



# An Examination of the Impact of New Product Announcements on Stock Prices: Evidence from the Indian Automobile Sector

<sup>1</sup> Prof. Anitha BM D'Silva, <sup>2</sup> Rehan Faisal Qadri, <sup>3</sup> Kalavala Abhishta, <sup>4</sup> M Luqman Nawaz

<sup>1</sup> Associate Professor at RV Institute of Management, Bangalore, India

<sup>2,3,4</sup> Student at RV Institute of Management, Bangalore, India

## ABSTRACT

New products are frequently viewed as being essential to any organization's future success. A company can gain a competitive edge by creating, producing, and selling new and creative products. Especially in an evergreen industry like the automobile sector. Once new items have been introduced and made available to the target market, it is possible to reliably estimate their impact on both the top and bottom lines. However, when a new product is announced, the stock price can initially reflect the significance of the new product to the organisation and the sentiment of the stakeholders.

The current study examines how the Indian automobile industry's new product releases were received by the market. 23 new products were announced in total between 2017 and 2022. The study has looked at 3 distinct automotive manufacturers in India. To determine if cumulative abnormal returns accrue to the firm when announcements of new product launches are made, the conventional event research approach has been applied. The study's findings imply that, in terms of specific manufacturers, the market response to various new product launches can be characterised as a mixed bag. On the announcement date in two segments of (-10,+10) and (-20, +20) event window. The study shows a positive CAR for M&M, while negative for Tata and MSIL. However, the overall CAR comes out as negative.

**Keywords: Cumulative Abnormal Returns, New Product Releases, Event Research, Automobile Sector**

## INTRODUCTION

In today's competitive environment, new product innovation is an important key to a firm's survival, growth, and long-run performance (Bikram Jit Singh Mann, 2017) Companies, across industries, invest heavily in R&D with the objective of designing and developing products that cater to the needs of the customers in a superior manner (Singh, 2018). Also, by introducing new products from time to time, the companies are aided in stimulating demand, thereby, accelerating the company's sales and profits when the product hits the market. So, a new product introduction is likely to create value for the organization in the future and, therefore, the stock market would probably react positively to such announcements. (Bikram Jit Singh Mann, 2017) but, the competitive advantage from new products may quickly disappear, largely as a result of the rapid imitation of such products by competitors, or the effects of short product life cycles (Wen-Chun Lin, 2011) Previous studies analyse Cumulative Average Abnormal Return (CAAR) based on new product announcements of 19 to 51 events for a period of 6 to 9 years (Singh, 2018) (Yuan, 2012) (Paul S. Koku, 1997) and studies have found that new product announcements have a positive impact on stock prices (Bikram Jit Singh Mann, 2017) (Singh, 2018) (Yuan, 2012) also, the positive impact is seen in stock prices of Consumer Electronic Firms and Technological firms (Yuan, 2012) (Paul, 2015) but some researchers have found that only preannouncements have a significant positive effect on stock prices and also the signalling effect of preannouncements on stock price is industry-specific. (Paul S. Koku, 1997), this implies that the result may vary based on the industry chosen for analysis.

## LITERATURE REVIEW

The study discovered that brand leveraging involves trade-offs and has nonlinear and nonmonotonic relationships. The stock market responds best to extensions of high and low esteem, and high and low familiarity brands, respectively. (Vicki Lane & Robert Jacobson, January 1995) Corporate governance factors play a vital role in assessing the impact of innovation on valuation for investors. Financial markets consider not only innovation-specific information but also managerial incentives. (Wen-Chun Lin, Shao-Chi Chang July 2011) The study suggests that a firm's new product information release event (IRE) has a significant signalling effect in the marketplace, especially when the firm's reputation is considered a long-term asset. The analysis examines a large sample of IREs from 1980-1989 for publicly traded NYSE or ASE stocks and differentiates between pre-announcements and post-announcements. (Paul S. Koku, Harsharanjeet S. Jagpal, And P. V. Viswanath, 1997) The study finds that new product announcements have a positive impact on the stock prices of Indian automobile companies. The study provides evidence that new product announcements are an important factor in determining the stock prices of Indian automobile companies and that investors react positively to such announcements. The study's findings have implications for investors, managers, and policymakers in the Indian automobile industry. (Jagandeep Singh, January 2018)

