

Who's in charge of the Takata airbag safety recall?¹

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ABSTRACT

This case was developed for students studying the regulatory environment of business, product safety, quality control, consumer protection, automotive manufacturers, and industry self-regulation. Some information contained in the case was collected from interviews with a college student and her father who owned a vehicle impacted by the Takata airbag recall. Corroborating details were derived from public sources. The content of this work product is real, but the names of the student and her father have been changed. Additionally, the names of the dealerships and managers who the student communicated with are not disclosed. The purpose of the case is for students to learn about general economic and legal consequences that occur when a dangerously defective product enters the stream of commerce. In this case, the Takata airbag is the product at the center of the largest safety recall in U.S. history. This massive recall has significantly impacted manufacturers, dealerships, regulators and consumers. Students will learn basic knowledge about the National Highway Safety and Transportation Agency (NHSTA), and study methods of managing a large safety recall in the automotive industry, and consider the effectiveness of current safety recall practices. This case is designed for undergraduate or graduate courses in business law, commercial law and for courses where product quality and safety, customer service, and regulatory issues in the automotive or manufacturing industry are discussed.

Keywords: regulations, product safety, business law, consumer protection, NHSTA, Takata Airbag, manufacturers

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INTRODUCTION

This case will introduce students to the importance of regulations in product safety and to further their understanding of the challenges of effectively recalling dangerously defective products from the marketplace. The study of regulations and product safety are highlighted by focusing on the Takata airbag safety recall, the largest safety recall in the history of the United States (U.S.). At least 22 deaths worldwide and hundreds of injuries have occurred from the defective airbag which sometimes explodes. A lesser resulting harm is the economic burden that Takata's mistakes and admitted fraud has forced on consumers and the automotive industry. In the U.S., there have been about 50 million recalls generated, and authorities expect another 20 million as new cars will be added to the list. To date, about half of the recalled airbags have actually been repaired, which heightens the critical importance of recall efforts by all stakeholders (Laing, Detroit News, 2018). Particularly as some of the vehicles have up to a 50% chance of housing an inflator that will explode if the vehicle is in an accident (Blumenthal, U.S. Senator for Connecticut, 2016). This case study will allow students to understand the critical importance of the actions of key stakeholders in a complex consumer safety product recall. Students will examine the roles of NHSTA, federal and state governments, automobile manufacturers, dealerships, consumers, Takata Corporation, and the courts.

Case: Takata Airbag Safety Recall

Emily Newman was catching up on the news, and learned that a class action lawsuit had been filed in a Florida federal court on March 14, 2018 against Mercedes, Fiat Chrysler, General Motors (GM) and Volkswagen (VW). The plaintiffs in the lawsuit alleged that the automakers were aware of dangerously defective Takata airbags years before they notified customers. The lawsuit alleged that certain GM employees were worried about the inflators rupturing in 2003, yet the company failed to warn customers. Instead they continued to buy the relatively inexpensive airbag systems from Takata and install them in vehicles.

Emily also read that in 2017, BMW, Subaru, Nissan, Toyota and Honda settled a similar lawsuit concerning the Takata airbag. The news reported, however, that GM intended to fight the lawsuit (Krisher, boston.com/car-news, 2018). Emily was intrigued by the recent class action lawsuit against the automakers because two years earlier, she learned that her vehicle had a defective Takata airbag. At that time, Emily was 22 years old, and an out-of-state graduate student studying at a university in Ohio. In March of 2016, her father, Chris Newman, contacted her from Virginia, Emily's hometown, to let her know that he received a safety recall notice in the mail for the airbag that was installed in her 2008 General Motors Saturn Astra. Chris had purchased the used Saturn for Emily with a loan. Chris scanned and emailed the recall notice immediately to Emily, and told her that he would confer with her after they gathered more information. Chris was concerned, but he knew Emily was capable of making sound decisions.

The notice from Saturn - GM stated that it was sent in accordance with the National Traffic and Motor Vehicle Safety Act:

“In some vehicles, the driver airbag inflator may experience an alteration over time, which could lead to overaggressive combustion in the event of an air bag deployment. This condition could create excessive internal pressure when the air bag is deployed, which could result in the body of the inflator rupturing upon deployment. In the event of an inflator rupture,

metal fragments could pass through the air bag cushion material, which may result in injury or death to vehicle occupants” (Boyer, Jeffrey M. , 2016).

After reading the reason for the recall, Emily wanted to have her Saturn’s airbag replaced as soon as possible. But, then she read further down in the recall notice where it stated: “Parts to repair your vehicle are not currently available, but when parts are available, your General Motors dealer will replace the driver airbag module on vehicles subject to this recall” (Boyer, Jeffrey M. , 2016).

While a graduate student in Ohio, Emily’s apartment was located many miles from campus, she attended daily classes, and she was a teacher’s assistant throughout the week. There was no public transportation from the campus to her apartment. Emily enjoyed driving home to Virginia a few times during the semester to visit her family and friends, even though the drive from Ohio to Virginia took about eight hours. A safe and reliable vehicle was important to her, as it is to most people. Emily had a limited disposable income so was unable to buy or lease a safer vehicle. To complicate matters, she was still making car payments on her Saturn. Emily called a GM dealership in Virginia where her parents lived, and explained her dilemma with living in Ohio for college, and the airbag recall of her vehicle. They told her that they had no timeline for the parts to arrive because her vehicle was not in a high risk area. The dealer suggested that she continue driving her car until the part was available. Emily expressed her concern as the Recall Notice clearly stated that the defective air bag could lead to death or injury. The GM Dealer in Virginia explained that they did not have loaner vehicles available, but that they could price a trade-in, or could offer her a contract for a leased vehicle if she was over 25, as they awaited the recalled airbag parts.

Emily was disappointed with the response and did not want to drive a car with a dangerously defective airbag even though the GM dealer suggested that she continue driving it. Until then, she had never heard of Takata, or this airbag recall.

Emily was strapped for cash, and considered selling her 2008 Saturn since she refused to drive it, but she was unsure of the legal and ethical issues of selling a used car with an unrepaired safety recall. She called the used car dealer in Virginia where her family had purchased the used Saturn, but they were no help and said that they had no legal obligation to offer her assistance or to buy the car back.

