

Day of Week Effects in Asian Emerging Stock Markets: A Comparative Study

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Abstract

The present study is conducted to analyze the day of week effects in three emerging markets Pakistan (Karachi Stock Exchange (KSE100)), India (Bombay Stock Exchange (BSESN)) and Malaysia (Kuala Lumpur stock exchange (KLCI)). It is one of the calendar anomalies that describing different returns across trading days and contradicts with efficient market hypothesis prescribing same returns across trading days. Daily data of three indexes from 2008-2012 have been collected from yahoo finance. Descriptive statistics have been performed to see the general trends of data during the sample period. OLS has been employed which indicates no clear evidence of day of week effects in these three emerging markets during the data period. Thus it is concluded that no anomalous behavior towards abnormal return has been seen in these emerging markets during the period.

Keywords: Efficient market hypothesis, Random walk hypothesis, Emerging markets, Day of week effect, Stock returns

Introduction

Efficient Market Hypothesis specified that stock returns on each trading day are not different. But in behavioral finance calendar anomaly “the day of week effects” predicts that stock returns in each day of week are different and contradicts with Efficient Market Hypothesis. An anomaly is defined as the event or incident whose actual result deviates from the expected result under the given set of assumptions. It means this is not possible to explain this incident judiciously with the help of theories already exist in finance literature. There is a need of some unscientific and irrational assumptions for explaining this phenomenon. Securities are fairly priced if these reflect total effect of information including the event that have already incurred and the event market expects to occur in future. In financial markets, days of the week affects the equity returns and abnormal positive or negative equity returns results than its intrinsic value. This is one of the calendar anomalies and the reason for the origin of specific returns on specific days of week is not known. It cannot be explained by fundamental theories with underlying assumptions.

In general a negative return on Monday is due to release of new information over the weekend. Some researches explain it is in the context of behavior. In the first day of week (Monday), investors are pessimistic causing negative returns on Monday where as in the last day of week (Friday)

investors are optimistic and abnormal positive return results. The abnormal return forces the investor to design his investment strategy, select the portfolio and maximize the profit. The abnormal return associated with day of week effect has made it important for research. Due to this reason this topic has received extensive research in past.

There is no reason to presuppose that the return on each day of week is asymmetric in nature. One of the widely accepted theories concerning the value of market prices is the study of Fama (1970) where market prices are 'informationally' efficient. By reason of this, anyone cannot get structural significant returns, and outperform the market. Furthermore, the expectations cannot be predicted on basis of past price data. Since the returns are normally distributed, there are some who will get higher returns and some that get lower, but the market as a whole will always be right. Fama structured it in three parts: when the market is in weak form, behavior of past prices and technical analysis is useless in estimating returns. Abnormal returns in weak form are the result of differences in estimating the firm values through fundamental analysis by investors. The going market price is seen as the best price possible.

In semi- strong efficiency any new information comes in market it is adjusted in a price in a very short time. On the basis of technical and fundamental analysis structural significant returns are not possible

When the market has Strong form efficiency, it is not possible for the investors to get structural significant returns; even very important private firm-specific information is available. The price will change only to its proper level in strong form efficiency if the investor having private information act upon it quickly

In consistent with Efficient Market hypothesis, Random walk hypothesis specifies that prices of stocks are adjusted randomly according to information indulge in the market. Bachelier (1900) put forward the idea that equity pricing might adjust randomly. The random walk is used to discuss that changes in successive price are not dependent on each other. In other words we can say that change occur in pricing of securities tomorrow is independent of change in price today. Therefore future price of tomorrow cannot be forecasted on the basis of today's price change. No abnormal returns exist on the basis of spying trends.

According to Efficient Market Hypothesis prices of securities show all the information and Random Walk Hypothesis specified that prices are randomly adjusted in response to information come to market. Any price that provides a certain gain to investors should be adjusted due to arbitrage. According to these financial theories investors and speculators should not be able to realize profit from their investment on the basis of technical analysis.

However, market anomalies are important to create opportunities for trading forecast and abnormal return.

