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Anchoring Success
Effective Management
of Energy Companies'
Shipping Interests



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EXECUTIVE SUMMARY

For decades, major energy companies have been at the forefront of the global shipping of hydrocarbons. Producers have played an instrumental role in the development of all aspects of the business, including the design of the ships and the establishment of standards that ensure high-quality operational, safety, and environmental performance. However, shipping has often taken a subordinate role and even been viewed as a cost center as energy companies pursue broader goals, such as access to market, HSEQ (health, safety, environment, and quality) performance, and national industry development. As a result, energy company shipping assets have largely underperformed in commercial terms, and this has generally been accepted as a price worth paying by energy companies.

But pursuit of performance in an energy company's shipping businesses is consistent with its broader priorities. Indeed, given the shipping business's capital-intensive and volatile nature—and the consequent implications of underperformance—energy companies need to recognize that improving the commercial performance of shipping assets is a strategic imperative. Poor management of shipping interests can tie up hundreds of millions of dollars of capital unproductively. In time, energy

companies may abandon or scale back their legitimate interests in shipping if the business proves to be a black hole, and divert management talent, focus, and capital to competing priorities.

A systematic approach to strategy, operations, measurement, and organization can position energy companies to reap major benefits from their shipping assets, ensuring efficiency, profits, and synergy with broader strategic goals.

KEY HIGHLIGHTS

- Most major energy companies maintain in-house shipping capacity, though the scope of their commitment varies.
- The shipping divisions of energy companies often do poorly in terms of commercial performance; the shipping divisions of international oil companies (IOCs) and national oil companies (NOCs) have comparatively low returns on capital.
- It is imperative to expect high standards of commercial performance from shipping interests. Not holding such high standards is not only value destroying; it can compromise energy companies' primary strategic reasons for maintaining shipping capacity.

THE GROWTH OF THE SHIPPING INDUSTRY

The shipping industry has evolved in step with the development of the oil industry, ever since the use of wooden barrels for oil transportation in the 1850s and the Nobel brothers' creation of early models of the single-hull oil tanker in the late 1870s.

The size of tankers has grown markedly since the middle of the 20th century: Today's double-hull tankers and liquefied natural gas (LNG) ships are built for scale to transport large quantities of hydrocarbons from production sites to markets worldwide. Roughly 2 billion barrels of oil are transported annually by

ship, and the biggest supertankers can carry more than 3 million barrels of oil in a single load.

Throughout this evolution, energy companies have stayed the course and have been instrumental in the development of the shipping industry. Historically, major energy companies owned and operated at least some portion of their own tanker fleets, as a result of their interest in controlling the supply chains of their core product. As the shipping industry evolved, numerous independent shipping companies entered the market alongside incumbent energy companies, offering a viable alternative to energy companies' practice of owning and operating shipping assets. This maturity in shipping led to the natural commoditization not only of crude and refined product tanker shipping, but also of other trades, such as LNG shipping, that were once considered specialized.

ENERGY PRODUCERS REMAIN INVESTED IN SHIPPING

Energy companies are still committed to maintaining shipping capacity, although the degree of their involvement varies (see *Exhibit 1*). Energy company rationales for involvement in the ownership and management of shipping assets are typically linked to some combination of the five factors below:

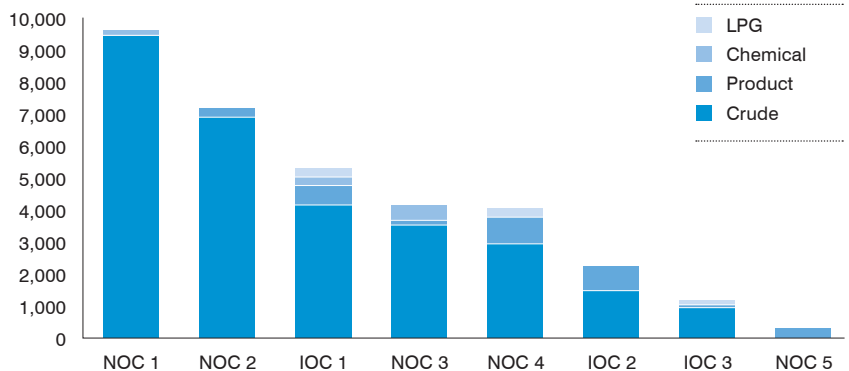
1. *Strategic coverage:* Maintaining control over shipping capacity is a significant consideration, especially

for NOCs in geopolitically unstable regions. Access to markets ensures business continuity and sustenance during periods of emergency.