General Costs

Emily’s car insurance was \$75.38 a month, and the car payment on her Saturn was \$227 per month. She, like many others impacted by the airbag recall, had to continue making car payments to the bank, even though the safety recall notice clearly stated that injury or death to the occupant could occur from the defective airbag. She could not afford to lease another “safer” vehicle waiting for GM to procure the part to fix her airbag. Additionally, Emily had to consider costs to store her Saturn Astra for an indefinite time, and depending on how long it was stored, the tires may develop flat spots, and the battery may need to be replaced. She had just purchased all new tires for \$450 before moving to Ohio. A new battery for would run about \$120. She figured that even if she parked her car for a year, she would have to shell out \$5,151 for it. Emily searched online for inexpensive car rentals, and found that a rental could cost her up to \$988 a month, or maybe more because she was under 25. An economy car leased from a well-known rental company was about \$988-\$1,000 per month for a 22 year old. (Enterprise.com, 2018)

To lease a vehicle with a contract for 36 months, a price of \$269/month was possible, but this included a down payment of \$2,999 down and a 36 month contract commitment. This was a total of \$12,683. (cars.usnews.com, 2018)

The dealer did not tell her exactly how long before the Takata inflator could be replaced, but to expect up to a year, or longer. Therefore, at the slightly higher price of \$988 per month Emily could lease a car on more flexible terms, and the total cost for 13 months was about the same as the total cost of the 36 month contract.

Emily calculated her unanticipated costs for the next 13 months to be \$14,064, as indicated in Table 1 (Appendix). It began to sink in that she was being forced to absorb the financial hardship of Takata's mistakes. Emily was not financially leveraged to take on these unexpected costs. She could move closer to campus, but had not anticipated this extra expense either, as the move and the pricier apartments near campus were above her budget.

Emily decided to negotiate directly and in-person with a GM dealer in the Ohio college town where she was attending school. She drove her Saturn to the closest authorized GM dealer and met with the manager. She shared the safety recall notice, and her concern about driving a car with a defective airbag. She explained that she had no financial means to rent a car while waiting on Takata and GM to supply the part for her car.

The manager of the dealership in Ohio confirmed that GM did not know when the part would be available, and that GM was not providing free loaners to owners of Saturn Astra 2008 vehicles waiting on parts for the recall and that GM did suggest that people continue to drive their Saturn Astra's because none of these vehicle's airbags had ruptured. (Pender, 2016) But, he was surprisingly sympathetic, and told her that he would press GM for a complementary loaner vehicle. Emily was able to negotiate a free substitute car, and free storage for her Saturn until the parts were available for her car.

Thirteen months later, in mid-April, 2017, Emily's father called to let her know that another safety recall notice arrived in the mail. This time, informing him that the part to repair her airbag inflator was now available (Boyer, Jeffrey M. , 2017).

After 13 months of her Saturn being parked and stored at the dealer in Ohio, Emily's vehicle was repaired. The service manager gave her a free replacement battery, rotated and checked her tires, provided a complimentary oil change and performed an alignment. She returned the loaner vehicle in late April 2017, after using it free of charge for over a year. The receipt for the free rental vehicle was about \$12,000. This was an expense that GM ultimately elected to absorb. Emily understood that in fact, neither the dealership, nor GM, were under any legal obligation to replace her Saturn's battery, store her vehicle for over a year, pay for the loaner vehicle, and provide all of the free work that they did on her Saturn. That was two years ago, and Emily had been satisfied with the result.

But, now as she read more facts underlying the recent class-action lawsuit filed against GM and other manufacturers she was startled by the deaths and injuries associated with the defective Takata airbag. She discovered that there were many lawsuits all over the country surrounding the safety recall. There were several types of lawsuits; some were suing for physical injuries or wrongful death, and others were suing for economic losses resulting from having vehicles with unrepaired Takata airbags. Emily felt fortunate that she had only encountered the economic loss, and nothing more serious. Yet, she was curious as to why the recall was taking so long to complete, and why some automakers provided free loaner vehicles to stranded customers, while others refused. She wondered why the law was not more uniform in requiring all manufacturers to assist their customers when their vehicles were stuck with an unrepaired safety

recall involving a dangerous defect. What was being done to warn drivers about the risks of the defective inflators? Emily decided to research the seriousness of the defective product, to learn about the relevant regulations, and to find out, who was in charge of the Takata airbag safety recall?

Airbags Designed to Protect Drivers and Passengers

Airbags are considered a passive restraint safety device because they automatically activate to protect vehicle occupants. The first U.S. Patent for an airbag was awarded in 1953 to John W. Hetrick. It was called a safety cushion. It was further developed as some automakers such as Ford and Chrysler began installing airbags in their vehicles in the mid 1980's. In 1998, U.S. legislation required all vehicles sold by automakers to be equipped with airbags (McMormick, 2006).

The modern airbag system contains three parts - the airbag, an inflator and the propellant. The airbag is made of a textile, sometimes nylon, and is produced in an assortment of sizes relevant to the vehicle and placement in the vehicle. Inside the inflator canister, usually made with steel, metal or cast aluminum, is a filter, including a seal to prevent propellant contamination. The metal canister houses an igniter and the propellant chamber. Generally, modern airbag systems are designed to detect a crash through a sensor, which then sends an electric impulse causing the igniter to fire and ignite chemicals located in the propellant chamber, in many cases this was sodium azide, which essentially results in an explosion for the airbag to deploy. The sodium azide has been upgraded to a safer and less toxic propellant by many air bag manufacturers (Mogahzy, 2008).

Airbag equipment designers must mitigate risk of injury to vehicle occupants from the rapidly inflating airbag. The chemical in the propellant chamber once heated creates an explosion thereby filling up a bag with gas "at about 200 miles per hour" (PopularScience, 2016). Airbags save thousands of lives every year according to the NHSTA (NHSTA, Airbags, 2018).

WHAT WENT WRONG WITH TAKATA'S AIRBAG?

