Risk management for sustainable profits

The E&P sector faces a steeply rising risk curve due to a combination of increasingly complex field development projects, rising country risks, highly volatile commodity prices and unstable credit markets. Crispian McCredie *and* Ruud Weijermars*, *Alboran Energy Strategy Consultants, argue that sustainable profits are generated by those companies with the most rigorous risk management framework.*

The oil company of the future must be a champion in risk management for the full range of strategic as well as operational risks in order to maintain the support of the public, policymakers and investors. Some of the topics that require attention to reduce the risk of eroding support for the oil and gas business are rooted in communication on performance issues, which are only now beginning to be addressed.

Figure 1 highlights a non-exhaustive inventory of the corporate decision-making areas ranging from the strategic to the operational project management level within the E&P environment. Any corporate risk management framework should address risks at all levels in the organisation. A potential gap in risk management integrity may arise when perceptions of risk management responsibilities vary amongst the managerial layers in the organisation. It is therefore critical to clearly identify which functions bear responsibility for the proactive monitoring, assessment and decisions related to the management and mitigation of the various levels of risks. For example, overall risk management is a corporate responsibility, but operational risk management must be delegated to the project teams.

Responsible project risk management

The Chief Risk Officer (CRO) has the ultimate responsibility for designing and implementing an active risk governance structure, and planning and setting up intelligent crisis management in the organisation. To manage risk means establishing a range of probabilities associated with the possible outcomes – especially focusing on the mitigation of future events that may have a negative impact. This requires identification of the full spectrum of potential risks, assessing the probability that each risk should occur, and quantifying their impact on the company's performance. The oil and gas community harnesses some of the world's leading experts in decision-making for field development projects under uncertainty. Deterministic and probabilistic estimates of subsurface parameters are now routinely used to establish the size of hydrocarbon resources, thereby reducing the level of uncertainty.

However, sources of risk with a strategic component may affect all projects in the company portfolio and must be proactively managed at corporate level. Examples highlighted here are reputational risk, country risk, price volatility risk, credit rating risk and portfolio risk.

Reputation risk

Project failures at the operational level may severely impact the corporate reputation of oil and gas operators, especially when the safety record of operations, human health issues and care for the environment are compromised. For example, BP has seen its risk of operational failures rising with a string of accidents – a major explosion at the Texas City refinery, with fatalities; an Alaskan pipeline explosion; the Thunderhorse production platform capsizing; and the 2010 blowout of the Macondo well and subsequent collapse of the Deepwater Horizon drilling platform, involving 11 deaths. Reuters reported in March 2012 that a rough calculation of those costs, based on estimates from analysts and some previously paid items, could put the total bill at over $65bn if the judge finds BP to be grossly negligent – a contention that BP strongly disputes. The judgement was expected in September 2012.

