

2014 Emerging Trends and Key Issues Report

Product Recall and Contamination Risk Management

This industry leading publication discusses changes in the regulatory environment relating to product safety and also provides updates on capacity, carriers and new coverage enhancements.

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The year in review—product safety and recalls

Product safety and recalls continued to be the focus of regulators and the media in 2013 as rules mandated under the Food Safety Modernization Act began to take effect. The number of product recalls in the U.S. and Canada for both food products and non-food products continues to grow year over year. Several significant recalls occurred during the 2013 calendar year that have affected the market place and for the first time in several years, we have seen the insurance market capacity contract. The significant recall and contamination incidents in 2013 spanned all product categories from dairy and poultry to clothing and automotive parts, many of which affected carrier results.

Food contamination events

One of the more significant and widely publicized events of 2013 involved **Rich Products Corporation**. A diversified food processor based in New York, Rich's announced a voluntary recall of frozen meals and appetizers linked to an E coli 0121 outbreak in March of 2013. The initial recall of 196,000 pounds was expanded to 10.5 million pounds produced at the company's Georgia facility. Although the products were heat treated, they were not fully cooked and were meant to be either microwaved or baked in an oven.

During the late summer, **Chobani**, the top Greek yogurt brand in the U.S., advised grocery stores and consumers to destroy 35 varieties of yogurt reported to have been contaminated by a mold associated with dairy products. More than 300 people reported getting sick after eating Greek yogurt produced in Chobani's Twin Falls, ID plant. Although no link was ever confirmed between the illnesses and the yogurt, the company, working with the FDA, issued a voluntary recall. The resulting negative publicity, destroyed product, and refunds caused significant financial damage.

The trend of significant contamination events continued through the fall of 2013, with two food processors on the West Coast dominating headlines. **Reser's Fine Foods** of Beaverton, OR announced the recall of chicken, ham and beef products produced at the company's Topeka, KS facility because they may have been contaminated with listeria. That recall was subsequently expanded to include refrigerated ready-to-eat foods including potato salad, cole slaw and salsa.

Also on the West Coast, **Foster Farms**, a California based poultry processor was linked by the Center for Disease Control (CDC) to at least 362 people in 21 states and Puerto Rico to illnesses caused by Salmonella Heidelberg in relation to chicken produced by Foster Farms. The CDC reported that 38 percent of victims were hospitalized. Despite the fierceness of the outbreak, Foster Farms has not initiated a recall, and has instead opted to comply with the U.S. Department of Agriculture to mitigate issues at three central California facilities tied to the outbreak.

International food safety events

Two international cases also bear mentioning given their complexity and damage sited. In early 2013, several "meat" products in Europe were found to contain **horse meat**. Products ranging from hamburger patties to bolognese sauce and lasagna were found to have adulterated meat. By the end of February, it was announced that sales of frozen hamburger had fallen 43% from pre-scandal levels. While horse meat is not harmful to health, fear of veterinary drugs or chemical agents used for animal euthanasia stoked safety concerns.

A second significant international incident resulted from concerns over tainted whey protein from a New Zealand Dairy Cooperative. **Fonterra**, a leading multinational dairy company owned by 13,000 New Zealand dairy farmers and the world's largest exporter of dairy products, issued a worldwide recall of products in August after testing revealed some batches of its whey protein were potentially contaminated with botulism-causing bacteria. Numerous companies were affected by the recall with one maker of infant formula stating it had suffered major brand damage amounting to more than 200 million euros. Further testing of the whey product showed the bacteria was never present and there was never a health risk.

Yum! Brands, Inc., owner of restaurant brands Taco Bell, KFC, Pizza Hut and other quick service restaurants suffered a significant sales drop after the company was accused in China of feeding toxic chemicals to poultry to accelerate their growth. Yum has nearly 5,300 restaurants in China, mostly KFC locations, and the country accounts for more than half its sales and 40% of total operating profit. Yum's China sales began to slide in late 2012 after government food safety agencies began investigating the

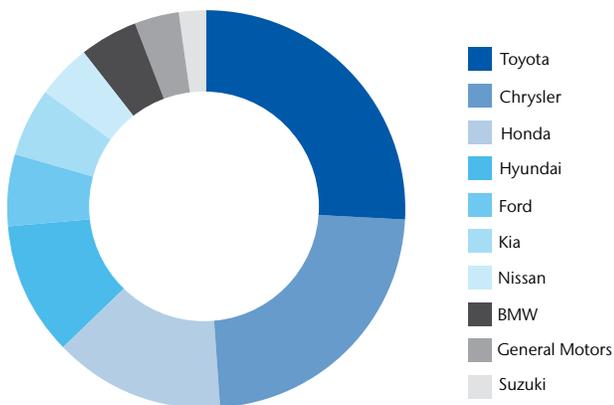
company's supply chain. A report on China Central Television found that two Yum suppliers in China had purchased chickens from farmers who used excessive levels of antibiotics. Although Yum was not fined by authorities, it suffered significant brand damage over its handling of the food scare with same-store sales declining 20% and profits declining 41% in China for the first quarter of 2013.

Non-food and automotive recalls

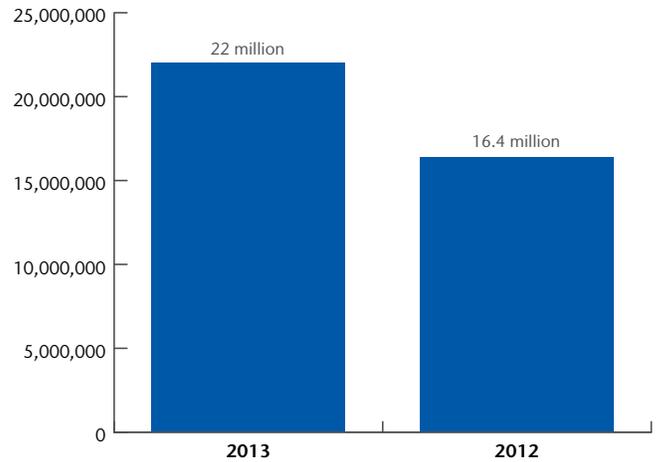
On the non-food front in 2013, Canadian based **Lululemon Athletica** was hit by a significant recall of its stretchy black yoga pants that were unintentionally see-through. A day after the problem was announced, the stock price dropped 7 percent. The company put the lost revenue at about \$57 million to \$67 million. The financial and reputational damage to the brand are credited with the Chief Product Officer's forced departure.

The National Highway Traffic Safety Administration stated that automakers initiated 632 separate vehicle recalls in 2013, up 9 percent from the prior year. In total, 21.9 million cars and trucks in the U.S. were recalled, a nine-year high. While companies are using more common parts to save money, recalls are occurring more frequently in many more vehicles when something goes wrong.

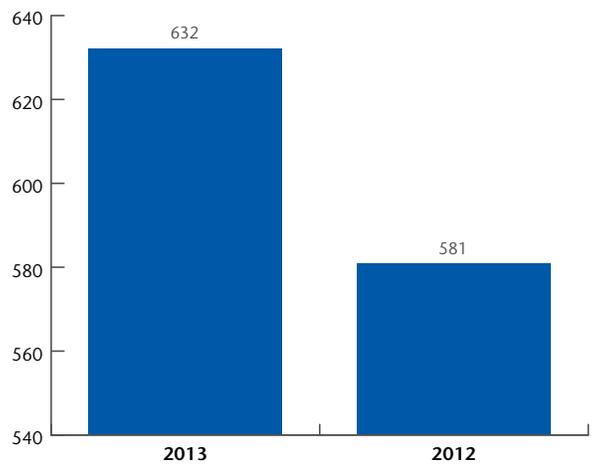
Number of vehicles recalled in 2013 by manufacturer



Vehicles recalled



Number of auto recalls



Chrysler Group initiated the most recalls with 36 in 2013, one of which was a recall of 282,000 minivans whose airbags could deploy on the wrong side. After Chrysler, General Motors had the most recalls with 23. Meanwhile Toyota recalled the most vehicles with 5.3 million, and Chrysler recalled 4.7 million in 2013.