Technical Problems

The defective Takata airbags were installed in tens of millions of vehicles around the world since about 2001. The recall includes 37 million vehicles, and 50 million airbags in the U.S. with the numbers fluctuating as new information is learned about the situation. The airbag has been responsible for worldwide fatalities and hundreds of people have suffered injury from the airbag (Buretta, 2017). At the core of the defect, is the propellant used in the airbag system, also known as phase-stabilized ammonium nitrate ("PSAN").

A full list of all recalled vehicles is too lengthy to include in this case, however, the list may be found in a report published by the Department of Transportation's appointed Independent Monitor (Buretta, 2017). The Takata airbag safety recall list is extensive and includes many models from the early 2000's and vehicles as new as a 2017 Audi R8, a VW vehicle (Mays & Fred Meier, 2018). The list is updated as necessary, by the NHSTA website (NHSTA.gov, 2018).

The U.S. Department of Transportation has announced that the “Alpha” vehicles contain airbags with up to a 50-percent change of exploding like a grenade (Buretta, 2017).

-Honda Accords, 2001 and 2002
-Honda Pilots, 2003
-Honda Odysseys, 2002
(NHSTA, Takata Alpha Air Bags Pose Increased Risk, 2017).

-Honda Civics, 2001 and 2002
-Acura TL/CLs, 2002 and 2003
-Honda CR-Vs, 2002

On January 11, 2018, Ford released another recall of its 2006 Ford Rangers after it determined that the July 2017 death of a man in West Virginia was caused by the exploding Takata airbag. In 2016, a Ford 2006 Ranger was also involved in a fatality due to the Takata airbag which exploded in a car accident. Ford has offered to pay for a free tow to the dealer for those owning these cars. Ford advised people not to drive this vehicle at all because it is so dangerous (Plungis, consumer reports airbags, 2018).

The obvious problem with the airbag is that when the vehicle is involved in a crash, and sometimes even a very minor one, some Takata airbags have exploded sending metal shrapnel from the airbag components into occupants of the vehicle with tremendous force. Some first responders have described the wounds as if the victim had died from being shot in the face, other victims died from blood loss from having their necks severed by the exploding metal debris. Stephanie Erdman, survived, but was permanently blinded from the shrapnel (Samilton, 2017).

Takata originally used sodium azide as a propellant in its airbag systems. In the late 1990's manufacturers sought substitutes for the sodium azide because it had toxic and explosive tendencies. Takata substituted tetrazole as its propellant, a safer and less toxic compound. The use of tetrazole, however, was expensive and the resources to create the compound were in short supply. Takata pushed its scientists to find a cheaper and more efficient substitute for the propellant, which led to the use of ammonium nitrate as the propellant. The problem with ammonium nitrate is that it was known to become unstable over time in humid conditions. But, the cheaper price and more abundant supply were attractive. “Ammonium nitrate was about one-tenth the price of tetrazole” (Susan Berfield, Fisk, Plungis, & Trudell, 2016) according to Scott Upham, manager from 1994-1995 of the marketing division of Takata at the Auburn Hills, Michigan location (Susan Berfield, Fisk, Plungis, & Trudell, 2016). Due to its unstable characteristics nearly all other airbag manufacturers rejected ammonium nitrate. “Takata is the only global air bag maker to use ammonium nitrate as a propellant in its inflators” (Shiraki & Tajitsu, 2017).

Several accidents and deaths occurred before Takata decided that moisture entering the propellant chamber was the problem, so it added a desiccant, a drying agent, to the airbag system. Honda recalled cars in 2008 claiming that excessive water in contact with the ammonium nitrate made the propellant unstable. Honda and U.S. regulators were assured by Takata that Takata had addressed the problem by adding the desiccant and that the manufacturing issue was a small one (Susan Berfield, Fisk, Plungis, & Trudell, 2016).

More fatalities and injuries followed. Dissatisfied with Takata's analysis of the defective airbag system, several automobile manufacturers hired Orbital ATK in 2016, a company whose team of rocket scientists independently investigated and determined the flaw with the airbag system. The team conducted computer simulations and gathered detailed data before concluding that the problem was indeed the ammonium nitrate but also related to design. According to the report from the scientists, “—it's not just manufacturing problems, as Takata has alleged, but a

fundamental flaw in the design that has turned the airbag's inflator into a bomb" (Fernholz, 2016). The design is not able to protect the inflator from moisture and high temperatures. So, by just adding desiccant, Florida senator Nelson claimed that this was allowing automakers to install "new live grenades into people's cars as replacements for the old live grenades" (Fernholz, 2016).

The volatility of ammonium nitrate exposed to time, high temperatures and moisture, as well as the design flaw noted by Orbital ATK, lead to the dangerous flaw in the airbag. Some have been disappointed that the solution by Takata is to simply add a desiccant as the fix. Keiichi Hori, a leader in examining auto safety components at Japan Explosives Society, claims "adding a drying agent can reduce, but not eliminate, the risk of uncontrolled explosions" (Shiraki & Tajitsu, 2017). Even former employees of Takata who worked with the inflators, have questioned fixing the recalled vehicles by simply adding a drying agent. Some predict that these too may someday be recalled due to the volatility of using ammonium nitrate as a propellant. One former Takata employee asserted that by only adding a desiccant, "you're just lengthening the fuse, not correcting the problems" (Shiraki & Tajitsu, 2017).

Death and Injuries

Worldwide, there has been reported up to 22 known deaths and about 180 injuries from the Takata airbags spanning from 2009 through early 2018. Nearly all of the vehicles involved in a fatality are early 2000 model Honda vehicles, but two were 2006 Ford Rangers and one a 2002 Acura. The NHTSA has determined time, high temperatures and humidity create the greatest danger for the inflator to explode. Hence it has designated priority zones for repairs in people living in these states depending on the year of the vehicle: Alabama, California, Florida, Georgia, Hawaii, Louisiana, Mississippi, South Carolina, Texas, Puerto Rico, American Samoa, Guam, the Northern Mariana Islands (Saipan), and the U.S. Virgin Islands. Yet, several fatalities from the defective airbag occurred in states that are not listed in Zone A (AP, Detroit Free Press, 2018) (Buretta, 2017).