The present research is done to analyze the calendar anomaly of abnormal returns during specific days in emerging markets. Day of week effect is the independent variable for the research and emerging markets are the dependent variables for the research. A specific return on specific days of week is one of the calendar anomalies and emerging markets are financial markets having characteristics of high returns due to its shallowness and volatility. The emerging markets selected for doing research are Pakistan (Karachi Stock Exchange (KSE)), India (Bombay Stock Exchange (BSE)) and Malaysia (Kuala Lumpur stock exchange (KLSE)). These three emerging markets are the developing countries of Asia.

The study covers the daily observations of five years of these three emerging markets started from 2008-2012 and OLS is applied on their daily returns to investigate the analysis of abnormal returns across different days of week. The presence of week day's effect would indicate that there would be impact of days on stock returns in emerging markets and anomaly would exist with financial theories of asset pricing such as Random walk hypothesis (RWH) and efficient market hypothesis (EMH).

There are five sections of this paper. Introduction and importance of research are presented in section one. Second section indicates the theoretical and empirical literature about calendar anomaly (Day of week effect). Section three reveals methodology of the research. Empirical Results are discussed in section five.

Objectives of Study

The objective of the study is to

- Analyze the calendar anomaly of specific returns on specific days of week in three emerging markets Pakistan, India and Malaysia
- Examine the sensitiveness of emerging markets to week day's effect.

Significance of Study

The present study is a comparative study for analyzing the effect of days on returns in emerging markets. Previous researches (Ajayi *et al.*, 2004; Anwar & Mulyadi 2009; Anwar & Mulyadi 2009; Mbululu & Chipeta 2012; Gharaibeh & Azmi 2015; Okey 2016) have focused Monday and Friday effect in emerging markets. The current research is different from the previous researches in the sense that it shows the effect of each day of week on equity returns in emerging markets. This research also contributes in extending empirical literature on calendar anomalies and emerging markets of Asia. This study is significant for international and domestic investors in terms of

return predictability and it may affect their investment strategy, portfolio selection and profit management.

Literature Review

Theoretical literature of finance contains two theories Random Walk Hypothesis (RWH) Efficient Market Hypothesis (EMH) that depict investors cannot realize excess returns on the average market returns after adjusting for its risk. According to Efficient Market Hypothesis all available information are used in the determination of prices of securities at its moment in time (Fama, 1970). Efficient Market Hypothesis (EMH) has three forms: The prices of traded assets include all past publicly available information in weak-form efficient market hypothesis. The semi-strong-form EMH adds to this statement that prices response to new public information immediately. Strong-form Efficient market hypothesis reflects past and new public information is priced and declares prices also cover for hidden or insider information. According to the EMH, it's impossible to realize excess returns on the average market returns after adjusting for its risk. Though, last three decades more and more research is done on theories harming the EMH. These theories carried out by the behavioral finance school, known as market return anomalies or market inefficiencies, emphasize that prices or returns can distort the presumption of informational efficient markets. When anomaly patterns in stock returns arise, the market inefficiency is created and the EMH is harmed.

Consistent with Fama (1970), the Random Walk Hypothesis (RWH) states that stock prices develop randomly and therefore historical or current prices cannot predict future stock prices. As a result both fundamental and technical analyses are useless. Like Efficient Market hypothesis, Random walk hypothesis specifies that prices of stocks are adjusted randomly according to information indulge in the market. In 1900, Bachelier¹ put forward the idea that security prices might follow random. The random walk is used to discuss that changes in successive price are not dependent. No abnormal returns exist on the basis of spying trends.

Anomalies are in conflict with the EMH and RWH. Distortions, when taking the RWH into account, are statistically showed by significant outperformance of periods, data clusters, fat tails and asymmetries. To cover for anomalies using these statistical measures, is maybe not always right since the foundations (theories) are perhaps to some extent anomalous itself. Therefore, it is questionable if it is good that (behavioral) finance takes the EMH as a starting point.

Both classical finance theories are thus in contrast with an important part of the topic of research of this study: calendar anomalies which could earn structural significant returns, and therefore distort the premise of market efficiency.

Calendar anomalies are basically defined as there is no regular model of equity returns in a calendar year. Calendar market return anomalies arise in indices, which represent company's assets through stock rates. It's imperative to be acquainted with the foundations of stock prices of underlying assets, how markets value the assets, and how these stock prices develop.