The study finds new product announcements have a positive and significant effect on stock prices in India. The study suggests that new product announcements are an important factor in driving stock price changes in India and that the effect may be more pronounced for smaller firms and firms in the consumer goods and services sector. These findings may be useful for investors and managers in assessing the impact of product announcements on stock prices and making investment decisions. (Bikram Jit Singh Mann, Sonia Babbar, 12 December 2017) The study examines the relationship between new product announcements and stock prices while controlling for market returns, firm size, and R&D investment. The author hypothesizes that new product announcements have a positive impact on stock prices in the technology sector and that the effect may be stronger for smaller firms and firms with higher R&D investment. (Peng Yuan, 10 Sep, 2012) This study concludes that the stocks of consumer electronic firms have historically experienced excess returns as well as excess idiosyncratic risk on average when announcing new products. The study provides empirical evidence that new product announcements are an important factor in the stock prices of consumer electronic firms and can affect investors' perceptions of a company's future growth potential. (Fredrik Paul, October 2015) Using a sample of 1,154 products in 34 product categories launched in 48 countries between 2011 and 2018, the authors investigate how product characteristics such as product innovativeness and product type affect abnormal stock reactions to a new product launch event. The impact of Product Characteristics on Abnormal Stock Returns, The Moderating Rule of National Culture. (M. Berk Talay, M. Billur Akdeniz, Michael Obal, and Janell D. Townsend 2019)

## OBJECTIVES

The purpose of the current study is to determine whether automakers receive cumulative anomalous returns when they announce the introduction of new goods or models. The 3 companies are MSIL, M&M, and Tata Motors firms collectively control the market share in the Indian passenger automobile industry, and their new model releases are the subject of this study (Sengupta, 2016). The study will evaluate the influence of every release of a new product on the stock price of vehicle firms as well as the overall effect of announcements. The study has taken the observations of around 23 products collectively of the three companies.

Obj 1: To explore and understand the concept of launching new products in detail.

Obj 2: To identify if any relationship exists between the launching of products and the impact on stock market behaviour.

Obj 3: To identify and critically analyse the impact of the stock market on the announcement of the launch of new products.

## SAMPLE SELECTION

Maruti Suzuki India Ltd. (MSIL), Mahindra & Mahindra (M&M), and Tata Motors Ltd. are significant contenders in the automotive industry in India. Tata Motors Ltd. has implemented a strategy to expand its product line by introducing multiple new models between 2017 and 2022. In recent years, M&M has also gained a larger share of the Indian passenger car market. Meanwhile, the MSIL, recognized for producing trucks and commercial vehicles in India, has also strengthened its position in the Indian passenger car market.

Between 2017 and 2022, these three manufacturers launched 23 new models as a group. It's important to remember that these announcements only apply to brand-new models, not to existing models that have been modified. The companies do occasionally update older models and release newer models at different intervals.

For this study, the launch date of the products was determined based on the press releases released by the manufacturers. Specifically, the date when the press release was issued was considered as the announcement date or event date or Day Zero.

In this study, the stock prices of MSIL, M&M, and Tata Motors on the National Stock Exchange (NSE) were utilized. Furthermore, the Nifty 50 index was used as a reference for the overall market performance.

**Table 1A: New Models Launched by Tata Motors Ltd. (2017-2022)**

Sl.no	Model	Year	Date of Launch
1	Hexa	2017	18 January, 2017
2	Tigor	2017	29 March, 2017
3	Nexon	2017	21 September, 2017
4	Harrier	2019	23 January, 2019
5	Nexon EV	2019	19 December, 2019
6	Altroz	2020	22 January, 2020
7	New Safari	2021	14 January, 2021
8	Tiago NRG	2021	04 August, 2021
9	Punch	2021	18 October, 2021
10	Tiago EV	2022	28 September, 2022
11	Tigor EV	2022	23 November, 2022

**Table 1B: New Models Launched by Maruti Suzuki India Ltd. (2017-2022)**

Sl.no	Model	Year	Date of Launch
1	Ignis	2017	13 January, 2017
2	S-Presso	2019	30 September, 2019
3	Cias S	2020	27 January, 2020
4	Eeco	2020	16 March, 2020
5	S-Cross	2020	5 August, 2020
6	Celerio	2021	10 November, 2021
7	XL6	2022	21 April, 2022
8	Grand Vitara	2022	20 July, 2022

**Table 1C: New Models Launched by Mahindra & Mahindra Ltd. (2017-2022)**

Sl.no	Model	Year	Date of Launch
1	XUV 300	2019	9 January 2019
2	BOLERO NEO	2021	13 July 2021
3	XUV 700	2021	14 August 2021
4	XUV 400 EV	2022	9 September 2022

### Research Methodology

The Standard event study methodology is being used for the research.

