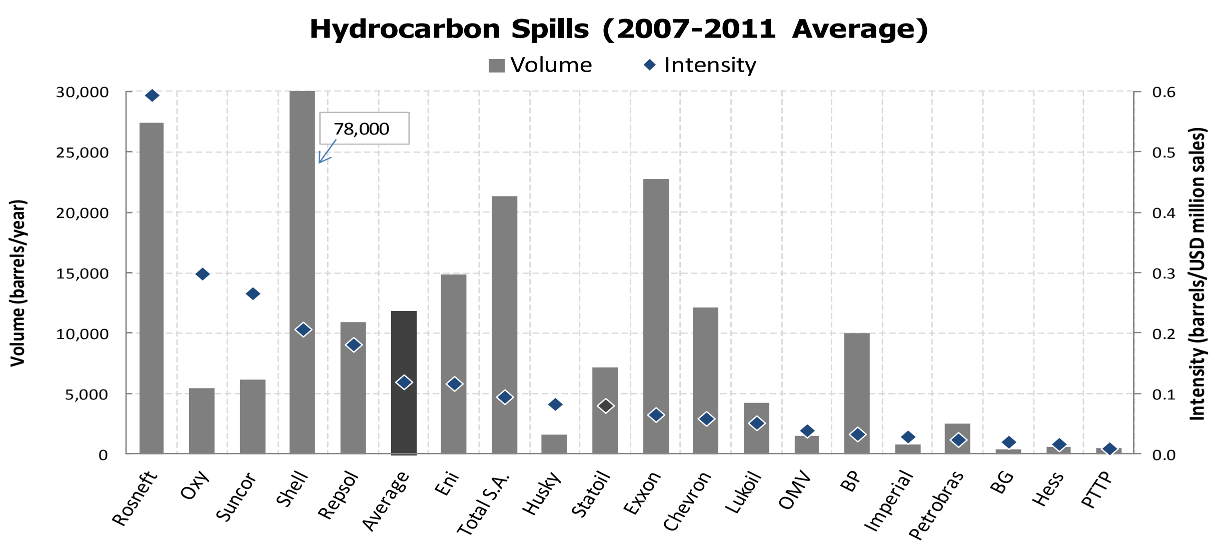
Large Oil Spills – the *Gordian Knot* for the Risk Taker?

By Yulia Reuter and Dana Sasarean, Senior Analysts, MSCI ESG Research

Despite global economic decline, oil prices have remained at a historically high level of roughly USD 100 per barrel[1], which has supported the economics of many unconventional petroleum projects. However, environmental liabilities and on-going operating costs in projects requiring assumption of greater operational leverage continue to grow, exemplified by clean-ups of marine hydrocarbon spills, water treatment costs in hydraulic fracturing, and tailings remediation in oil sands projects.

We highlight **Statoil ('AAA')**[2] and **BG ('AAA')** as best positioned in our integrated oil & gas coverage to manage associated environmental and social impacts, including such aspects as hydrocarbon spills. Conversely, we note concerns on **BP ('BB')** and **Chevron ('B')**, as we find these companies' high risk exposure to environmental risks is coupled with significant long-term evidence of operational failures.

Below we provide examples of the financial materiality of hydrocarbon spills, and comment on environmental risk levels undertaken by integrated oil & gas companies and the corresponding quality of risk management. Full details are available in the **MSCI ESG IVA Industry Report: Integrated Oil & Gas**, along with analysis of additional key ESG risk factors including health and safety, toxic releases, corruption, carbon emissions, and corporate governance.



Source: MSCI ESG Research, corporate disclosure, October 2012.

Notes: Figures do not include major oil spills, such as Montara, Macondo, and Frade. Ecopetrol, Galp, Gazprom, MOL, Murphy, Origin, PetroChina, Sasol, Sinopec and Surgut do not report spills. The average excludes Cenovus, whose reported spills include produced water.

[1] BP Statistical Review, June 2012: Average spot crude prices in 2011.

[2] MSCI ESG Intangible Value Assessment (IVA): On the scale from 'AAA' (best-in-class) to 'CCC' (worst-in-class), relative to industry peers we rate.

- **Large-scale, catastrophic events remain the biggest area of concern.**

Poor management of oil & gas infrastructure - pipelines, refineries, drilling rigs - could lead to blowouts, fatalities, fires, and large hydrocarbon spills with significant associated penalties and long-term financial liabilities. For instance, the high risk of environmental damage intrinsic to offshore deepwater oil & gas projects may lead to costly catastrophic events, such was the case with the latest major marine hydrocarbon spills off the coasts of Australia, US, China and Brazil over the last four years:

- Brazil, Frade field, off the coast of Rio de Janeiro, November 2011, estimated 2,600-4,000 barrels spilled: partial drilling ban for the operator Chevron. The company paid USD 14 million penalty to Brazil's petroleum industry regulator Agencia Nacional do Petroleo (ANP) and faces two civil lawsuits filed by the Federal Public Prosecutor for a combined USD 20bn.