2. *Volume commitments:* Because NOCs typically have a higher percentage of CIF deliveries than FOB deliveries, they have a greater volume commitment and baseload shipping capacity requirement.

Exhibit 1
A Representative Sampling of Energy Companies' Transport Capacity

DEADWEIGHT TONS (IN THOUSANDS)



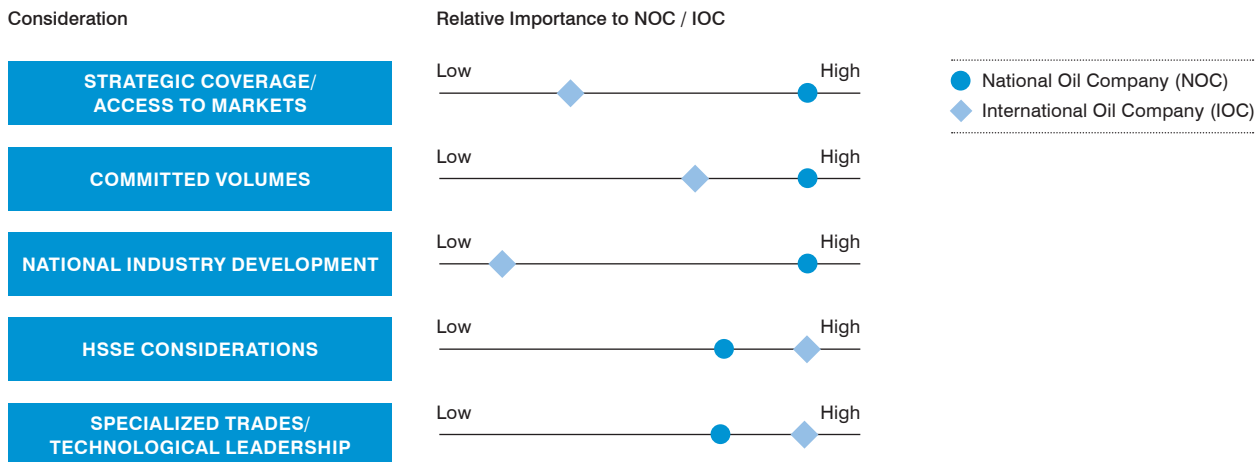
Note: Excludes LNG fleets.
Source: Clarkson Shipping online data, June 2009; Booz & Company analysis

3. *National industry development:* Shipping presents some producer corporations with an opportunity to expand and diversify their countries' domestic economies, and provides an avenue to create local employment and develop local skills.

4. *HSEQ considerations:* For IOCs that face strict regional regulations and public pressure in addition to international regulations, control over shipping provides a greater ability to manage risks by adhering to health, safety, security, and environmental rules that protect the primary hydrocarbon business.

5. *Technological leadership:* IOCs that are involved in highly specialized technological trades, such as LNG shipping a decade ago, can use control of shipping to position themselves less as commodity suppliers and more as end-to-end solutions providers.

*Exhibit 2
Strategic Considerations Will Vary by Company*



Source: Booz & Company

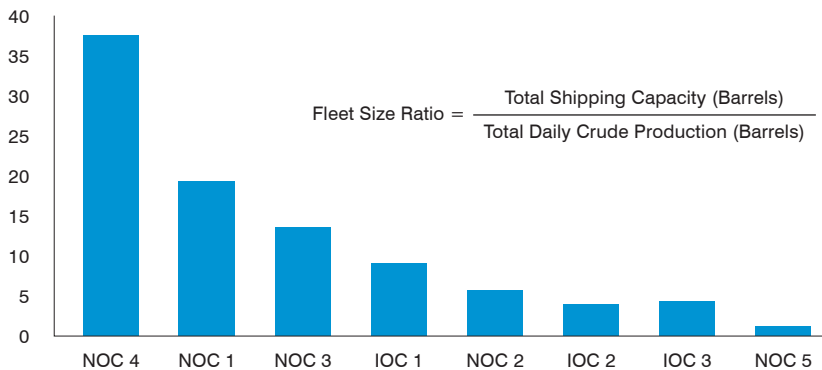
There are no definite prescriptions for how energy companies should rank these five strategic considerations (*see Exhibit 2*). In fact, energy companies should develop their own priorities depending on their unique circumstances. As a result, setting industry-wide benchmarks for fleet size and operating models holds little value; each company will have different goals.

