

The Impact of Dividend Announcement on Stock Returns

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Abstract

One of the factors that influences the stock return is announcement of dividend. This study specifically investigates the impact of dividend announcement on the share prices of the Indian auto companies. The objective of the study is to find out whether the investors respond to the dividend announcements and also to see whether there are any differences between expected and actual returns. The study considers a sample of 10 auto companies listed under the head CNX auto for the period 2007-2014. By using event study methodology for a window period of 41 days the study shows that there is significant negative impact of dividend announcements on stock prices especially over the entire post announcement period. Thus the study concludes that the existing shareholders prefer to earn capital gain instead of a dividend amounts at regular intervals .

Key Words: Dividend, Stock Returns, Abnormal Returns, Event Study, Event Window

Introduction

Every firm is faced with a question in terms of distributing the profits as dividends to the shareholders or retaining the same to be further reinvested in the firm. This question can be rightly answered by the firm depending on the financial goal they desire to achieve. A firm may desire to distribute the profits to the shareholders if they believe that such a distribution will lead to wealth maximization of the shareholders, or else a better

option would be to reinvest the same in the business to expand the business and in turn increase the value of the firm. Thus every profit making company has to strategically find a balance between satisfying the shareholders as well as increasing the value of the firm by ploughing back in the business.

Since dividends policy is an important topic influencing every business, it is a widely researched topic. In simple words the profits distributed by the company to its shareholders is called dividend. Thus it can be said that dividend is a practice that the management follows to make payments to its shareholders.

An interesting relation can be seen between the retention and dividend payout i.e. there is an inverse relation between the two. Dividend issued by the company is not only a deciding factor to the investor but also a signal of performance by the company to all the stakeholders associated with it. Thus it is an important topic to focus by the finance managers of every company.

Dividend can be used as an effective tool by the managers to increase its value in the eyes of their investors and stakeholders. This means that increase in dividends by companies should indicate a positive signal about the future prospects of the company to the investors.

The study aims to analyze the impact of final dividend announcements on the shareholders return and also to find out whether there are

abnormal returns to the shareholder in the pre and post announcement period.

Literature review

Kumar, Mahadevan, & Gunasekar (2012) analyzed whether the announcement of the dividend had any influence on the company returns. It was concluded that the announcement of corporate dividend does not have any impact on the stock return of the companies.

Aamir & Ali Shah (2011) analyzed the impact of 26 dividend announcements on the stock prices of the companies as well as their rival firms belonging to cement, oil and gas sector in Pakistan. Overall results indicate that on the dividend announcement date and few days after there was significant positive impact. This pattern was also seen for rival firms.

Suwanna(2012)examined the effect of dividend announcement on the stock prices of 60 Thai companies for a window of 40 days.The study concludes that the stock prices move upward significantly after dividend announcements.

Dasilas & Leventis (2011)investigated the market reaction to cash dividend announcements using the data from Athens Stock Exchange (ASE). The study results support the dividend signaling hypothesis. It was concluded that increases in dividend leads to a significant positive stock price reaction, whereas decreases in dividend bring about a significant negative stock price reaction.

Savita(2014)conducted a study to understand the behaviour of the share prices of 30 companies forming a part of SENSEX index in relation to the dividend announcements. The results derived revealed that there is negative effect of dividend announcement on stock price of the companies and market has not been efficient in processing the new information in the market.

McCluskey, Burton, Power, & Sinclair(2006) investigated the manner in which the Irish stock market responds to company announcements about dividend payments.The results suggest that

dividend announcements are important for Irish investors, but earnings signals appear to have a stronger impact on equity values.

Henry K, Roland, & Christoph (2004) examined the reaction of stock prices and trading volume on changing dividends for the Austrian market. The study concluded that dividend increase induce a significant positive reaction in stock prices, whereas announced dividend decreases lead to a significant fall in stock prices.

Elfakhani (1998) examined whether the direction of dividend change affects the share value around the dividend announcement. The results obtained suggest that the market reaction to dividend increase is stronger than to dividend decrease.

Pradhan (2000) explained the effect of dividend payment and retained earnings on market price of share in the context of Nepalese companies.The study shows a predominant influence of dividends and an absence of retained earning effect on share price. Dividends are found relatively more attractive among the Nepalese stockholders.

