EFFECT OF PRODUCT RECALL STRATEGY ON FIRM VALUE: A STUDY ON INDIAN AUTOMOBILE SECTOR

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ABSTRACT

Product recalls around the world is increasing every day. Whether it is a marketing gimmick or manufacturing problem, its impact on the stake holders is far reaching and can't be discounted. In order to understand the financial impact on firms, four Indian automobile companies which recalled products were considered for the study. Results of the event study showed that product recall negatively impacts the firm value. Strategies to be followed and implications of the same are also presented.

KEY WORDS: Product recall, proactive strategy, Reactive strategy, Firm Value

INTRODUCTION

In automobile industry it is observed that product recall is hitting all time high in USA[1] and European markets[2]. In India also the trend is catching up and it's no longer an unheard phenomenon. Although product recall program is intended to address safety issues, there is no proof on what firms learning from it? From the perspective of marketing, product recall may help to show the consumers that firm takes doesn't compromise safety, provided the recalls are not done so often. At the same time from the perspective of the investors, Product recalls could affect their confidence in the firm, subsequently reducing the firm value whose stocks are traded. Similarly, private investors will not show any further interest in private firms which recalls product. Though the impact of product recall on firm value was studied in western context, it was not studied in Indian context.

REVIEW OF LITERATURE

Chen Yubo et al (2009) studied how product recalls impact a firm's reputation, sales, and financial value. Based on the how recall process was managed, the authors identified two types of processes viz., proactive strategies and passive strategies. By applying event study on product recalls happened during a 12-year period from 1996 to 2007, the authors shown that the negative effects of proactive strategies on firm value is more comparing to passive strategies.

Kalaignanam et al (2013) studied the direct relationship between product recall and future accidents and future recalls. Based on the data for the period 1995-2011 pertaining to 27 automakers, the

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authors found that increases in recall magnitude lead to decreases in future number of injuries and recalls.

Z Ni John et al (2014) investigated the effect of product recall announcement from the perspective of retailers. Using event study methodology and hierarchical regression they found that product recall has a negative impact on retailers and more for private labels.

Souiden Nizar and Pons Frank (2015) studied from product recall from consumer perspective. With the data from automobile Industry, the authors examined how the management of recall crisis affects the image of the manufacturer, consumers' loyalty and future purchase intentions. Results of the study showed that product recall has negative impact on manufacturers' image, as well as on consumers' loyalty and purchase intentions.

METHODOLOGY

Event study was carried out to understand the impact of recall on firm value. The following steps were followed to carryout event study.

Step 1: Share Price of the firm understudy was collected 15 days before and 15 days after the product recall. Nifty indices for the period also collected for the said period

Step 2: Return (dependent variable) was regressed with the market return (independent variable) to calculate intercept, Slope (β)

Step 3: with these values, the expected return(ER = intercept+ Slope*market return) and Abnormal return (AR=ER-Actual return) was calculated.

Step 4: Then expected return and abnormal return for those 30 day time period was plotted

SAMPLE

For analyzing the impact of product recall on the firm's stock price data, Four Indian automobile companies have been taken namely Bajaj Auto Ltd., Mahindra & Mahindra, Maruti Suzuki Ltd & Tata Motors Ltd. These four companies have recalled their products in the past for replacement or repairing parts. Details about the recall are given below briefly.

BAJAJ AUTO

Bajaj Auto Limited is an Indian two-wheeler and three-wheeler manufacturing company. Bajaj Auto manufactures and sells motorcycles, scooters and auto rickshaws. Bajaj Auto is the world's third-largest manufacturer of motorcycles and the second-largest in India. It is the world's largest three-wheeler manufacturer. As of 31 March 2013, its market capitalization was INR 520 billion (US$9.57 billion), making it India's 23rd largest publicly traded company by market value. The Forbes Global 2000 list for the year 2012 ranked Bajaj Auto at 1,416.