The Fallout from Prior Years

The fallout from 2012 contamination incidents, discussed in our **2013 Emerging Trends in Product Recall and Contamination Report**, continued to take its toll on several companies. The largest organic peanut butter manufacturer in the U.S., **Sunland Inc.**, filed for Chapter 7 bankruptcy after being forced to shut down after the firm was linked to a Salmonella outbreak in 2012. This was the first time the FDA used their newly authorized power to shut down a company's operations. According to the court bankruptcy filing, Sunland has liabilities of close to \$100 million. Many attribute the FDA's issued shut down as a main reason for Sunland's filing for bankruptcy.

Another casualty of product contamination and recall in 2013 was **Jensen Farms**. Jensen Farms, linked to one of the deadliest food outbreaks in history, was found responsible for the listeria-tainted cantaloupe that injured 147 persons and killed 36 consumers. In addition to bankrupting their multi-generation family business, brothers Eric and Ryan Jensen face up to six years in prison and \$1.5 million fines each.

Finally, the saga of **Peanut Corporation of America (PCA)** appears to be slowly coming to an end as the criminal trial of former executives of the firm commenced. Four former officials at the now-defunct PCA have been accused of knowingly distributing products contaminated with salmonella and face a 76-count federal indictment. Peanut products processed at the company's Blakely, Ga. facility were linked to the 2009 salmonella outbreak that sickened more than 700 people and may have contributed to nine deaths. The outbreak resulted in the recall of thousands of products by hundreds of different companies including ice cream, cookies, cakes and confectionary products. According to the Justice Department, the four former officials misled investigators after they allegedly fabricated quality assurance labels and continued shipping products after testing showed a salmonella.

Recall Severity and Frequency Trends

Data is critical to making intelligent business decisions and how effectively businesses develop, manage, and utilize data impacts the quality of those decisions. Recall and contamination events continue to receive high profile in the media and press. Projecting the exposure to a product recall or contamination can be a difficult task not only for the company at risk, but for underwriters as well.

Although large amounts of data are available through publicly announced recalls, actual damage or loss information is seldom publicized or available. The size or severity of a loss may well be more dependent upon the handling of the media and public

perception as opposed to the size of the recall itself. Each year hundreds of products are recalled in the U.S. The six governmental agencies with oversight for product safety publish press releases and other public notices about recalls that may potentially present a significant or serious risk to consumers. Certain product recalls may be subject to expanded coverage due to the impact they have on public health.

The recalls listed below are a summary of some of the more significant recall events that have taken place over the past 30 years.

Historically Significant Recall Events 1982-2013

Product	Company	Year	Country	Recall
Tylenol	McNeil Labs	1982	USA	Product Extortion Incident involving over 30,000,000 bottles of pain reliever due to suspected cyanide tampering. Estimated costs in excess of \$200,000,000.
Perrier Water	Perrier	1990	USA/France	Benzene contamination resulting in recall of 160,000,000 bottles. Brand never re-established to pre-recall sales level.
Pepsi	PepsiCo	1993	USA	Alleged tampering of Diet Pepsi products with needles. Loss in excess of \$35,000,000 due to lost sales, rehabilitation and advertising costs.
Jack-in-the-Box	Foodmaker	1993	USA	E. coli contamination of ground beef on West Coast. Numerous bodily injury claims and 4 adolescent deaths. Loss in excess of \$100,000,000.
Cheerios	General Mills	1994	USA	Contamination of grain by grower using improper pesticide. Loss in excess of \$75,000,000.
Ground Beef	Hudson Foods	1997	USA	E. coli contamination of ground beef patties. Recall of more than 20,000,000 lbs. of ground beef. Company no longer in business.
Coca-Cola	Coca-Cola Company	1999	Belgium / Europe	Loss in excess of \$100,000,000 as recall of products expands from Belgium to 6 European countries.
Firestone Tires	Bridgestone Corp	2000	USA	Recalled 6.5 million Firestone brand tires in response to complaints that the tires may be linked to fatal crashes. Estimated recall costs of \$351 million
Snickers and Mars Bars	M&M Mars / Masterfoods	2005	Australia	Product extortion in Australia alleging poison contamination forces recall and destruction of over 3,000,000 candy bars.
Cadbury Chocolate	Cadbury Schweppes	2006	United Kingdom	Salmonella contamination resulted in recall of over 1,000,000 chocolate bars. Estimated loss in excess of \$50,000,000.
Ground Beef Patties	Topps Foods Company	2007	United States	21 million pounds of ground beef recalled due to E. Coli fears causing company to close its doors within 10 days of recall announcement.
Pet Food	Menu Foods	2007	Canada / USA	Melamine contamination of wheat gluten used in various pet foods due to Chinese supplier resulted in recall of 60 million containers of pet food. \$42,000,000 in losses attributed to the recall alone, not including lost sales.
Mattel Inc	Toys	2007	Worldwide	Mattel recalled 20 million Chinese manufactured toys in 2007 due to lead paint contamination and small parts hazards to young children. Estimated recall costs were \$24M.

