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Measuring the Costs of Responding to **Business Risks**

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Understanding the costs of risk response is a critical yet challenging part of developing an effective enterprise risk management (ERM) framework that goes beyond the initial steps of assessing the most important inherent risks facing an organization. This article describes the direct and indirect costs associated with reducing risks through insurance, hedging, alliance formation, and controls implementation. By more thoroughly understanding and measuring the costs of risk-reduction strategies, organizations are better able to compare the net benefits associated with reducing risks to a level more in line with their risk appetites.

Enterprise risk management (ERM) is becoming an increasingly important aspect of managing a business in today's complex, dynamic, and intensely competitive global marketplace. Organizations assign the growing responsibilities to perform effective risk management practices to different positions, including management accountants and internal auditors. In 2004, for example, Larry White, then Chair of the Institute of Management Accountants (IMA®), noted that "all management accountants need to understand [enterprise risk management] work so they can help their companies analyze and manage financial and operational risk."[1] Not surprisingly, there are a growing number of consulting firms and share forums to assist organizations seeking best practices for understanding, assessing, and managing the risks faced in achieving strategic objectives.

Implementing an ERM framework often moves along fairly smoothly as executives identify and assess the top inherent risks (i.e., risks prior to responding to them internally) facing their organizations. The process often breaks down at the point of deciding the proper allocation of resources in response to the risks faced by the organization (i.e., risk responses). Such responses enable organizations to reduce inherent risks to a lower level, commonly referred to as residual risks. Existing ERM models, including the Committee of Sponsoring Organizations of the Treadway Commission's (COSO's) *Enterprise Risk Management—Integrated Framework*, provide excellent guidance for organizations in early ERM

stages, which include understanding and assessing inherent risks. Yet these models are less clear regarding the stage where risk responses are selected and analyzed collectively. In this article, we examine one of the key—although often ignored or underutilized—steps to capturing the full potential of ERM: incorporating the costs of risk response.

The quantification of risks and responses is complicated by various measurement issues, including the organization's determination of an appropriate time horizon and its definition of costs within the risk management process. For example, an unexpected event that causes an adverse impact on an organization's profitability also may have a negative effect on its cash flows and stock price over an extended period of time. One recent study found that public companies announcing a supply chain disruption between 1989 and 2000 experienced an average abnormal stock return of negative 40% over a three-year period starting one year prior to the announcement date.[2] Stock price volatility for these same firms increased 13.5% in the year following the announcement, reducing shareholder returns and providing evidence that the companies did not recover quickly from the negative effects of the disruptions. Therefore, the costs of risks and their associated responses can be incurred over several years and impact numerous stakeholders. We will discuss examples of and challenges to estimating both the direct and indirect costs associated with the most common risk-response options, which is critical in selecting the most appropriate responses.

Estimating the Effectiveness and Net Benefit of Risk Responses

Assessing the effectiveness of a risk response requires measuring both the benefit and cost of the response. A basic ERM framework should also emphasize the identification of multiple responses for each critical risk and the selection of the most appropriate response(s) to each risk. In addition, the effects of risk responses on other risks (i.e., risk correlation) should be considered.

The most appropriate response is the one that yields the greatest positive net benefit. Quantifying the costs of responding to inherent risks is necessary in order to appropriately compute the net benefits realized from reducing exposure to significant risks. The net benefit of a risk response can be considered as follows:

Benefit of Response – Cost of Response, or
[Inherent Risk – Residual Risk] – Cost of Response

When the net benefit is positive, the response should be considered because it produces a benefit that exceeds the associated costs. (This will be discussed in greater detail later in the article.) When the net benefit is negative, however, the response should not be considered because its benefit is not sufficient enough to exceed the associated costs. It is likely that many companies unknowingly fall into this latter category, which can lead to improper risk-response decisions and, ultimately, can harm performance.