The Calendar anomalies analyzed in the literature include effect of week days, turn of the month effect, January effect and the holiday effect. The present research paper is an attempt to analyze the effect of days on returns in emerging markets of Asia

Empirical researches on specific returns on specific days of week demonstrate that equity returns are not same in all days of week. Monday effect shows negative or considerably lower returns on equity. Another anomaly or contradictory event with standard finance is Friday effect. Lakonishok & Smidt (1988) demonstrated that equity returns on Friday are positive in developed financial markets. Dubois & Louvet (1996) also showed that patterns for distribution of returns in all days of week changes from one country to another.

Different factors explain the effect of days on returns. One factor is *settlement regime hypothesis*. It deals with the operating mechanism of stock exchange including procedures involved in trading and settlement of stocks. Second factor is *information processing hypothesis*. This hypothesis relates to asset management planning of various investors such as individual and institutional investors. The timing of these investors for planning of asset management varies from one another. Third factor is *information release hypothesis*. It includes that the pattern of releasing information across the weekdays are not same. As a result mispricing occurs and abnormal return results. (Gibbons & Hess, 1981; Lakonishok & Maberly, 1990; DeFusco *et al.*, 1993; Martikainen & Puttonen, 1996; Draper & Paudyal, 2002).

The *information release hypothesis* investigates that the time for releasing good and bad information is entirely different. Market players usually release negative information on Friday. As Friday and two non trading days (Saturday and Sunday) of the week help the investors to neutralize their behavior on the first working day (Monday) of the next week. When good news come to market players, these are released as quickly as possible. The main reason for bearish environment on Monday in the stock market is the discharge of negative information during weekend (French 1980; Rogalski, 1984; Penman, 1987; Damodaran 1989; Defusco *et al.*, 1993).

Another hypothesis contributes towards calendar Anomalies is the *information processing hypothesis*. Trading attitude of individual investors is a major contribution for low returns on Monday. It is very costly for individual investors to gather information during trading hours as they are

busy in other activities during working days of the week i.e. Monday to Friday. Individual investors usually take investment decision during weekend as they are free and have enough time to get the information and develop it in the form of investment plan. (Osborne, 1962) demonstrates that institutional investors usually structure their trading strategy of coming week on Monday morning; therefore trading on Monday is less. Less trading or no trading on Monday is the cause of negative returns on that day (Miller, 1988; Lakonishok & Maberly, 1990; Abraham & Ikenberry, 1994; Sias & Starks, 1995).

Another hypothesis that explains specific returns on specific days of the week is the *settlement period hypothesis*. It depicts that availability of extra credit period for payment of cash contributes abnormal on specific days. (Gibbons & Hess, 1981; Lakonishok & Levi, 1982; Solnik & Bousque, 1990; Agarwal & Tandon, 1994).

All three hypotheses are in favor of existence of abnormal return in some specific days of week and encourage the investor to design their investment strategies by encountering this fact.

Recent studies entail the existence of mixed pattern in specific days of week in emerging markets. Ajayi *et al.* (2004) showed the effect of Monday on equity returns in Europe. They selected eleven emerging markets in central Eastern Europe (CEE) from 1994 to 2002 and found mixed results of returns on the day of Monday. Six states of Europe showed negative Monday returns as compared to the remaining emerging markets of CEE. In (Estonia and Lithuania) there were statistically significant relationship between negative returns and Monday where as in (Russia) positive Monday returns were statistically significant. Their results proved that daily patterns do not exist in emerging markets of CEE.

Basher & Sadorsky (2006) examined the impact of days of week in the context of conditional and unconditional risk in twenty one emerging markets. The selected emerging markets are, India , Taiwan , Venezuela , Turkey , Malaysia , Poland , Pakistan , Sri Lanka, Indonesia Argentina Thailand , Israel , Peru , Mexico , Korea, Brazil, Chile , Colombia, Jordan, Philippines and South Africa . They had employed different models on 2827 observations covering the period from 1992 to 2003. Their finding showed the existence of abnormal returns in specific days in three emerging markets Pakistan, Philippines and Taiwan while the rest emerging markets had no week day effect.

Chia, Liew & Wafa (2008) examined the day of week effects on Singapore, Taiwan, South Korea and Hong Kong stock markets. Daily data starting from 2000 to 2006 had been tested by employing EGARCH model to know the week day effect. Their result indicated the existence of positive

yield on Friday and negative yield on Monday in, Singapore, Hong Kong and Taiwan stock markets.

