The Impact of Automotive Recalls on Consumer Opinion

by Infegy and Phoenix Marketing International (PMI)

Overview

Challenge
Understand how recalls affect consumer opinions of automotive brands

Solution
Performed qualitative analysis using social media and survey data sources to extract the core undercurrents and the length of impact

Result
Recalls have moderate effects on consumer perceptions of quality and desirability, and produce a lifecycle lasting longer than six months
2014 was a year of major safety-related recalls by some of the biggest automotive brands, including GM, Honda, Toyota, Ford, Nissan and BMW. For GM, what started out with a small recall of 800,000 vehicles in the spring, quickly escalated into a 28 million vehicle recall worldwide by the beginning of July. This massive recall sparked multiple investigations and placed GM directly in the public spotlight.

While the company’s new CEO, Mary Barra, attempted to quell the situation, more and more information appeared suggesting that GM had known about the defect for nearly a decade and had even attempted to cover-up the company’s culpability.

The latest recall, centered around defective airbags, affects 15 brands and more than 7 million vehicles in the US. Much like the recalls GM recently weathered, the most recent recalls are experiencing protracted attention with more vehicles being added and greater oversight being applied.

Infegy and Phoenix Marketing International (PMI) conducted an analysis of several data sources to gauge the effect the recalls have had on consumer opinion and the lifespan of the recall crisis.

PMI utilized data from the Phoenix Automotive Brand and Ad Audit, an ongoing study conducted among those in the market for a new vehicle. Infegy leveraged their in-house collection of online consumer dialog. Both analyses were conducted on data collected between April through July and again in December.
Recall Awareness

According to data collected and analyzed by PMI, the considerable media attention on the recalls, which were widespread across numerous automotive manufacturers, seemed to drive high awareness of the recalls. Awareness was at its peak in April of this year, at 60%.

The proportion remained over 50% as the recall crisis continued for GM and as the initial wave of recalls impacting other brands for seatbelt and airbag related issues began to emerge. By December, despite intense media coverage of the recalls related to airbags manufactured by Takata, awareness of the recalls had declined to 40%.

Based on the findings, awareness of the recalls was somewhat higher among consumers who were in the market for luxury vehicles, when compared to those in the non-luxury segment. Truck shoppers were least aware of the recalls.

Earlier in the year, when asked which brands respondents were aware of having announced a recent recall, Chevrolet and Toyota were mentioned, by sharply higher proportions of consumers compared to other brands (see chart on Page 5).
Chevrolet was mentioned more than any other brand in July. However, to close out the year, the tables had turned with Honda and Toyota being mentioned most often, though Ford had entered the picture, at a slightly smaller proportion than Chevrolet.

Interestingly, GM, the corporate entity itself, was mentioned most often overall across April through July. Nissan and Chrysler were cited by smaller proportions of automotive shoppers, and no other brand was cited by more than 10% of shoppers as having issued a recall.

Among luxury brands (below), generally less than 10% of consumers in the market for a luxury vehicle cited any luxury brand as having a recall. Cadillac was mentioned most often earlier in the year.

In December, BMW, Lexus, Acura, and Cadillac were the brands mentioned most often. The proportion of consumers citing any of the other luxury brands was less than 5%. With awareness levels established, the next step was to look at the impact of previous recalls and then gauge how the Takata airbag recall compared.
To determine what the general life of a recall in the public eye looks like, Infegy focused on four major brands’ recalls that occurred prior to the Takata airbag incident. The brands that were observed were Ford, GM, Honda, and Toyota. The study took a sample of online commentary from six weeks up to the announcement of a major recall and six weeks after to gauge how perceptions shifted.

For the majority of brands, the recall was just a blip on the radar in terms of generating negative conversations about overall product quality. On the other hand, the GM recall produced a linear increase of negative mentions about quality that continued to increase up to six weeks after the announcement.

One common thread consistent across multiple brands was the effect on negative mentions of acquisition such as, “I didn’t buy the Toyota Corolla.” Every brand, with the exception of Ford, saw a compounding surge of conversations specifically about not buying their products.
In relation to acquisition, the effect on mentions of negative purchase intent were much more sporadic and did not display a general trend. Here, negative purchase intent refers to future looking statements similar to, “I will never buy a Honda Civic.”

Although these types of statements were made at the time of the announcement, and immediately after, about Honda, elevated numbers of these reactions for GM and Toyota were delayed by several weeks. However, just as with Honda, the duration of high volume periods of negative feedback was short lived.

Findings here suggest that widespread adverse impacts on consumer opinions have a timeline that generally does not exceed six weeks before declining.

However, when taking into account year-over-year changes for GM, several disparities were noticed in the aggregate measurements of negative sentiment and perceptions of quality.

