

Bringing Value to Scorecarding

Part III in Series on Risk Management

By Brian Briggeman, Josh Detre, Michael Boehlje, Ph.D., and Allan Gray, Ph.D.



Addressing risks of an agribusiness through a strategy that mitigates downside risks and effectively manages upside risks is necessary for success in today's competitive environment. Our previous two columns on risk management outlined a risk scorecard that classifies qualitative risks into six categories. This article focuses on how a manager can interpret the risk scorecard and use results to form effective risk management strategies.

INTERPRETING THE RISK SCORECARD

The risk scorecard (Figure 1) is comprised of six risk categories and three dimensions of risk – potential, exposure, and likelihood – associated with each category. Potential and exposure categories represent upside and downside risks respectively, while

likelihood is the chance of these risks occurring. Each measure is based on a 1 to 5 scale with 1 being low or unimportant and 5 being high or very important. Using the numbers from the completed risk scorecard, the decision-maker can plot each risk's likelihood/potential and likelihood/exposure score on Graphs 1 and 2, respectively.

The graphs are a visualization of the risk scorecard. Ideal and adverse quadrants are labeled and arrows are utilized to show possible paths a manager might take in managing the risk. As an example, ABC Seeds Inc. completed a risk scorecard (Figure 1). Since ABC Seeds recently acquired a state-of-the-art research laboratory, it gave technology a potential score of 5 and a likelihood score of 4. In essence, ABC Seeds knows it is in a position to develop innovative products that positively impact profits. Therefore, the company

is in the ideal potential quadrant for technology risk and current strategies are sufficient.

The likelihood/exposure score for ABC Seeds' financial risk category places the risk in the adverse quadrant, which indicates immediate management of the risk is needed. An example of this would be if ABC Seeds were a start-up seed company with limited financial resources. Through strategic alliances with venture capitalists, it could begin to decrease the score of financial exposure. The likelihood of financial exposure may be unaffected since the seed company is unproven and venture capitalists may not provide multiple rounds of funding. However, continual interaction between both parties of the alliance should cause the likelihood of financial exposure to decrease.

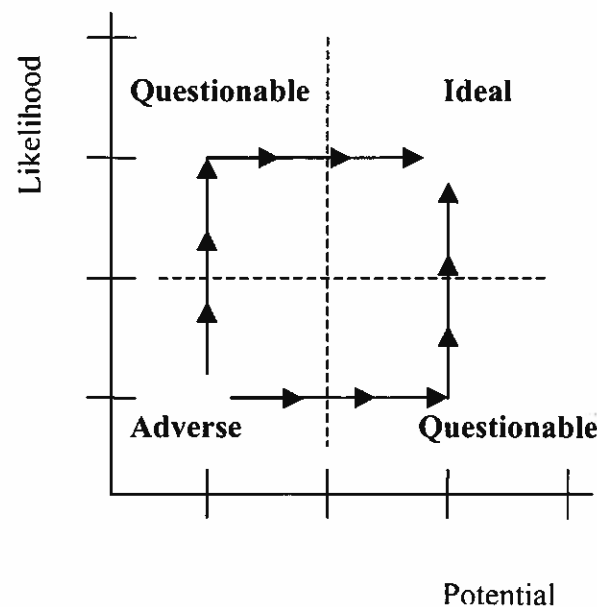
Often strategic risks fall into neither the ideal nor adverse quadrants, rather, into one