The following example illustrates the net benefit of risk response. Assume that the unit of measure for a key risk is "revenues lost" and that the estimated inherent risk (considering both the expected likelihood of the given risk occurring and the expected magnitude of its impact should it occur) is $23 million. Assume that a particular response is expected to reduce the inherent risk to an expected residual risk of $13 million, thereby producing a risk-response benefit of $10 million. Finally, assume that the particular response has a cost of $8 million. Therefore, the expected *net benefit* of the particular risk response is $2 million, or ($23 million – $13 million) – $8 million. Unfortunately, far too many companies underplay or ignore the costs associated with risk responses. Ignoring the response cost in the above example would falsely suggest to executives that the net benefit is $10 million, which is five times greater than the "true" net benefit—an error that would have significant decision consequences, particularly if the response costs exceeded $10 million.

If multiple responses are considered, then the response with the greatest positive net benefit should be chosen, assuming all else equal. Further, comparing the resulting residual risk (i.e., the risk that remains after the chosen response has been implemented) to measures of the risk appetites of both the organization and its key stakeholders helps in assessing risk optimization effectiveness. Such risk appetites can be driven by a number of factors, including the desired returns on initiatives, an organization's strategy (e.g.,

low cost, product differentiation, etc.), or expectations about corporate responsibility. For example, has the organization driven its residual risks to such a low level that it is being too conservative in its risk-management responses?

The costs associated with risk responses could consist of actual dollars spent on control activities, returns forfeited as a result of inducing another organization to share in the risk-related activities (e.g., alliances), or premiums paid to transfer a portion of the risk to another organization, such as an insurer. In order to assess the effect of risk responses, organizations should measure residual risks in the same fashion as they measured inherent risk prior to the implementation of the risk-response strategy.

In addition, when multiple potential risk responses are being considered, the ERM framework should include measures of the opportunity costs associated with other responses. While it may appear to be excessive to measure the impact of risk events on response options not chosen, such measurement is important for helping an organization understand the effectiveness of the process it uses for choosing risk responses.

When measuring risk, organizations need to be careful to incorporate the entire *incremental* costs (both direct and indirect) of mitigating risk, including control implementation, premiums for insurance, transaction and opportunity costs for derivative instruments, and forfeited returns associated with forming strategic alliances. Measuring incremental costs can be difficult when the organization already incurs various costs related to existing controls or other risk-response mechanisms or if it engages other organizations as part of its risk response. For example, most organizations in today's global marketplace are forced to form multiple strategic alliances to produce products in an efficient manner. These relationships involve sharing the returns associated with the final product because risk premiums typically are incorporated into contracts. Otherwise, why would a partnering organization agree to take on the risk of collaborating with an organization to share risk in the first place? Although potentially difficult to measure, these shared returns should be recognized as a cost of risk response.

There are three basic categories of risk response: accept the risk, avoid the risk, or reduce the risk. Measuring the three primary responses to risk is fairly straightforward for the first two options. The costs of accepting a risk are equal to the costs associated with the inherent risk. An organization accepts risks when it determines that the risk level is sufficiently close to its risk appetite or effectively offset by another risk (or set of risks) below its risk appetite. The costs of avoiding a risk include any factory disposal costs and the opportunity costs associated with no longer conducting the activity associated with the risk (which presumably had the potential upside of generating shareholder value). The core challenge of measuring risk-response options is associated with the decision to employ a risk-reduction strategy. In order to fully understand whether reducing risk was a good decision, organizations need to know the total costs—both direct and indirect—associated with the response to be able to compare it to accepting or avoiding the risk.

Direct Risk-Response Costs

The remainder of this article discusses specific direct and indirect cost-measurement challenges associated with risk-reduction strategies, including costs of insurance, hedging, alliances, and control activities.