The event study methodology assesses the impact of significant events and announcements on a firm and country level, based on the belief that capital markets reflect public information. It calculates abnormal returns to evaluate how specific corporate events affect a company's prospects and stock price movements. (Singh, 2018)

1. The residual returns are calculated as

$$R_{jt} = R_{a,t} - (\alpha + \beta * R_{m,t})$$

$R_{jt}$  = Abnormal return for stock  $j$  at time  $t$

$R_{a,t}$  = Actual return for stock  $j$  at time  $t$

$\alpha$  = Intercept

$\beta$  = slope

$R_{m,t}$  = NSE Returns

2. Average daily returns are calculated

$$As\ AR_t = \sum R_{jt} / N$$

$AR_t$  = Average daily returns

$N$  = Number of releases

3. Cumulative average returns

$$CAR = \sum AR_t$$

This study analysed the cumulative abnormal returns that occurred on the Announcement Day or Day 0. Moreover, the abnormal stock price behaviour was assessed across two additional event windows: from ten days before to ten days after the announcement (-10, +10) and from twenty days before to twenty days after the announcement (-20, +20). (Singh, 2018)

Note: The clean period is defined as 100 days before and 100 days after the window period, while the window period is defined as 40 days before and 40 days after the product launch date.

### Hypothesis

Hypothesis 1: New product announcements have an impact on stock prices.

Hypothesis 2: New product announcements impact stock prices of all firms in the same direction.

Significance level = 5%

**Table 2A: Clean Period & Window Period Dates (Tata Motors New Product Announcements)**

Model	Date of Launch	Clean Period Dates	Window Period Dates
Hexa	18-Jan-17	June 27, 2016- August 11, 2017	November 23, 2016 - March 20, 2017
Tigor	29-Mar-17	November 10, 2016 - August 16, 2017	February 17, 2017 - May 8, 2017
Nexon	21-Sep-17	May 4, 2017- February 8, 2018	August 12, 2017, November 1, 2017
Harrier	23-Jan-19	August 6, 2018- June 12, 2019	December 14, 2018- March 5, 2019
Nexon EV	19-Dec-19	August 2, 2019- May 7, 2020	November 9, 2019- January 28th, 2020
Altroz	22-Jan-20	August 5, 2019- June 10th, 2020	December 13, 2019- March 3, 2020
New Safari	14-Jan-21	August 28, 2020- June 3, 2021	December 5, 2020- February 23, 2021
Punch	18-Oct-21	May 31, 2021- March 6, 2022	September 8, 2021- November 27, 2021
Tiago EV	28-Sep-22	May 11, 2022- February 15, 2023	August 19, 2022- November 7, 2022
Tiago NRG	22-Nov-22	July 5, 2022- April 11, 2023	October 13, 2022- January 11, 2023
Tigor EV	23-Nov-22	July 6, 2022- April 12, 2023	October 14, 2022- January 11, 2023

Source: Compiled by Author

**Table 2B: Clean Period & Window Period Dates (Maruti Suzuki Ltd New Product Announcements)**

Model	Date of Launch	Clean Period Dates	Window Period Dates
Ignis	13 January, 2017	23 June,2016- 7 August,2017	21 November,2016- 14 March,2017
S-Presso	30 September, 2019	05 March,2019- 27 March,2020	31 July,2019- 28 November,2019
Cias S	27 January, 2020	03 July,2019- 18 August,2020	02 December,2019- 23 March,2020
Eeco	16 March, 2020	22 August,2019- 07 October,2020	20 January,2020- 15 May,2020
S-Cross	5 August, 2020	13 January,2020- 23 February,2021	11 June-2020- 29 September,2020
Celerio	10 November, 2021	20 April,2021- 02 June,2022	14 September,2021- 05 January,2022

XL6	21 April, 2022	28 September,2021- 11 November,2022	21 February,2022- 16 June,2022
Grand Vitara	20 July, 2022	29 December,2021- 09 February,2023	26 May,2022- 16 September,2022

Source: Compiled by Author

**Table 2C: Clean Period & Window Period Dates (Mahindra & Mahindra New Product Announcements)**

Model	Date of launch	Clean period dates	Window period dates
XUV 300	9 January 2019	August 10, 2018 - June 10, 2019	November 13, 2018- March 7, 2019
BOLERO NEO	13 July 2021	February 16, 2021- December 7 2021	May 19, 2021- September 8, 2021
XUV 700	14 August 2021	March 19,2021 - January 6, 2022	June 18, 2021- October 11, 2021
XUV 400 EV	9 September 2022	April 19, 2022 - February 1, 2023	July 13, 2022 – November 7, 2022

Source: Compiled by Author

## Findings and Interpretation

### Tata Motors New Product Launch

Cumulative Abnormal Returns recorded with respect to new product launches of tata Motors are given in the table 3A to table 3K.

