

MARSH



THE IMPACT OF RISK ON NATIONAL OIL COMPANIES

EXECUTIVE SUMMARY

Today's national oil companies (NOCs) control nearly 90% of the world's known oil reserves, but face a myriad of risks arising from the occurrence of both man-made and natural events in their exploration, production, refining and shipping/distribution chains. Given their dominance in supplying most of the world's energy needs, Marsh believes that it is vital that these companies – both for their own benefit as well as for global economic stability – enhance their understanding and mitigation of risk.

In February 2007, Marsh convened the first-ever global risk advisory meeting of the world's leading national oil companies. At that meeting, approximately 250 participants from nearly every continent looked at the current state of NOC risks, and the results of the conference were illuminating. While NOCs recognize the need for appropriate levels of protection against potential losses, they overwhelmingly acknowledged an inability, at present, to fully assess the total scope of their risks and proactively mitigate losses through advanced risk management techniques.

Marsh convened this forum in order to help NOCs more fully understand their protection needs, as well as to bring into focus the need for companies in this space to strengthen their risk mitigation with insight and initiatives that extend beyond merely obtaining appropriate insurance coverage.

Recognizing the need to continue convening the top risk managers of the world's NOCs, and to share best practices in both the use of insurance and other risk mitigation techniques, Marsh is also announcing its intention to sponsor and lead a second annual risk advisory conference for NOCs in early 2008.

INTRODUCTION

There is no denying the fast growing importance to today's global energy market of the national oil companies. As leaders at the forefront of an evolving industry, NOCs have more ability than ever before to shape the market in ways that have worldwide impact. Likewise, global market trends will undoubtedly change and influence the business of NOCs in major ways. NOCs control the majority of the world's carbon resources, and looking at oil and gas reserve holdings, 14 of the world's top 20 upstream oil and gas companies are NOCs.¹ Clearly, some of the risks that these companies face are risks that energy consumers ultimately face as well.

And those risks are significant. They range from controllable: safety procedures at a refinery; to uncontrollable: the threat of hurricanes; to vastly broad and geopolitical: the desire for environmentally-friendly energy sources. In this kind of environment, it is vital that NOCs understand not just the types of risks they face and the associated financial impact, but that they think about and address these risks *strategically*. With so much of the world's resources in their hands, NOCs have a significant opportunity: to limit the world's energy risks by mitigating their own business risks.

To look at one example of a major risk, we can examine climate change and the accompanying growing demand for environmentally friendly energy sources. We need look no further than today's front pages to see how much this issue has become a part of the zeitgeist. And, it presents a multi-faceted risk:

- > **Operational.** Companies with oil and gas production resources in the Arctic are facing new challenges due to loss of permafrost; and rigs and platforms are at risk due to increasingly severe weather patterns that result in hurricanes like Katrina.
- > **Political.** Regulatory standards are becoming tougher and tougher around the world.
- > **Reputation.** The public is demanding greater social responsibility on this issue, and companies who cannot pass the test are feeling the effects.



MAJOR RISKS AFFECTING GLOBAL LANDSCAPE

From a wide-angle lens, today's business leaders are facing growing challenges that are massively complex. That's why our firm is always working to identify these challenges and the risks that accompany them, because the first step in the risk mitigation process is discovering precisely where companies' risks lie. For NOCs and indeed all major business leaders, there are three major imperatives that should inform our understanding of today's risks:

- > **An interconnected global community.** Simply put, the "butterfly effect" has never been more real. What happens in a remote corner of the world affects a company across the globe. This means that we need to broaden our scope when we assess risk – disruptions in a supply chain can have bottom-line consequences for companies in other countries and on other continents.
- > **The need for efficiency.** With the advent of the digital age, global business has become ruthlessly efficient. But this means that even minute disruptions can have disastrous effects. When operations, communications, or investments cannot take place instantly, they may cause severe problems.
- > **A focus on short-term performance by investors.** Today's environment is all about competition, and any indication of who is winning that competition – the release of quarterly operating results or the slightest fluctuation in stock price – has instant consequences. And these pressures are not going away. But by bowing to them, business leaders risk forgoing long-term strategic planning – a dangerous proposition.