Costs of Insurance

The most traditional form of risk reduction involves insuring tangible assets through insurance policies. In recent years, insurance policies have extended beyond traditional fixed assets to risks associated with events. In one case, Yum! Brands purchased an insurance policy to cover its offer in 2001 of providing a free taco to everyone in the United States should the core of the Mir space station hit a 40-square-foot floating target in the South Pacific. A more common example involves annual music and arts festivals that have their performance tied directly to the weather on one weekend a year. Such festivals are able to purchase insurance policies that will pay settlements when a certain level of rainfall accumulates during the event period. These policies are typically classified under the broad category of business interruption insurance.

Regardless of the underlying tangible asset or other

operating feature being insured, there is a cost associated with insurance that most people understand—the premiums that must be paid on an ongoing basis to remain insured. The high cost of insurance premiums is well documented and has even led many organizations and professionals to switch from a risk-reduction strategy to an avoidance strategy because the cost of insurance premiums made participating in the business activity unfeasible. For example, many OB/GYN doctors have chosen to relocate from states in which malpractice insurance premiums became so high that the doctors could not afford to practice their specialty.

Costs of Hedging

Organizations have traditionally protected themselves from investment risks by entering into hedges to limit losses associated with unfavorable movements in economic variables, such as exchange rates, interest rates, and commodity prices. While some types of hedges involve the natural offsetting of cash flows within a business, it is not uncommon for hedging strategies to include the use of derivative instruments to reduce unwanted risks. Examples include futures and options contracts as well as swap agreements.

The downside is that the costs associated with executing an effective hedge include forgoing the opportunity to recognize gains when movements in economic variables would benefit the organization. In other words, a hedge strategy helps minimize risks, but it also minimizes opportunities. Such arrangements are most common when organizations do not want to tie their operating performance to market fluctuations. For example, while the global operations of Procter & Gamble may occasionally benefit from favorable movements in foreign currency exchange rates, the company likely prefers that its performance instead be related to its ability to develop profitable brands and customer loyalty. Southwest Airlines, like many airlines, has used hedging to respond to the risk of skyrocketing jet fuel prices. Table 1 addresses in more detail how the motion picture industry employs hedging as a risk-response strategy.

Costs of Alliances

The formation of a strategic alliance is a risk-response strategy when companies seek to manage their own risk exposures by utilizing the resources of other organizations to achieve their own objectives. Another organization is not going to increase its own risk profile willingly without requiring a risk premium from its new partner, which represents a cost of a strategic alliance risk response. Typically, these arrangements involve some

Table 1. Hedging as a Risk-Response Tool in the Motion Picture Industry

The motion picture industry uses hedging strategies as part of an ERM framework. When producing and distributing movies, many studios hedge operational and financial risks by attracting investments from hedge funds. Managers of these hedge funds rely on sophisticated models that project film profits based on the past performances of directors, actors, genres, and distribution dates. As documented in *Business Week* in 2006 (Ronald Grover, "Duds in the Water," Sept. 4, 2006), one relationship involved a $500 million investment by Stark Investments in six Warner Brothers movies, including 2006's *Poseidon*. When the movie, which cost $160 million to produce and distribute, underperformed at the box office, Warner Brothers did not recognize as much of a loss because it had shared in the risks. Had the movie been a big hit, however, Warner Brothers would have realized less of the profits, which typically include proceeds from DVD sales and fees for television viewings. Another example is the Walt Disney Company choosing to share risks in its movies through a $505 million investment from Credit Suisse First Boston; however, it wisely excluded two major hit films, *Pirates of the Caribbean: Dead Man's Chest* and *Cars*, from that agreement. As a result, the organization accepted full risk for those motion pictures (particularly as the company had purchased Pixar, the maker of *Cars*, earlier in the year) and was able to retain its full claim to the returns. Thus, understanding the cost associated with the possibility of forfeited returns is an important part of deciding whether to hedge risks.

type of prearranged fee per transaction or a sharing of revenues. Table 2 illustrates a strategic alliance between Apple and AT&T involving the introduction of Apple's iPhone.