In February 2012, Bajaj Auto recalled its flagship Pulsar 220cc DTS-i motorcycle to fix a faulty part that could lead to starting problems. It was the starter relay on the Pulsar 220 had prompted Bajaj Auto to go in for the part replacement. However, not all the Pulsar220 units were recalled. Bajaj Auto carried out this exercise only for a select number of units that are believed to be carrying the faulty part.

MAHINDRA & MAHINDRA

Mahindra & Mahindra Limited (M&M) is an Indian multinational automobile manufacturing corporation headquartered in Mumbai Maharashtra, India. It is one of the largest vehicle manufacturers by production in India and the largest seller of tractors across the world. It is a part of Mahindra Group, an Indian conglomerate. It was ranked as the 10th most trusted brand in India, by The Brand Trust Report, India Study 2014.It was ranked 21st in the list of top companies of India in Fortune India 500 in 2011.

In November 2014, Auto major Mahindra & Mahindra recalled 2,300 units of different variants of its popular SUVs Scorpio and XUV500, and multipurpose vehicle Xylo to rectify a defective vacuum pump in engines manufactured in May 2014.. Earlier in July 2014, Mahindra & Mahindra recalled around 23,000 units of select variants of its popular sports utility vehicle Scorpio to rectify faulty pressure regulating valves.

MARUTI SUZUKI

Maruti Suzuki India Limited commonly referred to as Maruti and formerly known as Maruti Udyog Limited, is an automobile manufacturer in India. It is a subsidiary of Japanese automobile and motorcycle manufacturer Suzuki. As of November 2012, it had a market share of 37% of the Indian passenger car markets

Automaker Maruti Suzuki India recalled 1,03,311 units of its popular models - Ertiga, Swift and DZire -- manufactured between November 12, 2013 and February 4, 2014 to replace their faulty fuel caps. This was one of the biggest recalls in the Indian auto market ever. The passenger car market leader announced that it will recall 47,237 units of the Swift hatchback, 42,481 units of the DZire compact sedan, and another 13,593 units of its multi-passenger vehicle Ertiga. "

TATA MOTORS

Tata Motors Limited is India's largest automobile company, with consolidated revenues of INR 2,32,834 crores in 2013-14. It is the leader in commercial vehicles in each segment, and among the top in passenger vehicles with winning products in the compact, midsize car and utility vehicle segments. In January 2008, Tata Motors unveiled its People's Car, the Tata Nano. The Tata Nano has been subsequently launched, as planned, in India in March 2009. Tata Motors issued a recall for all

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Nano models manufactured between July 2009 and October 2011 to replace the vehicles' starter motors free of charge.
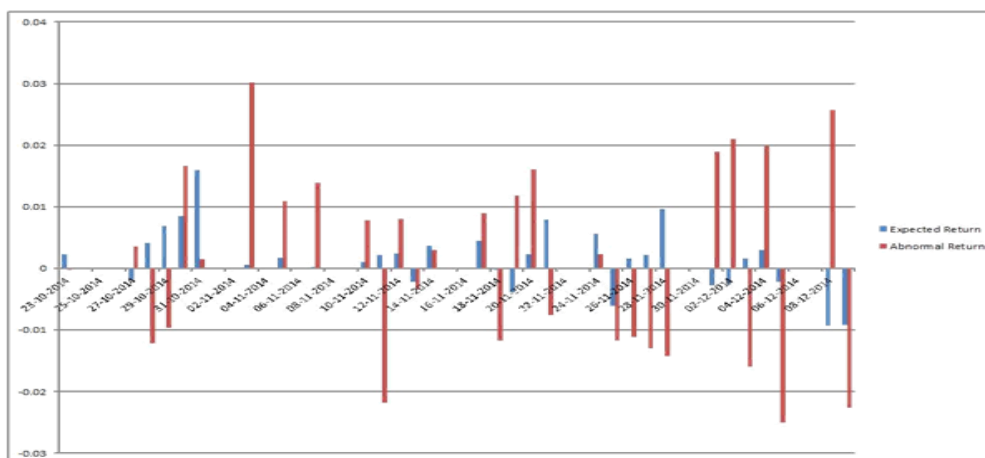
RESULTS