Vieira & Raposo (2004) Investigated whether any change in dividend lead to a change in share price in the same direction. The results prove that the dividend changes are not leading to subsequent market reaction in the same direction.

RESEARCH METHODOLOGY

In order to find out the effect of dividend announcement on stock returns and to study whether there are any abnormal returns to the shareholders, 'Event Study Methodology' was used.

Event study methodology is mainly used to study the impact of any corporate announcements on the stock returns by calculating Abnormal returns. In order to calculate abnormal returns different models are used. The most common among them is 'Market Model'. To measure the total impact of an event over the 'event window', one can add up individual abnormal returns to create a 'Cumulative Abnormal Return'.

The steps used to conduct the events study in the auto sector are outlined below:

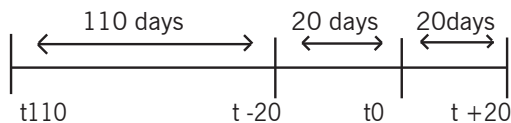
- **Identify the event to be studied**

The day of Final Dividend announcement was taken as the event. For the purpose of the study a total of 76 final dividends announcements of the selected auto companies were collected from the website of money control for a period of 8 calendar years.

- **Select the firms for the study**

To conduct the study, top 10 auto companies listed on NSE were selected based on the volume traded (in lakhs). The data on volume traded was obtained from the website of NSE. Daily closing prices of the selected companies were collected in order to analyse the pre and post impact of announcement.

- **Define the estimation window, event window and post-event window:**



- Estimation window of 110 days before the event window was chosen to calculate two parameters i.e. Alpha (intercept) and Beta (slope).

- Event window of 20 days before the event day was selected.

- Post-event window of 20 days after the event day was selected.

- **Calculate daily stock returns and daily market returns:**

Stock returns were calculated to find the daily return on the stock of the selected companies across the 110 days event window using the following formula:

$$R_{it} = \frac{P_{it} - (P_{it-1})}{P_{it-1}}$$

Where, P_{it} is the price of share i on day t and P_{it-1} is the price of share i on day $t-1$

Market returns were calculated to find out the daily market return on Index (CNX Auto) across 110 days event window using the following formula:

$$R_{mt} = \frac{I_t - (I_{t-1})}{I_{t-1}}$$

Where I_t is the index price day t and I_{t-1} is the index price on day $t-1$

- **Calculate the expected returns**

Expected returns were calculated by using 'Market Model Method' based on 110 days event window using the following formula:

$$E(R_{it}) = \hat{\alpha}_i + \hat{\beta}_i \cdot R_{mt}$$

Where, $\hat{\alpha}_i$ = Intercept of straight line or alpha coefficient of 'i'th security

$\hat{\beta}_i$ = Slope of straight line or beta coefficient of 'i'th security

R_{mt} = Market return/ Return on Index (CNX Auto) during period 't'

- **Calculate the abnormal returns**

In order to find out the response of stock prices during the window period of 41 days, abnormal returns are computed using the following formula:

$$AR_{it} = R_{it} - E(R_{it})$$

- **Calculate Daily Cumulative Abnormal Returns (CAR)**

Since the response of the stock prices cannot be captured instantly by using daily Abnormal Returns and hence they are aggregated daily during the 41-day window in order to find out daily CAR. CAR gives the total return of the investor during the entire window period. A positive CAR in the window period suggests that the event has a positive impact on the shareholders value.

- **Study the significant impact of the event:**

In order to find out the impact of dividend announcements on stock returns t-test was used. Daily Abnormal Returns (AR) and daily Cumulative Abnormal Returns (CAR) were tested for significance using the t-test at 5 % level of

significance. Thus we can determine the days on which dividend announcement is having an impact on the shareholders return.

For a better understanding of movement of ER, AR and CAR of the selected companies were represented on a graph during the 41 days window period.

EMPIRICAL RESULTS:

Table 1 depicts the selected 10 auto companies belonging to CNX auto index of NSE with their volume traded (in lakhs) and dividend announcement dates from 2007-2014.

