Winning in a Turbulent World

It isn’t your imagination. According to A.T. Kearney’s Turbulence Index, your operating environment is probably twice as volatile as it was 10 years ago. The Index offers direction in managing our era’s volatility.
There has never been an age when people did not marvel at the pace of change in their lives. If the acceleration of change in our era is not unprecedented, there has certainly been nothing like it for at least a generation. A.T. Kearney’s Global Business Policy Council has developed a measure of volatility that quantifies just how volatile our age has become.

Managing turbulence cannot be a one-time, crisis-driven event. **Expectations of high volatility must be built into the way we do business.**

Our Turbulence Index portrays an interwoven world economy in which the volatility of external conditions doubled from 1999 to 2011 (see figure 1). For strategic planners, operating environments became twice as difficult to predict, even in the near term. We call this “the 200 percent effect.” This picture of extraordinary volatility quantifies what we all know intuitively about the growing influence of externalities on senior executives and the companies they manage. A decade ago, variables such as currency fluctuations and input costs had half the impact on corporate earnings that they do today.

Figure 1
**The world economy is in an especially volatile period**

Sources: U.N. Food and Agriculture Organization, European Central Bank, International Monetary Fund, Chicago Board Options Exchange Volatility Index, Dow Jones-Union Bank of Switzerland Commodity Index; A.T. Kearney analysis
The Index illustrates the macroeconomic uncertainty, financial instability, and unprecedented thirst for resources in an age of unpredictable energy and commodity prices. But bear in mind that the Index does not measure prices. It measures the degree of price movements—their volatility (see sidebar: A Live View of Volatility). It offers a foundation for analytics that, if approached systematically, can guide choices about resourcing, investment ideas, and talent management.

Understanding Value at Risk

The Turbulence Index portrays volatility in a basket of externalities, including food, foreign-exchange rates, metals, energy, and publicly traded shares. High volatility in these areas is likely to stay with us for a long while. Translating that into detailed choices for specific companies begins by understanding the impact on profit and loss (P&L). The first step is knowing a company’s exposure to volatility risk, not just in general but in relation to explicit drivers of turbulence.

Tools for calculating value at risk were developed in the 1980s to measure investment portfolio risk amid the unstable financial markets that materialized late in that decade. For our own turbulent age, we adapted the logic of the value-at-risk calculation by broadening the externalities (which is to say, the volatility drivers) for specific industries, measured as a percent of earnings at risk.

A Live View of Volatility

A.T. Kearney’s Turbulence Index is a live view of volatility, a moving average that combines into a single index five international measures of price movements:

- The U.N. Food and Agriculture Organization’s Food Price Index, which consists of meat, dairy, cereals, oils, and sugar prices
- The European Central Bank’s foreign-exchange reference rates
- The International Monetary Fund’s index of commodity metals prices
- The Chicago Board Options Exchange (CBOE) Volatility Index, which measures market expectations of near-term volatility in Standard & Poor’s 500 stock-index option prices
- The Dow Jones-Union Bank of Switzerland Commodity Index (DJ-UBSCI) sub-index of energy prices for crude oil, heating oil, natural gas, and unleaded gasoline

Each element is equally weighted with a 20 percent value in the Index. Each is a variable, and these variables interact. Energy costs, for example, have an impact on food prices because petrochemicals are essential to fertilizer production. Energy costs also have uneven effects on currency exchange rates, depending on a country’s reliance on imported oil. These interactions are not always predictable and are often clear only in retrospect.

Looking at the Index, it is plain to see how volatility is excited by external events that impose themselves on several variables at once. Temporal factors such as war and natural catastrophes come into play. Consider the 2003 Iraq invasion’s impact on oil prices, the 2008 world financial crisis, or the effect of the 2011 Japanese tsunami on global supply chains.

Our Turbulence Index offers a glimpse at how connected the world’s economies have become and measures just how volatile our age is.

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Using publicly available information, we built a prototype cost structure for each industry and calculated the impact from the full range of index variables—reliance on commodities inputs, exposure to currency fluctuation, energy demand, even holdings in other companies and therefore exposure to stock-market volatility. We then looked at what these meant for specific industries (see figure 2).