NOC-SPECIFIC RISKS

With these global imperatives in mind, NOCs need to understand the risks that they face specifically as members of a critically important industry. To that end, Marsh convened the first ever NOC-specific global risk advisory conference in February. The Dubai conference allowed for discussion of topics like knowledge transfer among NOCs, governance, measurement of enterprise-wide risk, and operational challenges tied to cross-border investments. Marsh also polled attendees, which included NOC leaders and advisers from across the world, to get a better sense of how risks are viewed and understood by the audience.

We asked attendees to rate the relative importance of a number of different risks that NOCs face. The top five resultsⁱⁱⁱ:

1. **Availability of Oil and Gas Resources:** Access to and availability of reserves to ensure continuity of supply and meet growing worldwide demand for oil and gas.

2. Recruitment and Retention of Qualified Workforce: The inability to develop, recruit and retain an appropriately qualified/skilled workforce, including the potential impact of societal changes on local culture.

3. Political/Regulatory Risk Issues: The potential adverse impact of decisions driven by constituent political groups, e.g. state intervention, expropriation, lack of legal clarity. Financial implications of new and existing laws and regulations (both national and international) affecting operations.

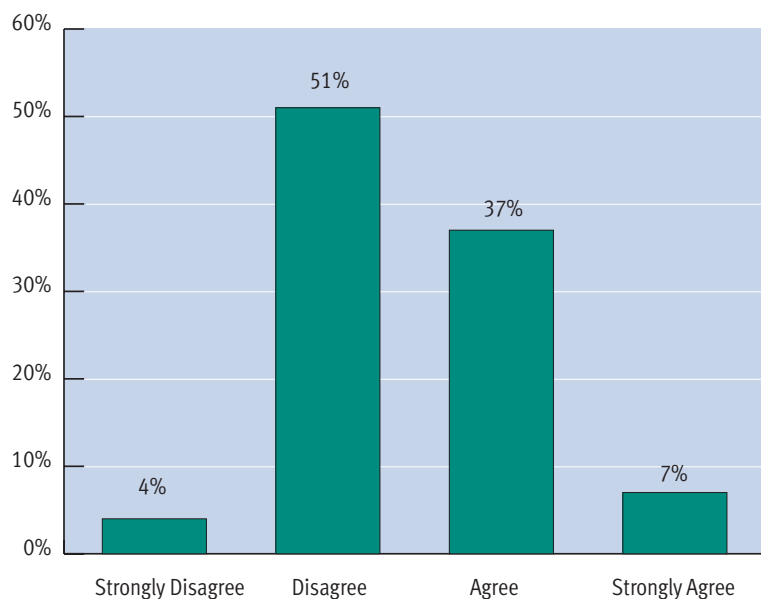
4. Environmental Impact of Operations: The impact of climate change on the oil industry, and impact of operations on the environment.

5. Infrastructure and Development Obsolescence: Financial implications of constructing, maintaining and upgrading systems and structures, such that they continue to meet required technical standards and existing proposed usage requirements.

In addition to finding out what the specific risks are, we also wanted to determine the level of understanding that NOC leaders have about these risks. Here are our major findings:

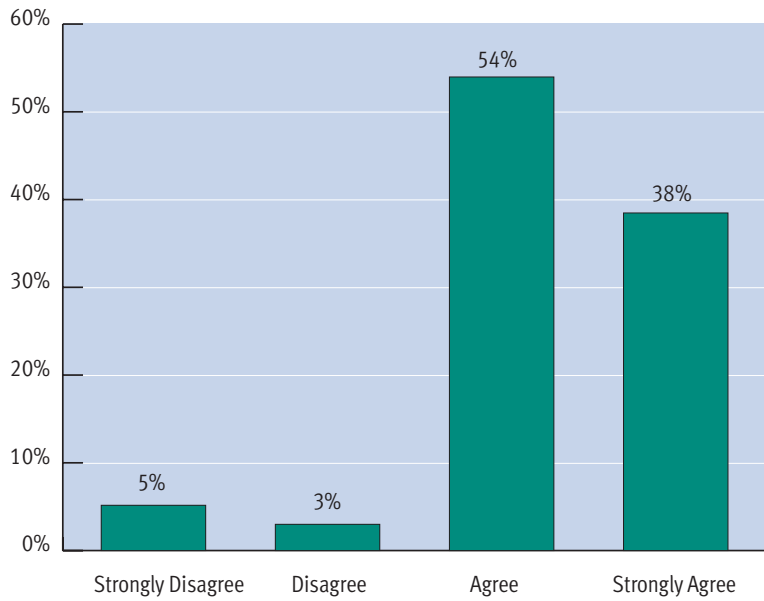
1. Risk is poorly understood by many NOCs. When attendees were asked if they fully understand their company's risk tolerance and how it can be used to manage risk, just 7% said they had a full understandingⁱⁱⁱ. This lack of understanding among industry members who control nearly 90% of the world's oil reserves indicates the need for a risk management forum within the growing NOC community, as well as further debate and sharing of best practices.