Table 1: Selected CNX auto companies with their volume traded and dividend announcement dates

	Mahindra & Mahindra Ltd	Tata Motors Ltd	Hero MotorCorp Ltd	Motherson Sumi Systems Ltd	Bosch Ltd	Maruti Suzuki India Ltd	Ashok Leyland Ltd	Apollo Tyres Ltd	Excide India Ltd	Eicher Motors Ltd
Volume traded (in lakhs)	17,222.22	16,592.90	14,997.26	11,029.16	10,947	6,666.07	6,296.26	6,162.10	3,239.82	5,288.68
2007	23-05-07	18-05-07	11-05-07	28-05-07	15-03-07	24-04-07	14-03-07	12-03-07	20-04-07	06-03-07
2008	16-05-08	16-05-08	24-04-08	NA	07-03-08	24-04-08	08-05-08	09-05-08	22-04-08	28-02-08
2009	19-05-09	29-05-09	21-04-09	30-06-09	04-03-09	24-04-09	15-05-09	04-05-09	27-04-09	30-03-09
2010	24-05-10	27-05-10	NA	18-05-10	05-03-10	26-04-10	29-04-10	31-05-10	28-04-10	15-02-10
2011	30-05-11	26-05-11	04-05-11	25-05-11	28-02-11	25-04-11	19-05-11	11-05-11	27-04-11	05-02-11
2012	30-05-12	29-05-12	02-05-12	28-05-12	28-02-12	28-04-12	14-05-12	10-05-12	30-04-12	11-02-12*
2013	30-05-13	29-05-13	26-04-13	17-05-13	27-02-13	26-04-13	10-05-13	10-05-13	29-04-13	12-02-13
2014	29-05-14	29-05-14	28-05-14	22-05-14	28-02-14	25-04-14	NA	15-05-14	25-04-14	12-02-14

NA : No final dividend in the year

*: Share prices are not available for the said date

Source: (www.nseindia.com)

ANALYSIS:

The following are the figures representing Abnormal Returns, Expected Returns and Cumulative Abnormal Returns over the 41 days window period having the highest impact during the post event window period.

Figure 1: Returns over a window period of 41 days of Mahindra & Mahindra Ltd for the announcement on 19.05.2009

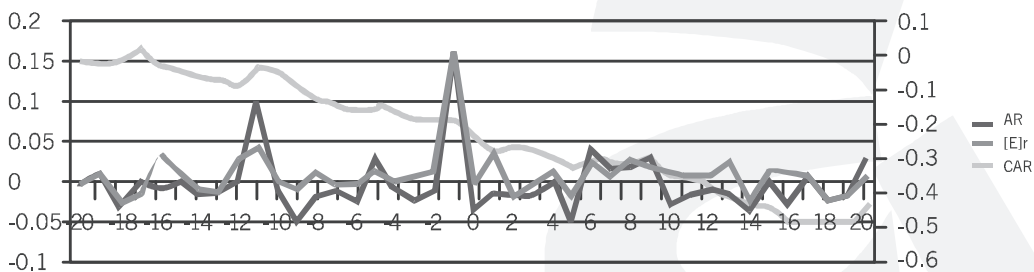


Figure 2: Returns over a window period of 41 days of Mahindra & Mahindra Ltd for the announcement on 29.05.2014

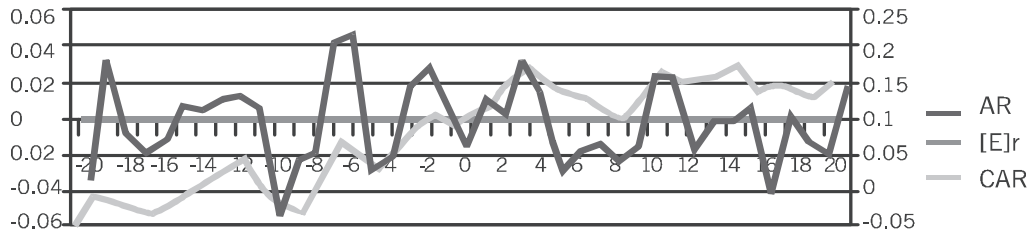


Figure 3: Returns over a window period of 41 days of Tata Motors Ltd for the announcement on 29.05.2012