Product	Company	Year	Country	Recall
Tomatoes / Peppers	Various	2008	United States	Salmonella outbreak incorrectly linked to tomatoes by the FDA costs the tomatoes industry more than \$100 million in related losses. Eventually, the contamination is traced to jalapeno and serrano pepper farm in Mexico.
Milk and Powder Milk Products	Various	2008	China	Originally detected in infant formula in mainland China, milk and powder milk adulterated with melamine sickens more than 53,000 people including 12,800 hospitalizations and four infant deaths.
Deli Meat Products	Maple Leaf Foods	2008	Canada	Listeria contamination found in corned beef and roast beef products. Recall expanded to 243 different meat products produced by Maple Leaf Foods.
Peanuts	Peanut Corp. of America	2008	USA	Salmonella contaminated peanuts affecting more than 200 companies and 2000 different products. Industry losses estimated at over \$1B. PCA declares bankruptcy.
Hydrolyzed Vegetable Protein	Basic Food Flavors	2010	USA / Canada	Salmonella contamination results in recall of 177 different products. Affected bulk, ready-to-eat and ready-to-cook products in the U.S. and Canada.
OTC Children's Medicine	Johnson & Johnson	2010	USA / Canada	Recall of 43 over-the-counter children's medicines (135 Million bottles) by McNeil Consumer Healthcare, a subsidiary of Johnson & Johnson. Medications in the recall included liquid versions of Tylenol, Tylenol Plus, Motrin, Zyrtec, and Benadryl. The recall affected at least 12 countries. Annual sales reduced by over \$600 Million and 27.5% drop in OTC sales in US.
Cereal	Kellogg	2010	USA	The Kellogg Co. issued a voluntary recall of 28 million boxes of some of its most popular cereals because of an "uncharacteristic off-flavor and smell" coming from packaging. Possible temporary symptoms, included nausea and diarrhea.
Eggs	Wright County Egg Farm	2010	USA	Recall of over 500 Million shell eggs due to salmonella contamination.
Infant Formula	Abbott Labs	2010	USA	5 million containers of top-selling Similac powdered infant formula recalled due to possible contamination by beetles or larvae of the bugs.
Cantaloupe	Jensen Farms	2011	USA	Deadliest foodborne illness outbreak in over 25 years. Listeria contamination results in over 30 deaths and hundreds of illnesses. Dollar volume of sales drops by 55.7% within four weeks. Company declares bankruptcy.
Ground Turkey	Cargill Meat Solutions Corp.	2011	USA	Largest meat recall in history with 36 million pounds of ground turkey (representing 6% of annual consumption for the industry) recalled because of potential salmonella contamination. The recall and subsequent plant closure led to 130 employees being laid off and one of the "weakest quarters" ever for their meat division.
Cucumbers / Sprouts	European Farmers	2011	Europe	Cucumbers initially implicated in over 4,000 illness and at least 48 deaths. German Federal Ministry of Food, Agriculture and Consumer Protection, later announced that seeds of fenugreek imported from Egypt were likely the source of the outbreak
Peanut Butter	Sunland, Inc.	2012	USA	Over 200 different products recalled. Resulted in first ever facility shutdown by FDA under FSMA authority.
Beef	XL Foods Inc.	2012	Canada	1.5 million pounds of beef recalled following positive E. Coli test.
Chicken Products	YUM! Brands	2012	China	Accusations of poultry being fed toxic chemicals leads to significant brand damage and China first qtr loss of 41%.
Whey Protein	Fonterra	2013	New Zealand	False report of botulism-causing bacteria results in \$100 million plus loss.
Frozen Foods	Rich Products Corp.	2013	USA	E. coli contamination results in recall of over 10 million pounds of potentially contaminated products.
Yoga Pants	Lululemon Athletica	2013	Canada	Recall of "see through" pants results in loss of \$57-67 million and forced departure of Chief Product Officer.
Yogurt	Chobani	2013	USA	Leading Greek Yogurt manufacturer issues recall due to mold associated with dairy products. The resulting negative publicity, destroyed product and refunds caused significant financial damage.



Consumer Safety—U.S. Regulatory News

The U.S. Food and Drug Administration (FDA) had an eventful 2013 having proposed six of the seven main Food Modernization Act (FSMA) rules. These include the preventive controls for human food and produce safety that was proposed in January, foreign supplier verification programs and accreditation of third-party auditors for foreign facilities that was proposed in July, preventive controls for animal food proposed in October, and mitigation for intentional adulteration that was proposed in December. The only rule we have not seen yet proposed is the sanitary transportation of human and animal food, which is expected in early 2014.

Although the FDA has made great strides in implementing rules and regulations under the FSMA, the road has not always been smooth. In April of 2013, a U.S. District Court in California ruled that the FDA violated the FSMA and ordered the agency to agree upon new dates for issuance of the regulations. This ruling was in response to a legal complaint filed by the Center for Food Safety and Center for Environmental Health. In the complaint, the Center for Food Safety and Center for Environmental Health allege that certain proposed and final regulations have not been issued by FDA pursuant to the Administrative Procedures Act (“APA”), within the time frame set forth by FSMA.

The FDA argued that they had been working on the new regulations, but that the aggressive timelines set forth in FSMA have proven to be unachievable. In addition, FDA argued that it has been difficult to staff the simultaneous development of such a large number of major rules in the same general subject area. The court found that, given that the FDA has admittedly failed to comply with the mandatory rulemaking schedule, declaratory relief was proper. Because FSMA included specific deadlines, failure to comply with those deadlines constituted a “failure to act” under APA.

Whistleblower Provision of the FSMA

The first complaint under the employee protection provisions of FSMA Whistleblower provision was filed in federal court against a New York based food and beverage company in 2013. The FSMA includes a whistleblower provision which is meant to ensure that health and safety concerns raised by employees are heard.

A former director of e-commerce at the company alleged that the company violated the FSMA whistleblower provision when he was fired for raising safety and health concerns about its products. Prior to his termination in July 2012, the employee specifically brought up concerns regarding the re-dating and sale of expired food products and the possibility of bacterial contamination. Around the same time that the employee raised the concerns, the Company began to require employees to sign non-disclosure agreements as a term of continued employment. When the employee refused to sign the agreement, the Company immediately fired him and escorted him off the premises. The employee’s counsel in the complaint says the employee protections of the FSMA are “our first lines of defense as it pertains to food, making sure that safe food reaches our tables.”

FDA proposes new food safety standards for foodborne illness prevention and produce safety

Two new food safety rules were proposed in 2013 specific to helping prevent foodborne illness. The first rule requires makers of food to be sold in the United States, whether produced at a foreign- or domestic-based facility, to develop a formal plan for preventing their food products from causing foodborne illness and to have plans for correcting any problems that arise. The FDA is proposing that many food manufacturers be in compliance with the new preventive control rules one year after the final rules are published in the Federal Register but small and very small businesses would be given additional time.

The second proposed rule proposes enforceable safety standards for the production and harvesting of produce on farms. This rule proposes science- and risk-based standards for the safe production and harvesting of fruits and vegetables. The FDA is proposing that larger farms be in compliance with most of the produce safety requirements 26 months after the final rule is published in the Federal Register. Small and very small farms would have additional time to comply, and all farms would have additional time to comply with certain requirements related to water quality.

FDA Announces Final Rule on Administrative Detention of Food

The U.S. Food and Drug Administration (FDA) announced a final rule amending the criteria for administrative detention to prevent potentially unsafe food from reaching the marketplace. This action makes the criteria consistent with changes to the Federal Food, Drug, and Cosmetic Act under the Food Safety Modernization Act (FSMA). The final rule amends the criteria for ordering administrative detention to permit FDA to administratively detain food it believes is adulterated or misbranded.

Before the passage of FSMA, FDA was able to detain a food product only when it had credible evidence that a food product presented a threat of serious adverse health consequences or death to humans or animals. Under the final rule, the FDA can detain food if it believes that the food is adulterated or misbranded. The agency can keep the products out of the marketplace for a maximum of 30 days while the agency determines whether to take further enforcement action, such as seizure.

Consumer Safety—International Regulatory Issues

Approximately 15 percent of the food consumed in the United States is imported, with much higher proportions in certain higher risk categories, such as produce and seafood. As imports have grown, foodborne disease outbreaks caused by imported food continued to rise. During a 5 year period from 2005 – 2010, over 2,348 illnesses and 39 outbreaks were linked to imported food from 15 countries. Fish and spices were the most common foods linked to those outbreaks. A report by the Department of Agriculture's Economic Research Service estimates that 85% of seafood and up to 60% of fresh produce is imported. Nearly 45% of the imported foods causing outbreaks came from Asia.

Improving oversight of imported food is an important goal of FSMA. Lawmakers have proposed accreditation standards to strengthen the quality of third party food safety audits overseas, and additional responsibilities for importers to verify that food products grown or processed overseas are equally safe as domestically produced food.

FDA Extends Agreement with China on Food and Feed Safety

On December 11, 2012, the U.S. Food and Drug Administration (FDA) announced that it has renewed an agreement with the General Administration of Quality Supervision, Inspection, and Quarantine of China (AQSIQ) to enhance cooperation between the U.S. and China on food and feed safety. The two countries entered into the original agreement in 2007, and this announcement extends the agreement for an additional five years.