Anwar & Mulyadi (2009) investigated the effect of days on returns in Malaysia and Singapore and Indonesia Stock Markets They used AR-EGARCH econometric models to test their data covering 1168 observations. Their result showed abnormal returns on Friday in Indonesia and Malaysia stock markets. However, Singapore didn't show any impact of Friday on returns. Moreover, their study also demonstrated the absence of the effect of Monday on returns in these countries.

Ulussever, Yumusak & Kar (2011) examined week days effect in an emerging market (TADAWUL) of Saudi Arabia. They employed non linear Garch model in their research and found that abnormal returns exist on specific days during the week and confirm the impact of days on returns in TADAWUL. Georgantopoulos, Kenourgios & Tsamis (2011) also tested four emerging markets (Turkey Romania, Croatia and Bulgaria) and Balkan region (Greece) for the calendar anomalies. They included week day's effect, the half month effect, the turn of the month effect, the January effect and the time of the month effect as calendar anomalies in their research. Data from 2000-2008 had been tested through GARCH. Their result indicated that three calendar anomalies (time of the month, week day's effect, turn of the month,) exist in Turkey whereas the effect of above mentioned calendar anomalies has no effect on the returns of the remaining emerging markets.

Mbululu & Chipeta (2012) demonstrated the week day effect on the nine sectors of emerging market , Johannesburg Securities Exchange (JSE).The eight listed sectors Telecom ,Oil & Gas, Basic Materials ,Health Care , Consumer Services , Consumer Goods , Industrials, Financials and Technology of JSE covering the data period 1995 to 2011 are the sample of their research. The findings of their study indicated that returns of only one sector; Basic materials is affected by this calendar anomaly and other sectors show no abnormal positive or negative returns on Friday and Monday. Patel, Radadia & Dhawan (2012) attempted to observe the descriptive statistics and the impact of days on returns in Asian markets. The study covered the data of 2000 to 2011 and regression result shows absence of specific returns on specific days in all the Asian stock markets.

Gharaibeh & Azmi (2015) used the daily data from 2002-2011 to examine the week day effect in Kuwait stock Exchange. Ordinary Least Square employed to investigate the effect of this anomaly in the Exchange. Their finding revealed optimistic return on first and last day of the week. Moreover second trading day of the week has also negative and significant impact on returns in Kuwait Stock Exchange. Similarly Okey (2016) conducted the study on Nigerian financial market to investigate the same

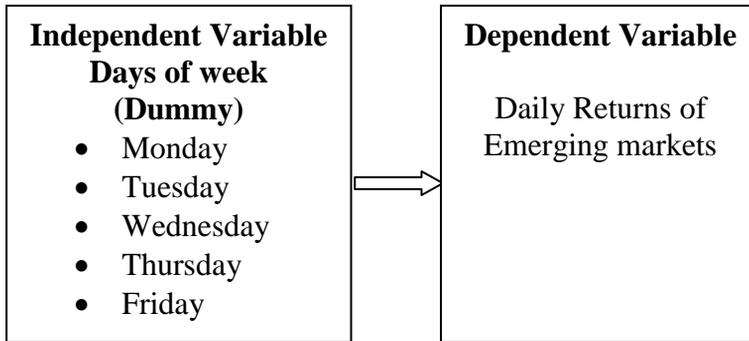
seasonal anomaly using OLS. The results of the study indicated the presence of the week day effect in the Nigerian stock exchange during 2009-2015.

Xiao (2016) demonstrated two seasonal anomalies including week day effect and effect of months on the returns of American Stock market. The study employed UCM and ARCH model on daily observations of developed stock market from 2000-2015. The findings of the research concluded that two months January and December have significant impacts on returns but no evidence about the effect of days on returns found in American stock market. Moreover Mitra (2016) also tested the week day effect in India Stock Exchange and found no traces of this anomaly in BSE during 2000-2015. Moreover GARCH model employed in the study to test the volatility and results of the model indicated statistically significant volatility on Tuesday exist during trading week.