#### January 18, 2017: Hexa

Tata Motors recorded CAR of -2.62 and -28.85 during the (-10, +10) and (-20, +20) event windows respectively during the launch of Hexa. During both the event window the t stat value of 0.92 and 4.45 respectively and shows the negative impact of the announcement on stock prices.

<b>Table 3A: Cumulative Abnormal Returns- HEXA Launch</b>			
Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(- 10,+10)	0.89	-2.62	0.92
(- 20,+20)	0.89	-28.85	4.45

#### March 29, 2017: Tigor

Tata Motors recorded CAR of -8.29 and -12.8 during (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t stat value is 3.62 and 5.44 respectively. CAR shows the negative impact of the announcement on stock prices.

**Table 3B: Cumulative Abnormal Returns-Tigor Launch**

Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	0.52	-8.29	3.62
(-20,+20)	-0.22	-12.8	5.44

**September 21, 2017: Nexon**

Tata Motors recorded a CAR of 1.74 and -5.04 during the (-10, +10) and (-20,+20) event window respectively during the launch of Nexon. During both the event window the t stat value of 0.31 and 1.86 respectively. The announcement shows a positive effect during the 10 days window whereas during the 20 days window the negative impact is seen, leading to a loss of value for the shareholders.

**Table 3C: Cumulative Abnormal Returns-Nexon Launch**

Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	1.35	1.74	0.31
(-20,+20)	-1.67	-5.04	1.86

**January 23, 2019: Harrier**

Tata Motors recorded a CAR of -6.61 and -8.72 during the (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t stat value of -0.52 and -2.82 respectively shows the negative impact of the announcement on stock prices.

**Table 3D: Cumulative Abnormal Returns-Harrier Launch**

Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	-3.54	-6.61	0.52
(-20,+20)	2.25	-8.72	2.82

**December 19, 2019 :Nexon EV**

Tata Motors recorded a CAR of 1.46 and 1.26 during the (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t stat value of -0.77 and -0.47 respectively. Even though CAR shows the positive impact of the announcement, t stat shows no impact stock prices as. The difference in the result may be due to exogenous variables that would have impacted during the period of analysis.

<b>Table 3E: Cumulative Abnormal Returns- Nexon EV Launch</b>			
Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	-1.91	1.46	-0.77
(-20,+20)	-1.83	1.26	-0.47

**January 22, 2020 :Altroz**

Tata Motors recorded CAR of -16.05 and -21.33 during the (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t stat value of 1.83 and 4.42 respectively shows the negative impact of the announcement on stock prices.

<b>Table 3F: Cumulative Abnormal Returns- Altroz Launch</b>			
Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	-3.34	-16.05	1.83
(-20,+20)	1.47	-21.33	4.42

**January 14, 2021 :New Safari**

Tata Motors recorded a CAR of 16.3 and 18.63 during the (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t-stat value of 1.84 and -0.19 respectively, the CAR shows Positive impact of the announcement on stock prices but t-stat for the 20 days window shows the difference in the result indicating no impact.

<b>Table 3G: Cumulative Abnormal Returns- New safari Launch</b>			
Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	18.59	16.3	1.84
(-20,+20)	14.61	18.63	-0.19

**August 04, 2021 :Tiago NRG**

Tata Motors recorded a CAR of -11.07 and -20.47 during the (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t-stat value of -0.25 and 2.14 respectively. The CAR shows Negative impact of the announcement on stock prices.

<b>Table 3H: Cumulative Abnormal Returns- Tiago NRG Launch</b>			
Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	-11.91	-11.07	0.25
(-20,+20)	-25.05	-20.47	2.14

### October 18, 2021: Punch

Tata Motors recorded a CAR of -11.07 and -20.47 during the (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t stat value of 5.83 and 11.36 respectively. The 10 days window shows a negative impact whereas the 20 days window shows a positive impact. The announcement of a punch has added value to the shareholders in the longer window.

