

Geopolitical Risk: The Butterfly Effect and Black Swans



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Multinational corporations typically have processes and systems in place to evaluate and deal with risks around the globe. Companies dedicate significant resources to protecting their people and assets and often are effective at mitigating risks and responding to emergencies in any given country or market.

But there are more complicated situations that organizations frequently are not prepared to confront: events involving the dynamics of geopolitical risk — the complex interactions of multiple actors (both state and non-state) that develop either slowly or rapidly across international borders and markets. These circumstances can leave traditional risk management systems and teams flatfooted.

Unfortunately, geopolitical risk commonly is misunderstood by the very functions charged with safeguarding an organization's interests. Risk management tends to focus on country-specific risks — natural disasters, things that could go “boom,” changes in the political landscape that could affect a company's security arrangements or its ability to operate within a specific regulatory regime. But geopolitical risk is different. Even a regional conflict between two nations may not result in a geopolitical risk for an entity, especially if the conflict is contained. But other — seemingly remote political, economic or social — events can create a cascading series of responses and counter-responses that may lead to adverse impacts on a company's business operations.

Call it the Butterfly Effect, a phrase coined by mathematician and meteorologist Edward Lorenz to describe how a small change (like a butterfly flapping its wings in China on a Monday morning) in the current state of a complex system (such as

the world's weather) can produce a massive change in that system's future state (such as a hurricane in Florida the following Friday). A system in which a tiny input can produce a large output is defined as chaotic. That's the nature of the environment in which business is conducted today, and it is within that context that geopolitical risk must be managed.



The Butterfly Flaps Its Wings in the Ukraine; Australia Feels the Chill

A straightforward reading of the 2014 Ukrainian crisis would note the armed conflict between pro-Russian breakaway militia members and government forces, the effects on those hostilities on populations in the Crimea and Kiev, the downing of Malaysian Airlines flight MH17 (allegedly by Russian-supplied rebels), the Russian annexation of Crimea and the announcement of far-reaching sanctions against Russia by the West. All these events represented risks to assets and personnel. Managing those risks, while difficult, was relatively uncomplicated. But less apparent were the ramifications of the conflict months after the most turbulent fighting had ceased.

In Russia, the sanctions led to a wheat surplus in 2014. A bumper crop this year added to it. Consequently, Russia

launched an aggressive international marketing and pricing campaign in 2015, making its wheat so cheap that it affected trade on the other side of the globe. One of the markets aggressively targeted by Russia was Indonesia, a huge wheat importer. And Russia's efforts succeeded. Its inexpensive wheat took market share from Australia.

Thus, Russia's actions in the Ukraine in 2014 negatively affected Australia's wheat business in 2015 without any obvious connection between Crimea and Australia (although, perhaps not coincidentally, Australia was vocal in its condemnation of Russia, especially after the downing of flight MH17). But the (admittedly large) butterfly that flapped its wings in the Ukraine had created a tempest half a world away.

Another, less dramatic, example of the Butterfly Effect shows how corruption in a local government, in a country considered a stable market, led to unanticipated losses for a major investor.

The Australian state of New South Wales uncovered local government corruption in a mining venture. The state government revoked contracts and licenses, one of which was to a Japanese firm for an exploration project in which the company had invested millions.

Australia is known as a safe haven for business. The country ranked 11th out of 175 nations as the least corrupt in 2014, **according to the Corruption Perceptions Index**. The Japanese firm considered its investment safe. (There

was no suggestion the organization, or its executives, was involved in the corruption in New South Wales.) As a result, the company was caught off-guard and found itself with a severely impaired asset on its balance sheet.

Any risk management executive would have been hard-pressed to anticipate such an event. But the key here, from a geopolitical risk perspective, would be to understand that new risks could arise in this situation if, for example, the Japanese government had decided to retaliate against Australian companies or interests or if other Japanese firms had decided to pull out of their Australian investments for fear of similar occurrences. It is this range of potential reactions and counteractions that constitute the management of geopolitical risk.



Coping with Butterflies and Black Swans

A subspecies of the Butterfly Effect is the Black Swan. Predicting that Russia might flood markets with low-priced wheat or that an Australian regional government might cancel a large mining contract, is very difficult. In his book, *The Black Swan: The Impact of the Highly Improbable*, Nassim Nicholas Taleb describes Black Swan events as those that are unexpected; produce an extreme impact; and, although technically outliers, demand explanations and responses. By definition, Black Swans are rare. But given an increasingly complex and interconnected world, not only are they becoming common, but their impacts are more broadly felt. Companies with superior risk management antennae can make the unexpected less so. They can adopt a combination of methodologies that, adjusted to the corporate appetite for risk, can help the boardroom anticipate Black Swan event patterns and mitigate the effects.