The empirical literature shows recent researches on calendar anomalies in emerging markets. The studies on emerging markets have been done in group or in isolation. In order to enhance the literature regarding calendar anomalies and emerging markets, the present study is done to know the effect of each day of the week on the returns of three emerging markets Pakistan (Karachi Stock Exchange (KSE)), Malaysia (Kuala Lumpur stock exchange (KLCI)) and India (Bombay Stock Exchange (BSESN)). Pakistan, India and Malaysia are developing countries of Asia.

Theoretical Frame work

It is comprised of financial theories, efficient market theory and Random walk theory, of standard finance and Calendar anomalies of behavioral finance. These theories are based upon set of assumptions and stated that information in stock markets determine and adjust the equity prices .On the other side Calendar anomalies (week days effect) are the seasonality effects on equity returns in financial markets which causes abnormal returns on particular days Monday and Friday. The present study investigates the impact of days of week on returns of three selected emerging markets Pakistan (Karachi Stock Exchange (KSE100)), India (Bombay Stock Exchange (BSESN)) and Malaysia (Kuala Lumpur stock exchange (KLCI)). Days of the week are the independent dummy variables and daily returns of emerging markets are dependent variables for the research. The diagrammatic representation of independent dummy variables and dependent variables is shown as following:



Hypotheses

H₀: The daily return of a specific trading day of the week is not equal to daily return of other trading days in emerging markets.

H₁: The daily return of a specific trading day of the week is equal to daily return of other trading days in emerging markets.

Data and Methodology

Daily Data of indices of three Asian emerging countries Pakistan (Karachi Stock Exchange (KSE)), India (Bombay Stock Exchange (BSESN) and Malaysia (Kuala Lumpur stock exchange (KLCI), has been taken from Yahoo finance. Daily data covers the time period starting from 1st January 2008 to 31st December 2012. The most common model used by many researchers (Chia, Liew & Wafa 2008; Dicle & Hassan 2007; Ulussever, Yumusak & Kar 2011) has been employed in the research. The model will be tested for three emerging markets Pakistan, India and Malaysia.

Unconditional logarithmic returns of stock exchange indices are calculated as

$$R_t = \ln \left(\frac{I_t}{I_{t-1}} \right)$$

Where:

$$R_t = \text{Return at time } t, \quad \ln = \text{Natural Log,}$$

$$I_t = \text{Index at time } t, \quad I_{t-1} = \text{Index at time } t-1$$

At first daily returns of each week are calculated for the period of five years (2008-2012). Four dummies are used to know the effect of each day on daily returns. Regression is run to test that the daily returns in Asian emerging markets are statistically different across trading days of the week.

$$R_t = \beta_0 + \beta_1 D_{1t} + \beta_2 D_{2t} + \beta_3 D_{3t} + \beta_4 D_{4t} + u_t$$

R_t = Return at time t

D_{1t} = 1 if day t of the week is Tuesday and 0 otherwise

D_{2t} = 1 if day t of the week is a Wednesday and 0 otherwise

D_{3t} = 1 if day t of the week is a Thursday and 0 otherwise

D_{4t} = 1 if day t of the week is a Friday and 0 otherwise

β_0 = return of Monday and is a reference dummy of the research. β_1 to β_4 explain the returns of rest of the days of the week with reference to Monday return.

The error term is indicated by u_t

The hypothesis formulated on the basis of theory is represented as

$$H_0 = \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$$

Statistically significant coefficient can prove the impact of days on returns in emerging Asian stock markets.

Results and Discussion

The statistics summary of returns of emerging markets in days of week from 2008-2012 are given below

Descriptive Statistics

Table 1: *Summary Statistics of KSE100 (2008-2012)*

	Monday	Tuesday	Wednesday	Thursday	Friday
observations	248	249	251	249	241
Average	-0.00186	0.00104	0.00067	-0.00023	0.00138
S. Deviation	0.01451	0.01327	0.01381	0.01140	0.01271
Coefficient of Variation	-0.12842	0.07840	0.04840	-0.02060	0.10859

Table 1 indicates Mean returns of the KSE 100 index are negative on Monday and Thursday and positive on Tuesday Wednesday and Friday during the sample period. The statistical measure used to show the deviation in return from mean is standard deviation. A higher volatility means that index returns deviate from their mean values. This can change the index severely in either direction over a short time period. A lower volatility means that there is no spectacularly fluctuation in index. Volatility on average is lower on Thursday and Friday and higher on Monday. This is consistent with the results of Basher & Sadorsky (2006). The coefficient of variation is a measure of return obtained per unit of risk. Friday returns show high Coefficient of variation indicating lower risk and higher return on Fridays in KSE 100 index during the data period 2008-2012.