Examples of strategic alliances include the supply chain relationships formed between organizations that depend on one another for the delivery of raw materials, inventory components, and essential services. When an organization requires specialized knowledge or processes that are beyond its current capabilities, the use of third parties who possess the necessary expertise can lead to reduced risk exposure as well as the realization of cost savings and other efficiencies. The inherent risks associated with outsourcing may result in an organization facing additional costs to preserve the loyalty of its customer base and the value of its brand should disruptions occur in the supply chain.

Mattel Inc. incurred significant costs to voluntarily recall more than 2.7 million toys in 2007 because of concerns regarding lead paint. In a series of press releases, Mattel announced that some of its contract manufacturing facilities in China outsourced the painting of toy parts to other vendors that used an unapproved paint pigment containing lead. After the product recalls, Mattel immediately implemented a strengthened three-point check system requiring the use of paint only from certified suppliers, an increase in unannounced random inspections, and the testing of every production run of finished toys before they reach customers. Although Mattel now has tighter controls throughout its production processes, its experience with subcontractors illustrates the trade-off between the potential costs and benefits of utilizing an extended supply chain.

In a 2007 study by Deloitte Consulting titled "Supply Chain's Last Straw: A Vicious Cycle of Risk," companies that are the most effective at realizing cost savings through outsourcing and advances in information technology were found to be especially vulnerable to lapses in their supply chains. This phenomenon, referred to as efficiency backlash, has grown in recent decades as more firms pursue relationships with suppliers and customers in international locations. Although establishing and maintaining a global supply chain affords many opportunities and may function as a component of a risk-diversification strategy, such efforts may also increase systemic risk to a level that negates any projected cost savings and other benefits. Of particular concern are issues related to product quality and safety, which can threaten an organization's long-term sustainability and have a lasting impact on shareholder value.

The Deloitte study also noted that the increased complexity of modern supply chains coupled with a rapidly changing external environment have contributed to a revised corporate risk paradigm where unanticipated incidents may trigger a succession of events resulting in irreparable harm to a company's reputation. When an organization's lean, efficient practices have heightened its reliance on the performance of

Table 2. Strategic Alliance as a Risk-Response Tool for Apple's iPhone Launch

Business Week reported in its Feb. 11, 2008, issue that Apple's iPhone agreement with AT&T includes a payment to Apple of $10 per month for every two-year subscription agreement that customers enter into with AT&T. Assuming that one million iPhones are sold, Apple is due to receive $240 million. This agreement is based on exclusivity of subscriptions with AT&T, however, which means that Apple does not sell iPhones to customers who subscribe to other carriers or live in countries in which AT&T is not available. These limitations create an opportunity cost to Apple that should be compared to the potential for $240 million of sales revenue generated by the alliance. This risk is further complicated by the widespread practice of reconfiguring the phones so that they will work on other carriers, which hurts the revenue streams of both AT&T and Apple. While Apple still receives the revenue streams associated with the sales of the phone, it faces an increased risk from litigation should AT&T decide to sue Apple on the basis of not taking sufficient steps to prevent manipulations to its phones that result in overriding the exclusivity of AT&T's service.

third parties, the ability to respond quickly and effectively to unexpected disruptions is critically important. Therefore, companies need to continually identify and understand the potentially weak links that exist in their strategic alliances, including the costs required to mitigate the risks associated with their collaborative relationships.

Costs of Control Activities

Measuring control activities is an important aspect of understanding ERM effectiveness because control activities are associated with investments undertaken to reduce risks internally. At issue is whether investing in these often costly risk-mitigation procedures makes the most sense for an organization. When selecting the best risk-reduction control activity to implement, an organization should identify all incremental costs, as well as the resulting net benefit associated with implementing and operating each control (with the exception of a control activity required to be in place under Sarbanes-Oxley Act (SOX) or other regulations). Included in this cost-identification process are the portions of any existing control mechanisms that are dedicated to reducing the risk—assuming that the controls could not be used to mitigate other risks or be partially/fully eliminated should the activity associated with the risk not be performed any longer. In addition, any decision to accept the cost of full responsibility for risk (e.g., self-insuring) should be associated with the benefit of commensurate risk premiums (i.e., sufficient returns) to justify the level of accepted residual risk.