The first known fatality in the U.S. from the airbag was on May 27, 2009 in Oklahoma when Ashley Parnham, an 18 year old who had graduated from high school days earlier bumped another vehicle in a high school parking lot causing minimal damage to her 2001 Honda Accord. But the airbag in her Honda Accord exploded propelling metal shrapnel into the young woman's neck. She died at the scene. The case was quickly settled with Takata and Honda (AssociatedPress, 2010).

Serious injuries involving blindness and deep lacerations have also occurred where victims require extensive surgery, some resulting in disfiguration or disabilities (Buretta, 2017).

Economic issues

Less serious harm has been in the form of economic hardship. Due to the high number of vehicles equipped with these airbags, potentially tens of millions of people have suffered economic hardship created by the Takata Airbag recall. Many people in Emily Newman's situation are anxious or afraid, and understandably so, to operate a vehicle with defective airbags known to propel shrapnel into the occupants of a car during an accident instead of protecting them. Therefore, many have been forced to use public transportation, rent a substitute vehicle, or even buy another car, all while still making a car payment on the parked car, or stored car, with

the recall. Due to the massive size of the recall, the replacement parts have been in short supply. Some dealers have not had the replacement part for months or years (Blumenthal & Markey, Automaker Report Card, 2018). Many customers have suffered undue economic hardship and have taken to filing lawsuits to seek reimbursement for incidental, consequential and compensatory damages.

STAKEHOLDERS

Takata Corporation

The Takata Corp., and its subsidiary TK Holdings, Inc., i.e., Takata, sold the defective airbag to automakers for about 15 years. The airbags were installed in vehicles and sold to consumers all over the world. In the U.S., Takata's principal place of business was in Auburn Hills, Michigan (U.S. v. Takata Corp., 2017).

Takata, a Japanese Corporation, began in the early 1930's as a textile business in Japan. Its self-described philosophy was to reduce "traffic accident victims to zero" (Takata, 2018). And, its dream was to be "motivated by the preciousness of life" (Takata, 2018). The Takata Way was described as, "to communicate openly and effectively..." (Takata, 2018). Each of these proclaimed goals were unfilled, in the end.

Takata's president during the safety recall timeline was Shigehisa Takada, the grandson of Takezo Takada, Takata's founder. According to court records in the criminal case, Takata was the second largest supplier of airbag systems in the world, and 20% of airbags sold in the world were Takata products (U.S. v. Takata Corp., 2017).

In April, 2017, Takata shares were suspended due to the impending bankruptcy plan (Shepardson, 2017). Growing pressures surrounding the defective airbag led Takata to file for bankruptcy protection. TK Holdings (U.S. based) filed Chapter 11 bankruptcy on June 25, 2017, and its Japanese parent corporation also filed for bankruptcy protection in Tokyo District Court the next day (Dean, 2018). Chinese-owned Key Safety Systems paid \$1.6 billion to acquire Takata assets, but Takata will continue to manage the airbag inflator replacements (Kageyama, 2018).

National Highway Safety Transportation Administration (NHSTA)

The Department of Transportation oversees many administrations connected to transportation, including the National Highway Safety Transportation Administration (NHSTA). NHSTA is tasked with keeping the highways safe, and reducing economic loss, physical injuries and death that may result from a motor vehicle accident. The agency is charged to investigate, inform the public, and provide standards to further their broad responsibilities (Transportation, 2018).

NHSTA Legal Authority to Act

"A recall is issued when a manufacturer or NHTSA determines that a vehicle, equipment, car seat, or tire creates an unreasonable safety risk or fails to meet minimum safety standards" (NHSTA.gov, 2018). The NHSTA has authority to issue a safety recall, or to order a manufacturer to issue a safety recall. The NHSTA began managing the Takata safety recall and

repair schedule in the Coordinated Remedy Order on November 3, 2015 (Blumenthal & Markey, Automaker Report Card, 2018).

The Transportation Recall Enhancement, Accountability, and Documentation Act (TREAD Act) gives the NHSTA the authority to legally order a remedy program for the safety defect. The TREAD Act was enacted in 2000 to correct flaws seen in an extensive Firestone tire safety recall. The TREAD Act is incorporated in the Safety Act of 1966. NHSTA exercised its authority under the TREAD Act to manage the Takata airbag and GM recall procedure (Snively, 2015) (National Traffic and Motor Vehicle Safety Act of 1966).

The Safety Act regulates motor vehicles and equipment and is under the authority of the Department of Transportation to enforce. The Secretary of the DOT delegated enforcement of (National Traffic and Motor Vehicle Safety Act of 1966) the Safety Act to NHSTA (49 C.F.R. §§ 1.95(a), 501.2(a)(1)). The Safety Act obligates manufacturers of equipment and automobiles to provide a timely notification to NHSTA where the equipment is defective. Notice must be provided within 5 days after the manufacturer should have known or did know, of an unreasonably dangerous defect. Violators are subject to a fine of \$7,000 per violation, but limited to \$35 million per related offense.

NHSTA enforced the Safety Act against Takata for its failure to notify officials about the defects seen in the airbags containing the ammonium nitrate, non-desiccated propellant. NHSTA found and confirmed in a Consent Order dated November 3, 2015 that Takata had violated the Safety Act's defect notification requirements. Takata was ordered to pay the United States \$200 million (Consent Order Air Bag Inflator Rupture, 2015). The consent order, however, included much more than a fine, as it also created an extensive order requiring Takata to manage the dangerous airbag, including phasing it out.

In a November, 2015, NHSTA Consent Order, EA15-001, Air Bag Inflator Rupture, Takata admitted violating the Safety Act, by failing to give timely notice of the airbag defect to NHSTA. The consent order noted that Takata claims to still have confidence in the safety of its inflators. The record indicated that, "NHSTA does not share this same confidence in the long-term performance of such inflators, particularly those that do not contain a desiccant..." (Consent Order Air Bag Inflator Rupture, 2015) p. 9.

As part of the settlement in the administrative case, Takata agreed per NHSTA guidelines, to phase out the use of ammonium nitrate in its ignitors regardless of whether it contains a desiccant or not. Takata was given several years to phase out its existing PSAN contracts, and will be prohibited from signing new contracts for the PSAN ignitor product. But, if the contract was signed before October 21, 2015, Takata may honor those contracts by using non-desiccated inflators unless, at some point NHSTA discovers new research to show that they are also unsafe (Consent Order Air Bag Inflator Rupture, 2015); (In Re: Takata - Nissan Settlement, 2017) p. 259.