Figure 1: ABC Seeds Risk Scorecard

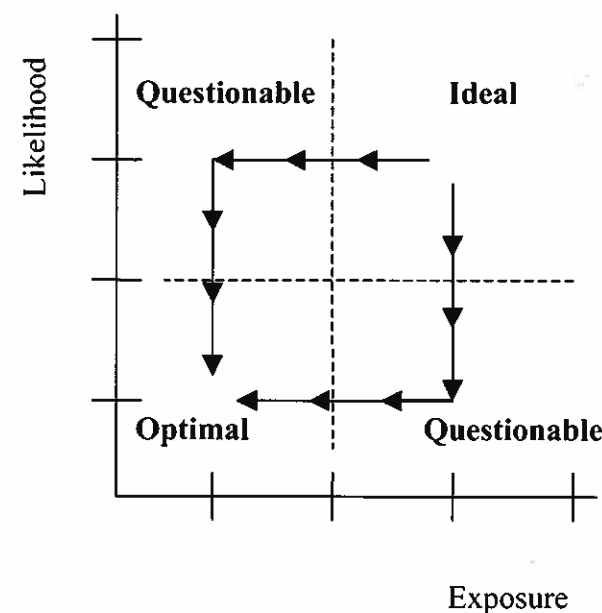
Category of Risk1	Potential Score 2	Likelihood Score 2	Situation 3	Strategy 3
1 Business/Operational	4	2	Retention of customers increases sales and is less costly than attracting new customers, but there is very little expertise in Customer Relationship Management.	Hire a market firm to develop a customer relationship management database that contains information such as expectations of customer service and product performance.
2 Financial	2	4	A good working relationship exists with the current lender and debt is used to finance research and development endeavors. Management is concerned with the timing and allocation of R&D.	Utilize real options analysis to determine the proper timing of investments.
3 Business Relationships	4	1	There are efficiencies to be gained from outsourcing, but worries exist about the leakage of private information to out-sourced firms.	Introduce non-compete clauses in the outsourcing contracts.
4 Market Conditions	5	2	By merging with a competitor, economies of scale can be realized, but antitrust concerns over market power might prevent the merger.	Divest business units that show lower efficiencies, overlap current business units, and develop an antitrust plan.
5 Policy and Regulation	3	2	Foreign governments may not honor current U.S. patents because companies in these countries want to earn the profits generated by the patented technology.	Set up joint venture or strategic alliances with companies in the foreign market as a means of protecting the patented technology.
6 Technology	4	5	A large amount of capital is available to attract the resources necessary to fund state-of-the-art research laboratories.	Maintain current strategies, but be aware of changes that will likely occur in the technology area.
7 Business/Operational	2	4	A high sales force turnover may prevent salespeople from capturing any economies from learning.	Outsource human resource management because this increases the expertise lacking in Customer Relationship Management.
8 Financial	5	4	The company is becoming too leveraged and our lender is concerned about our financial position because of the potential liquidity and solvency problems.	Restructure the terms of payments with input suppliers and retailers. Shorten and lengthen terms of payments to allow for more cash flow.
9 Business Relationships	2	4	Due to acquiring a small genetics laboratory that has a different corporate culture, management is concerned about potential cultural conflict.	Allow the laboratory to function as a profit center (bureaucratic control) for control, but let it maintain its own internal culture (clan culture) to maintain its previous success.
10 Market Conditions	4	1	Delivery delay of products rarely happens because of the market coordination, but when it does occur, there is a large negative affect on profits.	Ensure the existence of multiple customers (avoid concentration) and provide incentives to participants in the distribution channel to deliver on time.
11 Policy and Regulation	3	3	A foreign market is concerned about the safety of biotech seeds, so product sales in foreign markets could decrease.	Consider the use of a strategic alliance with a foreign seed company to sell the biotech seed or use political lobbyists.
12 Technology	2	1	A large amount of capital is available to attract the resources necessary to fund state-of-the-art research laboratories.	Maintain current strategies, but be aware of changes that will likely occur in the technology area.

1. Please refer to "Risk and Uncertainty in Agriculture: What are the Sources?" in the May 2004 issue of Seed World for a detailed explanation of the dimensions of risk.
 2. Please refer to "Strategic Risk Assessment Through Scorecarding" in the July/August 2004 issue of Seed World for a detailed explanation of likelihood, potential, and exposure.
 3. Note that we have provided only one potential risk and strategy to manage it within each risk category (a firm may face multiple risks within each category, therefore, requiring multiple strategies).

Graph 1: Potential Plot



Graph 2: Exposure Plot



of the two questionable quadrants. These quadrants present the greatest dilemma in strategic risk management. As the arrows in graphs 1 and 2 indicate, risk strategies should move a risk from a questionable quadrant to the ideal quadrant. For example, a risk category score in the upper left quadrant of the potential plot (Graph 1) tells a manager to focus on strategies that increase the potential score. If a risk category score on the exposure plot (Graph 2) were in the upper left quadrant, a strategy that focuses on decreasing the likelihood of the downside risk is appropriate.

POTENTIAL RISK MANAGEMENT STRATEGIES

Continuing our scorecard example (Figure 1), potential risk management strategies are provided to demonstrate how to move from a questionable quadrant into the ideal quadrant. One solution for increasing the likelihood of the Business/Operational risk (#1 in

Figure 1) would be to hire a market firm to develop a customer relationship management database that contains information about expectations of customer service and product performance. To increase the potential of financial allocations to uncertain investment projects (#2 in Figure 1), ABC Seeds should utilize real options analysis to determine the proper timing of investments. To decrease the likelihood of sales force turnover (#7 in Figure 1), ABC Seeds could outsource human resource management to provide expertise it lacks. A way to reduce exposure from a delay in seed delivery to customers (#10 in Figure 1) would be to ensure multiple customers (avoid concentration) and provide incentives to participants in the distribution channel to deliver on time.

We have presented a systematic way for firms to assess their tactical and strategic risk positions. Through the qualitative ranking system, scorecard, and graphs, decision-makers can develop strategies for risks to

maintain their competitive advantages by exploiting their potential risks and reducing their exposures. Decision-makers should note that some decisions can have cross-risk category implications, and these interactions should be considered before implementing any risk management action. The next article in this series will address the consequences of risk management decisions via a decision tree analysis. ☺

Brian Briggeman and Josh Detre are graduate students and Michael Boehlje, Ph.D., and Allan Gray, Ph.D., are professors with the Center for Food and Agricultural Business at Purdue University. Additional information on this topic can be obtained from Mike Boehlje at boehljem@purdue.edu.



LearnMore!
 For more information related to this article, go to www.seedworld.com/lm.cfm/sw110403