These disparities suggest that while lasting upward trends seemed to settle after six weeks on the recall timelines, the overall impact on consumer opinion compounds over time and can have measurable effects on brand affinity. This hypothesis is further supported by PMI’s findings (Page 9) as well as findings in the postmortem analysis of the GM ignition recall that follows.
GM’s ignition recall went through several stages and the total timeline of significant attention lasted from February through July. Negativity peaked on March 30, 2014, rapidly declined, but was then stabilized by ongoing reports that GM may have hidden the defect and high ranking members of the company were aware of the problem long before it became the center of public attention.

Only in the last few months of the year did negative sentiment begin to drop to levels similar to pre-recall levels. Even so, GM was not out of the woods just yet.

The spikes in conversation in Q4 were directly related to ongoing findings that GM potentially hid information from regulators and the public about the dangers of the ignition switches, as well as a rising death toll attributed to ignition switch failures.

A. 2/18 - First wave of 800,000 recalls announced
B. 3/16 - Authorities Investigate Whether GM Understated the Defect to Safety Regulators
C. 3/30 - Report that Mary Barra Sent a Personal Letter Urging People to get Switches Replaced
D. 5/18 - GM Announces Recall of Another 2.42M Vehicles
E. 6.15 - GM Employee Warned About Ignition Problems in 2005
Negative mentions on microblogs related to purchase intent and acquisition grew steadily during the period of the recalls. Although negative purchase intent had not fully subsided to pre-recall levels by year end, discussions related to buying GM brands and models had increased.

Throughout the year both negative purchase intent and negative sentiment spiked each time a new recall or finding was announced. While focusing on each individual event, it was recognized that the growth in the number of negative mentions generally declined after six weeks. However, both examples in the GM postmortem analysis demonstrate elevated levels of negativity throughout the year that did not return to pre-recall standards.

From the historical analysis and postmortem analysis of the GM ignition recall, it is safe to assert that in the past, recalls have had a lasting effect on consumer perceptions of brand quality and desirability, as well as sustaining a lifecycle lasting longer than six months.
At the center of the last automotive recall of 2014 was the airbag manufacturer, Takata. The company is responsible for supplying defective airbags to nearly every major car maker and the Takata’s faulty product potentially affects almost 11 million vehicles.

No manufacturer was harder hit than Honda, with more than 5 million cars recalled. The only closest brand by sheer number of recalls was Toyota with around 800,000 vehicles recalled. While Honda led the field in total number of recalls, the ratio of recalls to amount of attention received online was not nearly as skewed towards Honda.

In fact, for all the vehicles out there that Honda recalled, the company received the least amount of attention by proportion. Mazda, on the other hand, received the most attention for the number of cars recalled with 13 mentions for every 50 cars. This highlights that the total number of recalls is not proportionate to the amount of online feedback that is generated.
What was also apparent was that the number of recalled vehicles does not significantly increase the lifecycle of negative conversations, at least when there has only been one incident.

For the majority of affected brands, the bulk of conversation about the recalls dropped off by the fourth week following the announcement. The only outlier in this instance was Nissan, and this was due to a second announcement that the company was expanding the recall to cover more vehicles.

Yet, when the second major round of recalls were released, the results were quite different. This time, the number of total affected vehicles did seem to matter in terms of the length of the lifecycle of conversations.

Each of the top three most vulnerable brands, Honda, Toyota, and Nissan, saw more attention over a longer period of time. Even here, the attention was sporadic and was generally related to more follow-up and increases in the scope of recalls rather than centering on the primary announcement.
While brands with higher numbers of recalls experienced larger volumes of attention at the time of announcement, as well as greater durations of negativity with the more announcements that were made, the severity of impact to the overall brand was rather unpredictable.

For example, even with the highest number of recalls and greatest amount of attention, year-over-year perceptions of quality for Honda models that were recalled remained flat. Furthermore, negative sentiment for Honda only increased by two points.

However, when removing Honda and Chrysler from the scope of the research as outliers, a non-linear relationship between number of recalls and impact on quality was witnessed for the five other brands.

As the number of vehicle recalls decreased so did the year-over-year change in perceptions of quality. At least on this front, there did appear to be some correlation, albeit a loose one. Again, the difficult aspect of drawing any sort of conclusion on patterns of impact were the cases of Honda and Chrysler, both of which had significant numbers of recalls but did not receive large drops in perceived quality.
A more narrow view of just the mentions about brands, their recalled models, and airbags, provided insight specifically into each company’s handling of the crisis. The representative field fell fairly in line with how many vehicles each company had recalled. The only outlier here was Mazda. The brand’s lower scores on quality and sentiment appeared to be directly related to the company’s focus on only recalling vehicles in a select few US states in the Southeast region.