But to do so, organizations first must understand that traditional risk mitigation approaches are inadequate to the task. Risk mitigation-as-usual focuses on events that can and do blow up but lacks the comprehensive outlook either to anticipate or track the aftershocks of the Black Swan or the reactions and countermeasures of a wide range of players that constitute the Butterfly Effect. During the hostilities in the Ukraine, for example, a multinational bank would have been wise to do everything it could to secure its sites and personnel in Kiev, and, indeed, any professional risk mitigation function would have endeavored to do that. But to mitigate geopolitical risk, that bank also would have needed to be attuned to what was occurring in international relations and domestic policymaking around the world. That broader view is necessary, especially (as proved to be the case) if the bank was invested in wheat.

The traditional model for evaluating a market's risks — PESTEL, which stands for the political, economic, social, technological, environmental and legal lenses through which the risk analysis is conducted — leaves out the actors that can influence commerce across borders. Many applications of the PESTEL model include only one company's perspective on a given situation and that company's business position as affected by the PESTEL inputs. But effective geopolitical risk analysis involves viewing a company's position from the perspective of competitors, opposition politicians, third-party entities and more. In other words, look inside out, not outside in. In geopolitical terms, the risk profile of a given market zone is only one factor in a thorough risk analysis. An executive can't simply ask, "What's the business climate in Papua, New Guinea?" The executive, and the risk management function, also must consider the company's industry, its business model, the company's entry and exit strategies, and so on.

A key aspect of Black Swan events is the propensity for geopolitical reactions to continue escalating long after the initiating incident. The 1984 gas leak from Union Carbide's pesticide tanks in Bhopal, India, for instance, caused

an immediate reaction that released a vapor cloud killing thousands of people. Over the next few years, hundreds of thousands more suffered from fibrosis, bronchial asthma and emphysema. While theories abound, it is widely believed that poor management and deferred maintenance expenditures contributed to the disaster.

Union Carbide paid \$470 million in 1989 to the Indian government to settle the victims' claims, yet the animosity and legal actions the event produced have gone on and on, with unpredictable reverberations. For example, a leaked 1991 memo by the World Bank suggesting that encouraging "dirty industries" to locate in developing countries because of lower health costs and wages would be economically efficient revived the ill feelings that surrounded the 1984 catastrophe. World Bank officials said the memo was "a **sarcastic response**" to an internal policy discussion and then apologized. But the disclosure likely solidified Indian perceptions (rightly or wrongly) that the disaster was caused by cost-saving measures in the areas of management and maintenance.



You Have to Think Big: Strategies for Coping with Geopolitical Risk

To account for geopolitical risk, multinational firms operating supply chains across many borders need a mindset broader than PESTEL affords. Consider the hypothetical situation below.

A global boot manufacturer that sources its rubber from Indonesia, leather from China, and stitching and assembly work in Bangladesh and sells the majority of its boots in the United States needs to be aware of events in all these zones, watching for risk signals. To account for geopolitical risk, the company can:

- Work to understand the local political,

economic and social factors affecting the business, not just in those jurisdictions but also in the regions that may impact those jurisdictions. Could boot soles containing rubber sourced from Indonesia become the target of a trade boycott or sanction if a dispute arose between Indonesia and China or Bangladesh or another jurisdiction?

- Attempt to anticipate the ramifications of multi-lateral trade agreements involving one (but not all) of the countries in its supply chain. For example, if a trade agreement causes the cost of Bangladeshi labor, or of Chinese materials, to rise, the boot manufacturer should be prepared to employ alternative labor and materials in anticipation of those market changes.

- Assess each country's and regional jurisdiction's perspective on where revenues, profits, expenses and value are being created or used in the supply chain and what political, economic, social, legal and financial implications these might have. The dispute between the European Union ("EU") and the United States over hormone treated beef, for instance, has not ceased since it started in the 1980s. EU restrictions on beef imports led to retaliatory tariffs imposed by the United States on a range of European food specialties. (Canada has its own dispute on the same issues.) In 2012, the EU had to settle the dispute before the World Trade Organization and agree to increase imports of non-hormone treated beef.