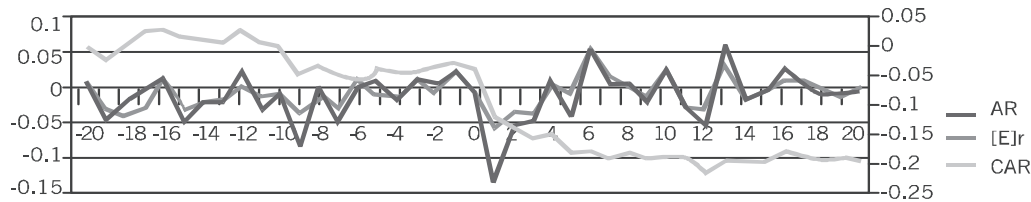


Figure 4: Returns over a window period of 41 days of Tata Motors Ltd for the announcement on 29.05.2014

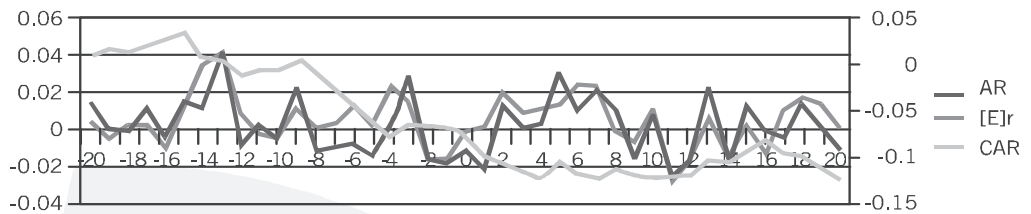


Figure 5: Returns over a window period of 41 days of Hero MotoCorp Ltd for the announcement on 04.05.2011

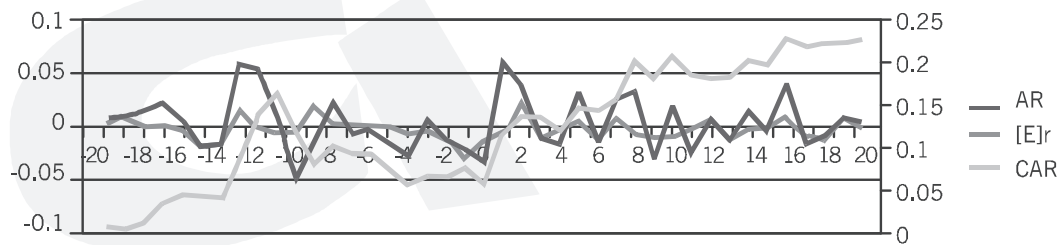


Figure 6: Returns over a window period of 41 days of MothersonSumi Systems Ltd for the announcement on 22.05.2014

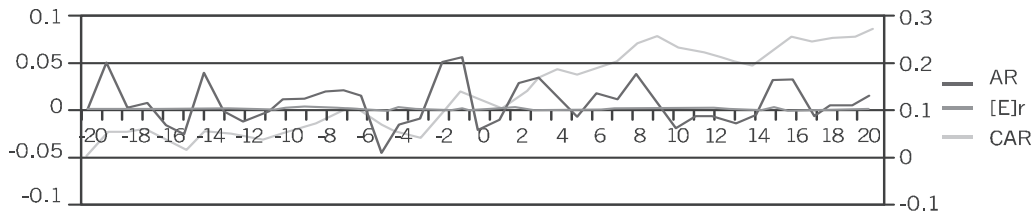


Figure 7: Returns over a window period of 41 days of Maruti Suzuki India Ltd for the announcement on 24.04.2009

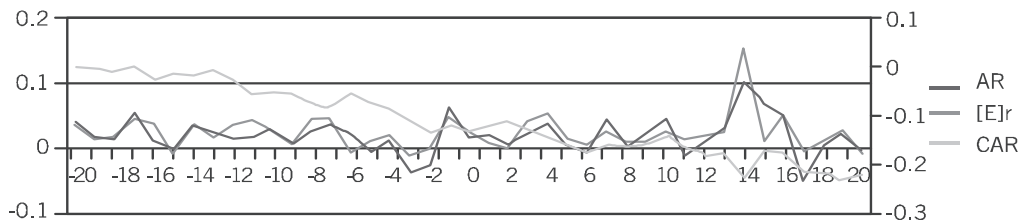


Figure 8: Returns over a window period of 41 days of Maruti Suzuki India Ltd for the announcement on 26.04.2010