Do you fully understand your Company's risk tolerance/risk appetite and how it can be used to manage risk?



2. NOC leaders have a desire to understand risk better. Not only is there a need for a forum focused on risk management, there is a desire for one. 92% of respondents agreed that there is a need to share best practice within the industry^{iv}. 99% located in the Middle East agreed.

Do you agree that there is value in developing an NOC risk management forum for debate and sharing of best practice?



Saudi Aramco ran a break-out session that strongly supported the desire for best-practice sharing:

- > When asked to respond to the statement, “I believe I have sufficient ways to exchange views,” only 38% agreed, and no one strongly agreed.
- > When asked whether NOC’s wanted to involve service providers such as brokers and risk management consultants in a leadership, facilitation and participative capacity, 96% agreed to advisor involvement.
- > Three quarters believed the proposed risk management forum should be global rather than regional, and the majority agreed that it should be held on an annual basis. It is in response to this request by clients and prospects that Marsh is once again hosting a global risk conference for NOCs in 2008.

INNOVATIVE RISK MANAGEMENT

So, what can be done in the face of these challenging and misunderstood risks? A lot, it turns out. Large companies like NOCs can benefit greatly from asset and liability protection, as well as strategic risk mitigation. This unrivaled combination of global risk management services is unique to Marsh, and at the heart of our core competencies.

Companies have always been reliant on insurance carriers to protect their assets in the case of disasters. Damage or destruction of a company's operational competence can negatively affect its business just as seriously as character defamation, and the events that can cause damage are unpredictable: from floods to data loss to terrorist attacks. To be sure, having the right protection is a vital barrier to entry in the competitive marketplace.

But finding the right way to transfer and finance risks increasingly requires innovation and strategy. It's important that NOCs look for the kind of insurance brokerage services that can provide them with the best *total* coverage. And they should look for a provider whose services are constantly being improved to increase protection, limit cost and streamline process. For example, we pioneered the integration of multiple protection policies, as well as financial exposures in unique packages designed to protect a company in the long term.

As the risk environment changes, it is no longer enough to just have the right insurance policies. To gain a competitive advantage, companies need to strategically mitigate their risk in new and innovative ways. By leveraging in-depth knowledge of a company's risks as well as industry expertise, a trusted risk advisor can help to mitigate exposures across all levels of a company, and even look at outside forces like stakeholders and influencers. The end of this process oftentimes results in the smart transfer of risk to the insurance markets.

By thinking about risk strategically, companies can complement risk transfer with proactive internal steps, like operational improvements, that mitigate risk. The point being this: while liability protection is certainly fundamental, the least expensive claim is the one that is never filed.

THE DIFFERENT FACES OF RISK

For any company seeking to mitigate its risk, a first step is assessing and evaluating those risks. But before getting into specific risk drivers, it is helpful to first separate risk into two main categories: controllable and uncontrollable.

Controllable risks are those that you can limit or reduce by changing something about your business. For instance, in many markets, the costs of worker injuries has risen dramatically, and could mandate a new approach to the human capital risk area. Instead of merely investing in insurance, companies need to be proactive about assessing worker injuries, asking where they come from, how much they cost, and if they can be prevented. Controllable risks like these can be mitigated *before* a claim event takes place.