<b>Table 3I: Cumulative Abnormal Returns- Punch Launch</b>			
Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	34.27	-1.52	5.83
(-20,+20)	38.31	1.53	11.36

### September 28, 2022 :Tiago EV

Tata Motors recorded CAR of -3.3 and -10.89 during the (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t stat value of -0.43 and -1.23 respectively, The CAR shows negative impact of the announcement on stock prices.

<b>Table 3J: Cumulative Abnormal Returns- Tiago EV Launch</b>			
Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	-5.25	-3.3	-0.43
(-20,+20)	-14.46	-10.89	-1.23

### November 23, 2022 :Tigor EV

Tata Motors recorded a CAR of -7.19 and -11.23 during the (-10,+10) and (-20,+20) event window respectively during the launch of Hexa. During both the event window the t stat value of 5.89 and 8.66 respectively and shows the Negative impact of the announcement on stock prices.



**Table 3K: Cumulative Abnormal Returns- Tigor EV Launch**

Window (Day)	CAR(%) PRE	CAR(%) POST	T-Stat
(-10,+10)	-0.0031	-7.19	5.89
(-20,+20)	-0.0085	-11.23	8.66

**Maruti Suzuki New Product Launch**

Cumulative Abnormal Returns recorded with respect to new product launches of Maruti Suzuki are given in Table 4A to Table 4H.

**January 13, 2017: Ignis**

Maruti Suzuki recorded CAR POST of -19.2585 and -38.2656 during (-10,+10) and (-20,+20) event windows respectively during the launch of Ignis. During both the event window the t stat value of 1.624359 and 3.858829 respectively shows the negative impact of the announcement on stock prices. It shows a more negative return in the long-time frame.

**Table 4A: Cumulative Abnormal Returns - New Ignis Launch**

window (Day)	CAR (%) PRE	CAR (%) POST	T - Stat
(-10,+10)	15.9188	19.2585	1.624359
(-20,+20)	-27.465	38.2656	3.858829

**September 30, 2019: S-Presso**

Maruti Suzuki recorded CAR POST of -13.4107 and -28.0735 during (-10,+10) and (-20,+20) event window respectively during the launch of S-Cross. During both the event window the t stat value of -7.9248 and -10.7071 respectively shows the negative impact of the announcement on stock prices. Although the CAR POST value is lower, the t-stat is on the negative scale.

**Table 4B: Cumulative Abnormal Returns - New S-Presso Launch**

window (Day)	CAR (%) PRE	CAR (%) POST	T - Stat
(-10,+10)	18.8435	-13.4107	-7.9248
(-20,+20)	32.4839	-28.0735	-10.7071

**January 27, 2020: Cias S**

Maruti Suzuki recorded a CAR of -17.1385 and -37.1582 during (-10,+10) and (-20,+20) event window respectively during the launch of Cias S. During both the event window the t stat value of -2.7726 and -1.8544 respectively shows the negative impact of the announcement on stock prices. Here the value of CAR POST is again more negatively impacted both in the short and long-time frame.

**Table 4C: Cumulative Abnormal Returns - New Ciaz S Launch**

window (Day)	CAR (%) PRE	CAR (%) POST	T - Stat
(-10,+10)	17.5852	17.1385	-2.7726

(-20,+20)	-35.3515	-37.1582	-1.8544
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### March 16, 2020: Eeco

Maruti Suzuki recorded CAR POST of -13.9662 and -29.2135 during (-10,+10) and (-20,+20) event window respectively during the launch of Eeco. During both the event window the t stat value of 1.827531 and 5.175512 respectively shows the negative impact of the announcement on stock prices. The CAR POST value is relatively lower than before but has a negative impact.

<b>Table 4D: Cumulative Abnormal Returns - New Eeco Launch</b>			
window (Day)	CAR (%) PRE	CAR (%) POST	T - Stat
(-10,+10)	10.02399	-13.9662	1.827531
(-20,+20)	-11.0447	-29.2135	5.175512

### August 5, 2020: S-Cross

Maruti Suzuki recorded a CAR of -11.6178 and -29.374 during (-10,+10) and (-20,+20) event window respectively during the launch of S-Cross. During both the event window the t stat value of 6.03E-05 and 2.235103 respectively shows the negative impact of the announcement on stock prices. Here the negative impact again is shown in the CAR POST in the time frame.