A more nuanced observation from our experience, and one that is much more problematic, is that some strategic considerations are explicitly recognized, whereas others are not. For example, many NOCs recognize that strategic coverage, or access to markets, is a vital consideration (*see Exhibit 3*). However, other key considerations—such as national

industry development—either are not formally recognized or are so vaguely alluded to that they are not meaningful in terms of shipping strategy development. As a consequence, there is often confusion throughout the organization regarding the true goals of shipping and how to evaluate its subsequent performance.

Exhibit 3
Energy Companies Maintain Varying Levels of Strategic Coverage

RELATIVE FLEET SIZES
(REPRESENTED IN TOTAL DAYS OF DAILY PRODUCTION)



Source: Clarkson Shipping online data, June 2009; International Energy Agency crude production figures; Booz & Company analysis

THE CASE FOR FOCUSING ON COMMERCIAL PERFORMANCE

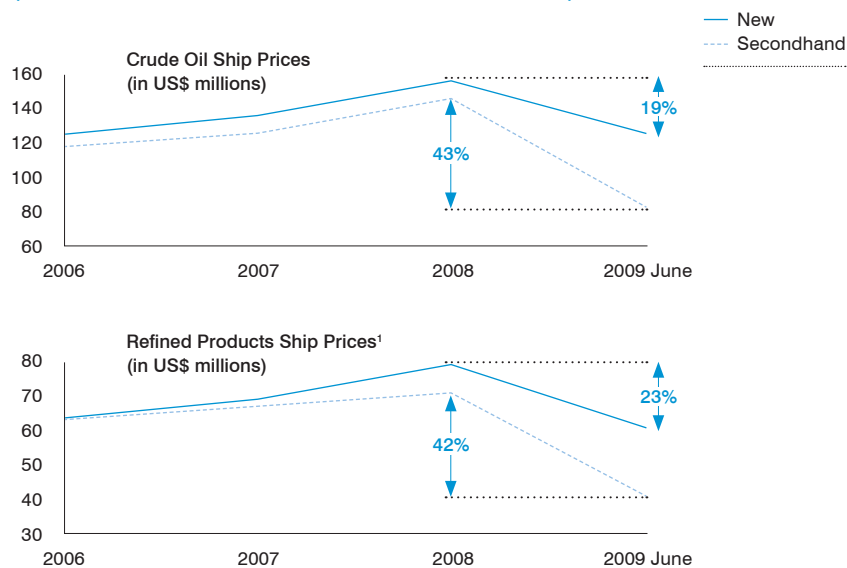
The shipping divisions of energy companies often do poorly in terms of commercial performance: Booz & Company analysis reveals that the shipping divisions of IOCs and NOCs have comparatively low returns on capital. This is primarily because management often views shipping as a cost center. The shipping company is relegated to an operational support area with limited autonomy in decision making. The lack of emphasis on commercial results also provides little incentive to innovate or improve efficiency from within. Many key decisions (ship acquisition and sales, shipping revenues, ship utilization, ship availability, head office costs, and ship management approach among them) are made with only limited consideration of their impact on shipping returns—all such concerns are largely

subordinated to the real and perceived needs of the parent corporation.

Unfortunately, this approach does not take into consideration the fact that the shipping industry's financial dynamics can be unforgiving to halfhearted participants. There are two major sources of value creation (or destruction) in any shipping operation: assets and freight. Both can be extremely volatile, and the impact of incorrect decisions, or even just the wrong timing, can be very material. For example, the cost of a new very large crude carrier (VLCC) at the market peak would have been in the region of US\$170 million. In June 2009, it would have been between \$100 million and \$120 million (*see Exhibit 4*). Freight markets can also move radically. The average time char-

Exhibit 4
The Cost of Tankers Varies Widely

VESSEL ACQUISITION COSTS (NEW BUILDS AND FIVE-YEAR-OLD SECONDHAND VESSELS)



¹ Using Aframax as a proxy
Source: Clarkson Shipping online data, June 2009; Booz & Company analysis

ter rates for much of 2008 hovered above \$80,000 per day; the rate has since dropped to \$30,000 per day (see Exhibit 5). The consequence of being locked in at the wrong end of these deals is starkly obvious.