Table 2: *Summary statistics of BSESN (2008-2012)*

	Monday	Tuesday	Wednesday	Thursday	Friday
observations	242	249	248	242	245
Average	-0.00032	0.00002	0.00001	-0.00002	0.00002
S.Deviation	0.04425	0.04511	0.04061	0.03967	0.04004
Coefficient of Variation	-0.00726	0.00050	0.00026	-0.00050	0.00063

Table 2 shows, mean returns are negative on First and fourth day (Monday and Thursday) of week in BSESN and positive on rest of the days of week that is Tuesday Wednesday and Friday. On average the volatility is low on Thursday and Friday and high on Tuesday .It indicates the presence of abnormal positive returns on Tuesday and negative returns on Thursday. The

result of the research is consistent with the study of Patel, Radadia & Dhawan (2012) who reported the same trend of data during their research. The Coefficient of variation of Friday is high indicating high returns and low risk on Friday during data period.

Table 3: Summary Statistics of KLCI (2008-2012)

	Monday	Tuesday	Wednesday	Thursday	Friday
Observations	237	247	253	250	247
Average	-0.00069	-0.00011	0.00003	0.00001	0.00002
S.Deviation	0.01071	0.02913	0.02742	0.02136	0.02211
Coefficient of Variation	-0.06451	-0.00245	0.00105	0.00029	0.00078

Table 3 demonstrates mean returns of KLCI are positive in all trading days except Tuesday and Monday. On average the volatility is high on Tuesday followed by Wednesday and Friday. High coefficient of variation on Wednesday and Friday indicates more return or less risk incurred on these days during the whole sample period. Summary statistics shows more return and less risk on Friday and Wednesday.

Unit Root Test

Table 4: Unit Root Test of Returns of Emerging Markets

Emerging markets	t- statistics	1%CV	5%CV	10%CV	P-value
BSESN	-32.70989	-3.43548	-2.86369	-2.56797	0.00***
KLSE	-30.77538	-3.43545	-2.86368	-2.56796	0.00***
KSE100	-28.66964	-3.43543	-2.86367	-2.56795	0.00***

Note BSESN=Bombay Stock Market(India) ; KLSE= Kaula Lumpur Stock Exchange (Malaysia); KSE =Karachi Stock Exchange (Pakistan) P<.05***

In order to promptly address the problem of non- stationarity in time series data, daily returns are calculated because returns show a stable pattern where as prices are constantly changing. Augmented Dickey Fuller Test (ADF) is applied on returns to statistically test the existence of unit root in time series data or not. The results of ADF on returns of emerging markets are illustrated in table 4

Table 4 rejects the null hypothesis of non-stationarity for all emerging countries. It means data is stationary there is absence of unit root in the data. This test also verifies the absence of spurious regression.

Correlation matrix (table 5 ,6 ,7) shows that returns of days are positively or negatively related to each other but the strength of relationship between returns of day is negligible even weak relationship between returns of day does not exist in these emerging markets. Therefore there is no problem of multicollinearity in data during the sample period.

Correlation Matrix

Table 5: *Correlation Matrix among Returns in Days of the Week of KSE 100 (2008-2012)*

Days	Monday	Tuesday	Wednesday	Thursday
Tuesday	-0.12452			
Wednesday	0.01806	0.07366		
Thursday	-0.01336	-0.01436	0.14109	
Friday	0.11556	0.08695	0.12119	0.02855

Table 6: *Correlation Matrix among Returns in Days of the Week of BSESN (2008-2012)*

Days	Monday	Tuesday	Wednesday	Thursday
Tuesday	-0.00246			
Wednesday	-0.05218	-0.10146		
Thursday	0.14747	0.11984	0.10939	
Friday	0.08717	0.16305	0.00697	0.23112

Table 7: *Correlation Matrix among Returns in Days of the Week of KLCI (2008-2012)*

