmark Initiative.

Note: Intrafleet opex variance is calculated as the arithmetic mean across firms in a given year. To ensure that results are not driven by changes in Shipping Benchmark Initiative participants, the analysis is adjusted to select recurring participants. At the firm level, intrafleet opex variance is calculated as the standard deviation of the deviation from a vessel's expected opex, based on its characteristics (including, among others, vessel class and age).
pp = percentage points.

optimization levers, notably nationality switching.

In the coming years, firms will find it necessary to be more cost-disciplined than at any time since the onset of COVID-19. Geopolitical instability, for example, will continue to affect the industry, as the conflict in the Middle East has made it all too clear. Firms' ability to perform in this challenging market will hinge on remaining cost-disciplined and pulling the right levers.

Pulling the right levers

As the past decade's benchmarking results show, cost competitiveness at both the firm and the vessel level is especially responsive to two factors: the effective application of historically proven cost levers, and the ability to adapt to a dynamic operating environment. Systematic identification and implementation of critical cost-cutting levers have led to improved opex performance, and the SBI benchmark

clearly helps ensure an exhaustive, programmatic approach.

Although traditional levers such as crew nationality switching and e-auctions can be effective, our benchmark results indicate that shipping companies must look beyond them. Companies seeking to achieve cost leadership in the years ahead should consider three additional focal areas.

First, build contingency plans for 'known unknowns.' COVID-19-specific line items



Photo: Canva

accounted for the vast majority of the 2021 cost increases, yielding a clear lesson: carriers should build contingency plans for ‘known unknowns’ to avoid the risk of being swamped when the next shock hits. In volatile times like the present, contingency plans must take into account a wide range of macro risks and provide levers that ensure both resilience (such as the dual sourcing of parts and consumables) and agility (such as framework agreements with dry-docking yards across multiple countries).

Second, focus on crewing, M&R, and dry-docking. The industry’s overall lack of resilience and agility during the pandemic is evident in the absence of contingency plans to counter higher dry-docking costs. On average, from 2020 to 2021, inflation-adjusted dry-docking costs rose by 10% to 12%, driven by a combination of the zero-COVID-19 policy in China, higher prices for energy and key materials such as steel, and supply bottlenecks in labor and infrastructure outside China. These costs will probably continue to rise faster than inflation in the coming years. This will exert further pressure on the industry to increase its resilience while also managing other opex costs, such as crewing.

Vessel fundamentals reinforce the challenging outlook on M&R and dry-docking costs. Fleets have been ageing over the course of a decade in which capacity grew by roughly one-third in the dry bulk and tanker segments and by nearly three-quarters in container shipping. According to the UN Conference on Trade

and Development, the average vessel age was 13 years in 2024, the highest average on record and two to three years higher than a decade ago, despite the order book’s recent rise to its highest level since 2016.

This situation is likely to increase the importance of M&R and dry-docking in the years ahead as average-age vessels enter their third dry-docking cycle. To offset it, firms must rethink processes, including applying levers such as intelligent dry-docking schedules, bundled repair campaigns, predictive maintenance, and data-driven spare-parts forecasting.

Finally, lead the technological change. To remain at the forefront of cost discipline and stay competitive, shipping firms must pursue both incremental and radical technological innovation. The advent of increasingly sophisticated, cost-efficient ships running on new, lower-cost systems that can operate profitably even at lower freight rates, such as the propulsion systems used by new liquefied natural gas carriers, has increased pressure on firms with older vessels to aggressively cut their opex to remain competitive.

A similar inflection point is emerging with AI and machine learning. A recent **BCG survey** indicates that companies across

all industries plan to increase their AI investment in 2026, with average spending more than doubling relative to 2025 levels. Within the shipping industry, firms must explore capabilities such as big-data-based predictive maintenance to reduce M&R costs and downtime, semi-autonomous ships to lower crewing costs, and live fuel optimization through weather analysis.

Adjusting priorities – swiftly

As our SBI benchmark shows, the shipping industry has made considerable progress in controlling opex over the past decade. Yet, the voyage has been turbulent, as demonstrated by the increase in costs during COVID-19. Even so, the industry’s ability to refocus on cost discipline following the pandemic confirms its capacity to adjust priorities swiftly in the face of changing circumstances.

Shipping companies looking to remain competitive must continue to pull historical cost levers while also taking advantage of opportunities to lead through technological change, crewing, M&R, and dry-docking. Equally important are the ability to adapt and the readiness to ride out the inevitable storms that will arise in our increasingly uncertain world. ■



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