What food firms and investors should know about meat and poultry recalls

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Research from Kansas State University found that when publicly traded food firms face a meat or poultry recall, five factors influence stock price reactions most: severity to human health, recall size, firm size, firm's experience and media influence.

Food safety is top-of-mind among many consumers and producers of food. It is also a continuum, because the more a food firm spends on effective technologies and protocols to ensure safe food, the greater chance the foods are protected against contamination.

Despite a blanketed desire to keep foods safe, eventually food firms reach a price point—a limit they can spend feasibly to ensure staying in business and giving consumers an affordable product, said Ted Schroeder, professor of agricultural economics at Kansas State University.

"The more a company knows about the anticipated impact of a recall event, the better it can make a decision about adopting new food safety protocols, new technologies or new surveillance methods to reduce the probability of a food safety breach," Schroeder said.

Schroeder, along with Veronica Pozo, assistant professor of applied economics at Utah State University, recently found that when food firms face a meat or poultry recall, several factors determine how that recall affects the firm's bottom line. The most impactful factor is the class of the recall, which determines if a severe human health hazard is involved. Other factors include the size of the recall, size of the firm, if the firm has prior experience dealing with a recent recall and the media coverage surrounding the event.

A close look at publicly traded food firms

The researchers examined meat and poultry recalls that took place between 1994 and 2013, based on availability of recall data from the U.S. Department of Agriculture's Food Safety and Inspection Service (FSIS). The FSIS showed more than 1,200 meat and poultry recalls happened during that time, and 163 of those recalls came from 31 different publicly traded firms.

Although 163 of more than 1,200 recalls may seem like a small number, publicly traded firms showed almost half of the total meat and poultry products recalled, said Pozo, who was a K-State doctoral student when the research was conducted. In fact, 277 million out of 638 million total recalled pounds, or 43 percent, came from publicly traded firms.

Although it's difficult to obtain financial data from firms and measure total direct costs and losses of revenue from a recall, price reactions in the stock market surrounding a recall event tend to indirectly reflect all the private costs, Pozo said.

"Some recalls would have gotten out to the consumer, and some would not have," she said. "Regardless, calculating the actual physical cost of a recall can be quite daunting. You have to track volume of product, determine if the product was disposed of or the firm got an alternative value for it, and the cost of all people involved, including sales losses and liability costs."

"Our claim is all private costs—costs the company itself ends up realizing—will ultimately be reflected in the stock price through the value of the firm," Schroeder said. "The stock market is efficient, meaning it rapidly incorporates information and embeds it into the stock values. It is a widely accepted method for evaluating event studies."

What the stock price does ignore is public costs, he said. For example, if someone gets sick from a recall and it never resonates back to the firm, someone else likely paid for that. It wouldn't necessarily show up in the stock price.

"Our goal was to look at individual, private firm costs, because if I'm a company that's in the food processing or merchandising segment, I need to have a sense of what the impact of these (recall) events can be on my company," Pozo said. "If we show firms how costly a recall can be, then they will be able to conduct a cost-benefit analysis to decide if it's worth it to implement additional (food safety) technologies."

In addition, Pozo said the study shows investors the importance of finding out more about a firm's food safety protocols.

"I've seen publicly traded companies that went bankrupt after one recall," she said. "And although companies do as much as they can to avoid these types of events, food safety outbreaks are still possible. Firms must have a good plan in place. Investors must find out about those plans before investing."

Recall reflections in stock prices

The researchers found it took about four to five days, on average, for the stock price to reflect a recall. If a major health hazard was part of the recall, the stock price could take a hit earlier, potentially within one day.

Investor and firm interests often go hand-in-hand during a recall, Schroeder said. In the stock market, especially as a recall progresses, there's uncertainty and emotion.

"Our results show investors do respond fairly quickly, within the day of the recall or as soon as the markets open after the recall," he said. "As the recall continues to unfold, the market will adjust, and it's either going to go down further or readjust back up if the confidence and handling of the recall is made known."

Regardless if a health hazard was part of the recall, the researchers found the stock price returns decreased on average 0.63 percent within five days. A health hazard jumped that decrease to an average of 1.15 percent, which could translate to a loss of hundreds of millions of dollars for some firms.

A breakdown of factors that most impacted stock price reactions

1. Severity

Class I recalls pose a major health hazard compared to Class II and Class III. The researchers found the seriousness of the human health risk, brought on by E. coli O157:H7, salmonella or listeria as examples, would impact shareholder losses to the greatest extent.

2. Recall size

The larger the recall, the more financial damage the firm would face, according to the researchers. Knowing that recall sizes matter, it may behoove firms to test products in smaller lot batches to help prevent a large-scale recall, but they would need to weigh the costs to implement this practice.

Further, firms should know that combining acute health urgency in a Class I recall with a large recall size would make the most sizeable market reaction.

3. Firm size

Some of the financial hit from a sizeable Class I recall can be countered if the firm is large and more diverse, said the researchers. In addition to immediate private costs, insurance premiums for the firm also would likely rise.

A large firm won't have near the stock market impact as a smaller publicly traded firm that relies heavily on that particular meat or poultry product as its main line of business. Smaller, more homogeneous firms are more apt to go bankrupt from one recall.

4. Firm's experience

Say a firm experienced one recall and within a year faced an additional recall. The researchers found the impact of the second recall would still be adverse, but because the firm showed it could manage a recall situation, all the possible repercussions from the second recall didn't have as much effect as the first.

The firm's customers, investors and consumers are often more at ease after the firm shows it can bounce back from one recall. If a company is experiencing one of its first recalls, it might benefit from leaning on experts who know how to navigate a recall to minimize financial damages.

5. Media

Media has an important effect on how a processing or manufacturing firm's customers, investors and consumers perceive the company. The larger the number of media articles about the recall event, the more damage it would likely cause the firm related to that particular recall.

Most of the media articles related to the recalls under study were informative, but they carried a negative tone, according to the researchers. Results suggest value in firms having a media plan in place if a recall were to occur.

More information: "Costs of Meat and Poultry Recalls to Food Firms." www.agmanager.info/livestock/m … r_FactSheet_2015.pdf

Provided by Kansas State University