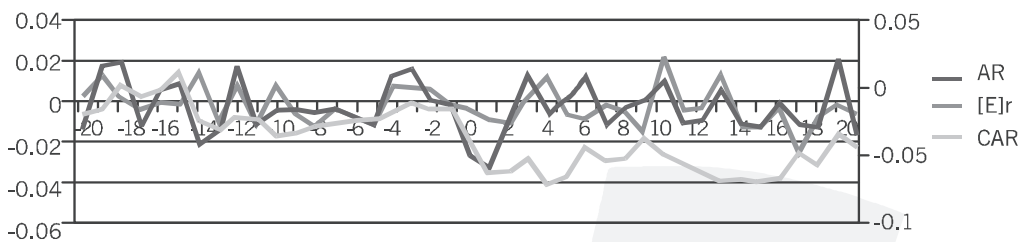


Figure 9: Returns over a window period of 41 days of Apollo Tyres Ltd for the announcement on 04.05.2009

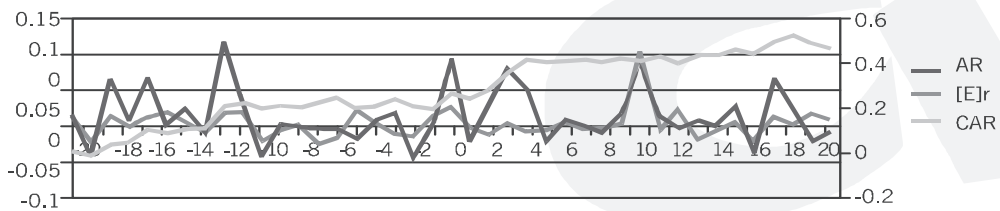


Figure 10: Returns over a window period of 41 days of Apollo Tyres Ltd for the announcement on 15.05.2014

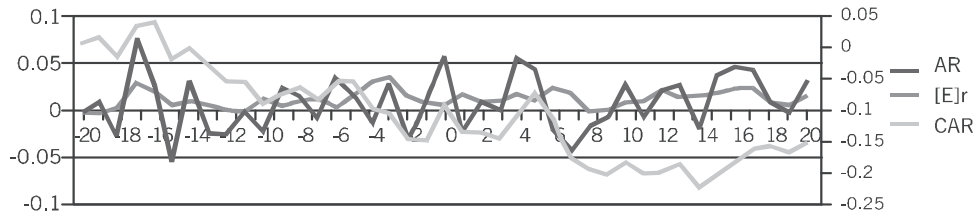


Figure 11: Returns over a window period of 41 days of Excide India Ltd for the announcement on 27.04.2011

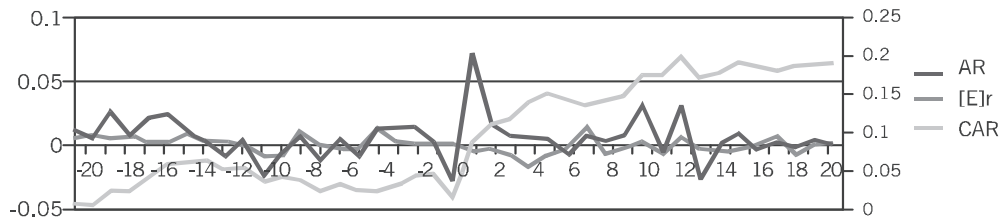
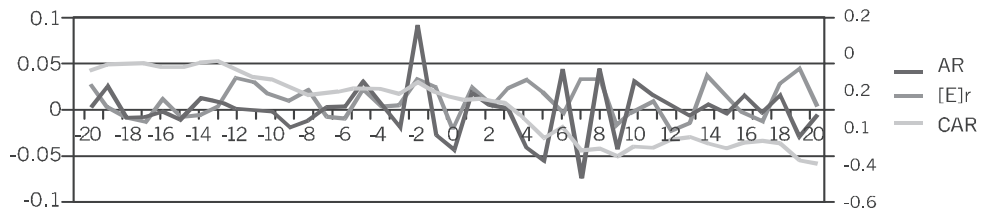


Figure 12: Returns over a window period of 41 days of Eicher Motors Limited for the announcement on 30.03.2009



Source: Own compilation

From the above figures it can be seen that CAR has been decreasing in the entire post event window and such decrease is significant for a long period after the event. This implies that the total return of the shareholders has decreased significantly especially after the dividend announcement.