The period that is considered for carrying out event study and even date of the firms studied are given below:

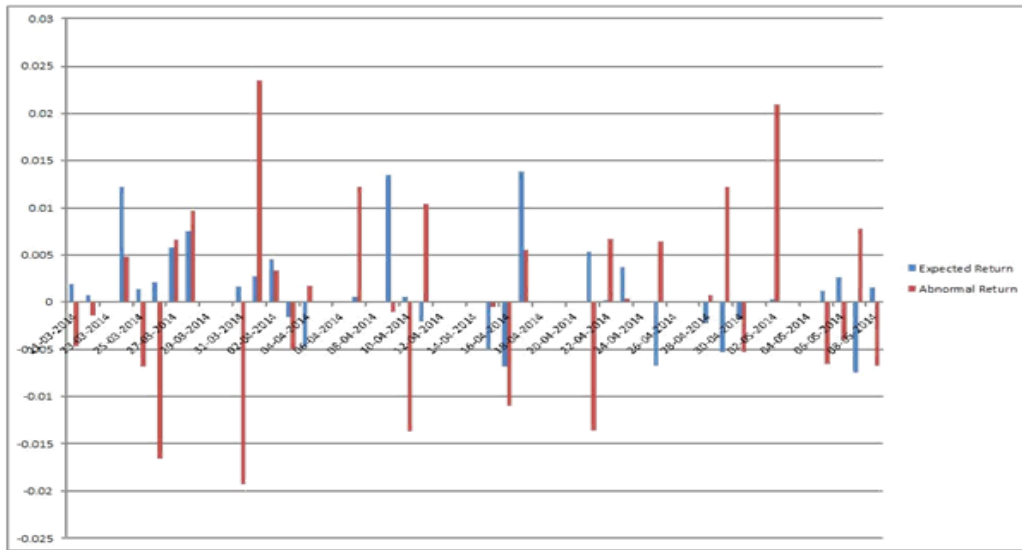| Firm	Product recalled	Event date	Period considered for analysis
Bajaj Auto	Pulsar 220cc DTS-i	Feb 28, 2012	3 Feb, 2012 to 21 March, 2012
Mahindra	Scorpio,XUV500, Xylo	Nov 18, 2014	23 Oct,2014 to 10 Dec,2014
Marutii	Ertiga, Swift DZire	April 11, 2014	23 Mar,2014 to 9 May, 2014
Tata Motors	Nano	Dec 19, 2011	23 Nov, 2011 to 9 Jan, 2012

