# Calendar Anomalies and Stock Returns <br> Amna Mumtaz 

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#### Abstract

Purpose of the paper is to examine the presence of market anomalies and how stock prices are affected due to market anomalies which may affect investors' returns. It is a conceptual paper and it will definitely helpful to know how market anomalies affect the concept of efficient market hypothesis and importance of anomalies for the investors while decision making. In literature there are contradictory views for negative Monday anomaly and Positive January anomaly and this paper put the attention of investors on the factors that cause financial anomalies. It is proposed that we can find more accurate results about negative Monday anomaly and Positive January anomaly if different sectors of the economy will be observed separately.


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## Introduction <br> Impact of Calendar Anomalies on Stock Returns

Markets are rational and they reflect completely all the available information in market is the hypothesis of efficient market theory. New information in the market is adjusted in stock prices quickly and all the investors in market are well aware of the new information. So market can't be beaten by any investor to generate abnormal profits. But the results reveal that there are many systematic deviations from the theoretical base which are important for market to be called as efficient and due to these deviations investor can beat market by getting abnormal returns which is contradict to Efficient Market Hypothesis (EMH). These deviations are named as anomalies.
This review paper is related to how financial anomalies negate the hypothesis and impact on stock return.

## Market Efficiency

The concept of efficient market hypothesis was first introduced in 1950. According to Strong (2006) the fair price is the function of the capital market that assures investors can sell stocks at the going/available price. The concept of fair pricing leads to the efficient market hypothesis which is one of the most important paradigms of traditional finance theories. Fama (1970) explained efficient market as a market with large number of rational investors who actively participate in trading activities with the objective of profit maximization by predicting stock prices with the assumption that stocks related important information is freely available to every investor.

Due to the availability of certain level of information; Efficient Market Hypothesis is divided into weak form efficiency, semi weak form efficiency and strong form efficiency. According to Strong (2006) weak form efficient market hypothesis is the least reactive form which tells future stock prices cannot be predicted by analyzing past information of stocks. According to Bodie, Kane, and Marcus (2007) current stock prices reflect all past information related to stock price and return. So future stock price cannot be predicted by examining the past prices of stock and individuals cannot earn abnormal profit by beating market except fundamental analyst and inside traders.

In semi strong form current stock prices not only reflect past information but also reveal publically available information. This form also does not allow making abnormal profit to any investor except inside traders. In strong form; Current stock prices reflect all past, public and private information. Abnormal profits are not possible even in case of inside trading (Brealey, Myers, \& Marcus, 2011).

According to EMH theory beating the market to earn abnormal profit is impossible as stocks are already accurately priced and reflect all the available information by Latif, Arshad, Fatima, and Farooq (2011). It means it is impossible to make abnormal profits for investor by using any trading strategies (Swing trading, Arbitrage, candle stick patterns and trends lines etc.). So_ investor should place all investment in index and forget about return as no abnormal profit is there and must focus on minimizing cost of investment to maximize his returns rather to consider the index but practically it does not happened as there are investor in the market who get abnormal returns. So, the question arises why efficient market hypothesis may be incorrect._Efficient market hypothesis may be incorrect due to many reasons. Following are the few reasons

- Stocks take time to reflect new information
- All investors perceive information differently
- Decision making can be wrong due to wrong calculation and emotional effects
- Financial market anomalies etc.

In this paper focused area is financial market anomalies.

## Financial Market Anomalies

Literal meaning of anomalies is unusual occurrences. According to M.Frankfurter and McGoun (2001) anomaly is irregularity from common pattern and it is the term which is generic in nature. Anomalies are the indicator of inefficient market and vary in nature. There are few anomalies which happened once and disappear but others happen repeatedly. So anomalies are said to be indicator of inefficient market. As far as finance theory is concerned, financial market anomaly is the situation when stocks prices deviate from efficient market hypothes

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## Calendar Anomalies

Monday Effect and January Effect are calendar or seasonal anomalies which are discussed in this paper. These are related to particular time period. Calendar Anomalies includes weekend effect, Turn of the month effect, Monday Effect or Weekend Effect, January Effect or Turn of the year effect etc.