As seen in the examples of VLCC costs or the fluctuation of freight rates, the stakes are high, and the threat of value destruction very real. As a result, it is not an option but rather an imperative to focus on maxi-

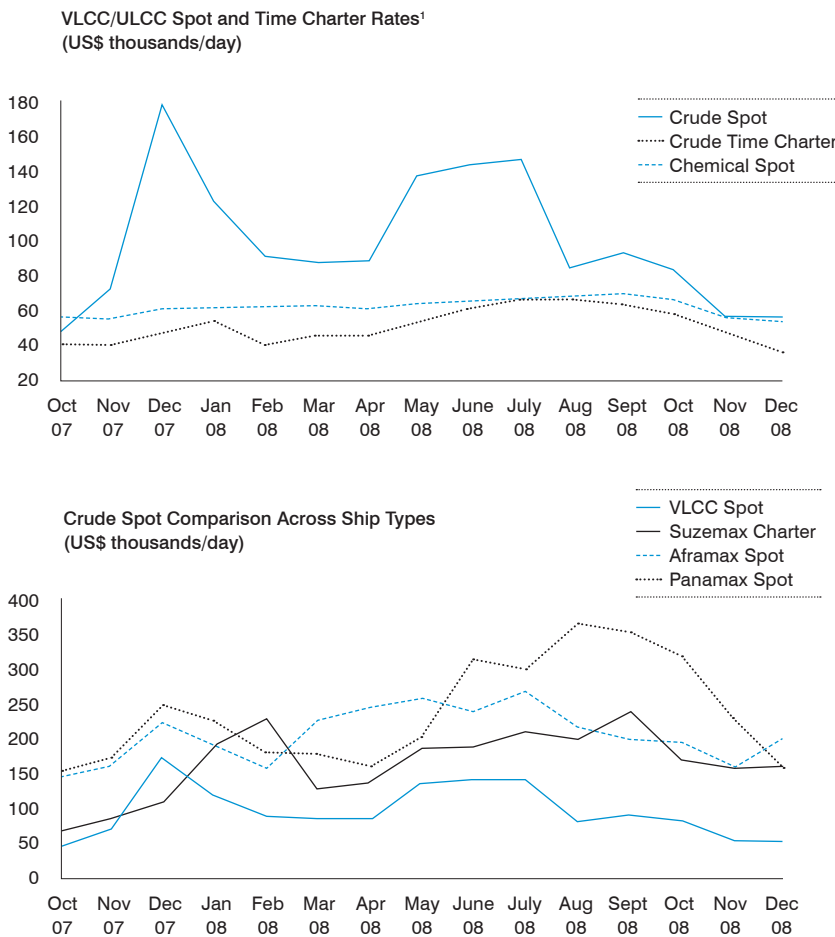
mizing performance in the shipping arena. In doing so, energy company management must address and dispel three main concerns and misconceptions involving the shipping business.

Concern 1: The pursuit of commercial performance diverts management from its core purpose of supporting the strategic aspirations of the parent company.

This need not be the case. Any beliefs to the contrary arise from executives'

taking the strategic considerations of their company not as directional aspirations but as firm mandates. The former approach lays out the boundary conditions that the shipping division must meet, while giving the division flexibility in how to meet them. The latter approach, lacking in adaptability, would not be responsive to fast-moving markets, whether in oil or shipping. Internal energy company criteria can rarely be defined so minutely as to dictate inflexible com-

Exhibit 5
Shipping Players Must Be Alert to Volatile Freight Rates



¹ Based on 310,000 DWT D/H modern tanker. Rate quoted for a 300,000 DWT vessel until 12 Sep 2008. Source: Clarkson Shipping online data; Booz & Company analysis

mercial decisions by the shipping divisions. There is a significant element of subjectivity in all general decisions, enough to warrant a large degree of strategic flexibility for shipping divisions, and through it the pursuit of commercially viable performance.

Concern 2: Energy companies cannot do a good job of commercially managing their shipping interests.

Contrary to popular belief, energy companies should have an easier task and do a better job of managing their commercial performance than would an independent shipping company. The reason for this is the relative abundance of capital within the parent energy company, which affords the best-managed oil divisions the privilege of taking a much more strategic view on market trends and having the financial muscle to make bold, value-enhancing decisions; independent shipping companies, by contrast, may have their hands tied owing to capital constraints. For example, not many shipping companies currently have the resources to buy assets at today's

depressed prices. However, an energy company with a long-term strategic interest in building its shipping fleet might find the next few years an ideal time to do so for commercial sustainability in the long run.