High volatility can be seen in AR in the entire window period. At the same time it is to be noted that AR dropped in the post event window period but it started peaking up at the end of the post event window. Also the figures show a steep rise and fall in AR just two days before and after the event day and are significant on most of the announcement days. Hence there are opportunities to prospective investors to gain from such movements in AR on and around the dividend announcement day.

SR.NO.	COMPANIES	DATE OF DIVIDEND ANNOUNCEMENTS	DIVIDENDS (%)	EFFECTS			
				Before		After	
				Returns	Number of days	Returns	Number of days
		28-04-12	150	Nil	Nil	Negative	9
		26-04-13	160	Positive	8	Positive	19
		25-04-14	240	Nil	Nil	Negative	6
7	Ashok Leyland Limited	14-03-07	150	Positive	3	Positive	4
		08-05-08	150	Nil	Nil	Nil	Nil
		15-05-09	100	Nil	Nil	Positive	8
		29-04-10	150	Nil	Nil	Positive	13
		19-05-11	200	Nil	Nil	Positive	9
		14-05-12	100	Nil	Nil	Negative	11
		10-05-13	60	Negative	9	Negative	4
8	Apollo Tyres Ltd	12-03-07	45	Negative	4	Negative	13
		09-05-08	50	Nil	Nil	Negative	6
		04-05-09	45	Nil	Nil	Positive	18
		31-05-10	75	Nil	Nil	Negative	9
		11-05-11	50	Positive	9	Positive	19
		10-05-12	50	Negative	2	Positive	1
		10-05-13	50	Positive	8	Nil	Nil
		15-05-14	75	Negative	2	Negative	16
9	Excide	20-04-07	35	Negative	1	Negative	3
		22-04-08	40	Positive	19	Positive	20
		27-04-09	20	Positive	5	Positive	16
		28-04-10	40	Positive	3	Positive	2
		27-04-11	60	Nil	Nil	Positive	17
		30-04-12	60	Negative	9	Negative	18
		29-04-13	60	Positive	2	Positive	15
		25-04-14	70	Positive	4	Positive	7
10	Eicher Motors Limited	06-03-07	290	Nil	Nil	Negative	10
		28-02-08	50	Nil	Nil	Positive	1
		30-03-09	50	Nil	Nil	Negative	16
		15-02-10	70	Negative	7	Negative	10
		05-02-11	110	Negative	11	Negative	15
		12-02-13	200	Positive	3	Negative	2
		12-02-14	300	Negative	9	Negative	10

From total of 76 dividend announcements, around 44 dividend announcements show a significant negative impact on the stock returns in the post announcement period in spite of increase in final dividends. And only 32 dividend announcements show a significant positive impact on the stock returns in the post announcement period.

It can be also seen that the companies have significant negative impact on their stock returns before the dividend announcement and the intensity of significant negative impact in turn increases in the post event window.

Conclusion

The study is conducted to evaluate the impact of final dividend announcements on the stock returns and also to identify the presence of abnormal returns of the top 10 auto companies belonging to CNX auto sector on NSE.

The study reveals that there are positive abnormal returns on the stocks of the selected companies especially few days before the date of the event. Hence the investors can trade and gain enormously due to the presence of positive abnormal returns.

Overall CAR has been negative this suggests that the dividend announcements lead to a negative

impact on the shareholder's wealth. Thus it can be concluded that there is a significant long term negative impact of final dividend announcements on stock returns of the selected companies after the event day irrespective of increase in dividends.

The reason for such negative reaction in the market is due to the fact that higher amount of dividend, signals that the company is not retaining the profits for further investments and hence need to borrow the same from additional sources for any future growth prospects. Thus leading to increase in external debt obligations or increase in the issue of shares in the market which in turn would have negative impact on the return to existing shareholders. Hence the shareholders liquidate their holdings irrespective of higher dividends.

The trend of fall in prices can also be seen before the dividend announcements but are not significant and hence this implies that the intensity of such price reductions is more in the post announcement period.

The results of the study indicates that there is a negative impact of dividend announcements on the stock prices and that the shareholders are ready to take risk and want to raise their wealth through capital gain and not by regular dividends payments. The results are in conformity with the conclusions drawn in earlier researchers such as Vieira & Raposo (2004) and Savita (2014).

The results of the study also supports the Modigliani and Miller (MM) Hypothesis which states that dividends does not affect the shareholder's wealth but it is the retention of profits that adds on to the wealth of the firm and its shareholders.

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