

Chemical Risk Update — June 2011

The chemical industry is a processing industry based on the transformation, in one or several stages, of raw materials (oil derivatives, gas, minerals, natural products, or other materials) into more or less complex chemical products. The chemical industry is a global industry, highly regulated and largely cyclical. Companies in the industry manufacture a wide range of products for use in other major industries, including construction, packaging, chemicals, automotive, electronics, food manufacturing, and pharmaceuticals.

Chemical companies face a broad range of risk issues related to the very nature of their products and processes. Emerging issues—such as expansion in emerging economies, volatility of raw materials, increasingly complex supply chains, and an ever changing regulatory environment—along with more traditional concerns—risks of fires and explosions, workforce safety, and environmental liabilities—represent some of the financial threats to the success of chemical companies.

Market conditions affecting the chemical industry

Prevailing global market conditions in 2011 are favorable for the chemical industry and in line with those of the second half of 2010, driven by strong demand in Asia, a gradual recovery in North America and Europe, and a growing demand for products related to sustainable development. Restructuring efforts engaged by many chemical companies over the past two years, necessitated by the economic downturn, have led to stronger balance sheets across the board. As the economy is showing some signs of recovery, the industry is well positioned and is now focusing on growth through product innovation, acquisitions, and expansion in emerging markets.

The business environment in which most chemical companies operate is characterized by:

- a return, for most markets, to conditions close to those prior to the crisis, with the exception of the construction markets in North America and Europe;
- the continued rise of the Chinese economy and growth in emerging markets;
- significant volatility in the cost of energy and raw materials;
- new opportunities related to sustainable development (alternative energy, green chemistry);
- industry consolidation and an increase in M&A activities—large transactions as well as “bolt-on” acquisitions;
- increasingly strict regulations, notably in Europe (Registration, Evaluation, Authorization and Restriction of Chemicals) and in the U.S.; and
- ongoing efforts by most companies to improve productivity and reliability.



Factors likely to affect industry's outlook

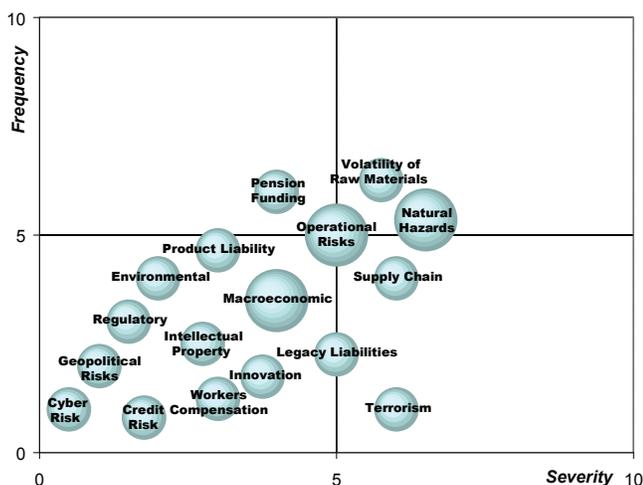
Some factors that may influence future results include:

- general market conditions on a global and national scale;
- growing environmental regulation and legislation;
- fluctuations in raw materials and energy prices, especially the price of oil and oil derivatives;
- fluctuations in interest rates and in currencies, particularly the U.S. dollar;
- capacity to introduce new products and develop new technologies;
- consolidation in the industry and concentration of customers; and
- political instability in some parts of the world.

Main trends affecting the chemical industry

- Ongoing expansion in emerging economies, especially in China
- Return of M&A activities, driven by portfolio restructuring and private equity firms
- Potential impact of regulatory changes, especially around the use of toxic substances and air emission
- Investments in product innovation and opportunities around sustainable development
- Focus on strategic sourcing including long term suppliers' agreement and business continuity planning
- Continuous improvement focusing on manufacturing performance and reliability
- Improved risk governance practices and broad focus on enterprise risk management

Baseline Risk Map: Specialty Chemicals



Top 10 risk issues to watch in the chemical industry

1. Emerging market risks especially in China (operational, health, safety and environment)
2. Impact of natural disasters (hurricane, earthquake, and flood)
3. Supply chain risks, including dependence on key suppliers and growing interdependencies
4. Product innovation, including nanotechnologies
5. New studies linking chemical substances to specific diseases or pathologies (i.e., cancer, autism)
6. Short and long term impact of restructuring efforts on own operations and suppliers
7. Exposure to toxic or hazardous substances (including toxic release, occupational disease)
8. Environmental liabilities from past and discontinued operations
9. Risks related to transport of toxic and hazardous products
10. Regulatory and compliance with changing regulations

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