Two key components affect the profitability of shipping interests of energy companies. The first is capital decisions, including the timing of acquisitions and sales, decisions related to buying new or used vessels, and the selection of shipyards. The second is revenue; making sound freight market decisions and maximizing vessel availability will ensure that companies realize the full revenue potential of their shipping assets.

It is important to note that the biggest sources of value creation or destruction in shipping are minimally related—if not unrelated—to actual vessel operations and consequent HSEQ risks. Commercial performance can be easily achieved without any increase to the risk or compromise to the reputation of the parent energy company.

Concern 3: The pursuit of commercial performance does not contribute to the achievement of energy companies' primary strategic goal.

The pursuit of commercial performance can be complementary to the achievement of the strategic goal on several fronts. For example, commercially well-managed shipping divisions are highly regarded by the parent company and find it easier to get support for initiatives that fit with the parent company's strategic goals. In addition, an energy company with shipping assets that consistently perform well in the market will feel little pressure to abandon its legitimate strategic interests in shipping—which might be the case if the parent company views shipping as a black hole in terms of its capital. Finally, a well-managed shipping operation finds it easier to attract the brightest talent from the industry and from the parent company, increasing the likelihood that its success will be sustainable.

Energy companies should have an easier task and do a better job of managing shipping interests' commercial performance than would a third-party company.

MANAGING PERFORMANCE

Management can operate shipping divisions efficiently and contribute to the parent company's strategic goals by taking a systematic approach to addressing challenges in four major areas—strategy, operations, measurement, and organization.

Analytic and Dynamic Strategy

In most cases, energy companies' shipping divisions need to revisit their strategies to ensure overall coherence. The first step involves determining the explicit strategic considerations of the shipping division, which will also include institutionalizing implicit strategic considerations.

Once the organization has defined its overall strategy, it should prioritize

the timing, setting parameters for what needs to be accomplished and when. Finally, once these strategic goals are clearly defined and set, it is imperative that they be articulated in the mission, vision, and values statements of the organization. This will ensure a common understanding throughout both the parent company and subsidiaries.

A hypothetical example of an NOC seeking to establish its strategic coverage requirements during an emergency illustrates how important it is to define and institutionalize strategic goals. An energy producer seeking to ensure it can deliver an ample supply of oil during a crisis would begin by answering three questions: What are the planned export volumes during emergencies?

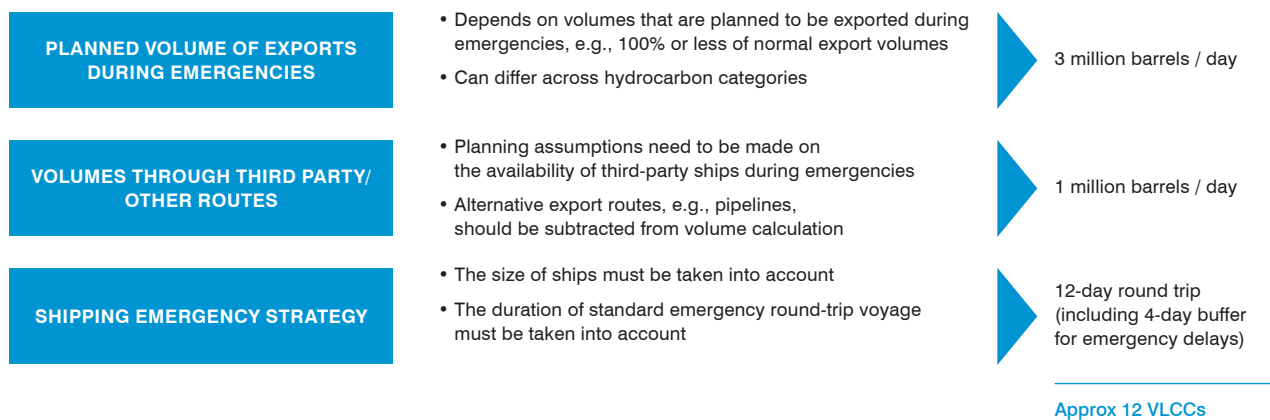
What volumes would be handled by third-party shippers? What is the existing emergency shipping strategy?