The agreement includes:

- enhancement of FDA's ability to identify high-risk food products entering the United States from China
- collaboration to facilitate inspections of facilities that process and produce food
- a focus on high-risk foods frequently exported from China to the United States, including canned and acidified foods, pet food and aquaculture
- the creation of processes for FDA to accept relevant, verified information from AQSIQ regarding registration and certification

Canadian Food Inspection Agency to Open "Centers of Expertise"

The Canadian Food Inspection Agency (CFIA) announced it will be creating sixteen Centers of Expertise across Canada to provide industry and CFIA inspectors with better, more consistent access to information and advice. The intent of these Centers is to create a more efficient system for providing guidance and expert advice. This builds on CFIA's efforts to improve how it interacts with stakeholders and ultimately improves the industry's understanding and compliance with federal regulations.

In November 2012, the Safe Food for Canadians Act received Royal Assent. This act overhauls the statutory framework for regulatory food products manufactured or sold in Canada. The goal of this act is to create uniformity in inspection and enforcement powers for all types of food and will replace various product-specific statutes including the Meat Inspection Act, Fish Inspection Act, and the Canadian Agricultural Products Act.



The Recall and Contamination Markets

The product contamination and recall market incurred a number of significant losses during the 2013 calendar year across all product categories, with the most severe losses stemming from food and beverage products. Several of these losses were limit losses and affected both primary and excess carriers. Both U.S. and London based carriers were equally affected by the losses. As a result, we are anticipating a tightening of underwriting standards and capacity by carriers. For 2014, underwriters will likely look to distinguish their offerings more through policy enhancements and clarifications, value-added consulting services and claim handling reputation than pricing.

For the first time in a number of years, we have seen a reduction in the number of carriers in the product contamination and recall market. The Sagicor Syndicate at Lloyd's had been a significant provider of recall and contamination capacity for a number of years, but ceased underwriting the class in December of 2013. Manchester Underwriting Management, a newer player in the recall and contamination market, was another casualty of a difficult 2013 having also ceased with the class. Several other carriers had a difficult year, but several years of good results and larger overall portfolios seem to have tempered their results. At this point, barring any additional significant losses, we do not anticipate additional capacity reductions.

London and the Lloyd's Market

Traditional London recall and contamination carriers will entertain both primary and excess placements on a variety of food and non-food product categories. The Catlin Syndicate at Lloyds and XL Insurance are the dominant players in London. Both are particularly strong carriers for larger risks and currently provide significant capacity (generally as a lead) for larger risks placed in London. Additional London based carriers include the ARK, Canopius, Kiln, Novae and Talbot Syndicates. Most U.S. carriers also maintain a Lloyd's presence.

The Catlin Syndicate at Lloyd's of London has developed an updated version of their Automotive Product Recall Program. The updated program includes a government recall (NHTSA) trigger with no further need to prove bodily injury or property damage. The enhanced program can also be extended to include

coverage for Product Guarantee (a component failing to perform its function) and unlike other market wordings there are no specific exclusions related to fitness, quality, efficacy or efficiency. The program provides a standard retroactive date of 12 months and offers capacity of \$25 million with additional capacity available on a case by case basis or through the excess markets.

The Talbot Syndicate 1183 at Lloyd's began providing product recall insurance with a capacity of \$25 million in the summer of 2012. Talbot is focused on addressing three distinct market segments: Product Contamination Insurance for the food and beverage industry including pharmaceuticals and restaurants; Product Recall Insurance for automotive component part manufacturers; and First Party Recall Insurance for consumer finished goods companies.

After several years as a significant provider of capacity in the London marketplace, the Sagicor Syndicate at Lloyds of London announced in December of 2013 that it will no longer provide product recall or product contamination insurance. Carrier underwriting results have been challenging across the class of business for 2013, and while the past five years have seen a number of new carriers enter the marketplace, Sagicor is the first market to have exited in a number of years.

The Canopius, Kiln, Novae and ARK Syndicates at Lloyds, also continue as active markets for both primary and excess placements at Lloyds of London. As of January 1st, 2014, the Kiln Syndicate and Tokio Marine Europe merged to create one Syndicate which will be rebranded as Tokio Marine Kiln Syndicate. Tokio Marine & Nichido Fire Insurance Company acquired the Kiln Syndicate in 2008. Also, the recently announced acquisition of the Canopius Syndicate by Sompo Japan takes affect during the first quarter of 2014. Sompo Japan is the principal subsidiary of NKSJ Holdings, one of the largest insurance groups in the world.

Company market changes in 2013 include Ace European Group's announcement that they will consider participating on U.S. domiciled accounts that are placed in the London market. Aon is one of four brokers with access to this arrangement.

Liberty International continues to be an active London market willing to provide both primary and excess capacity. Traditionally based at Liberty Mutual Insurance Europe Ltd., they recently announced that their Crisis Management team now has a presence at the Liberty International Underwriters (LIU) Box 336 at Lloyd's. Through this arrangement, LIU clients can access Lloyd's paper and security.

Early in 2013, Aon and Berkshire Hathaway announced an exclusive sidecar agreement. Available only to Aon clients, the agreement allows insureds to access Berkshire Hathaway capacity via an Aon/Berkshire Hathaway Sidecar Agreement whereby Berkshire Hathaway provides a 7.5% line on any placement where there is Lloyd's capacity. They are a follow market and will follow the Lloyd's market terms and conditions.

Zurich in London released a Quantative Risk Assessment Tool that is being offered exclusively through Aon London currently. This tool is both an educational tool as it requires that the broker and/or customer complete an E-learning module prior to getting access. Once access is permitted, a web based tool can be utilized to calculate a company's maximum possible product recall or contamination loss.

U.S. Domestic Market

Domestically, U.S. carriers appear to be in a stable position. Although each carrier has to some extent experienced a difficult 2013, the losses seem to have been spread between markets. Risk preference and class selection among carriers continued to develop in 2013, with carriers focusing their portfolios towards strategic industries. Domestic markets continue to provide good competitive alternatives to the traditional London and Bermuda markets. The domestic markets have driven much of the innovation in this class including impaired property, government recall, adverse publicity, product refusal and recall liability.

ACE Westchester, a U.S. based insurance division of ACE Group, and a new player to this field in 2012, had a successful 2013, having established themselves as a significant carrier for non-food and automotive product risks. The ACE Westchester product recall offering can tailor coverage based on the unique needs

of customers. ACE maintains a capacity of \$10 million and will consider food, beverage, consumer products and automotive component parts, but seems to have carved its niche in the non-food categories.

AIG through Lexington Insurance Company continues as the longest standing product recall market globally, having offered some form of this coverage for over 25 years. Based in New York City, the underwriting team maintains a strong underwriting discipline for this class. AIG has significantly broadened its scope to include large multinational accounts and has increased its monetary capacity to \$25 million. During 2013, AIG introduced an innovative tool to assist food and beverage companies in assessing their exposure to product recall events. This program, known as NOVI, calculates the largest possible loss arising from an accidental contamination and is available to food and beverage manufacturers at no cost.