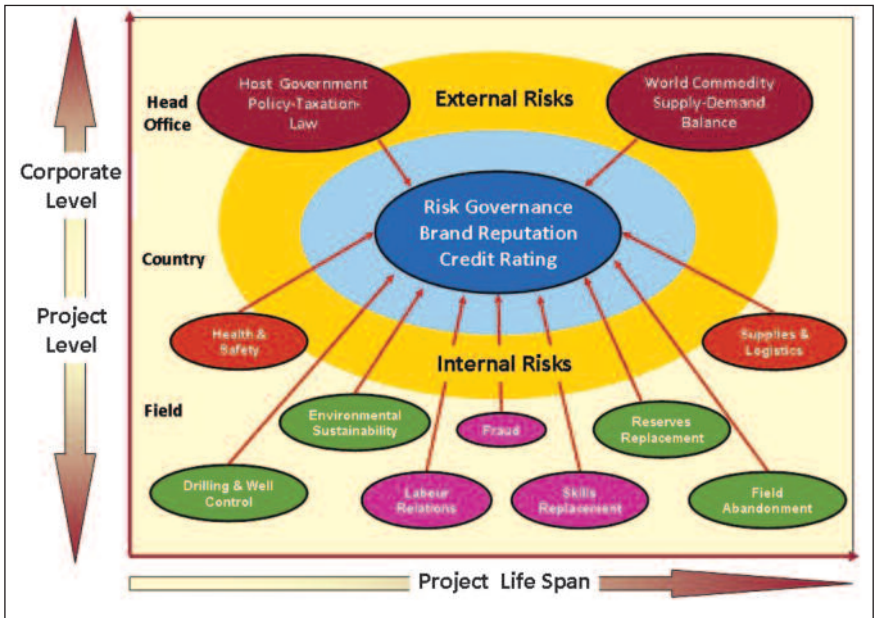

Figure 1: Corporate risk management at different managerial levels

An energy company's reputation can be impaired when environmental issues dominate in any number of project activities, ranging from the Canadian tar sands to the potential for water contamination as a result of shale gas extraction. Public outcry has led to shale gas drilling moratoriums over time in Upstate New York, France, the UK and Bulgaria. As a consequence, the E&P enterprise of the future must work closely with policymakers and regulators to gain political support and project approval, as well as engaging local communities when drilling plans are perceived to impact them.

Country risk

Company assets may be adversely affected by risks associated with geographical location, ranging from the risk of taxation policies to asset disappropriation. Since the end of the Soviet era, nearly all major oil companies have sought to acquire and operate Russian oil and gas assets. The track record shows that Russia's country risk is substantial. ConocoPhillips exited Russia altogether in 2011, after years of struggling with its 20% Lukoil stake acquired for $7bn in 2004. The company sold 13% back to Lukoil for $5.8bn and 7% to smaller investors. In addition, it has written off substantial losses on its Lukoil venture over the years.[1] TNK-BP has also encountered major setbacks – from the abortion of the Kovykta gas field development to the failure of its joint partnership with Rosneft to develop the Arctic Basin, coupled with long-standing disputes with its 50% partner AAR.

In Nigeria, Shell has had a long history of problems of militancy and oil theft. It is now winding down some of its onshore operations. Shell's SEC 20-F return of March 2012 states that an erosion of the business and operating environment in Nigeria could adversely impact the company earnings and financial position. The risks specified by the company include security issues surrounding the safety of staff, host communities and operations, and the ability to enforce existing contractual rights; limited infrastructure; and potential legislation that could increase taxes or costs of operation.

Commodity price risk

The level of risk in terms of economic return of the resource is highly sensitive to volatility in commodity prices. Nowhere has the impact of price volatility been felt harder than in the US natural gas market over the past few years. US shale gas operators have seen wellhead prices dwindle from an annually averaged price peak of $7.74/mn Btu in 2008 to about $2/mn Btu in 2Q2012. This means that shale gas wells in fields that were previously assumed to be viable with rising gas prices are no longer economic. Hedging against gas price fluctuations has its limitation in times of prolonged price drops.[2]

The business impact of reserve downgrades will be severe on shale gas field operators. Previously proved reserves were recognised as collateral for credit transactions, but the downgraded contingent resources are not recognised.[3] This means that nearly all of the $430bn combined market capitalisation of US shale gas independents is at risk of becoming illiquid. With an unusually high average-gearing ratio (debt leverage) of 0.7, there is no feasible room left for any refinancing.

In the area of reducing performance risk, organisations must better understand the effects of market price swings on corporate performance and inform their investor community accordingly. Energy companies must strive to accelerate their innovation rate to bring down the time and hence cost of reserve growth and strive to secure access to new oil and gas resources. In August 2012, BHP took a charge of $2.84bn against the value of its Fayetteville gas assets, which it acquired in 2011 for $4.7bn.

Company credit risk

Strategic risks that should be mitigated at corporate level include credit risk. Failure to correctly assess commodity, country and reputational risk increases the probability of exposure to credit risk, as in many cases bank credit lines contain covenants related to share price and debt to equity ratios. Government regulation of minimum earnings for US transmission companies and utilities has limited their risk of exposure to transmission price volatility. However, overly-tight regulation of the returns on investment has a downside if rates are set too tightly.[4]

The low authorised cost of capital set for US energy transmission companies and utilities has increased the risk that the true cost of capital cannot be recovered from operational earnings by companies with low credit ratings. At the height of the credit crunch in 2008, the weighted average cost of capital (WACC) for El Paso, an integrated US energy company, became higher than its authorised WACC. El Paso's real cost of capital in 2009 was as high as 11.03%, while the authorised cost of capital was 8.15%. The gap of 2.78% between the real and authorised cost of capital could not be charged to end-consumers according to the regulatory principles (General Rate Case (GRC) method and Cost of Capital Mechanism (CCM)) adopted by most US states.[4] This forced El Paso to sell assets in order to cover operational losses. The situation was not sustainable. El Paso ceased to exist as a separate corporation due to persistent earnings shortfall and credit default. It is now a brand of Kinder Morgan.