<b>Table 4E: Cumulative Abnormal Returns - New S-Cross Launch</b>			
window (Day)	CAR (%) PRE	CAR (%) POST	T - Stat
(-10,+10)	9.77498	-11.6178	6.03E-05
(-20,+20)	33.1383	-29.374	2.235103

### November 10, 2021: Celerio

Maruti Suzuki recorded a CAR of -22.4747 and -47.0056 during (-10,+10) and (-20,+20) event window respectively during the launch of Celerio. During both the event window the t stat value of 0.026587 and 3.310409 respectively shows the negative impact of the announcement on stock prices. This has the highest negative CAR POST value since the start of our study.

<b>Table 4F: Cumulative Abnormal Returns - New Celerio Launch</b>			
window (Day)	CAR (%) PRE	CAR (%) POST	T - Stat
(-10,+10)	12.6585	-22.4747	0.026587
(-20,+20)	36.1194	-47.0056	3.310409

### April 21, 2022: XL6

Maruti Suzuki recorded a CAR of -14.6011 and -21.3618 during (-10,+10) and (-20,+20) event window respectively during the launch of XL6. During both the event window the t stat value of 3.21358 and -0.91003 respectively shows the negative impact of the announcement on stock prices. This shows improvement from the previous CAR POST value.

<b>Table 4G: Cumulative Abnormal Returns - New XL6 Launch</b>			
window (Day)	CAR (%) PRE	CAR (%) POST	T - Stat
(-10,+10)	14.6011	-21.3618	3.21358
(-20,+20)	21.3618	-14.6011	-0.91003

(-10,+10)	-9.08537	-14.6011	3.21358
(-20,+20)	32.9035	21.3618	0.91003

### July 20, 2022: Grand Vitara

Maruti Suzuki recorded a CAR of -24.7823 and -46.6567 during (-10,+10) and (-20,+20) event window respectively during the launch of Grand Vitara. During both the event window the t stat value of 2.78499 and 5.478194 respectively shows the negative impact of the announcement on stock prices. This again shows huge negative value.

**Table 4H: Cumulative Abnormal Returns - New Grand Vitara Launch**

Window (Day)	CAR (%) PRE	CAR (%) POST	T - Stat
(-10,+10)	20.2373	24.7823	2.78499
(-20,+20)	-33.899	46.6567	5.478194

### Mahindra & Mahindra New Product Launch

Cumulative Abnormal Return recorded with respect to new product launches of Mahindra & Mahindra are given in the table 5A to table 5D.

### 9 January,2019: XUV 300

Mahindra & Mahindra recorded CAR of -3.9879 and -5.7306 during (-10, +10) and (-20, +20) event window respectively during the launch of XUV 300. During both the event window the t stat value of -3.56377 and -8.11807 respectively shows the negative impact of the announcement on stock prices.

**Table 5A: Cumulative Abnormal Returns - XUV 300**

Window Day	CAR (%) PRE	CAR (%) POST	T-stat
(-10,10)	73.107	-3.9879	-3.56377
(-20,20)	82.0893	-5.7306	-8.11807

### 13 July, 2021: Bolero Neo

Mahindra & Mahindra recorded CAR of -4.74051 and -0.95365 during (-10, +10) and (-20, +20) event window respectively during the launch of New Bolero. During both the event window the t stat value of 1.12130 and 1.41336 respectively shows the negative impact of the announcement on stock prices.

**Table 5B: Cumulative Abnormal Returns – New Bolero**

Window Day	CAR (%) PRE	CAR (%) POST	T-stat
(-10,10)	-1.4741	-4.74051	1.1213
(-20,20)	-3.1289	-0.95365	1.41336

### 14 Aug,2021: XUV 700

Mahindra & Mahindra recorded CAR of -0.70870 and -8.12983 during (-10, +10) and (-20, +20) event windows respectively during the launch of XUV 700. During both the event window the t stat value of 0.50039 and 4.03513 respectively shows the negative impact of the announcement on stock prices.

Window Day	CAR (%) PRE	CAR (%) POST	T-stat
(-10,10)	2.51891	-0.7087	0.50039
(-20,20)	-3.07589	-8.12983	4.03513

### 9 September, 2022: XUV 400 EV

Mahindra & Mahindra recorded CAR of -1.40469 and -3.2498 during (-10, +10) and (-20, +20) event windows respectively during the launch of XUV 400. During both the event window the t stat value of 4.34108 and 6.40572 respectively shows the negative impact of the announcement on stock prices.