For NOCs, a key controllable risk is the recruitment and retention of qualified workforce, identified as a major issue by our conference participants. But NOCs need to think beyond their employees missing work. They need to think strategically about issues like:

- > **Placement practices.** Are you putting the right people in the right jobs?
- > **Workplace environment.** Do your safety programs adequately protect your employees and prevent injuries?
- > **Employee administration.** Do you have the right technology to find potential employees and administer programs once they are hired?

For NOCs, there are several important uncontrollable risks that need to be mitigated. But in speaking with our conference attendees, two of the most important areas were:

- > **AVAILABILITY OF OIL AND GAS RESOURCES** (access to and availability of reserves to ensure continuity of supply and the ability to meet growing worldwide demand for oil and gas); and
- > **POLITICAL /REGULATORY RISKS** (adverse impact suffered that is attributable to decisions driven by constituent political groups, e.g. state intervention, expropriation, lack of legal clarity, etc. and financial implications of new and existing laws and regulations, both national and international, affecting your operations).

> **Employee productivity.** Are your employees as productive as they could possibly be?

> **Diagnostics.** Do you know what your employees' level of satisfaction is, and the areas in which management needs to improve?

But many of the scariest risks are those companies cannot prevent – uncontrollable risks like hurricanes or disease epidemics. When looking at these risks, preparation is paramount. In addition to having the right protection in place, companies need to have crisis management procedures at the ready that will help alleviate the fallout. By thinking strategically in areas like property risk control and business continuity planning, companies will be ahead of the game when a crisis hits their industry. So while they cannot control the event, they can control its impact on their business.

In looking at these two major areas, NOCs need to think about the following issues:

> **Resource Availability.** Do we have the resources necessary for implementing strategies to mitigate risk and control costs?

> **Ability to Meet Demand.** What is the risk of not being able to fulfill a spike in consumer demand for our products? What contingency plans can we put in place in case of a spike?

> **Brand Reputation.** What is the risk to your brand if an incident occurs along your supply chain? Will there be consequences beyond the financial, insurable ones?

> **Industry Regulation.** Do we understand the regulatory challenges facing our industry, and are we analyzing the impact those challenges will have on our business.

> **Political Changes.** Are we actively analyzing political trends and thinking about long-term political changes that may impact the regulatory environment for our industry?

The bottom line: insurance is great first aid in the event that something goes wrong, but a strategic approach to risk management allows you to stay healthy in the first place.

A local shipping company discovered that one point in their supply chain involved transporting all of their goods across a single bridge. There was no contingency plan set in the event that something happened along that route, or if the bridge was destroyed or blocked due to forces beyond the company's control. Once this risk was realized, the company was able to map out an alternative route as well as a crisis management plan.

STEP-BY-STEP PROCESS

In beginning the risk management process, Marsh recommends a three-step review of your risk lifecycle:

1. Risk identification and assessment. Do a 360-degree review of your companies' potential risks. Determine not only where your liabilities lie, but also what creates value for your business. Think about your operational risks, financial risks, political risks and reputation risks.

- > A risk assessment can include a thorough review of documents, in-depth interviews with company leaders and stakeholders, as well as gathering of industry-specific knowledge.
- > Diagram your value chain so it shows every point of potential failure.
- > Dig deep to go beyond just insurable risks.

2. Risk quantification and prioritization. Decide what your risk priorities are based on your company's needs, past experiences and operational requirements. Which of the risks you have identified will have the greatest impact on your company? And what will that impact be?

- > Realize that these can be extremely personal choices – it is an internal process that varies from company to company.

3. Risk treatment. Once risks have been identified and prioritized, you can come up with a course of action to transfer as much of your risk to the insurance market as possible. But because you now understand your risk, you can also implement strategic risk mitigation practices as well.

- > For some companies, uninsurable risks – like damage to reputation – will be their highest priority. Instead of insurance, strategic management practices must be put in place to protect these assets.

It is crucial to understand that no matter how well-prepared a company is, disasters can still occur. Because of this, the way in which you respond after an unexpected event is as critical as how you prepare for the possibility of risk.

After identifying and assessing their risks, a shipping company prioritized their number one risk as loss of life – an occurrence that was seen as unacceptable by the CEO. In order to mitigate that risk, the company conducted an in-depth study to determine where and how employees were being injured on company vessels. They studied injury patterns and looked at potential dangers in order to design and implement safety training programs for employees.