Mazda’s approach significantly differs from those of the other manufacturers in that while BMW, Toyota, Honda, Nissan, and Chrysler have prioritized replacing airbags in vehicles located in the Southeast, due to humidity’s contribution to airbag failure, these companies have not restricted replacement to a select number of states.

Here, Mazda’s stance is very important, as it has had significant repercussions on the public’s perception of the quality and positive opinion of the automaker. At the same time, Honda’s lowly position in general sentiment highlights that while overall perceptions of quality have not decreased year-over-year, the company is the most negatively viewed on recall conversations, most likely due to their position as the automaker with the most recalls.
Building on the data trends observed by Infegy, PMI looked at the impact the recalls had among new vehicle shoppers on two important elements that influence the vehicle shopping process - brand impression and brand consideration.

Here we see the impact of the recalls on non-luxury brands, and, possibly, the beginning of a trend affecting brand affinity observed in the Infegy data.

Awareness of the recalls did have an impact on brand impression, but it was not consistent across all brands. Chevrolet's and Toyota's brand impression was more impacted among those aware of the recalls. This was the case earlier in the year and at the end of the year. The impact on brand impression for most brands, when comparing over time, held relatively constant across those aware and unaware of the recalls (Appendix Fig. 1).

For these non-luxury brands, awareness of the initial wave of recalls did have a notable impact on GM and Chevrolet’s brand purchase consideration (Appendix Fig. 2). Chrysler, Toyota and Ford were also impacted earlier in the year. By December, the proportion of consumers in the market expressing negative sentiment toward those brands had decreased, but opinions did not improve, instead they shifted to unchanged. This would seem to point toward some lingering concern among those consumers currently in market.
Among luxury brands, awareness of the recalls did not have much of an impact on brand impression, and was relatively consistent across brands. Cadillac was most impacted when comparing those aware to those unaware, and this was the case earlier in the year and toward the end of the year (Appendix Fig. 3). There was very little variation over the course of the year for other luxury brands.

Through July, the impact of the recalls on consumers’ consideration of luxury brands was varied, though Lexus and Cadillac were the brands with highest proportion of shoppers indicating they would be less likely to consider them for their next vehicle.

By December, consideration was largely unchanged, or slightly improved, for most brands. Consideration of Cadillac, notably, did improve by December, indicating some level of recovery from the halo effects of the larger recalls at other GM brands.
Conclusion

Both sets of data suggest that recalls have moderate effects on consumer perceptions of quality and desirability, and generally produce a negative feedback lifecycle lasting longer than six months.

While PMI’s findings mirrored Infegy’s in many ways, where the two differed most was that in the field, the impact on the opinions of consumers who were actually in the buying cycle tended to be less severe than those who simply voiced their opinions online.

From observations related to the online data, and in regards to the airbag recall of 2014, there appeared to be a non-linear relationship between the number of recalls and year-over-year impacts on perceived quality for the models affected. However, this was not universally seen across all automakers.

Also stemming from Infegy’s analysis, what seemed to make the most significant difference in the degree of consequences to consumer opinion were how each company proceeded to remedy the situation. Partial measures that limited repairs to only select consumers in specific geographies, as enacted by Mazda, tended to have more profound negative ramifications to public perception.

Finally, continued reverberations of negative consumer response to recalls tended to be prolonged by automakers dragging their feet on implementing sweeping measures to right the potentially deadly problems with their vehicles.

From this, it can be asserted that the most important lesson automakers should take away from the Takata airbag debacle is that in order to protect brand reputation, companies should act quickly and decisively with clear support and concern for all potentially affected customers, rather than select groups of customers.
1. Recalls appear to have moderate effects on consumer perceptions of quality and desirability, and generally produce a negative feedback lifecycle lasting longer than six months.

2. Awareness of the wave of automotive recalls among consumers in the market for a new vehicle was relatively high, with between 50% and 60% of automotive consumers stating they were aware of the recalls between April and July. This number declined to 40% by year’s end.

3. Consumers shopping in the luxury vehicle segments were more aware of brand recalls. This was likely due to the fact that these consumers place a premium on quality and safety.

4. For the majority of brands, as the number of announced vehicle recalls decreased so did the year-over-year change in perceptions of quality. The outliers to this were Honda and Chrysler.

5. Consumers were most likely to be aware of recalls associated with the Chevrolet, Toyota and Cadillac brands. The GM brand was cited most often overall, but this is likely due to GM being the corporate parent of the Chevrolet, Saturn and Pontiac.