## Monday Effect

Monday effect is a calendar anomaly and it negates the weak form of efficiency as it postulates that stock prices reflect all past information related to stock price and return but future stock price cannot be predicted by examining the past prices of stock. So, individual cannot earn abnormal profit by beating market but abnormal profits are earned due to the existence of financial anomalies.

Number of studies conducted to observe the Monday effect and mixed findings are there. Cross (1973) conducted his study in Standard and Poor's Composite Index to examine the regularities in magnitude, price changes direction on different days and dependency of the performance of Mondays to its previous Friday; for this purpose he examined the returns of 844 weeks from 1953 to 1970 . He stated that in the given duration Friday index moved upward to $62 \%$ with mean change of $+0.12 \%$. However on Mondays the index moved upwards to $39.5 \%$ and $-0.18 \%$ was the average.

There are many evidences which confirmed the existence of weekend effect in USA and average returns of Mondays are found to be negative (shark 1986). Dubois and Louvet (1996) found that returns to be lower for the beginning of the week but not specifically on Mondays in Canada, European countries and Hong Kong. They also concluded that out of nineteen countries, nine countries showed negative returns on Monday whereas eight countries showed negative returns on Tuesdays.

Raj and Kumari (2006) studied Bombay Stock Exchange and National Stock Exchange to examine the Monday effect. No doubt seasonality in returns was revealed in Indian Market but those were different from commonly observed anomalies in other markets and negative Monday effect found absent in both markets.

According to Strong (2006) stock prices tend to be higher on weekends and lowest or negative on Mondays. According to Philpot and Peterson (2011), weekend effect was not only found in domestic but it was also present in foreign assets markets and the early work on weekend effect supported the phenomena that returns were significantly positive on Fridays and negative on Mondays. Initially researchers were unable to identify its actual reasons but the researchers had number of proposed explanations for this. Researcher developed new datasets over the year and test the hypothesis with different statistical tools that showed weekend effect began to reverse and it shifted to other days of the week and even vanished.

Sanaullah, Shah, Ather, Ali, and Aslam (2012) conducted his stud in Karachi Stock Exchange to observe that investors may earn abnormal profits due to their behavior patterns and also observed the anomalous behavior inclusive Monday effect in two data sets for thirteen years (1997-2010) and eleven year from 1997 to 2010 excluding $2005 \& 2008$. Both years were related to financial market crash. He did not observe negative Monday Effect by applying statistical test on both data sets in Karachi Stock exchange.

## Causes of Monday Effect

Negative or lowest returns on Mondays is also supported by Christophe, G.Ferri, and Angel (2004) with the cause of short selling because short seller face risks by holding their positions over the weekend and they try to close out their position by buying or selling on Friday and again open on subsequent Monday, the practice adds to the weekend effect.

Aksoy and Dastan (2011) conducted his study on short selling in Istanbul Stock Exchange for the period 2005-2009 in relation to the day of the week effect. He stated that no direct evidence of negative or lowest return on Monday found by examining its relation with short selling as it is supported by Chen and Singal (2003) but he found positive correlation between the returns for all days of the week and the short selling.

Blau, Ness, and Ness (2009) stated that short sellers carry out more sales volume during mid of the week and found positive correlation between the returns on Monday and short selling which was higher than other days of the week.
January Effect
January effect is also one of the well known anomalies and there are number of studies which give evidences that stock returns are higher in January. Wachtel (1942) introduced January effect first time to the academic world. The concept of January anomaly reintroduced by Rozeff and Kinney (1976) and appeared to general public widely.

According to Su , Dutta, Xu , and Ma (2010) January effect is a good example of calendar anomaly in stock markets all over the world. At the turn of the year, certain securities produce positive abnormal returns. The positive January effect is supported by different researchers and there are numbers of studies with negative January anomaly.