A major energy client, with significant assets in the northern hemisphere, undertook a comprehensive risk assessment and prioritization exercise. Previously, the subject of climate risk had only been an abstraction for them. When they began to consider the potential impact of climate change, they quickly realized they had massive exposures. Many of their facilities were situated either on areas of permafrost or in proximity to the arctic ice shelf, therefore the potential thawing induced by climate change presented significant new risk. Once they understood this risk and prioritized its potential impact, they could then turn to treatment.

WHERE DO WE GO FROM HERE?

In utilizing this in-depth process, companies have the opportunity to redefine the way they look at risk. By elevating their risk management process to be more strategic, companies will be tapping into a key insight: in risk lies opportunity.

With the proper risk management techniques, potential liabilities can actually be transformed into a competitive advantage. One beneficial business outcome of the risk management process is to be prepared to continue operations when competitors are not. Companies that are prepared will have a distinct advantage.

The energy industry, and the oil sector in particular, is no stranger to risk. However, new risks are emerging all the time. For many NOCs, these risks are relatively unexplored, which means there is a large opportunity for companies to distinguish themselves with risk management practices that consider the full risk spectrum. For example, many NOCs face the same risk of being unable to provide enough oil in the face of a spike in demand. That means that if one company were able to adequately prepare for this risk event – perhaps by investing in additional reserves or having other contingency plans in place – it would have a huge opportunity to leverage.

Or maybe, while other companies are focused on operational risk, one firm investigates the political risks of entering a certain market. By doing a thorough risk assessment and analysis, that company may be able to enter a market that others cannot. This type of risk intelligence can be invaluable in an industry where emerging companies are seeking to expand their operations in the most lucrative markets.

This approach allows companies to look at the upside of risk. This is a fundamental paradigm shift: it necessitates that we go from seeing liability to seeing opportunity, and strategy flows from there.

One large energy company had a bad reputation as a polluter and was lacking credibility on environmental issues.

The company created a new environmental push – a high-profile plan to cut its own greenhouse-gas emissions and boost environmental technology spending. But, they did not undertake the program solely to boost their reputation or influence the regulatory environment: they did it because it made good business sense. By offering environmentally-friendly products, the company is helping its customers respond to increased regulatory pressures. They identified an uninsurable risk, and then realized that their customers were likely facing the same risk – a business strategy that has already proven successful.

NEW STRATEGIC APPROACH

But in order to manage risk effectively and use it to create advantages, companies need to alter risk's place in the management system and the way in which it is considered and processed. Risk must be elevated to and incorporated into the highest levels of business strategy.

Risk transfer and insurance purchasing should be the last step in a long process of risk assessment, prioritization and treatment. Instead of looking at risk as a necessary burden – simply the cost of insurance – companies need to incorporate risk into their business strategy in the broadest sense. The first two steps in the risk management process – assessment and prioritization – are every bit as important as the last step, treatment. Without a disciplined review of your company's total risk, and a quantification and prioritization of risk, it would be impossible to manage it effectively. That is why successful risk management is more than a tactic, but a strategy.

2008 MARSH NATIONAL OIL COMPANY CONFERENCE

The importance of these risk management issues to the world's NOCs demands a forum for discussion. We are pleased to announce that we will hold the second annual Marsh National Oil Company Conference in Dubai in February 2008.

Similar to this year's event, the conference will look at vital industry issues, including knowledge transfer among NOCs, governance, measurement of enterprise-wide risk, and operational challenges tied to cross-border investments. The aim of the 2008 conference is to continue the dialogue among NOCs about the risk challenges they face and their strategic capabilities in dealing with those risks.

As key forces in the global energy market, it is critical that NOCs understand and mitigate their risks. With a new strategic approach, NOCs not only can improve their business, but also help ensure that the world's energy needs are met successfully and safely.

85% of 2007 conference participants said they would attend another Marsh conference next year.



www.marsh.com

¹ <http://www.rice.edu/energy/research/nationaloil/index.html>

² Polling reference

³ Polling reference

⁴ Polling reference