Some sources shift some blame for the growing Takata airbag problem to the NHSTA. By late 2009, several known injuries or fatalities from the exploding airbag surfaced, but the problem was attributed to a small number of airbags and Honda initiated a recall. The NHSTA closed its investigation within about six months. According to Clarence Ditlow, a director at Center for Auto Safety, a nonprofit organization, if NHTSA had done a more thorough job of probing Takata in 2009, the current airbag crisis may have been less serious (Susan Berfield, Fisk, Plungis, & Trudell, 2016). Of course, the NHSTA has actively stepped in to proactively manage the recall over the last few years. With the limited information that NHSTA had in 2009, their assessment of the Takata airbag problem may have been reasonable.

Conversely, it is the federal government which establishes standards for automobile performance and automobile equipment standards of performance (NHSTA.DOT, 2017). It is possible that in the late 1990's, the NHSTA could have banned the use of ammonium nitrate from use as a propellant in an airbag which is directed at drivers and passengers faces.

Due to the unprecedented volume of recalled vehicles containing the defective airbag, airbag production has been unable to supply enough replacement parts at one time. NHSTA in consultation with automakers and Takata prioritized the recall so that those vehicles at most risk are repaired first. The replacements or repairs began in 2016 and are scheduled to continue through the end of 2019.

The three zones depicted in Table 2-3 (Appendix) correspond with a heat and humidity index. Geographic locations under U.S. jurisdiction were assigned zones for purposes of priority in replacements.

Other problems with the recall are that information is subject to new developments. For example, NHSTA discovered that in December 2015, a nondesiccated inflator killed a man when the driver's side airbag exploded in the man's 2006 Ford Ranger. The vehicle was only under a recall for the passenger side airbag at the time because ballistic testing did not indicate that the driver's airbag was defective (Administrator, 2016). This is problematic, and would indicate that the ballistic testing is flawed, or the sample was too small, as it did not detect the problem. Subsequently, another man died from the driver's side 2006 Ford Ranger in late 2017. This time, NHSTA and Ford are proactively encouraging people not to even drive this vehicle (Plungis, consumer reports airbags, 2018).

Over time, the non-desiccated airbag becomes increasingly more likely to fail. This coupled with the fact that nearly half of the recalled airbags have not been replaced, has U.S. regulators concerned. NHSTA's Independent Monitor reported that many people may not appreciate the gravity of the risk of the airbag, and recall campaigns that use words such as 'defective' may be not be as effective to raise awareness as using words such as 'exploding' to describe the dangers of the airbag (Buretta, 2017).

A federal law passed on June 1, 2016, prohibits rental car firms with fleets of more than 35 cars from renting vehicles with unrepaired recalls. This law also extends to the NHTSA's authority over rentals. Prior to that date, rental car companies were legally able to rent vehicles that had unrepaired Takata airbags (NHSTA, Federal Rental Car Law, 2016).

NHTSA presently has no power to order airbag repairs of recalled vehicles used by Uber drivers or taxis (Olsen, Cars.com, 2016). Further, the NHSTA cannot require that a private consumer take care of the Takata airbag safety recall, nor prevent the consumer from reselling their unrepaired vehicle to another buyer. It is illegal, however, to sell a recalled auto part under federal law. Hence, a junk yard or used parts store cannot resell a recalled part that was removed from a vehicle and not repaired (AP, Autos, 2017). The NHSTA is an administrative entity and therefore it has no power to criminally prosecute violators.

THE COURTS

Criminal Case

The Department of Justice (DOJ) pursued its own investigation against Takata which resulted in a criminal case against the airbag manufacturer in a federal Michigan court. Court records indicate that Takata had engaged in criminal fraud regarding its airbags for 15 years. The

fraud was pervasive and involved high-levels of management ignoring falsification of documents to minimize problems with the airbag system. The DOJ asserted that Takata essentially put profit ahead of protecting customers from death or injury. Takata settled the case in part, by agreeing to pay \$1 billion to the U.S. government in January of 2017, admitting to:

“knowingly devised and participated in a scheme to obtain money and enrich Takata by, among other things, inducing the victim OEMs [automakers] to purchase airbag systems from Takata that contained faulty, inferior, nonperforming, nonconforming, or dangerous PSAN [phase-stabilized ammonium nitrate] inflators by deceiving the OEMs through the submission of false and fraudulent reports and other information that concealed the true and accurate test results for the inflators which the OEMs would not have otherwise purchased as they were” *U.S. v. Takata Corp.*, No. 2:16-cr-20810 GCS EAS, Dkt. No. 23 at 47 (E.D. Mich. Feb. 27, 2017) (p. 6-7 of 22) (*U.S. v. Takata Corp.*, 2017).

The Individual Restitution Fund (“IRF”) was established by the United States District Court for the Eastern District of Michigan (the “District Court”) as part of Takata’s criminal plea. This plan set aside \$125M for victims suffering physical injuries or wrongful death, and \$850 for the OEM (manufacturers who were victims of the fraud) (Green, 2018).

Bankruptcy

The Bankruptcy Court confirmed Takata’s Bankruptcy Plan on February 21, 2018. The court created a fund for victims which is separate, but complements, the IRF from the criminal settlement fund (Dean, 2018). The Takata Airbag Tort Compensation Trust Fund (“TATCTF”), will compensate wrongful death or victims of physical injuries resulting from the Takata airbag. This trust will be funded with \$ 90 million - \$ 137 million to compensate eligible victims (Dean, 2018) (Green, 2018). The bottom line is that victims, and future victims, were considered in both the criminal case against Takata and in Takata’s bankruptcy case.

Automakers contributing to the bankruptcy trust include: Volvo, BMW, Toyota, Ford, Daimler Trucks, Mitsubishi, Fiat Chrysler Automobiles, VW, Subaru, GM, Honda, Nissan and Mazda (Plungis, Consumer Reports, Legal Hurdles, 2018). Chinese-owned Key Safety Systems paid \$1.6 billion to acquire Takata assets, but Takata will continue to manage airbag inflator replacements at this time. Key Safety’s parent company, Joyson Electronics, is located in Ningbo, eastern China. They will rename Takata business as, Joyson Safety Systems. The bankruptcy court approved the acquisition, and it presented no antitrust issues (Kageyama, 2018).

