



Weathering the Perfect Storm

Revolutionizing the Maritime Industry with Advanced Analytics

After years of lower trade activity and higher operating costs, maritime leaders are using modern advanced analytics to develop new market strategies, make smarter investment decisions and create a competitive advantage from superior long-range insight into future market behaviors.

Today's maritime leaders are operating in a period of consolidation, over-capacity and low freight rates. The global economic recession—from which the world is still recovering—contributed to muted demand for trade and over-capacity of ships, meaning too many ships chasing too little cargo. Ultimately, players across the entire maritime industry from ship owners, brokers and the investment community to operators, marine equipment manufacturers and providers of key infrastructure bear witness to a perfect storm of reduced trade activity and higher operating costs.

The root of the industry's mounting challenges can be traced to the pre-2008 period, when high ordering activity in response to the accelerated rate of globalization from 2003-2008 caused the increased fleet capacity that has occurred over the past five years. According to IHS, dry bulk carrier fleets nearly doubled in capacity from 440 million deadweight tonnes (M dwt) to 804M dwt in the period from 2008-2013. During the same period, crude oil tanker fleet capacity increased by nearly 50 percent from 261M dwt to 388M dwt, while the number of product tankers grew by roughly a third from 113M dwt to 150M dwt.

The trade growth involving large fleets, crude oil tankers, product tankers, bulk carrier fleets and container fleets suffered initially in 2008 with the negative growth in the seaborne trade, and the double-dip recession did not help in terms of trade activity. Later, as a result of pre-2008 order activity, the growth of seaborne trade failed to meet the growth capacity of the commodity fleets.

The combination of decreased trade activity in the initial period with the fleet capacities outpacing the seaborne trade growth caused lowered freight rates and earning returns. The consolidation period is almost over, according to IHS experts, but the freight rates are still low, yielding earnings that are currently at just a fraction of their pre-2008 levels.

Accurately Understanding Future Demand

This perfect storm, combined with other industry challenges, have pushed maritime organizations to find new ways of discerning which assets will produce the best possible returns and to identify critical market dynamics and future trends that will impact trading and shipping.

Before advanced analytics, organizations had short, two-to three-year views of future market demands and industry "sentiment" on which to base critical decisions. Now, these same companies have granular, longer-range views—10 year forecasts broken down by vessel types, for example—right at their fingertips.

The very success of ship owners and operators, marine equipment suppliers, and ship investors and brokers depends on accurate understandings of future demand for shipping capacity by number, type and size of ship. Ships are, after all, multimillion-dollar investments that possess decades-long life cycles.

Identifying and investing in the right types of ships yields higher return on investment, higher utilization and shipping revenues, and higher equipment sales to ship manufacturers. In short, competitive advantage depends on it.

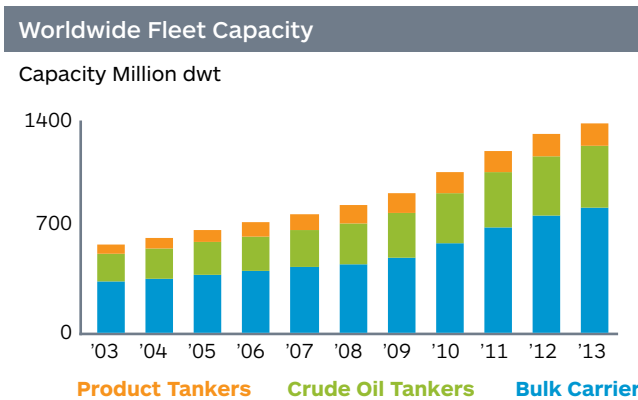


Figure 1: Higher ordering activity prior to 2008 caused industry fleet capacity to nearly double from 2008-2013

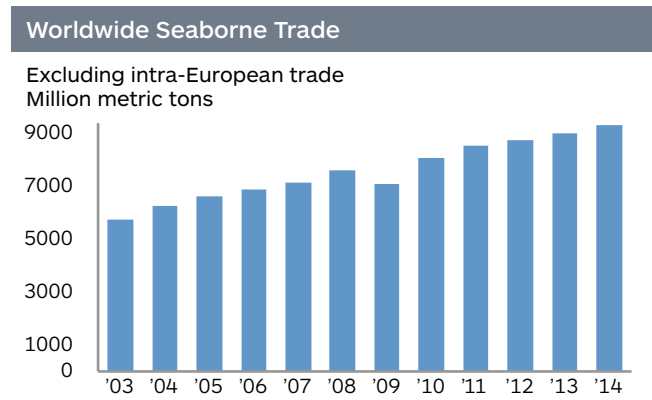


Figure 2: Fleets suffered in 2008 with negative growth in seaborne trade further impacted by a double-dip recession.

Maritime leaders have turned to advanced analytics to craft superior strategic plans and investment decisions by revolutionizing the level of granularity and sophistication involved in research to achieve exceptional long-range insight into future industry dynamics and impact on maritime value chains. This trend has introduced a new competitive frontier which may distinguish those who can weather the perfect storm from those who cannot.

New Answers to Industry's Questions

In their quest to gain competitive advantages, maritime leaders will need revolutionary models that transcend the traditional approaches that adhere to industry sentiment, typical outlook timeframes and new order volume.

Introducing a sophisticated process centered on advanced analytics will allow the maritime groups to leverage data concerning energy, trade and economics in a more effective manner.