Any of the above conditions left unexamined and unplanned for could cause a geopolitical risk through the responses or counter-responses of stakeholders. Labor strife in Bangladesh could arise if wages are perceived to be exploitative due to the local media latching on to the fact that the boots assembled there costing \$10 for materials from China and Indonesia are sold for \$200 in the United States. Trade policies during a government changeover in Indonesia could influence the flow of goods and supplies. Tax policies and consumer demand

changes in the United States could lead the company to reduce what it pays to its suppliers. That could force those suppliers out of business, impair production and create a rebound effect on the company's cost of doing business.

Fortunately, the boot company's boardroom is not powerless in the face of these complex challenges. For example, management could diversify sources of rubber, leather, stitching and assembly. It could develop a range of prices for the product and make demand highly elastic, seek out new markets for the boots or make logistics increasingly resistant to shocks by using more than one transportation strategy to move supplies between links in the chain.

Diversification strategies are a robust vehicle for mitigating geopolitical risk. For instance, a *vertical diversification strategy* may be to find alternative sources of raw materials and inputs for a particular product or a service line to new customer segments and clients. Should a disruption occur at one end of the vertical spectrum, then alternatives can be readily switched. A *horizontal diversification strategy* might be as simple as a boot manufacturer also having other product lines to complement the primary one or additional products that could act as a hedge against cyclical market declines in boot sales. Another strategy is *conglomerate diversification* with a firm making a range of product lines under various brand names in multiple countries; e.g., different varieties of beauty, home, health, baby and pet products specific to the particular tastes of each domestic market. Should one sector or geography suffer a risk, the firm's other businesses or product lines may be unaffected.

The interconnectedness of global supply chains and finance makes the ripples of any one change fan out across the globe more quickly than ever before. That increases the importance of thinking about geopolitical risk. And it requires bolstering the organization that manages this function.



How to Approach Geopolitical Risk

Companies that effectively assess and manage geopolitical risk combine a range of methodologies depending on the company's industry sector and risk appetite. There are a variety of approaches, or lenses, employed by risk analysts in combination to manage geopolitical risk factors. Some techniques include:

- Graphing events in terms of their likelihood of occurring and their potential impact on business operations, followed by prioritizing risk mitigation efforts according to assessed levels of impact. This is the approach set out in the **ISO 31000 risk management standard**.
- Applying the PESTEL analysis of political, economic, social, technological, environmental and legal concerns.
- Examining Michael Porter's, respected Harvard Business School economic theorist (and, according to some, the father of modern strategy), **five forces** model of potential risks: the threat of new entrants; the threat of substitute products or services; the bargaining power of buyers; the bargaining power of suppliers; and the intensity of the competition. By adding the sixth force of the actions and reactions of state and non-state actors, executives might gain a more complete appreciation or wider understanding of the potential risks frequently encountered by their business.
- Applying a SWOT (strengths, weaknesses, opportunities and threats) analysis to each of Porter's five forces listed above.
- Injecting geopolitical analysis and scenario planning into risk assessments. The effects of geopolitical events can slip through the filters that otherwise might

mitigate or protect against certain risks. In these situations, today's risk management methodologies, often reliant on historic or predictable data and conservative assumptions, can fail when faced with raw uncertainties. Scenario analysis challenges a company's executives to consider external factors and the forces that can impact the business. Scenario analysts can run practice tests to see how systems react under stress or worst-case situations.

Scenario analysis is ideal for considering potential Black Swan events and various actors' actions and reactions. Used in conjunction with more formal methodologies, one can produce a wider set of strategic controls and mitigation systems for a global business.

Adding geopolitical risk and combinations of risk management approaches to the mix of considerations that the risk management function employs requires top management backing, as well as investment in the expertise necessary to carry out the analysis.

Global Black Swan events have shown that a risk management methodology can leave companies vulnerable. Geopolitical risk analysis, using techniques such as scenario analysis and modeling, which plan for worst-case situations, can better prepare organizations for such events.

Not only is the two-superpower world of the Cold War long past, but so is the largely hegemonic position

held by Western powers in international relations. Increasingly, multi-lateral structures, rising powers such as China and India, and non-state actors are emerging as forces to dispute the status quo. Renewed nationalistic passions in many countries and other political, economic, societal and technological shifts are testing and challenging international structures, institutions, norms and processes that otherwise might temper actions and reactions to events. As such, the world can seem unpredictable and volatile when you're not looking in all the right places.

Adding a set of long, wide-angle lenses to sense geopolitical risk and building antennae so you know when a butterfly flaps its wings on the other side of the globe represent not only a more potent risk management strategy — it's also a necessary one. ■

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