Lawsuits

Class action lawsuits have formed across the country to sue automakers and Takata, for various product liability claims since 2016. Many of the class action suits are for economic damages to recover compensatory, consequential and incidental economic expenses related to the airbag recall. For example, recovery may include loss of vehicle’s value, child care expenses, loss of work, cost for towing unsafe vehicles, and cost to lease a substitute vehicle, or to pay for substitute transportation.

Common allegations seen in the class action lawsuits are that automakers knew or should have known that the Takata airbag systems were dangerous based on conversations with their

engineers reaching back to the late 1990's. Generally, the lawsuits allege that the automakers knew or should have known of serious defects with the Takata inflators in the early 2000's when evidence surfaced that there were problems. Yet, the actual recalls for most of the automakers were not sent to their customers until a decade later, thereby putting customers at risk. Other allegations are that customers were sent recalls for parts that were not actually available, hence being forced to park their cars for months, or years, causing economic hardship as the dealers were not authorized by the automakers to provide free substitute vehicles (Krisher, boston.com/car-news, 2018).

Class Action Lawsuits

- Mazda, Toyota, Subaru and BMW settled for \$553 million (Shepardson, 2017).
- Honda settled for \$605 million. (In Re Takata - Honda Settlement, 2017).
- Nissan settled for \$97.7 million (In Re: Takata - Nissan Settlement, 2017) .
- GM, Fiat Chrysler, VW, Mercedes-Benz (Daimler AG) pending class action lawsuits (Laing, Automakers face class-action suit over faulty air bags, 2018).
- Ford, pending class action lawsuit (Associates, 2018).

INVOLVEMENT OF STATES

There is no federal vehicle registration and the NHSTA does not keep track of vehicle ownership. If it did, it would certainly be more efficient for the NHSTA to process safety recalls. Instead, it must rely on states which collect vehicle ownership data, but every state has a different level of funding, collecting and processing vehicle registration information. Most states permit vehicle registration even if the car has an outstanding safety recall. California Department of Motor Vehicles (DMV) however, mails pending safety recall information to vehicle owners along with the registration renewal reminders. California requires that safety recalls on vehicles be resolved, or the vehicle's registration cannot be renewed. This is one way to ensure that a higher percentage of vehicles are not on the road with dangerous safety defects. Many state DMV's maintain that they are not equipped legally, financially or in terms of computer sophistication to handle manufacturer and NHSTA safety recalls for vehicles (Kulisch, 2017).

The recall completion rate in the U.S. is much lower than in some countries such as Japan and Germany, where there national laws require cars to have safety recalls resolved before they may be registered (Kulisch, 2017). Concern with the slow recall completions and notifications, the U.S. federal government created a two-year pilot-program offering a grant to states willing to participate in a study where state DMV's would mail safety recall notices to vehicle registrants (Lawrence, 2017).

AUTOMOBILE MANUFACTURERS

Former NHSTA director Mark Rosekind told Detroit reporters in late 2016 that despite what happened to the Takata Corporation, automakers were ultimately responsible for the costs of replacing the defective airbags (White J. , 2016). This means that ultimately, the manufacturers place their brand on a car, and they may even need to subsidize the mounting costs involved with the airbag replacement.

Automobile manufacturers cannot escape liability simply because they relied on Takata Corporation to supply them with an effective and safe airbag. Even the fact that Takata plead guilty to committing fraud against manufacturers does not relieve automobile manufacturers from liability. Several automakers have already settled class action lawsuits against them for the injuries incurred by their customers for the Takata airbag and have agreed to conditions, but they have still refused to admit fault.

Honda was the first automaker to recall cars with the Takata airbag. In November, 2008, Honda recalled 3,940 vehicles due moisture impacting the stability of the ammonium nitrate propellant. At that time, Takata added desiccant to absorb water, which may just be a temporary fix (Susan Berfield, Fisk, Plungis, & Trudell, 2016). The evolution of this airbag recall is not unnoticed. At first, Honda refused to provide loaners to teens, even if it was their car under the recall (White R. , 2016). As more injuries and fatalities surfaced from airbags in Honda vehicles, Honda changed their tune and began offering free loaner vehicles even to teens (Pender, 2016). In fact, as Honda vehicles came under scrutiny for have the most fatalities from the defective airbag, Honda become perhaps the most proactive of the automakers in assisting customers and getting the word out about the dangerous airbag.

A Takata airbag was purchased from a salvage yard and installed in a refurbished 2002 Honda Accord, which was then sold to 19-year old Karina Dorado's family. Karina's neck was punctured by metal when the airbag in the refurbished car exploded. To prevent this problem, Honda bought 75,000 Takata airbags from junk yards in the last several years to prevent them from being used to refurbish old cars (AP, Autos, 2017). Honda has also paid for ads in stadiums, social media and has hired private investigators to find owners of vehicles with the airbags (Susan Berfield, Fisk, Plungis, & Trudell, 2016). Honda has also taken to making visits to homes where the vehicles are registered to warn people of the dangers of the unrepaired airbags (White J. , 2016).

Many of the automobile manufacturers have settled lawsuits with victims. Settlement terms include offering reimbursement for expenses related to having the airbag replaced, and also require automakers to use social media and other effective ways to get the advertise the critical importance of customers taking care of the recall when parts are available. Some automakers such as GM and Ford have not settled the lawsuits against them, have denied the allegations against them, and have been less generous with assisting customers with burdens associated with the recall process.

As recently as 2017, new cars were being sold by four auto manufacturers with Takata airbags without the desiccant. Fiat Chrysler, Mitsubishi, Toyota and Volkswagen knew that these vehicles would need to be recalled at some point, but at the time the new car was sold, it was not subject to the recall. According to the NHSTA, testing reveals that the inflators may not be a danger in those vehicles for six more years (Krisher, Hartford Courant, 2016).