The first question identifies the volume of crude that the NOC would need to export to sustain critical public service obligations, such as defense, public infrastructure, public transportation, health care, and nutrition. The second question calculates

the volume that the NOC could offload to others. The last question requires the NOC to determine the number of ships that would be needed to carry the remaining volume not covered by third parties. The NOC would pinpoint the size and type of vessel it would need and the minimum voyage duration it would require to transport its volumes outside the emergency zone.

To further extend that example, consider a company that requires 3 million barrels of oil a day to satisfy its planned volume of exports and can use third-party shippers to handle volume of 1 million barrels a day. If that NOC had a 12-day round-trip plan (including a buffer to get its shipments out of harm's way), a strategic analysis would reveal that it needs approximately 12 VLCCs to continue to operate (*see Exhibit 6*).

Exhibit 6
An Example of Analytic Strategy Setting



Source: Booz & Company

Once a base fleet strategy is set, it is critical to keep this strategy dynamic, recognizing that the operating environment is not static but evolves continually. Just as energy companies adapt their hydrocarbon strategies to changing market environments, so should their shipping subsidiaries.

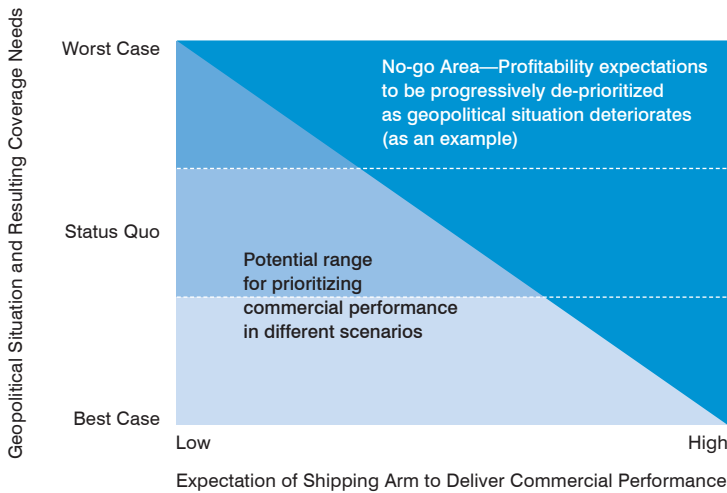
For example, in a tense geopolitical climate experiencing full-scale active conflict, commercial considerations can be abandoned entirely. At the other end of the spectrum, if the geopolitical situation is not dire, the shipping subsidiary of an energy company can seek to reap shipping

profits and maximize asset returns (see Exhibit 7).

Clear and Efficient Operating Model

There are two overarching objectives for shipping operating model clarity

Exhibit 7
Managing Trade-offs Between Commercial Expectations and Strategic Objectives



Source: Booz & Company

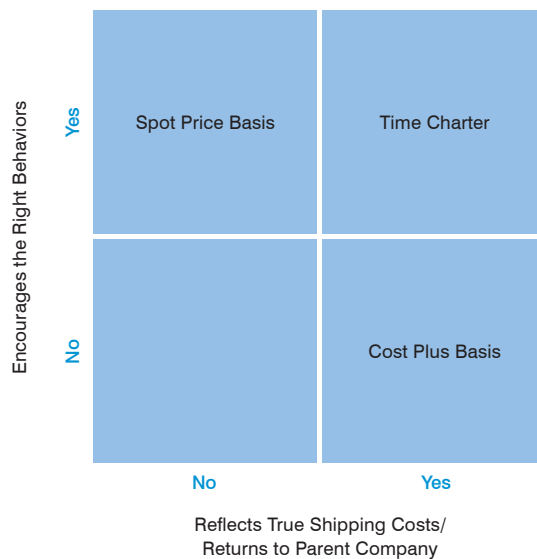
and efficiency. The first objective is to put the goals of the enterprise, or parent company, first; a shipping subsidiary always is aimed at driving the results of the parent company, not of itself (i.e., “enterprise first” behavior). The second objective involves a fair recognition of the performance of the business, the

transparency of costs, and returns on shipping assets. These twin objectives manifest themselves in several operational areas, such as the commercial arrangements between the parent company and the shipping arm for the use of shipping assets, decisions on the operational and office footprint of the shipping division and their

associated cost implications, and the overall ship management approach.