For example, Nike bases much of its marketing campaigns on contracts with professional athletes in a variety of sports. One risk Nike faces when using this strategy is that the athletes will engage in behavior that is inconsistent with Nike's core values of competitiveness and quality. Because of the media exposure surrounding athletes when they engage in this type of conduct (e.g., legal problems, cheating allegations, etc.), Nike cannot afford to simply accept the risk of damage to its image but instead must implement costly controls. Examples of controls include the research and background checks performed on athletes before signing them to contracts, incentive clauses in contracts that pay more when athletes reach certain benchmarks, investments in evaluation facilities to ensure that athletes maintain their physical condition, testing procedures to ensure that athletes are not using illegal substances to enhance performance, monitoring the press for any stories involving its athletes under contract, and including termination clauses in contracts. Even with these controls in place, the residual risks can be significant, as evidenced by events such as the Michael Vick dog-fighting scandal, which featured the Nike trademark in most athletic footage of Vick shown as part of the investigation and trial coverage over a four-month period starting in fall 2007.

The difficulties faced by a company attempting to quantify the cost of its control activities are illustrated by BP's effort to monitor the environmental conditions at its Whiting, Ind., oil refinery. Although the facility currently treats wastewater before it is discharged into Lake Michigan, BP is anticipating that its planned expansion to process heavy Canadian crude oil will result in the release of elevated levels of ammonia and suspended solids not captured by its existing treatment filters. According to a news article by Michael Hawthorne in the *Chicago Tribune*, BP is skeptical that the cost of making the necessary upgrade in its treatment filters will be less than $40 million.[3] Based on those projected costs, BP originally planned to significantly increase the discharge of pollutants into the lake—until intense public debate forced the company to reconsider its position. BP officials have pledged to abide by the limits of existing water permits, but the projected costs of remediation procedures and the anticipated expansion plans for the facility make keeping that promise difficult. Ultimately, the political pressure to not increase the discharge of pollutants coupled with the company marketing itself as an environmentally friendly company may result in BP needing to curtail the expansion project.

Indirect Risk-Response Costs

After risk-reduction strategies are identified, direct costs associated with reducing or sharing risks should be identified and measured whenever possible. In most cases, these costs should not be overly difficult to measure (e.g., hours spent reviewing data can be translated into costs factoring the salary and benefits of the

employees doing the reviewing, software and data processing, and storage costs, etc.). Organizations should also attempt to identify and measure the indirect costs associated with their cost-mitigation strategies, many of which arise well after a particular risk response is implemented. While indirect costs will likely be much more difficult to estimate than direct costs, failing to incorporate such estimations may lead organizations to pursue initiatives and resulting risk responses that possess a negative net benefit.

An example of an indirect cost that most organizations find challenging to quantify is a negative impact to company reputation resulting from a specific risk response. While a standard tagline frequently offered by organizations is that no damage to company reputation will be tolerated, an organization's reputation is continually impacted by how it executes its business model, including the conduct of its personnel in effectively achieving its objectives. Part of that journey includes failure, meaning that organizations are constantly withstanding negative impacts to their reputations. The goal is to make certain that processes are in place for successfully managing responses to such failures and that successes in other aspects of their operations more than offset any negative impacts from failures.

The slow return of many retailers to New Orleans during the rebuilding of the city after Hurricane Katrina in 2005—a major risk-response decision—is an example of the holistic approach to identifying and costing risk mitigation. From a financial standpoint, locations in New Orleans need to generate sufficient returns to cover the high costs of insurance, regardless of whether an outside insurer is used. Further, ensuring that employees in area organizations are sufficiently trained to operate those organizations during and after a hurricane is an important consideration.