Vetter and Wingender (1996) stated that in many stock markets January anomaly in preferred stocks has not been tested and it is only investigated and identified in common stocks. He conducted his studies on preferred stocks to know January anomaly. His study covered Standard \& Poor Index (19361987) and returns of ninety individual preferred stock listed on New York Stock Exchange (1969-1986). Regression analysis was applied to observe the January anomaly in preferred stocks and a significant January effect was found there.

Haugen and Jorion (1996) conducted his study in New York Stock Exchange for 68 years ( $926-1993$ ) to observe the January anomaly and found positive January in New York Stock Exchange. Gu (2006) found that January anomaly showed declining trends in France, United kingdom, Canada, Germany, Japan and these are five in G7 countries. He stated that there are evidences of much weaker January effect in United Kingdom market than before. Rozeff and Kinney (1976) observed seasonal patterns from 1904 to 1974 in New York Stock Exchange and found that average monthly return in January was about $3.5 \%$ and $0.5 \%$ was average returns in other months. So, he concluded that average returns for the month of January were higher than other months.

Ong and Mitchell (2006) studied calendar anomalies inclusive January anomaly in Chinese market and found no January effect in either Shanghai share markets or Shenzhen share markets but higher return observed in February as compare to non February months. February effect may suggest that the turn-of-the-year for Chinese stock markets may occur during the Chinese Lunar new year. He explained that turn of the year in China is February as Lunar year in China usually begins at the end of January or during the month of February instead of turn of the calendar year.

No January effect found in Chinese market is also supported by Zhang, Hua, and Sun (2003). Raj and Kumari (2006) examined two stock exchanges of India i.e. Bombay Stock Exchange and National Stock Exchange to observe the January effect. Seasonality in returns revealed in Indian Market but these were different from commonly observed anomalies in other markets. Positive January effect was not found in both markets

Sanaullah et al. (2012) attempted to find the anomalous behavior in Karachi Stock Exchange with the help of two data sets for the period of thirteen years from 1997-2010 and for eleven year from year1997-2010 excluding year 2005 and 2008. Financial markets were affected due to subprime loan in year 2005 and 2008. He concluded that no anomalous behavior exists in market and no investor can get abnormal return from the January effect (Raj \& Kumari, 2006).

## Causes of January Effect

According to Chen and Singal (2003) Number of explanations is there to identify the January effect. January effect may be due to one of the following hypothesis

- Window-dressing,
- Tax-loss selling,
- Bid-ask bounce, etc.

Or it may be combination of more than one hypothesis.
Branch (1977) stated that reason of uneven returns in January was tax loss selling of share. Ligon (1997) said that reason of January effect is significantly related to excessive liquidity in the month. Liquidity of the month may be real or self created.

## Conclusion

As we know that efficient market says that investors have all stocks related information and they perform according to the information. According to efficient market hypothesis all information is very quickly adjusted to stock prices and investors behave accordingly. So, no investor is there who may earn abnormal returns from market except in certain cases which are related to weak form of efficiency and semi- strong form of efficiency. Fundamental analyst and inside trader are there who may earn abnormal profits but Strong form of efficient market hypothesis does not allow any fundamental analyst and inside trader to make abnormal profits. Financial anomalies are there which negate the theory of efficient market hypothesis by stating that abnormal profits can be earned. In this paper two of the calendar anomalies i.e. Monday Effect and January effect have been discussed.

Number of studies are conducted to observe Monday effect or negative Mondays and January Effect or positive January. There are studies which support the negative Monday anomaly and positive January anomaly and there are studies which negate Monday and positive January.

Different causes are identified for these anomalies e.g. tax treatment, short selling, window dressing, tax loss selling, bid ask bounces, traditions approaches of a particular Countries, behavioral approaches etc. Sample size, time span, macro economic conditions with country specific and worldwide also impact on the findings of different studies.

I would like to suggest that negative Monday effect and positive January effect can be observed more accurately by dividing economy into different sectors as it will open for the investors to take timely decision and earn profits and this may also open new dimensions for further research.

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