Mitigating unbalanced risk

The rising risk exposure in the E&P business and need for effective mitigation measures are the result of accelerating changes taking place in the energy business landscape. **Figure 2** highlights how a corporate disconnection from the changing business landscape and industry's best practice commonly translates to a steep increase in the corporate risk profile. Such a disconnection does not occur abruptly, but evolves gradually due to a decline in the organisational learning capacity, of

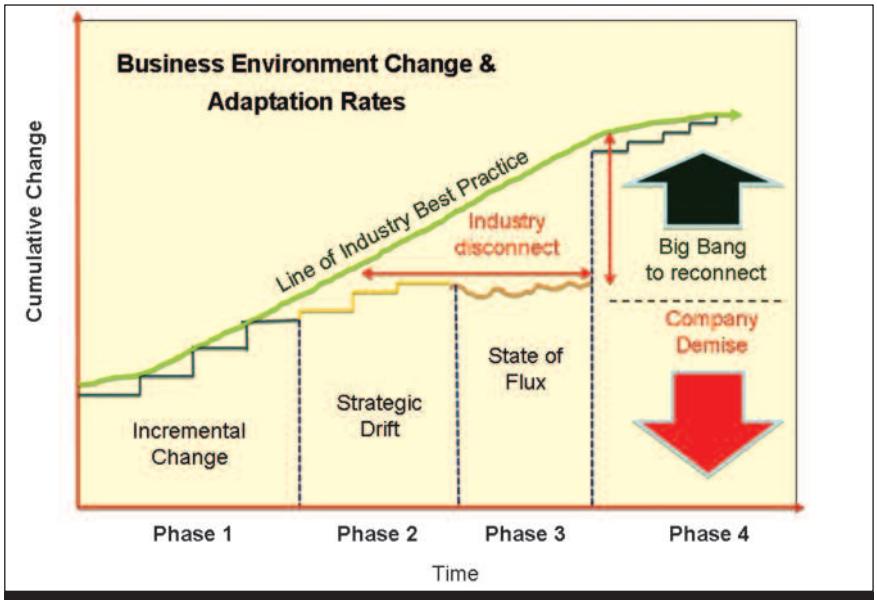

Figure 2: Corporate risk management must stay aligned with industry's best practice

which risk assessment is a key component. Corporate IQ development at all levels and accelerated corporate risk management must be in line with industry's best practice.[5]

When corporate learning ability is compromised, the company's inability to read risk exposure is reduced and accelerated performance deterioration occurs. As the company's risk profile increases to untenable levels, adverse events will start to impact performance. If the disconnect remains unrecognised and is not halted by management, the likely outcome is the eventual demise of the company. To survive, a major realignment of values must be undertaken (the Big Bang reconnect in **Figure 2**). The most important elements to prevent such disruptive Big Bang events remain: (1) generating creative solutions utilising intellectual capital to look at problems in unconventional ways, (2) analysing which project options and solutions are viable, and (3) adopting only the worthwhile projects where risk and opportunity are balanced and not adversely impacting the company's project portfolio.

The problem is that company's that have entered in strategic drift and flux often suffer from a progressive loss of common sense. Conscientious risk management and corporate learning that should be leading the change process are no longer critically monitored by the top management.[6] Such companies become increasingly out of touch with reality and they are progressively incapable of recognising the tell-tale warning signs of undue risk exposure.

Balancing risk and opportunity

The general principle that higher risk projects provide opportunities for higher returns on investment still applies to E&P projects. However, if a portfolio assumes a higher risk profile, the balance between risk and opportunity may become lopsided. The survivor companies of the future are not necessarily those companies which generated the highest profits in the past. In the long run, lower risk companies are likely to have better, sustainable returns on investment.

This non-trivial conclusion may just need a little bit more emphasis in today's profit-oriented E&P business culture. Lessons learned tell us that energy sector corporate failures are ugly and costly when the alignment process of the internal and external business environment become disconnected. Failures to correctly assess the corporate risk exposure will be increasingly expensive. As the industry is now exploring for reserve replacements in sensitive areas such as the Arctic and developing fields in countries without clear jurisdiction or a compromised legal recourse system, rigorous risk management has become more crucial than ever for generating sustained corporate profits. ●

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