In 2020 automakers, including Toyota, Honda, Nissan and BMW will send out re-recalls for vehicles that were repaired early in the Takata recall process because the earlier repairs were done before NHSTA or automakers knew why the airbags were exploding. Essentially, NHSTA ordered automakers to replace the older more dangerously defective airbag with a newer defective airbag until tests were confirmed, and supplies were available (Olsen & Plungis, Consumer Reports/Recalls, 2018).

Regardless of whether the manufacturer has settled its lawsuit, or admitted fault, most of the automakers have maintained information online for its customers about vehicles subject to the recall. Some companies, such as Ford, have not settled lawsuits for the airbags, yet they have

created various levels of assistance depending on the type of vehicle under the recall. For example, the company considers its Ford 2006 Ranger too dangerous to drive until the airbag is repaired. It has warned owners not to drive them until the airbag system has been repaired. Ford will even send a repair team to the location of the customer's Ford 2006 Ranger, provide a free loaner, or pay for the cost of a tow to keep the unrepaired vehicle off of the road (Gallagher, 2018).

Motivated by being contacted by a growing number of constituents expressing confusion over whether complimentary loaner cars were available for vehicles with unrepaired safety recalls for the Takata airbags, U.S. Senators Richard Blumenthal and Edward J. Markey investigated automakers and their express policies with dealers and customers surrounding the massive airbag recall. They compiled their results in a report titled, 'Automaker Report Card' published in March, 2018. Essentially, the report praises some automakers with a "thumbs up" and some with a "thumbs down" (Blumenthal & Markey, Automaker Report Card, 2018) depending on answers submitted by 17 automakers to five questions posed by the Senators.

Thumbs up report cards went to BMW, Fiat Chrysler, Honda and Acura, Nissan, Subaru and Toyota. Thumbs down reports went to Daimler Trucks and Vans, Ferrari, Ford, General Motors, Jaguar, Mazda, Mitsubishi, Tesla and Volkswagen. Criteria included the ease of customers to procure a free loaner vehicle during repairs, the willingness of the manufacturer to endorse a clear policy with the dealer and to reimburse the dealer for free loaner vehicles. Additionally, the Senators were concerned that a high percentage of the fatalities in the Takata airbag cases were teens, or under 21. Yet, the policies of the automakers who earned a "thumbs down" either refused to provide a loaner to someone under 21, or were not clear about their policy. The report praised those automakers permitting teens to have free loaner vehicles as long as the insurance company was fine with the teen driving the substitute car. The report also noted that higher-end brand vehicles did not translate to better customer service regarding the Takata airbag recall (Blumenthal & Markey, Automaker Report Card, 2018).

GM, in 2016, noted that the Saturn Astra 2008's, Sierra HD pickups, Saab 9-3, Saab 9-5 and Silverado vehicle could still be driven even though the vehicle owners had received safety recalls indicating that they could be killed from their airbags. The logic was that GM was unaware of any of those inflators injuring or killing anyone in the field, or rupturing during tests, yet GM had mailed safety recalls to vehicle owners indicating that the airbag in their vehicles could kill them (Pender, 2016). In 2017, GM updated its Securities filing with the SEC to include information about its confidence in the vehicles with some Takata airbags that do not have recalls because they were engineered with features such as better venting. GM expects to save up to \$1B if it is released from additional recalls for the Takata airbag (Form 10-K section of GM 2017 annual report, page 24) (GM, 2017).

DEALERS

Car dealers are on the front lines of the Takata airbag recall. For example in Emily's case, the GM dealer allowed her a 13-month free substitute vehicle (loaner), complimentary oil change, alignment and they gave her a free battery at the end of 13 months. Had Emily simply called GM she would not have had such an easy time. By negotiating directly with the dealer, she was able to store her Saturn without cost on the dealer's lot, and she did not have to worry about transportation. Yet, Emily did contact a GM dealer in her home state of Virginia, and that location was not willing to assist her with a free loaner, and suggested that she keep driving her

Saturn with the unrepaired recall. Different outcomes suggest that it can't hurt to try to negotiate with the dealer. Car dealerships presently are not required by law to provide loaner vehicles unless, as seen in the settlement agreements, a court has ordered that the automobile manufacturer provide loaners through the dealerships to customers waiting on parts to arrive for their defective airbags.

Dealers may own their own franchise, or car retail business, and can independently set loaner car policies, unless the dealer is under a court order as an agent of the manufacturer to provide complimentary transportation or loaner vehicles, or if the dealer has a loaner car agreement with the manufacturer (Blumenthal & Markey, Automaker Report Card, 2018).

There is currently no federal law stopping a used car dealer from selling a used car with a recalled and unrepaired Takata airbag. If a used car dealer, however, advertised that its used cars were "safe" and passed safety inspections, yet the car had a safety recall, this may fall under a false advertising claim under some state law. Additionally, the Federal Trade Commission (FTC) may be able to investigate under its broad authority to investigate deceptive claims. Yet, to further complicate this matter, even the FTC has been sued by several consumer groups for the FTC permitting used cars to be advertised as 'safe' even though they had unrepaired safety recalls (Brooks, 2017).

NHTSA is in favor of federal regulation to prohibit dealers from selling used cars that have unrepaired safety recalls. Current federal regulations do not prohibit a car dealer from selling one of the 'Alpha' vehicles as a used car that has airbags with a 50% of rupturing (Mays, Cars.com, 2016). Yet, under state tort law, most courts would find that a dealer has a duty to warn a buyer of the dangerous defect. Federal legislation, however, would strengthen the rules. Some dealers, however, do not sell used cars with safety recalls.

Those opposed to legislation prohibiting dealers from selling used cars with unrepaired recalls are generally concerned about millions of people who trade in used cars to the dealer every year and would experience either lower trade in values, or would be unable to trade in their car. If the recalled part is available, then this isn't an issue, but as in the Takata airbag recall, some car owners have a car that they prefer to trade in for a different car because they are afraid to drive due to the recall, yet the parts are unavailable for months, or even longer than a year (Mays, Cars.com, 2016).