While investors and other stakeholders were fairly forgiving for how businesses reacted during and immediately after Hurricane Katrina, many of these same individuals likely will have lower tolerances should another major hurricane hit the area in the future. Conventional thinking is that organizations should have considered managing hurricane risk effectively and efficiently before deciding to relocate to the city. While retailers operating in various metropolitan and rural areas throughout the world must manage all types of crisis event risks, a reasonably foreseeable event necessitates that the organization has sufficiently prepared itself for the event should it occur. Accordingly, the cost to relocate should factor into the decision to operate in locations such as New Orleans.

Conversely, the reputation costs associated with choosing to avoid the risk by not rebuilding in New Orleans should be factored into the costs of the avoidance option. For example, Shell Oil invested more than $30 million to buy residential property to lease back to employees in order to move operations back to New Orleans, even though many experts believed that the company would keep all of its New Orleans operations in Houston, where the U.S. division is headquartered. The company reported in a *New York Times* article that more than 80% of its relocated employees preferred to move back, so it chose to move back because it was the right thing to do, particularly from a corporate responsibility perspective.[4] Smaller companies that could not afford to make decisions based on responsibility or employee satisfaction motives, however, were not returning or were only returning a portion of their operations.

Another similar example could be taken from the ways in which major corporations—either oil producers or oil consumers—respond to the historically unprecedented extreme fluctuations in oil and gas costs. How will consumers and other relevant stakeholders react to an organization's decisions to stay the course with respect to consumption of traditional oil and gas energy sources? Alternately, how will market share increase or decrease for an organization that elects to invest significantly in alterative-energy-related products that are expected to be less susceptible to large price swings? An understanding of the indirect (as well as direct) costs associated with such risk-response decisions will be critically important as organizations address these questions.

Effects of Taxation

Any attempt to measure the costs of a company's response to business risks should take into account the impact of taxation. For income tax purposes, most costs

associated with risk responses will be either currently deductible ordinary and necessary business expenses or depreciable capital expenditures. Yet some items may qualify to be claimed as a credit, which reduces a company's income tax obligation dollar-for-dollar. Examples at the federal level include credits for increased research activities, building rehabilitations, or investments in properties using geothermal or solar energy. Many firms have recently renewed their efforts to maximize their depreciation deductions by performing cost-segregation studies to distinguish between personal and real property assets, which can result in shorter depreciable lives for tax purposes. Such distinctions can help organizations effectively manage the total cost of their responses to business risks.

Tax savings also can take the form of reduced property taxes or sales-tax exemptions realized at the state or local levels for items such as purchased machinery and equipment, expansion of business operations, retention of jobs, and training of employees. In addition to considering the effect of these direct taxes on response costs, companies need to be aware of how implicit taxes (an indirect cost of certain risk responses) can erode some of the potential benefits of investing in tax-favored activities. For example, the prices of investments that qualify for special tax treatments are bid up in the market place, which results in taxes being paid indirectly through lower before-tax rates of return on those investments.[5] The effects of implicit taxes and risk differentials produce situations where the costs of responding to a specific business risk within a given industry are not the same for all companies in all locations. Therefore, each organization needs to consider its unique set of facts and circumstances when analyzing its response costs.

Table 3 presents a case study on Wendy's Interna-

Table 3. Measuring Risk Response for Offering Chili at Wendy's International*

In 2005, Wendy's International was faced with a crisis when a customer accused Wendy's of allowing a human fingertip to be served inside a bowl of chili at a location in San Jose, Calif. Wendy's had to make a quick decision of how to respond to the crisis. Before considering its response, an understanding of the risk management decisions leading up to the scenario provides valuable context. First, selling chili presents unique risks because the product is outside of its core product line. Second, based on its analyses of those risks, Wendy's was in a better position to respond because it had built sufficient measures into its risk management process to react quickly should a third party accuse the company of poor controls over its food preparation and handling. Because a company's full risk management decision-making process is confidential, this example discusses hypothetical costs and benefits associated with the various risk-response options for each decision and the ultimate outcome of the scenario.