Window Day	CAR (%) PRE	CAR (%) POST	T-stat
(-10,10)	1.59878	-1.40469	4.34108
(-20,20)	0.7213	-3.2498	6.40572

### Combined CAR

The combined CAR is reported in Table. The findings reveal that MSIL & Tata Motors shareholders did not earn abnormal returns at the time of new product announcements. However, shareholders of M&M benefitted on announcement dates. The positive, substantial, and statistically significant CAR reported by the M&M propelled. The overall CAR of all 23 announcements is -57.97 (T Stat 6.49) for (-10, +10) and -181.53 (T Stat 14.65) for (-20, +20). M&M shareholders benefitted during the (-10, +10) as well as (-20, +20) event window as the company recorded CAR of 64.91 and 58.55 (T Stat 2.399 & 3.74). In the larger event window of (-10, +10) & (-20, +20) overall CAR is negative and insubstantial but is not statistically significant. Hence, New Product Announcement doesn't impact all the firms in the same direction this could be due to customer preferences, Brand image or any other exogeneous variable.

Window (Day)	Tata	MSIL	M&M	Total
(-10, +10)	-7.4831	-231.329488	64.9088	-57.96792932(6.49)
(-20, +20)	-83.6185	-519.5142228	58.5419	-181.5302743(14.65)

### LIMITATIONS

It is crucial to acknowledge the limitations of this study. Firstly, the researchers relied on secondary data obtained from websites like Yahoo Finance, which may have certain limitations in terms of accuracy and completeness. Furthermore, the study did not employ advanced statistical models that could have potentially highlighted the results more effectively. Consequently, the analytical tools and methodologies used in this study were inadequate for accurately predicting the actual trajectory of the stock market.

### CONCLUSION

The study revealed that the introduction of new models in the automobile industry can have an impact on the stock prices of companies, either in a positive or negative direction. The impact varied depending on the number of models launched. Interestingly, Tata Motors experienced the highest positive impact among the companies studied due to the launch of several successful models such as Nexon (2017), Nexon EV (2019), New Safari (2021), and Punch (2021). On the other hand, Maruti Suzuki and Mahindra & Mahindra faced a negative impact on their stock prices following the launch of new models.

It is important to note that while the launch of new models can influence stock prices, it is not the sole determinant. Other factors can also contribute to the fluctuations observed in the stock market. However, the study establishes a correlation between new model launches and their impact on stock prices, suggesting that investors and analysts should consider these launches as potential influencers in their assessments of automobile companies.

### Acknowledgement

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Launching Dates and Detail of Tata cars (2017-2022)

1. Make way for Tata Motors' new Lifestyle vehicle – 'HEXA'

18 January, 2017

<https://www.tatamotors.com/press/make-way-for-tata-motors-new-lifestyle-vehicle-hexa/>

2. Tata Motors brings a new era of Style with Tata TIGOR

29 March, 2017

<https://www.tatamotors.com/press/tata-motors-brings-a-new-era-of-style-with-tata-tigor/>

3. Tata Motors today announced its entry into the growing Compact SUV segment with the commercial launch of its new Gen-next lifestyle SUV, the Tata NEXON. (diesel & petrol)

21 September, 2017

<https://www.tatamotors.com/press/the-level-nex-of-suvs-is-here/>

4. The wait is over!

Tata Motors launches its much-awaited SUV - Harrier

23 January, 2019

<https://www.tatamotors.com/press/the-wait-is-over/>

5. Tata Motors unveils India's own Electric SUV, the Nexon EV

19 December, 2019

<https://www.tatamotors.com/press/tata-motors-unveils-indias-own-electric-suv-the-nexon-ev/>

6. New Premium Hatch – Altroz launched to redefine the segment with its Gold Standard in Design, Safety, Technology and Driving Experience

22 January, 2020

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7. Tata Motors commences production of the new Safari

14 January, 2021

<https://www.tatamotors.com/press/tata-motors-commences-production-of-the-new-safari/>

8. Tata Motors leads the way in the SUV market with a new white space product

18 October, 2021, Launches India's first sub-compact SUV, PUNCH

<https://www.tatamotors.com/press/tata-motors-leads-the-way-in-the-suv-market-with-a-new-white-space-product/>

9. Get ready to Go.ev with Tiago.ev!

Tata Motors launches its first electric hatch with segment-first, premium features