Consumer

As discussed above, the NHSTA had no authority to force consumers to repair their safety recalls. For example, Honda had sent 20 recall notices to owners of a vehicle housing the defective airbag since 2008 (Robles, 2016) yet the car was never repaired and in 2016 a woman from Riverside, California was killed when the airbag exploded after a car accident (White J. , 2016); (Naranjo, 2016).

Consumers may also resell vehicles that are under the Takata airbag recall, and the consumer has no statutory duty to repair the airbag prior to the resale. In common law, however, if a seller sold a known dangerously defective vehicle to an unsuspecting buyer and the buyer was subsequently harmed by the exploding airbag, the buyer could certainly bring a lawsuit against the seller under tort theory claiming that there was a duty to warn of a known dangerous defect.

Insurance

If the insurance company can determine that during a car accident the Takata airbag malfunctioned and the damages are related to the defect, then the insured probably would not have an insurance rate hike. Of course insurance policies differ, as do the underlying consequences for an accident. Courts will often interpret ambiguity in the contract terms, however, in the light most favorable to the insured (*Shelter v. Maples*, 2002).

Obviously, if damage to the vehicle or injuries or a fatality are a result of a part that is under a safety recall, the insurance company will not increase the policy holder's rates. Additionally, after a thorough investigation of the accident, the insurance company may seek subrogation against Takata or the manufacturers if it is apparent that the part under recall is what contributed to the accident. Subrogation allows the insurance company, if it pays the insured's claims from an accident or incident, to "step into the shoes of the party whom they compensate and sue any party whom the compensated party could have sued" (Henry Campbell Black, 1979), p. 1279.

Some insurance companies are extending physical coverage from the insured's personal vehicle to cover temporary free loaner vehicles provided by the manufacturers due to the airbag inflator recall (Armstrong, 2016).

John Buretta, the government appointed independent monitor overlooking the Takata recall, suggested that the insurance company could help get the word out about safety recalls by including the reminder in renewal notices. Honda officials weighed in claiming that "insurance companies have balked" (Kulisch, 2017) at the idea.

DISCUSSION QUESTIONS

1. What are pros and cons of legislation prohibiting the sale of used vehicles with unrepaired safety recalls? Use the perspective of the used car dealer, the consumer and the automaker.
2. How can automakers improve the current safety recall process?
3. How can the state or federal government improve the current safety recall process?
4. Why do you suppose that General Motors would permit GM product dealers to negotiate individually with customers and with GM, regarding the availability of free loaner vehicles, yet its official stance is that it would not provide free loaner vehicles to everyone with a pending Takata safety airbag recall?
5. Who should be in charge of consistently informing vehicle owners about safety recalls, NHSTA, the state governments, or the automobile manufacturers?
6. Do you think that the exploding Takata airbag problem could have been avoided or mitigated if the NHSTA or DOT had been more "hands on" in regulating the use of ammonium nitrate as a propellant in the construction of airbags for vehicles?
7. Do you think that private vehicle owners should be legally mandated to complete a safety recall repair before being permitted to renew their annual vehicle registration?
8. Discuss whether there should be federal or state legislation requiring Uber or taxi companies from transporting paying passengers in a vehicle with an unresolved safety recall.
9. List free market or industry self-regulating solutions to mitigate future massive safety recalls.

STUDENT ROLE PLAYING AND ANALYSIS OF STAKEHOLDERS

Students can self-select, randomly select, or the instructor can assign roles:

How would a representative from the stakeholders below improve the current safety recall process? If no improvement is suggested, then explain why?

- A. NHSTA or Federal lawmakers
- B. Consumer
- C. Takata representative, or equipment supplier
- D. Dealer
- E. Automaker
- F. State DMV or State Department of Transportation

APPENDIX

Table 1. Expenses Associated With the Takata Airbag Safety Recall for 13 Months

<u>Timeline Without Use of Car</u>	<u>Insurance on Saturn Astra</u>	<u>Battery Replacement</u>	<u>Tires Replacement</u>	<u>Storage for 12 months</u>	<u>Loan Amount at \$227/month</u>	<u>Lease a Car</u>	<u>Totals</u>
3/2016 – 4/2017	\$980*	\$120	\$450	\$650	\$2,951*	\$12,844	\$17,995

*These two figures (\$980 + \$2,951) represent a total of \$3,931 of anticipated costs which would have been budgeted by Emily whether her car was under a safety recall or not. The total unanticipated cost to Emily resulting from the safety recall was (\$17,995 – 3,931) \$14,064.

Table 2. Defect filing dates and priority zones according to age of vehicle, heat, and humidity of vehicle registration

Defect Filing Date	Zone A Vehicles Model Year	Zone B Vehicles Model Year	Zone C Vehicles Model Year
5/16/16	2011 and older	2008 and older	2004 and older
12/31/16	2012 and older	2009 and older	2008 and older
12/31/17	2013 and older	2010 and older	2009 and older
12/31/17	2013 and older	2010 and older	2009 and older
12/31/18	All remaining vehicles	All remaining vehicles	All remaining vehicles
12/31/19	All like-for-like replacement parts	All like-for-like replacement parts	All like-for-like replacement parts

(NHTSA, 2018) Information compiled from the NHSTA website: <https://www.nhtsa.gov/takata-air-bags/takata-recall-expansion-what-consumers-need-know> (NHTSA, 2018)

Table 3. Zone according to geographic location

Hot and Humid, Zone A: Alabama, California, Florida, Georgia, Hawaii, Louisiana, Mississippi, South Carolina, Texas, Puerto Rico, American Samoa, Guam, the Northern Mariana Islands (Saipan), and the U.S. Virgin Islands	Less Hot and Humid, Zone B: Arizona, Arkansas, Delaware, District of Columbia, Illinois, Indiana, Kansas, Kentucky, Maryland, Missouri, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Virginia, and West Virginia	Least Hot and Humid, Zone C: Alaska, Colorado, Connecticut, Idaho, Iowa, Maine, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New York, North Dakota, Oregon, Rhode Island, South Dakota, Utah, Vermont, Washington, Wisconsin, and Wyoming (NHTSA, 2018)
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(NHTSA, 2018) Information compiled from the NHSTA website: <https://www.nhtsa.gov/takata-air-bags/takata-recall-expansion-what-consumers-need-know>

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