Houston Casualty Company (HCC) continues to be a favored market for smaller food and beverage risks. HCC has a maximum capacity of \$5 million, but prefers to limit their policies to \$3 million or less. HCC will not offer terms for companies with revenues greater than \$500 million. While HCC has traditionally favored smaller food and beverage risks, they will offer excess limits to larger clients with a minimum attachment point of \$25 million and a capacity of \$10 million. In 2013, HCC announced a new strategic partnership with Indianapolis-based ExpertRECALL, a leading firm in the field of pre- and post-crisis assistance, risk mitigation and recall management for the full range of consumer goods. ExpertRECALL replaces Kroll as the first point of contact for policyholders looking to report a product contamination incident or requiring immediate crisis assistance.

Liberty International Underwriters (LIU) continues to aggressively expand its portfolio through all product types with the exception of automotive component parts. With a capacity of \$15 million and a package that includes third party recall liability and impaired property coverage for both food and non-food products, LIU is a significant and innovative player in this specialized market. 2013 saw LIU introduce a new Packagers Protection Policy, a unique, customized Product Recall Policy for packagers and contract packers of topical and ingestible products. This policy is

designed to provide a broad range of clients with comprehensive and flexible coverage available for potentially significant risks, including those stemming from product recall, contamination or manufacturers' errors & omissions. It features a combined trigger that merges the critical aspects of Product Recall, Contaminated Products, and Manufacturing Errors & Omissions coverage into one single policy.

Starr Indemnity & Liability Company has steadily grown its' portfolio and appetite across all product lines with the exception of automotive component parts. Starr has carved its niche through innovative coverage extensions and competitive pricing structures. During 2013, we have seen Starr significantly increase its appetite for larger risks and commit increasingly large lines up to \$20 million.

CoverX Specialty, part of the Crum & Forster Group, continues to focus on both food and non-food products, as well as automotive products and is particularly effective as an excess follow form market. In 2013 CoverX upgraded their consulting capabilities through partnerships with Inmar and red24. Inmar brings logistical expertise to CoverX programs with a supply chain network of retailers, manufacturers, distributors and regulatory agencies with experience in executing compliant, timely recalls to compliment the food safety expertise of red24.

XL Insurance opened a domestic office in New York during 2012. Focusing on food, beverage and non-food clients this new facility has provided much easier access to XL's capacity which was previously only available in Bermuda, Dublin or London. Coverage is written on Indian Harbor Insurance Co. paper on a non-admitted basis with a maximum capacity of \$10 million. In 2013, XL announced that they were expanding their crisis consulting and food safety capabilities through a strategic partnership with The Acheson Group. Comprised of industry experts in food safety, recall and crisis management, microbiology and risk-based preventive control strategies, The Acheson Group will serve as the core crisis consultant for Response XL effective on January 1, 2014. Dr. Acheson is a recognized thought leader in food safety and regulatory affairs in North America and brings more than 30 years of food industry experience. He served as the Chief Medical Officer at the USDA Food Safety and Inspection Service, Chief Medical

Officer at the FDA Center for Food Safety and Applied Nutrition, and as the Associate Commissioner for Food Safety at the FDA.

A final domestic market to mention is SwissRe who has offered this coverage for a number of years. More recently, we have seen SwissRe take a more aggressive approach in promoting this class of business. SwissRe offers coverage for food, non-food and automotive products. Significant capacity is available (up to \$25 million) depending on the type of product and attachment. In 2012, underwriting authority was moved for this class to Chicago.

The Bermuda Market

The Bermuda market is dominated by XL Insurance and Alterra (formerly MaxRe, Ltd.) Both markets are long term insurers in the product recall market and are characterized by their willingness to provide substantial capacity to the larger multinational risks. XL introduced a new and updated policy form in 2010. The Bermuda market requires large retentions generally starting at a minimum of \$5 million and more frequently \$10 million. XL writes food, non-food and automotive products, and is actively attempting to expand its portfolio of recall/contamination business. It recently brought in a full time underwriter to oversee and grow this class. AWAC Bermuda provides an additional \$10 million in capacity on a follow form basis. ArgoRe is another significant player, in Bermuda, with a capacity of \$25 million.

Most Bermuda markets also have the ability to write product recall out of their Dublin offices, however, in most cases, the underwriting is referred back to Bermuda. Over the past decade, the Bermuda markets have been consistent in their approach to these risks as well as in their pricing philosophy. Bermuda is an option only for larger multi-billion dollar companies or those willing to carry a substantial retention. Total capacity available on the island, depending on the class of business, can exceed \$100 million for product recall risks.

2014 Global Recall and Contamination Market Capacity

Carrier	Domicile	Food & Beverage		Non-Food	
		Malicious	Accidental	Consumer	Automotive
Ace Westchester	US	\$10m	\$10m	\$10m	\$10m
Ace European Group	Europe / London	\$10m	\$10m	\$10m	\$10m
AIG (Lexington)	US/Bermuda	\$50m	\$25m	\$10m	n/a
AIG (London)	London	\$50m	\$10m	\$10m	n/a
Allianz	Europe	€50m*	€50m*	€50m*	€50m*
Allied World	Bermuda	\$10m	\$10m	\$10m	\$10m
Allied World	London	\$10m*	\$10m*	n/a	\$10m*
Alterra	Bermuda	\$25m	\$25m	\$10m	\$10m
Amlin Syndicate 2001	Lloyds	n/a	n/a	\$1m*	n/a
Arch Syndicate 2102	Lloyds	n/a	n/a	n/a	\$15m
ArgoRe	Bermuda	\$25m	\$25m	\$25m	\$25m
ARK Syndicate 4020	Lloyds	\$15m	\$15m	\$15m	\$15m
Aspen	Bermuda	\$10m	\$10m	n/a	n/a
Berkshire Hathaway International Insurance Limited	London	Unlimited	Unlimited	Unlimited	Unlimited
Canopus Syndicate 4444 / 958	Lloyds	\$10m	\$10m	\$10m	\$10m
Catlin Syndicate 2003	Lloyds	\$50m	\$35m	\$35m	\$25m
Crum & Forster	US	\$10m	\$10m	\$10m	\$10m
C. V. Starr Syndicate 1919	Lloyds	\$25m	\$15m	\$15m	n/a
C. V. Starr	US	\$25m	\$15m	\$15m	n/a
Griffin Underwriting	Guernsey	\$10M	\$10m	n/a	n/a
HDI Gerling Industrial Insurance Company	London	€15m*	€15m*	€15m*	Under consideration
Houston Casualty	US	\$5m	\$5m	n/a	n/a
Houston Casualty Excess	US	\$10m	\$10m	n/a	n/a
Tokio Marine Kiln Syndicate 0510	Lloyds	\$20m	\$20m	\$20m	Under consideration
Liberty International	US	\$25m	\$15m	\$15m	n/a
Liberty Mutual Insurance (Europe)	London	\$25m	\$15m	\$15m	n/a
Novae Syndicate 2007	Lloyds	\$10m	\$10m	\$10m	n/a
PLIS	Lloyds	\$5m	\$5m	n/a	n/a
QBE Syndicate 0386/1886 and QBE Insurance (Europe) Limited	Lloyds / London	n/a	n/a	n/a	GBP 15m
SwissRe	US	\$25m	\$25m	\$25m	\$25m
SwissRe International	Europe/London	\$25m*	\$25m*	\$25m*	\$25m*
Talbot Syndicate 1183	Lloyds	\$30m	\$30m	\$15m	\$15m
XL Insurance Syndicate 1209	Lloyds	\$25m	\$25m	\$25m	\$25m
XL Insurance	US	\$10m	\$10m	n/a	n/a
XL Insurance	Bermuda	\$50m	\$50m	\$25m	\$25m
Zurich Insurance plc	London	\$25m*	\$25m*	\$25m*	n/a

*Denotes capacity only available for non-U.S.