- China, Bohai Bay, Yellow Sea, June 2011, 1,500-3,500 barrels spilled: 51%-share owner CNOOC and operator ConocoPhillips were fined USD 76 million and USD 192 million, respectively, by the Chinese State Oceanic Administration (SOA) for failing to report the spill for a month. A 23% stock price decline accompanied the disclosure of the spill by the SOA on July 5th until the recovery of the majority (85%) of the spill on August 19th[3].

- U.S. Gulf of Mexico, Macondo field, April 2010, estimated 4.9 million barrels spilled: Potential total costs to the operator, BP range from USD 38.3 to 55.8 billion. In the order of magnitude, our estimate includes: compensation claims, regulatory penalty, spill clean-up, pledges to research, tourism and seafood. Significant erosion of market value and profitability, temporarily suspended dividend, restructuring and asset disposition.

- Australia, Timor Sea (Northwest), Montara field, August 2009, estimated 150,000 barrels spilled: Operator PTT Exploration & Production is facing a USD 2.4 billion lawsuit over environmental damage filed by the Indonesian government and paid USD 0.5 million penalty to the Australian National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA). The company experienced a 20% stock price decline between the third unsuccessful attempt to plug the well on October 17th and eventually containing the spill on November 3rd.[4]

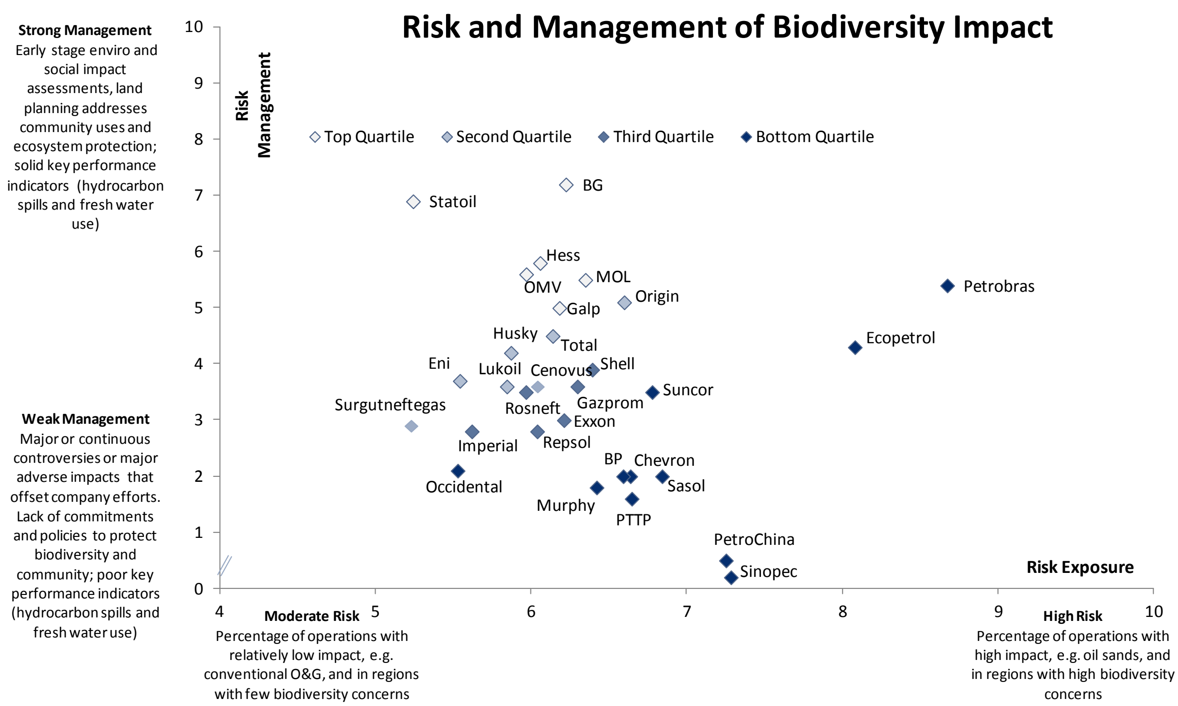
[3] Trading data for CNOOC Ltd on the Hong Kong Stock Exchange in Hong Kong Dollars (HKD): 5 July 2011 (HKD 101.32) to 19 Aug 2011 (HKD 78.08).

[4] Trading data for PTT E&P on the Bangkok Stock Exchange in Thai Baht (THB): 19 Oct 2009 (THB 111.68) to 3 Nov 2009 (THB 89.35).