Accepting Risk

Health code and Food and Drug Administration (FDA) regulations actually preclude Wendy's from accepting the risk of its chili containing a foreign object—it must take actions to mitigate such a risk in order to offer any food products to consumers. When deciding to offer a menu item outside of its core line of products, Wendy's could opt to produce its own chili recipe at each restaurant location using fresh ingredients. But producing grill products is its main business, and Wendy's is driven by preparing cooked-to-order items in an efficient, consistent manner. Thus, producing chili at each location might be quite costly and slow down other food preparation processes. On the other hand, a benefit of selling chili produced at each location is that Wendy's has full control over preparation of the chili and does not rely on a third party. In addition, the chain can offer a product not available at any of its core competitors (e.g., McDonald's and Burger King).

Another risk associated with selling chili is that consumers might be more likely to complain if its quality is not up to par. Chili is a difficult food product to prepare and keep in a proper state for serving because of the challenges of

maintaining its temperature at the appropriate level and keeping it fresh. Further, there are many ingredients in chili, so ensuring that sufficient amounts of only the proper ingredients are included in the final product is important. For example, foreign objects could accidentally fall into a pot of chili, which could impair its quality or lead to injury to consumers. Accepting this risk would entail the attitude that problems will happen when serving products like chili, but the company is willing to operate under these conditions because of its strategy as a product differentiator (as opposed to a low-cost leader).

Avoiding Risk

In this example, Wendy's could only avoid the two risks mentioned by opting not to offer chili as one of its product lines. Food service companies reject many of their food-offering possibilities for a variety of reasons, ranging from the cost of producing the item to concerns about quality consistency or marketing problems. Had Wendy's decided not to offer chili, however, the company should have measured the potential costs and benefits to the organization for opting not to offer the product and compared the net amount to the other risk management alternatives. Ultimately, the company's success is partially driven not by avoiding risk altogether, but rather by choosing to accept residual risks that will generate returns expected by stakeholders for the right products and avoiding other risks.

Sharing Risk

Sharing risks typically occurs through insuring, hedging, or forming a strategic alliance. In the case of deciding whether to sell chili, Wendy's only real sharing option is to form a strategic alliance and utilize suppliers for preparing chili. By partnering with food suppliers, the chili can be produced and delivered to individual stores on a daily basis to help ensure that it can be heated for a fresh, consistent-quality product. By following this approach, store employees only need to heat and serve the product, which should reduce the strain on preparing the main product-line items in an efficient manner. The cost of utilizing this approach is that Wendy's must pay its supplier more for preparing the chili, which reduces its return. But Wendy's markets the idea that it prepares food on-site using fresh ingredients. Further, part of its reason for selling chili was to make use of the beef it could not sell (e.g., hamburgers that were overcooked, excess beef not used as part of a patty, etc.).

Sharing the risks associated with problems in food preparation and handling occurs to some extent when sharing the production of the chili with a supplier. Because consumers will associate all chili consumed solely with Wendy's, sharing any losses incurred with a supplier likely will be insufficient for managing this risk, even though the shared losses should be factored into the computation of any net benefit associated with using a third-party supplier. Another sharing option is to utilize a third-party insurer to cover any legal costs or settlements associated with consumers becoming ill or injured from eating chili improperly prepared or handled. But a choice to share risks likely would still need to be combined with a risk-reduction strategy because the reputational damage associated with such an event would be too costly to absorb.

Reducing Risk

Should Wendy's choose to offer a product outside of its core business line, the company likely would include some type of risk-reduction strategy as part of its ERM process. Possible risk-reduction strategies include such initiatives as explicit training requirements, documented preparation and handling requirements, internal audit, careful market research, and customer feedback surveys. For example, Wendy's requires its chili to be cooked at 170° Fahrenheit for three hours. To make appropriate decisions concerning risk management, Wendy's should factor in the costs of various risk-reduction strategies and measure the impact on assessed risks to be able to fully understand the costs and benefits associated with offering a product like chili.