Automotive Product Recall Market Update

The National Traffic and Motor Vehicle Safety Act (originally enacted in 1966 and now recodified as 49 U.S.C. Chapter 301) gives the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) the authority to issue vehicle safety standards and to require manufacturers to recall vehicles that have safety-related defects or do not meet Federal safety standards. Since then, more than 390 million cars, trucks, buses, recreational vehicles, motorcycles, and mopeds, as well as 46 million tires, 66 million pieces of motor vehicle equipment, and 42 million child safety seats have been recalled to correct safety defects.

Manufacturers voluntarily initiate many of these recalls, while others are either influenced by NHTSA investigations or ordered by NHTSA via the courts. If a safety defect is discovered, the manufacturer must notify NHTSA, as well as vehicle or equipment owners, dealers, and distributors. The manufacturer is then required to remedy the problem at no charge to the owner. NHTSA is responsible for monitoring the manufacturer's corrective action to ensure successful completion of the recall campaign.

The insurance market for automotive recall insurance remains fairly limited, although several more carriers offer this coverage today than a few years ago. The carriers generally split the exposures between end products utilized in the U.S. market and those used in other countries. Liability issues and the U.S. legal system have led most carriers to rate U.S. exposures higher than those of non-U.S. insureds. A number of carriers can provide recall coverage for non-U.S. risks and several are able to offer limited coverage as an extension to the product liability policy.

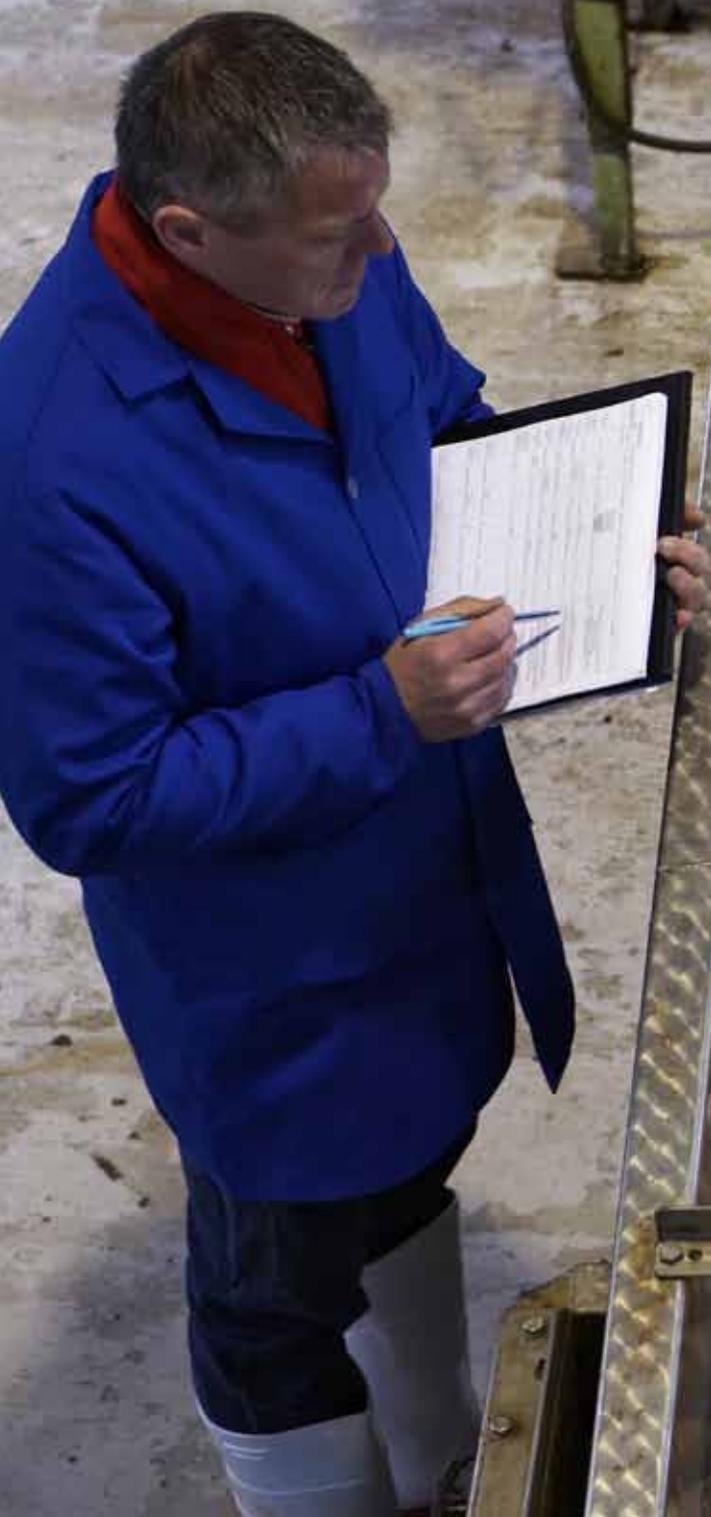
The Catlin Syndicate at Lloyds leads the London automotive recall market, and is joined by the Talbot Syndicate and QBE Europe. Catlin introduced a new form in 2013 and after reviewing data on more than 8,000 individual U.S. recalls, developed a model that gives greater differentiation between safety critical parts. This provides a unique insight into loss costs across the U.S. auto sector. The Catlin program insures non-safety critical and safety critical parts. Unlike most domestic carriers offering "impaired property" coverage under these contracts, Catlin offers "product guarantee" that is designed to broaden the bodily injury/property damage trigger to one covering quality issues and providing a similar level of coverage. Catlin's policy also includes a clear NHTSA related policy trigger while in other countries responding to government recalls initiated by the relevant competent authority of that country.

Domestically, Ace USA, Crum & Forster (CoverX Specialty) and SwissRe continue as reliable automotive capacity providers. Ace USA is carving itself a niche in the automotive recall market preferring to focus on the class given limited competition from other carriers. ACE USA has developed a strong consulting relationship with Cahill Consulting who bring a specialized automotive experience both before and during a crisis.

Crum & Forster has also been a reliable carrier for automotive recall risks and generally offers competitive terms and pricing for the class. They are also a reliable excess carrier willing to follow other carriers forms, terms and conditions. Although capacity is generally capped at \$10 million, for certain risks, Crum & Forster has been able to provide capacity up to \$20 million with facultative support.

A domestic market not to be overlooked is SwissRe. With \$25 million in capacity, they can be a substantial market for automotive recall risks. SwissRe tends to prefer higher attachment points, but is willing to play on both a primary and excess basis. They are also willing to follow most market wordings.

The Bermuda market can also provide automotive recall capacity as discussed in the earlier Bermuda Market section of this report. Attachment points generally start at a minimum of \$10 million, but several markets are willing to entertain these risk and should be considered when rounding out capacity.



Restaurant Contamination Market Update

The Restaurant Contamination industry continues to be a growing segment. As cases of accidental contamination and foodborne illness are on the rise and occurring frequently, restaurant owners are recognizing the necessity of this coverage in order to mitigate the losses that can occur during a catastrophic outbreak. In the wake of a crisis, coverage responds to business interruption losses, reputational brand damage, and adverse media attention associated with a contamination or foodborne illness event. There are also extensions of coverage such as Workplace Violence and Data Breach incidents.