6. While lasting upward trends seemed to settle after six weeks on the recall timelines, the overall impact on consumer opinion compounds over time and can have measurable effects on brand affinity.

7. From PMI’s Automotive Audit, the Takata airbag recall, which impacted many import brands, did not significantly effect those brands in terms of impression or consideration. This could be due in part to the strong quality reputation they already had in place.

8. The impact of the recalls on brand consideration followed a similar pattern, with Chevrolet, Toyota and Cadillac brands being most impacted. There was a notable effect even on brands not announcing significant recall volume, possibly indicating consumers being very selective on what brands make the list for their next new vehicle.

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Key Takeaways

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2. Awareness of the wave of automotive recalls among consumers in the market for a new vehicle was relatively high, with between 50% and 60% of automotive consumers stating they were aware of the recalls between April and July. This number declined to 40% by year’s end.

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1. Consumers with longer purchase horizons were generally more aware of the recalls, as were those who were only considering import brands. This could have long term implications for the domestic OEMs as they seek to regain their quality footing against the perception that the import brands are the quality leaders.

2. Consumers whose in-market timing is more than 24 months in the future are more likely to be aware of the recalls. This could have long term implications as these consumers are likely to have the advantage of taking more time to determine which brands have recovered from the recalls and have made quality improvements. Those with more near term purchase plans will not have this option.

3. In addition, a higher proportion of those who only consider import brands were aware of the recalls when compared to those who only consider domestic brands. Even though some import brands experienced recalls, particularly for seat belts and airbags, the recalls were not on the same scale as GM’s ignition switch recall. This could further impact the domestic manufacturers’ ability to bolster their image for vehicle quality and stay in the consideration set for the type of affluent buyer that typically favors import manufacturers.

4. Although brand impression and consideration are likely to rebound as the impact of the recalls fades, it is certainly possible that the recall stigma attached to these brands will continue to impact consumer’s perceptions longer term.

5. The Takata airbag recall introduces a new angle to the recall situation. Here, it is consumers becoming more aware of the role suppliers play in the design and assembly of critical vehicle systems. This greater awareness could impact consumer’s purchase decisions as they seek brands using suppliers they have a positive opinion of, and avoiding suppliers they feel have lower quality.
About Infegy
Since 2007, Infegy’s cloud-based technologies have been transforming huge volumes of commentary into valuable consumer insights.

Infegy’s flagship product, Infegy Atlas, helps brands, agencies, and researchers understand consumers better and faster through advanced automated analysis of online dialog.

With a focus on translating the voice of the consumer into actionable intelligence, Infegy Atlas has been utilized to determine what moms think about sugar content in breakfast cereals, what drives sales for nail polish, and if the Playstation 4 will outsell the Xbox One.

About Phoenix Marketing International
Phoenix has grown into one of the top International market research firms with distinct syndicated offerings and custom research capabilities.

PMI has expertise in multiple industries as well as research and marketing disciplines. The combination of syndicated, modeling and custom research in the areas of product innovation, customer experience, and communications/brand analytics has made Phoenix Marketing International a unique and important partner in the marketing research industry.
About PMI’s Automotive Audit
Phoenix Marketing International (PMI) has researched consumer reaction to over 250,000 advertisements, and tracks leading brand indicators for hundreds of companies across several industry verticals. PMI's Auto Audit is conducted continuously with consumers in the market for a new vehicle.

The Auto Audit features an industry leading diagnostic model that goes beyond ad awareness and recall measures to help marketers understand what aspects of their creative are driving consumer response. The PMI approach delivers specific insight into the key drivers of creative performance and in getting consumers to take action and engage with the brand. Phoenix’s expertise in automotive ad and brand tracking includes tracking performance of over 9,000 ads in recent years.

About Infegy’s Research Capabilities and Data
Since 2006, Infegy has been crawling the web and collecting consumer dialog. From major social networks like Twitter and Facebook, to blogs, news sites and community forums, the company collects from every corner of the web to capture a broad dataset and ensure analysis of the widest array of consumers possible.

The data Infegy collects is made valuable through Infegy Atlas, a social media intelligence platform that leverages Infegy’s cutting-edge linguistics technology to extract deep meaning including sentiment tonality, topic extraction, themes (like purchase intent), emotions (like trust) and even summarization of thousands of results into a few sentences.
Figure 1
Recall Unaware Consumers’ Impressions of Non-Luxury Auto Brands

Figure 2
Impact on Non-Luxury Vehicle Purchase Consideration - July
Impact on Non-Luxury Vehicle Purchase Consideration - Dec
Figure 3

Recall Aware Consumers’ Impressions of Luxury Auto Brands

Recall Unaware Consumers’ Impressions of Luxury Auto Brands