28 September, 2022

<https://www.tatamotors.com/press/get-ready-to-go-ev-with-tiago-ev/>

10. Tata Tiago NRG, India's First Toughroader CNG

22 November, 2022

<https://www.tatamotors.com/press/tata-tiago-nrg-indias-first-toughroader-cng/>

11. Tigor.ev, now with More Tech and More Lux Features

23 November, 2022

<https://www.tatamotors.com/press/tigor-ev-now-with-more-tech-and-more-lux-features/>

Maruti Suzuki Ltd introduced cars (2017-2022)

13 Jan 2017

Maruti Suzuki unveils #IGNIS – India's First Premium Urban Compact vehicle for the Millennials

<https://www.marutisuzuki.com/corporate/media/press-releases/2017/january/maruti-suzuki-unveils-ignis-india-first-premium-urban-compact-vehicle-for-the-millennials>

30 Sep 2019

Maruti Suzuki brews its Mini SUV S-PRESSO, ahead of the festive season

<https://www.marutisuzuki.com/corporate/media/press-releases/2019/september/maruti-suzuki-brews-its-mini-suv-s-presso-ahead-of-the-festive-season>

25 Jan 2020

Maruti Suzuki NEXA rolls out Stylish and Sporty Ciaz S

<https://www.marutisuzuki.com/corporate/media/press-releases/2020/january/maruti-suzuki-nexa-rolls-out-stylish-and-sporty-ciaz-s>

16 Mar 2020

<https://www.marutisuzuki.com/corporate/media/press-releases/2020/march/maruti-suzuki-introduces-eeco-bs6-s-cng>

NEXA introduces the new S-Cross Petrol – The Refined SUV with Powerful 1.5L K15B Engine

05 Aug 2020

<https://www.marutisuzuki.com/corporate/media/press-releases/2020/august/nexa-introduces-the-new-s-cross-petrol-the-refined-suv-with-powerful-1-5l-k15b-engine>

10 Nov 2021

Maruti Suzuki launches India's most fuel-efficient petrol car\*: All-New Celerio 'Drive Your Style'

<https://www.marutisuzuki.com/corporate/media/press-releases/2021/november/maruti-suzuki-launches-indias-most-fuel-efficient-petrol-car-all-new-celerio-drive-your-style>

21 Apr 2022

NEXA Launches the All-New XL6 - 'Time to Indulge'

<https://www.marutisuzuki.com/corporate/media/press-releases/2022/april/nexa-launches-the-all-new-xl6-time-to-indulge>  
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Maruti Suzuki Grand Vitara set to Rule Every Road  
26 Sep 2022

<https://www.marutisuzuki.com/corporate/media/press-releases/2022/september/maruti-suzuki-grand-vitara-set-to-rule-every-road>  
Launching Dates and Detail of Mahindra & Mahindra (2017-2022)

1. MAHINDRA OPENS XUV300 BOOKINGS

9 January 2019

<https://www.mahindra.com/news-room/press-release/en/mahindra-opens-xuv300-bookings>

2. MAHINDRA LAUNCHES THE NEW 'BOLERO NEO' AT A STARTING PRICE OF ₹ 8.48 LAKH

13 July 2021

<https://www.mahindra.com/news-room/press-release/en/mahindra-launches-the-new-bolero-neo-at-a-starting-price-of-rupees-8-point-48-lakh>

3. MAHINDRA XUV700 BOOKINGS TO OPEN STARTING 7TH OCTOBER

14 August 2021

<https://www.mahindra.com/news-room/press-release/en/mahindra-launches-all-new-global-suv-xuv700-starting-from-rupees-11-point-99-lakh>

4. MAHINDRA UNVEILS ITS FIRST ELECTRIC SUV ON WORLD EV DAY – THE FUN & FAST XUV400

9 September 2022

<https://www.mahindra.com/news-room/press-release/en/mahindra-unveils-its-first-electric-suv-on-world-ev-day-the-fun-and-fast-xuv400>

**End notes:**

The terms "make" and "model" are typically used in the automotive business to denote the brand and the manufacturer, respectively. For instance, if the Tata New Safari is being discussed, Tata Motors is the make (maker) and the New Safari is the model. The model that the producer has introduced is referred to as a "new product" for the purposes of this study.

Other top automakers in India include Hyundai, Honda, Kia and Toyota, which together own close to 26% of the market. These firms have been left out of our analysis since they are not listed on the Indian bourses.