Restaurant Contamination insurance is available domestically as well as through the Lloyds of London and Bermuda marketplaces. Upwards of \$100 million in limits is available in this specific niche with select markets providing restaurant contamination coverage. Each market is highlighted below with mention of unique program offerings.

Catlin is one of the largest Lloyds syndicates providing \$25 million in capacity. They provide large deductible programs and full limits for supplier contamination incidents. Catlin is a strong carrier for larger franchises and corporate chain restaurants. Domestically, Catlin has teamed with HCC and are able to provide limits up to \$75 million per Trade Name. They can also provide coverage subject to no deductible and in such cases would apply a 5 day waiting period. HCC continues to accommodate a wide variety of restaurant concepts.

Crum & Forster can provide a capacity up to \$10 million for restaurant risks. They will consider any restaurant type, but prefer smaller, higher end chains. Crum normally does not sublimit coverages. They are able to offer a long term agreement option in which they provide a premium guarantee up to two years if revenues have not increased by more than 10% and no losses have occurred. This offering makes them stand out against other carriers.

Starr Companies can now offer \$25 million in limits and has underwriting facilities in the U.S. and London. They have an appetite for all types of restaurant profiles and concepts. Coverage can be extended to cover royalties generated from franchise operations. In addition to being a primary carrier, Starr Companies can also be a strong excess partner and will consider follow-form coverage.

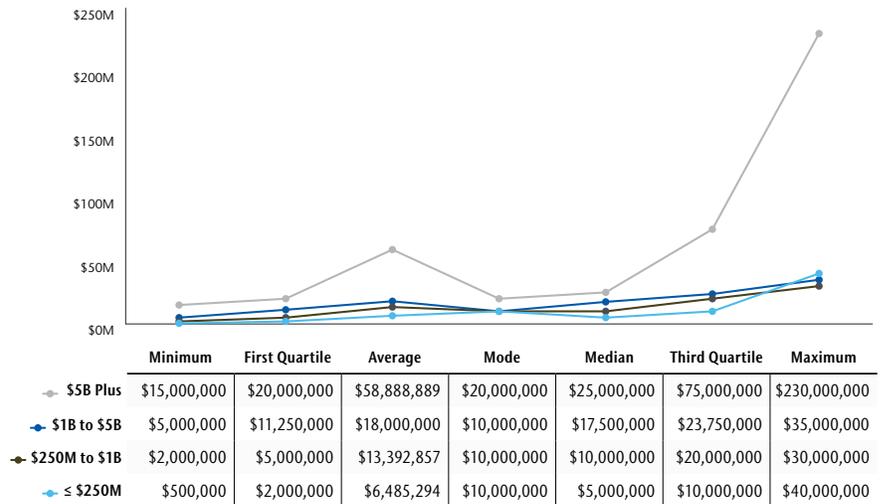
Professional Liability Insurance Services (PLIS) is the longest player in this specialized market having offered coverage for over a decade. PLIS offers \$100 million in available capacity per Trade Name. They have the ability to provide large limits for corporately owned and franchise programs. They have innovated much of what is considered standard coverage today including workplace violence. Their deductible structure includes a standard 7 day waiting period, although on occasion we have seen flexibility in this. PLIS has also introduced coverage for data breach events to address certain cyber-risks under their policy.

Finally, XL can provide coverage through their Bermuda or London facilities for restaurant risks. They have an available capacity of \$25 million. For risks placed in Bermuda, a minimum attachment point of \$10 million is required.

2013 Purchasing Trends—Product Recall/Contamination Benchmarking Report

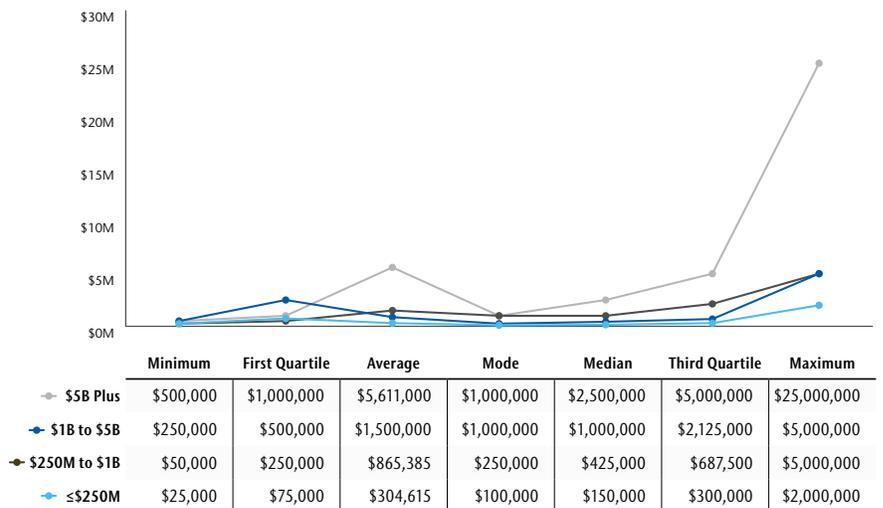
Aon Risk Solutions' Crisis Management Practice maintains a proprietary database to review purchasing trends from both a limit of liability and a self-insured retention view. Reviewing historical purchasing trends is one method to consider in determining a program's optimal structure. Historical data can also assist in analyzing trends to plan for changes in pricing and risk retention driven by the appetite of the insurance marketplace. The data below is provided in a summary format; however client specific reviews based on exposures and product type are also available.

Limits



Source: Aon Risk Solutions | Crisis Management Database

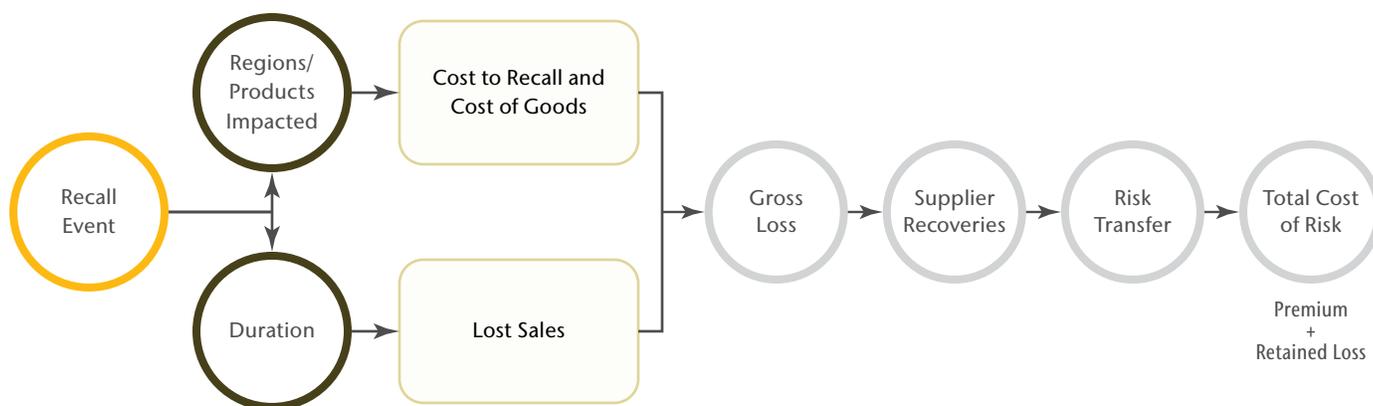
Retentions



Source: Aon Risk Solutions | Crisis Management Database

Industry Information and Trends

The benchmarking information data summarized above was taken from Aon's Crisis Management Proprietary Recall Database. The database represents policies placed by the Aon Crisis Management U.S. brokerage team during the 2013 calendar year. For the purposes of this exercise, only ingestible (food and beverage) products have been considered.