Based on the event study carried out from the data obtained for the period mentioned in the above table, the results for each of the firms is presented below
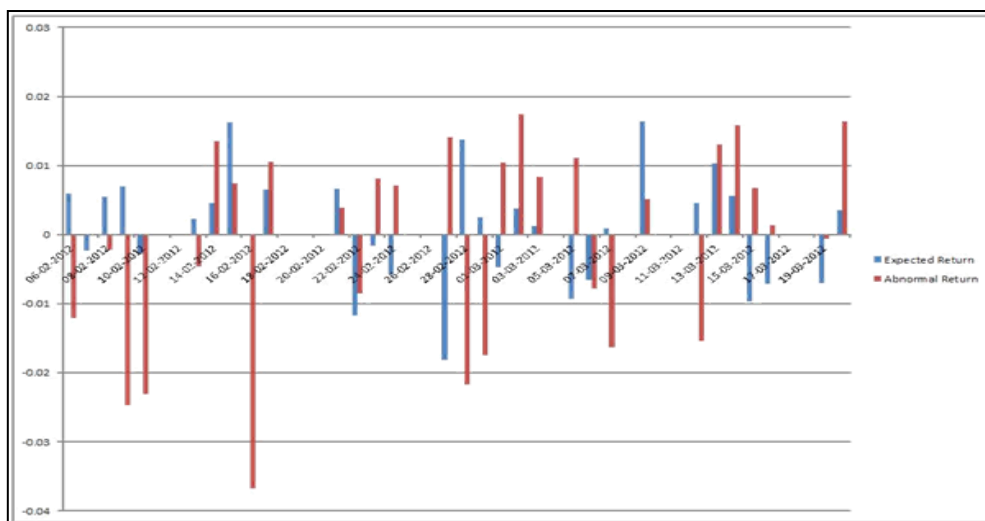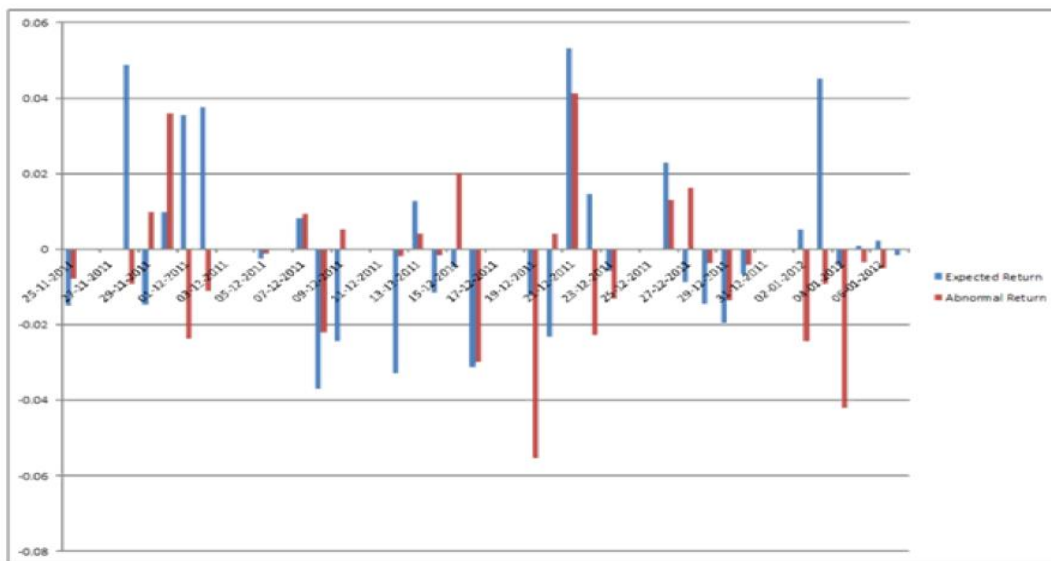

Fig 1. Plot showing Expected returns and Abnormal returns of Bajaj Auto

Fig 2. Plot showing Expected returns and Abnormal returns of Mahindra

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Fig 3. Plot showing Expected returns and Abnormal returns of Maruti

Fig 3. Plot showing Expected returns and Abnormal returns of Tata Motors

CONCLUSION

From the results presented above it can be understood that irrespective product characteristics and firm characteristics the product recall will have a negative impact on the firm value as abnormal returns were reported post product recall for all the firms studied. Hence it becomes necessary for the firm to manage the product recalls carefully. There are two possible ways in which firms can manage the recalls. One is proactive i.e. recalling the products voluntarily. Second one is reactive i.e. recalling the products after regulators finding faults or customers start complaining. But interestingly prior research shows that voluntary recall negatively impact firm value (Chen Yubo et al.,2009) at the

same time voluntary recall has positive impact on manufacture's image , consumer loyalty, and purchase intention(Souiden Nizar and Pons Frank ,2015). It can be implied that reactive recall strategy may not have much negative impact on firm value but it may have a negative impact on manufacture's image, consumer loyalty, and purchase intention. It can be inferred that it's a tough decision for the management whether to go with proactive strategy or reactive strategy. If a firm looks for maintaining firm value and prepared to forego image, consumer loyalty, and purchase intention then it can follow reactive strategy. On the other hand if a firm looks for image, consumer loyalty, and purchase intention and prepared to forego firm value then it can follow proactive strategy.

ENDNOTES

[1] https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/2017_recall_annual_report_updated011818_0.pdf

[2] https://www.ft.com/content/e02969fc-0dc0-11e8-8eb7-42f857ea9f09

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