The objectives of enterprise-first behavior and fair market value can be addressed to determine commercial arrangements between the parent company and its shipping arm for the use of assets (*see Exhibit 8*).

Exhibit 8
An Example of a Framework to Guide the Commercial Relationship Between the Parent Company and the Shipping Subsidiary



Source: Booz & Company

In this illustrative situation, compensating a shipping division for its costs incurred plus a fixed margin (cost plus) for hypothetical revenues would meet the objective of providing transparency in shipping costs and returns, but would fail in the encouragement of enterprise-first behaviors, as the shipping division

has limited incentive to manage its costs or revenues.

Similarly, compensating a shipping division for the prevailing spot price for vessel fixtures would encourage the right behaviors all around, but would not give a transparent assessment of shipping costs and

returns, as it ignores the fact that the parent company has already made the shipping investments and locked in capacity, and spot price fixtures could therefore be an inaccurate simulation of true shipping returns.

In this particular example, a time charter based on prevailing market

Enterprise-first behavior and an accurate reflection of asset costs and returns should be the guiding principles of the relationship between the parent company and its shipping arm.

prices or a relationship on similar terms between the parent company and the shipping arm could both encourage right behaviors and give a fair reflection of shipping returns. The shipping unit would be encouraged to simulate responsible management because its payments are market linked. And this arrangement recognizes the fact that the asset commitments have already been made, and thus effectively simulates shipping returns for the parent company.

Accurate and Effective Metrics

Performance management is critical, but it is often used by organizations

as a mere reporting tool. In fact, a performance management system that is closely aligned with a company's strategy provides leadership with the right level of detail and insight into the organization to manage its performance actively and efficiently. In turn, this drives the right balance of strategic and tactical behaviors across the organization.

Performance management, however, can be a daunting task. A number of key principles can help management guide the business.

1. Break down the strategy into measurable components—such as coverage, HSEQ, cost, revenue,

employees, social responsibility, and customer satisfaction.

2. Identify performance indicators for each component that will provide senior management with the most appropriate level of detail to determine whether the organization is achieving its strategic and commercial goals. Indicators should link to measurable targets that are assignable to a responsible individual.
3. Ensure that these indicators form the basis of conversations between the leadership of the shipping division and the parent, and between the management and leadership of the shipping division. The fre-

Performance management is critical, but it is often used by organizations as a mere reporting tool.

quency of discussions will ensure that leaders on both sides (parent and subsidiary) have the ability to intervene and mitigate any critical problems, if necessary.

4. Tie the indicators to individual performance appraisals and rewards, strengthening effective consequence management.

Building Blocks of the Organization

The final challenge for management concerns building an organization that will achieve high performance—fusing together five discrete capabilities:

Organizational structure. The right structure will drive accountability and transparency throughout the organization. From a structure perspective, a

clear delineation between corporate, operational, and support activities is particularly paramount.

Process efficiency. Clearly mapped processes and clarity on decision rights for individuals and groups (e.g., committees) help smooth interfaces and increase organizational efficiency. The most critical decision-making process in this business involves the use of capital—timing the purchase or sale of ships and deciding whether to invest in new or used ships, for example. The speed and efficiency of this process is key to the long-term commercial sustainability of the shipping business.

Human capabilities. Having the right quantity and quality of people, with a focus on employee development, is a key component of organizational sustainability. Energy company ship-

ping units need to focus on hiring, empowering, and retaining senior and middle management to ensure that they have the right mix of strategic and operational expertise.

Technology. Having appropriate fit-for-purpose technology platforms to aid the execution of the business improves organizational flexibility and responsiveness. Companies need to determine where they really need automation and focus their investments in discrete areas.

Key interfaces. The shipping company should be organized in a way that provides clarity on the relationships with important constituents of the parent company, particularly those in supply and trading functions as well as special project coordinators and corporate strategic planning departments.

CONCLUSION

For too long, shipping divisions have not played a central role in the corporate strategy of many IOCs and NOCs. Top commercial performance in the shipping divisions of energy majors is not an option; it is an imperative that can be achieved. Energy producers need to realize that shipping operations can enhance strategic goals. Furthermore, with a systematic approach to managing

performance, energy companies can nurture top-quartile performance from their shipping operations while reaping the benefits for the parent corporation. Continuing to regard these operations as a corollary business is likely to result in a huge missed opportunity that can prove to be severely detrimental in the long run in terms of strategy, finance, and impact on people.

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