**Figure 2**
Economic turbulence affects industries differently

<table>
<thead>
<tr>
<th>Industry</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>FMCG*</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Automotive</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Process and chemicals</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Pharma</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Professional services</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

*FMCG is fast-moving consumer goods.
Source: A.T. Kearney analysis

The impact of turbulence differs by industry. For instance, agribusinesses are subject to the full range of turbulence variables, automakers are sensitive to particular variables such as the price of steel, and a bank has minimal sensitivity to uncertainty because the cost of its principal inputs—labor and real estate—doesn’t fluctuate much, even over extended periods.

All industries are subject to variables they neither control nor influence, putting value creation and earnings at risk. This does not mean there’s nothing to be done.

### Prioritizing the Pain

Most companies have a formal understanding of currency risk. Others with a large commodity bias characteristically have a view of how price movements for a strategic input can affect them. Some model the impact of regulatory or macro-economic scenarios. But only a few understand all their potential turbulence drivers as a complex system.

Suren Chandrajit, CEO of True Value Solar, recently described how pivotal managing volatility has been to his company’s rise as Australia’s largest solar-panel retailer.² In addition to its agility

² “What Does it Take to be Australia’s Largest PV Retailer?” by Nigel Morris, Renewable Energy World, 8 May 2012
in responding to foreign-exchange movements and hedging to absorb commodity price volatility, True Value places singular emphasis on regulatory volatility. For True Value, a world in which regulation of renewables is still evolving is a turbulent place to pursue a growth strategy.

Other companies have also capitalized on a holistic view of value at risk. For example, a fast-moving consumer goods company introduced choice into its supply chain by doubling the number of qualified suppliers in Asia in the past four years. An international services firm took the dramatic step of abandoning annual budgets and now runs its business with a quarterly forecast. One global food company conducted a portfolio review and methodically trimmed volatile—and, as it happened, asset-intensive—businesses.

The point of these examples is that managing turbulence cannot be a one-time, crisis-driven event. Expectations of high volatility must be built into the way we do business. The Turbulence Index is a way to do exactly that, beginning with planning processes.

Pressure Testing Readiness for Change

No one can know what the future holds, but the message of A.T. Kearney’s Turbulence Index is that in this era, our knowledge is even less than what it used to be.

But remember what the Index does help us know: the nature of our vulnerabilities and a rough ranking of possible threats. By themselves, these don’t tell us what the future holds or what to do when it arrives, but they do help us navigate today and over the long term.

Even with imperfect knowledge, companies must be managed, and plans must be made. It’s all the more essential, then, that organizations pressure-test their readiness to deviate from plan. When no one knows how to be decisive, even near-term deviations can be paralyzing. For example, what protocols are in place for managing a big swing in the price of an essential commodity? Who has decision rights to take advantage of lows (or highs, for that matter) in the market? What are the protocols for environmental or geopolitical shocks, such as extreme weather or political upheaval? Are roles defined?

A good if sobering model is the airline industry, which has well-defined protocols for major crises. If an airplane crashes—a deviation from plan if ever there was one—the companies have procedures in place in which every step is spelled out down to the war-room participants and the condolence press release. As a prototype for managing volatility, it is unsurpassed.

Most planning processes are near-term in nature—a year out, typically, or perhaps a three-year rolling plan. Attempting to map an operating environment over any long-term horizon has always been risky, even when the range of probable outcomes was between 30 and 60 percent. It becomes even riskier when the range is between 30 and 200 percent, exponentially increasing the probability of missed opportunities and misdirected resources.

To spot threats over the horizon and, with any luck, unearth possibilities, it is common now for planners in large organizations to use data-driven modeling. But such models are limited by their dependence on historical data, which distorts their reliability in a world of fierce volatility. Worse, it subtly encourages an outlook that suggests the future will resemble the present, plus or minus 15 percent. Ask any Japanese manager since the 2011 tsunami if such a presumption holds up.

Planning in our age could become dominated by the “alternative futures” approach. Alternative futures model a range of plausible scenarios, such as a future in which the eurozone splits,
another in which China stumbles, another in which neither of these things happens but world
growth stagnates and prices rise. And maybe still another in which Europe recovers, viable
energy alternatives come on line, and oil drops to $40 a barrel.