Equipped with these new methods, maritime groups seek to determine the expected stock of new vessels within the market, the number of vessels retiring over specific time ranges and the amount of new buildings in progress. Having accurate answers to these three questions alone can inform strategic decision makers on the best way to invest assets, attain optimal fleet sizes and allocate assets to specific projects.

Historically, the maritime industry has used a 3-year window—the amount of time it takes to build a vessel from start to finish—to determine future needs. With the influx of private equity investors, though, private ownership is slowly being displaced by publicly-owned entities. These public owners are asking questions that their predecessors did not consider, requiring access to long-term and long-range planning insights. To obtain that information, maritime companies are increasingly turning to advanced analytics for a wide range of data points and key insights.

Concurrently, maritime companies are trying to push freight rates higher by employing a strategy known as “slow steaming” which involves actually slowing down ships to disrupt supply chains. Instead of rushing to port to accommodate stakeholders that depend on the fastest container-shipping possible, they leverage the slow steaming as a more flexible business model.

Creating Confidence, Amidst Uncertainty

Prior to the global economic recession, bulk carrier manufacturers were particularly ill-equipped to meet the demand levels that surfaced between 2003–2008. The recession led to waning demand for imported commodities which sparked an over-capacity of bulk carriers, crude oil carriers, product tankers and container ships.

The over-capacity was met with higher operating costs, mostly resulting from high bunker prices. The industry has yet to recover, and changing trade flow patterns have caused a shift in which types of ships sail where.

Geopolitical unrest, for instance, has created a change in export patterns for energy resources such as oil, gas and coal. At the same time, global rebalancing of uneven economic growth has altered manufacturing and consumption patterns. These dynamics contribute to uncertainty in shipping markets, and consequently, a hyper-competitive environment.

By accurately forecasting the demand for future fleet capacity, maritime organizations can effectively weather the uncertainties and gain competitive advantages. Maritime leaders must apply expertise in maritime, economic, energy, geopolitical, manufacturing and related fields to better understand how these drivers combine to influence future trade flows and fleet capacity demand.

They can then leverage such knowledge to gain insight into different/substitute sizes within fleets in the short and medium terms to plan for changes in capacity, retirements and stock.

In recent years, for example, medium-range large fleet product tankers have been more popular than medium-range small fleet while the Supramax/Ultramax fleet has outnumbered the Handymax size in the bulk carrier fleet. But the popularity of the medium-range large fleet is not forecast to continue at the same pace. By modeling down to the granular level, in this case, companies gain access to accurate predictions of both capacity and count.

Marine equipment manufacturers and suppliers rely on capacity forecasts and advanced analytics to better understand the future demand for specific products.

Fleet Forecast by Number of Ships

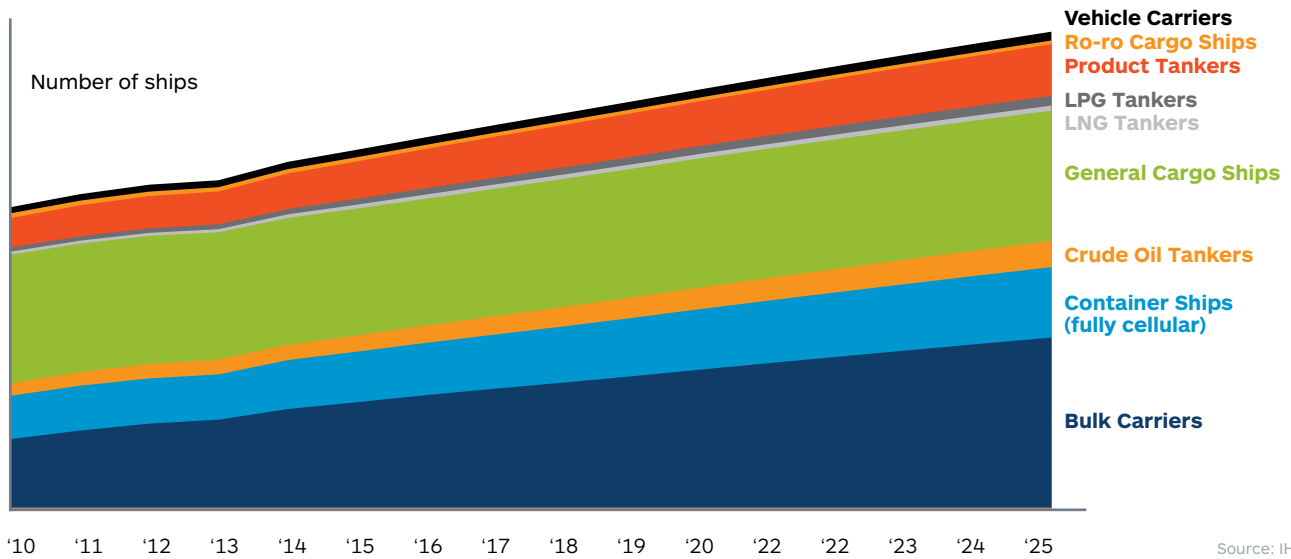


Figure 3: Modern advanced analytics now provide much more comprehensive, fact-based long-range fleet intelligence

Enhancing Decisions with Advanced Analytics

Using advanced analytics, organizations can extract precise, long-term forecasts that can accurately gauge customer demand to direct product development, navigate unexpected market fluctuations and identify trends in the shipping markets to quantify and qualify future market size for downstream products.

By harnessing leading economic and trade forecasts, extensive maritime data and advanced analytics, maritime organizations gain immediate access to the information that they need right now, and will need 10 years from now.

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