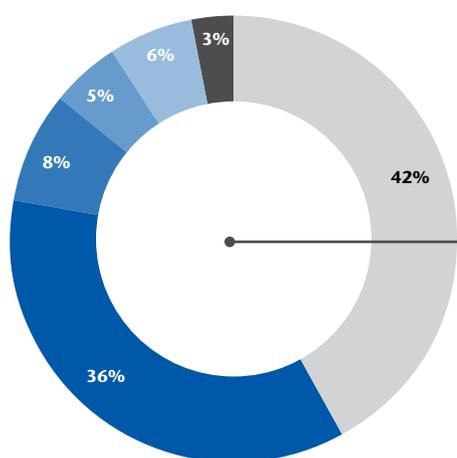
Product Recall Analytics and Modeling

In addition to traditional recall benchmarking data, Aon's Actuarial and Analytics group in conjunction with Aon's Crisis Management group has developed a Product Recall Analytics and Modeling Suite that provides guidance on the financial impact of decisions about Product Recall risk and insurance. This additional service provides company-specific advice to clients in evaluating program structure alternatives and provides quantitative results that can be used in addition to traditional benchmarking. The model helps determine the impact of program structure on retained losses, insurance recoveries, losses in excess of insurance coverage and premium value. This analytic capability can enhance the decision making process for multiple objectives.

Data is critical to making intelligent business decisions. How effectively businesses develop, manage, and utilize data impacts the quality of those decisions. Looking at historical loss and purchasing trends is one method to consider in determining a program's optimal structure. Historical data can also assist in analyzing trends to plan for changes in pricing and risk retention driven by the needs of the insurance marketplace.

Industry Information

Outside of the larger, well known and documented recalls, specific loss data is not made public. Often a company's best source when evaluating past losses may come from peer companies or industry groups sharing information. The Grocery Manufacturers Association (GMA) published a 2011 survey in their *Capturing Recall Costs* report that provides useful insight into the frequency and severity of product recalls. Thirty-six GMA members took part in the electronic survey.

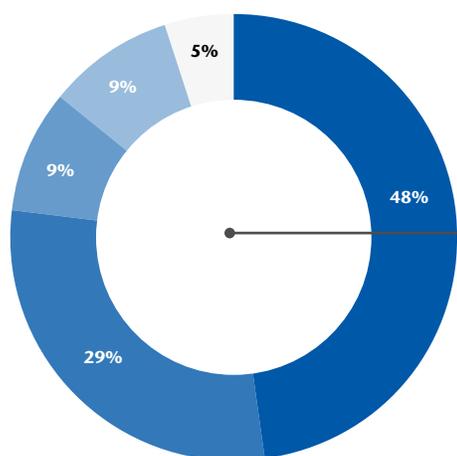


To the best of your knowledge, how many health/safety recalls has your company been impacted by in the last five years?

Legend: None (light grey), 1 to 2 (dark blue), 3 to 4 (medium blue), 5 to 10 (light blue), 11 to 20 (very light blue), Not Sure (black)

Source: GMA *Capturing Recall Costs—Measuring and Recovering the Losses*

Of the 36 members responding, 58% had experienced at least one product recall event during the past five years. 52% of those recalls had an estimated financial impact to the company of greater than \$9 million with 14% reporting an estimated loss of greater than \$50 million.



What do you estimate the financial impact (sales losses, direct recall costs, etc.) to your company was as a result of the recall?

Legend: Less than \$9mm (dark blue), \$10mm to \$29mm (medium blue), \$30mm to \$49mm (light blue), \$50mm to \$99mm (very light blue), Over \$100mm (white)

Source: GMA *Capturing Recall Costs—Measuring and Recovering the Losses*

2014 Conclusions

The product recall and contamination insurance market continues to evolve and adjust to developing exposures and new risks. Historically, carriers understand that after several years of relatively stable and low loss ratios, the nature of this exposure will from time to time result in a difficult underwriting year with loss ratios exceeding 100%. 2013 was certainly one of those years, but most underwriters seem to have prepared well for this, taking a long term view of their results.

Although 2013 was a difficult year for many carriers, underwriters will strive to maintain the stability of the market and the integrity of their contracts. While we anticipate that there may be some tightening of the market in terms of pricing and capacity, those risks that are well prepared to manage a recall event and who are able to demonstrate their preparedness, will be sought after by underwriters. Carriers will continue to be competitive as underwriters strive to identify and insure the “better risks.” Underwriters will also look to diversify their portfolios to spread their exposures beyond food and beverage risk. In particular we anticipate that underwriters will look more favorably at non-food risks including automotive products.

It is clear that companies who look to manage the risk of recall in a holistic manner will be best prepared to survive a recall crisis. Transfer of risk through insurance is just one method to prepare for a recall. A successful recall risk management program must include upfront quality control, management of vendors and contracts, and the ability to respond effectively and efficiently to a crisis. Underwriters and their partners can assist in developing a successful recall risk management program by bringing valuable expertise to their insureds in the form of crisis communication, quality control and recall logistics. This expertise can be the difference in maintaining the safety of your products, and protecting the trust of your customers.

Sources

Center for Disease Control

www.cdc.gov

United States Food and Drug Administration

www.usfda.gov

FDA Food Safety Modernization Act

www.fda.gov/food/guidanceregulation/fsma/ucm242500.htm

FDA Inspection and Compliance

www.fda.gov/food/guidanceregulation/fsma/ucm257978.htm

FDA International Programs

www.fda.gov/InternationalPrograms/Agreements/MemorandaofUnderstanding/ucm107557.htm

Consumer Product Safety Commission

www.cpsc.gov

National Highway Traffic Safety Administration

www.nhtsa.gov

U.S. Food Safety and Inspection Services

www.fsis.gov

U.S. Dept. of Agriculture

www.usda.gov

Canadian Food Inspection Agency

www.cfia.ca

About the Author



Bernie Steves is the Managing Director of Aon Risk Services Crisis Management Practice based in Chicago, IL. Bernie is recognized as one of the country's leading product recall, contamination, and food borne illness insurance specialists. With more than twenty years' experience in this specialty

risk management niche, he has worked with some of the largest companies in the United States and Canada, including numerous Fortune 500 companies, to address product recall, contamination, and food borne illness exposures. Bernie's background includes years of experience from both the underwriting and specialty brokering disciplines having specialized in this field since 1987. He is a frequent author and speaker on the topics of product contamination and recall insurance.

Bernie is a graduate of the University of Arizona and holds a Masters in International Management from the American Graduate School of International Management (Thunderbird). He is a licensed insurance producer and a licensed surplus lines insurance producer.

Crisis Management

Crisis Management is part of Aon Risk Solutions, the risk management and insurance brokerage business of Aon Corporation. Going beyond traditional risk transfer solutions, our global network of product contamination and recall specialists offer a full range of consultancy services, enabling clients to quantify their risk exposure and make informed decisions on the optimum balance between risk retention, risk management and risk transfer. Our team of specialist brokers, crisis consultants and in-house claims management combine threat assessment, impact analysis and crisis management and response with individually structured insurance programs. Our unique, consultative approach enables our clients to implement the most appropriate measures to meet their duty of care and better protect their balance sheet, people, brand and reputation.

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