- **With the growth of unconventional oil & gas reserves in the companies' hydrocarbon portfolios, and operations in sensitive ecosystems and jurisdictions with poor compliance standards, risk exposure may continue to increase.**

With increased appetite for complex and challenging unconventional oil & gas projects, including deep- and ultra-deepwater, oil sands, and shale oil & gas, especially those located in fragile environments such as the Amazon rain forests, marine/coastal areas, and the Arctic, we estimate an increased risk of spills and negative environmental impact.

For example, **Suncor** and **Ecopetrol**'s high exposure to risks of damaging sensitive ecosystems is driven by their respective operations in the oil sands basins and rain forests. Additionally, increased presence in regions with lax regulation and weak enforcement further elevate exposure to negative impact and financial liabilities. Overall, **Petrobras,** with majority of operations offshore and in eco-sensitive South American regions, runs the highest risk in the industry of damaging biodiversity.



Source: MSCI ESG Research, October 2012. Ranking results for the Biodiversity key issue include analysis of hydrocarbon spills.

Description: The x-axis indicates the companies' exposure to risks of incurring reclamation, compensation, and biodiversity protection costs, as well as operational disruptions due to regulatory or public opposition. The latter is typically based on the type of upstream project and proximity to areas rich in wildlife and natural resources, or to areas with fragile and unique ecosystems. The y-axis indicates management quality as assessed by commitments to minimize disturbances; protection of community land uses; community and biodiversity pre-assessments or baseline studies; reclamation activities; other programs to mitigate these risks, and such key performance indicators as hydrocarbon spills and use of fresh water.

- **Past performance regarding oil spills is the best available indicator of future management of elevated environmental risks.**

Although large spills with substantial material impact remain an obvious challenge for the industry, we see that companies are making efforts to prevent and reduce spills. For instance, the 30 global integrated oil & gas companies we analyzed (see names in chart above) have reduced the volume of spills to an average of 10,300 barrels in 2011 from the peak of 17,400 bbls in 2008 (this excludes major accidents such as Macondo and Montara). Over the 2007-2011 measurement period, the sector's average intensity stood at 0.12 bbls/USD million sales, somewhat higher than the 2007-2010 average of 0.09 bbls/USD million sales.

Statoil and **BG** are among the companies consistently adopting and implementing best practices and thus are most capable of addressing the risk associated with their core business - offshore oil & gas – and minimize their environmental impact and associated liabilities. **BG**, for instance, has achieved the lowest rate of spills at a fraction of the industry average at 0.02 bbls/sales. Among the supermajors, **Shell**'s hydrocarbon spills remain notable (average volume of 78,000 bbls/year over 2007-2011 and intensity of 0.21 bbls/sales); however, by 2012 the company has reduced spills in half since the peak of 2008/2009.

Despite these efforts by the industry, large-scale operational lapses remain a source of concern. Substantial historical oil spills reflect companies' inability to manage environmental risks and to prevent accidents with material consequences. We note that **PetroChina ('CCC')** and **Sinopec ('CCC')** show poor evidence of strong risk management systems to prevent and deal with potential accidents. Overall, we highlight concerns on **BP ('BB')** and **Chevron ('B'),** whose environmental track record is plagued with a long-term evidence of operational lapses.

Contact Us

esgclientservice@msci.com

Americas	Europe, Middle East & Africa	Asia Pacific
+1.212.804.5299	+44.207.618.2510	+612.9033.9339

Media Enquiries:

Martina MacPherson, MSCI, London	+ 44.20.7618.2231
Sally Todd | Jennifer Spivey, MHP Communications, London	+ 44.20.3128.8100
Patrick Clifford | Nick Connors, Abernathy MacGregor, New York	+ 1.212.371.5999

About MSCI ESG Research

MSCI ESG Research products and services are designed to provide in-depth research, ratings and analysis of environmental, social and governance-related business practices to companies worldwide. ESG ratings, data and analysis from MSCI ESG Research are also used in the construction of the MSCI ESG Indices.

For further information on MSCI ESG Research, contact esgclientservice@msci.com, or visit www.msci.com/esg

About MSCI

MSCI Inc. is a leading provider of investment decision support tools to investors globally, including asset managers, banks, hedge funds and pension funds. MSCI products and services include indices, portfolio risk and performance analytics, and governance tools.

The company's flagship product offerings are: the MSCI indices with approximately USD 7 trillion estimated to be benchmarked to them on a worldwide basis[1]; Barra multi-asset class factor models, portfolio risk and performance analytics; RiskMetrics multi-asset class market and credit risk analytics; MSCI ESG (environmental, social and governance) Research screening, analysis and ratings; ISS governance research and outsourced proxy voting and reporting services; FEA valuation models and risk management software for the energy and commodities markets; and CFRA forensic accounting risk research, legal/regulatory risk assessment, and due-diligence. MSCI is headquartered in New York, with research and commercial offices around the world.

[1]*As of June 30, 2011, based on eVestment, Lipper and Bloomberg data.*

For further information on MSCI, please visit our web site at www.msci.com

Notice and Disclaimer