Alternative futures make planners think about broadened horizons—five to 10 years out or even
longer. The objective is not to find a future to bet on because, in the age of the 200 percent effect,
all scenarios will likely be wrong in important ways. The idea is to pressure-test readiness for
whatever operating environment materializes, to compel the organization to ask: Are we ready
for volatility? Is the plausibility of a given event high enough and its potential impact substantial
enough that it must be explicitly addressed in the way an organization does business?

Supply-chain managers demonstrate agility by developing alternative sources:
for every source an understudy, for each material a substitute.

For a manufacturer of plastic products, looking at alternative futures could illuminate a volatility
risk in the supply of an essential resin, which might make it wise to secure direct access to the
resin or at least lock in prices by buying resin forward. Another manufacturer may realize its
vulnerability to currency swings across a range of futures. The response would be to move
production into the geographic regions where sales are made and thus decrease exposure
to forex volatility. In each case, there is a tactical and ultimately a strategic choice to be made
that balances defensiveness and flexibility.

Absorption and Agility Strategies

Not long ago, A.T. Kearney hosted a retreat for a client’s senior executives at which we introduced
the Turbulence Index and used it to prompt discussion about value at risk inside the client’s
business. Late in the day, the participants broke into working groups to exchange best-practice
ideas for dealing with value at risk from volatility.

Their responses fell pretty clearly into either “absorption” or “agility.” These terms, coined
by Donald Sull of the London Business School, describe options available to managers in
unpredictable operating environments.³ Absorption responses are defensive, designed to
make an organization less vulnerable to the shocks of high volatility and acknowledging the
inevitability of short-term deviation from plan. Agility responses create flexibility and resilience.
In addition to being long-term buffers, they are meant to capitalize on turbulence.

Agility is somewhat of a counter-strategy to absorption. In response to uncertainty, it emphasizes
flexibility. Supply-chain managers demonstrate agility by developing alternative sources: for
every source an understudy, for each material a substitute. In the soft-drink business, they call
this flex formulation: If the price of sugar goes up, they switch to high-fructose corn syrup.

Our experience with clients suggests that the concepts of absorption and agility are readily grasped by senior executives. As good absorption and agility strategies are put in place, earnings at risk should go down. The two kinds of responses are not mutually exclusive. With each, there are tactical and ultimately strategic choices to be made that balance defensiveness and flexibility. In a turbulent age, the burden lies in weighing their practical applications.

Making Volatility Management Sustainable

In the past few years, talk of “resilient organizations” has become a bit of a cliché, sparked perhaps by the seeming abruptness of the deep recession that began in 2008. But for at least two decades, organizational design has been evolving toward resiliency. Since at least the early 1990s, nimbleness has been elevated among management virtues. Levels of decision making have become compressed, and organizations have grown steadily flatter.

Our volatile age is accelerating the pace of change in the way we manage, function by function, portfolio by portfolio. Procurement, marketing, finance, operations, R&D, planning—every piece of the organization must adapt to volatility. One way of explaining this is the perceived need to make managing volatility a sustainable competency and not a one-off response to crisis. We argue for a codified response to volatility: Managing volatility must be written into the governance of an organization.

Agribusinesses, for example, take aim at their famously volatile supply-and-demand equation with an absorption strategy of owning and managing farms, asserting control over the supply chain. Vertical integration is an absorption response built directly into the organization’s design. In the same way, a preemptive concern for volatility should be embedded into a company’s talent-management practices. Among the credentials for strategic planners, for example, individuals should have a temperament for contending with volatility. They need the quickness and the nerves of traders on a forex desk. And like a trader, they need clear organizational protocols to give them a secure sense of how they are expected to manage risk.

The logical extension of this fixation on adaptability is reexamining the way organizational roles have conventionally been defined. It would not be surprising if a consequence of managing the new volatility is a reinvented role for risk managers. Risk management is usually conceived as a job of assuring that an organization stays inside the lines, and doing that depends on a rearward view of the world. In a generation, the role may have evolved in a more strategic direction, one that looks more forward than back.

Authors

Daniel Mahler, partner, New York
daniel.mahler@atkearney.com

Kevin McDermott, Collective Intelligence, New York
kevinmcdermott@collectintel.com

Martin Walker, senior fellow, Global Business Policy Council, Washington
martin.walker@atkearney.com
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For more information, permission to reprint or translate this work, and all other correspondence, please email: insight@atkearney.com.

Publishing Advisor: Wayne Boley
Editor: Patricia Sibo
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