Should the product be sold to consumers, Wendy's is required by health codes and the FDA to implement risk-reduction strategies to ensure safe preparation and handling of its chili. It is likely, however, that the minimum stan-

dards are insufficient for successfully managing the many risks associated with offering a product like chili. For example, Wendy's can utilize information technology and inventory tracking to quickly identify the origin of every batch of chili delivered to restaurants to find the source of any reported problems. Further, the organization can implement an internal investigation process to interview or interrogate any employees involved in a reported problem associated with preparation or handling of chili.

Wendy's Chili Crisis

In a *Wall Street Journal* editorial in May 2005, the CEO of Wendy's, J. Schuessler, conveyed several pieces of information that provide insights into the risk management process likely used by the company to manage the accusation from a customer that she was served an order of chili that contained a human fingertip. Schuessler states that within 24 hours of the event, Wendy's food handling procedures were investigated by health officials, employees in the store passed lie detector tests, and the supplier's safety records were analyzed. This implies that sharing risks was part of the risk management process. It is highly unlikely that Wendy's could have completed all of these tasks in such a short time period if risk-reduction strategies had not already been in place. The relevant question is whether the costs associated with these strategies were less than the reputational benefit of quickly being exonerated by the police (and the subsequent confession by the customer, who was the perpetrator of a fraud against Wendy's). The news reports of the woman's arrest note that the finger could not have maintained its form after cooking for three hours at 170°F. Schuessler suggests that even exoneration did not prevent lost profits resulting from a drop in sales immediately following the event.

In fact, Wendy's senior vice president of Enterprise Tax and Risk Management, Everett Gallagher, commented at an ERM Conference in Columbus, Ohio, in August 2006 that sales for the company in the San Jose area still had not recovered fully from the incident. Schuessler's editorial, combined with the assertion by Gallagher, suggests that identifying the costs and benefits associated with risk management decisions is quite difficult. The likelihood is somewhat low that Wendy's sufficiently factored into its risk management decision the sustained impact on sales over a 15-month period related to a claim that was publicly identified as fraudulent within a couple of days! Even so, Wendy's and other restaurant chains can use this incident to influence how they measure potential costs of food preparation and handling issues going forward.

* This case study is adapted from *Coordinating Risk Management and Performance Measurement* by Brian Ballou and Dan Heitger (Accounting Policy & Practice Series, Bureau of National Affairs, 2008) and *Wendy's Chili: A Costing Conundrum* by Richard Brownlee (University of Virginia, Darden Business Publishing, 2005).

tional that was included in the Bureau of National Affairs 2008 monograph, *Coordinating Risk Management and Performance Measurement*.[6] The case provides an example of how a company in the food service industry managed the risks associated with selling a chili product directly to consumers.

Greater Understanding

Most organizations face significant challenges when moving ERM frameworks beyond the initial stages of understanding and assessing inherent risks to developing cost-effective response strategies for managing risk portfolios and aligning residual risks with risk appetites. The critical first step in moving beyond inherent risk response requires organizations to develop an understanding of the direct and indirect costs associated with each type of risk-reduction response strategy.

By quantifying risk-reduction costs, organizations are better able to assess whether or not a given risk response provides a positive net benefit. Risk-response quantification also helps organizations to select the optimal choice among alternative courses of action by identifying the response with the greatest positive net benefit. While quantifying costs is a necessary step in

evolving an ERM framework, embedding risk-response costs alone is insufficient for fully developing a total enterprise portfolio view of the risks facing an organization. Later phases of the framework that examine the impact of risk-response choices on other inherent risks (i.e., risk correlation) and strategic and operational decision making resulting from risk management analyses also are important. Without a proper understanding and assessment of risk-reduction costs, however, the subsequent steps are much more difficult to perform. ■

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