Days	Monday	Tuesday	Wednesday	Thursday
Tuesday	0.09396			
Wednesday	-0.07721	-0.00559		
Thursday	-0.04187	0.03885	-0.04113	
Friday	0.09059	0.03704	0.04137	-0.00236

Table 8: *Testing of Day of Week Effects in Pakistan, India and Malaysia*

Time period	KSE 100		BSESN		KLCI	
	F-stat.	F-Sig.	F-stat.	F-Sig.	F-stat.	F-Sig.
2008	0.60	0.65	0.31	0.86	0.38	0.82
2009	1.56	0.18	0.45	0.77	1.39	0.23
2010	2.67	0.03***	2.94	0.02***	0.68	0.60
2011	0.56	0.68	1.00	0.41	2.84	0.03***
2012	1.04	0.38	3.14	0.02***	0.58	0.67
2008-2012	2.25	0.06	0.56	0.68	1.38	0.23

Note BSESN=Bombay Stock Market(India) ; KLSE= Kaula Lumpur Stock Exchange (Malaysia); KSE =Karachi Stock Exchange (Pakistan) P<.05***

The model for days of the week has been tested at 5% significance level and results have been shown in table 8. F-statistics in all emerging markets are less than 0.05 indicating there are no impact of days on returns except 2010 in KSE, 2010 and 2012 in BSENI and 2011 in KLCI. Maximum No of insignificant coefficients in individual countries suggest that there is no evidence effect of week days on returns in these emerging markets during the 2008-2012. It is concluded that calendar anomaly that is effect of days on returns does not exist in these emerging markets and returns are not affected

by days in a week. The results of the research reject null hypothesis and accept alternative hypothesis.

Regression Results of Emerging Markets

Table 9: Regression Results of BSESN (India)

	$R_t = \beta_0 + \beta_1 D_{1t} + \beta_2 D_{2t} + \beta_3 D_{3t} + \beta_4 D_{4t} + \mu t$					F-Stat.	F-Sig.
	β_0	β_1	β_2	β_3	β_4		
2008	0.0041	0.0017	0.0040	-0.0002	0.0011	0.31	0.86
P-Value	0.32	0.76	0.48	0.69	0.84		
2009	0.0052***	-0.0047	-0.0032	-0.0043	-0.0013	0.45	0.77
P-Value	0.04	0.24	0.41	0.29	0.51		
2010	0.0037***	-0.0063***	-0.0022	-0.0026	-0.0001***	2.94	0.02***
P-Value	0.01	0.00	0.25	0.18	0.02		
2011	0.0015	0.0014	0.0030	0.0014	0.0136	1.00	0.41
P-Value	0.43	0.61	0.25	0.60	0.61		
2012	0.0018	0.0061***	0.0022	0.0022	0.0281	3.14	0.02***
P-Value	0.16	0.00	0.23	0.23	0.12		
2008-12	0.0004	-0.0004	0.0006	-0.0016	0.0007	0.56	0.68
P-Value	0.71	0.78	0.67	0.30	0.57		

Table10: Regression Results of KLCI(Malaysia)

	$R_t = \beta_0 + \beta_1 D_{1t} + \beta_2 D_{2t} + \beta_3 D_{3t} + \beta_4 D_{4t} + \mu t$					F-Stat.	F-Sig.
	β_0	β_1	β_2	β_3	β_4		
2008	-0.0042***	0.0027	0.0027	0.0024	0.0031	0.38	0.82
P-Value	0.03	0.34	0.34	0.40	0.26		
2009	0.0009	-0.0032	0.0024	0.0009	0.0023	1.39	0.23
P-Value	0.65	0.25	0.38	0.72	0.41		
2010	0.0015	-0.0041	-0.0017	0.0033	-0.0016	0.68	0.60
P-Value	0.64	0.38	0.72	0.48	0.71		
2011	-0.0019	0.0015	0.0047***	0.0016	0.0015	2.84	0.02***
P-Value	0.06	0.31	0.00	0.26	0.27		
2012	-0.0002	0.0011	0.0008	0.0008	0.0004	0.58	0.67
P-Value	0.72	0.15	0.33	0.35	0.63		
2008-12	-0.0007	-0.0005	0.0017	0.0018	0.0011	1.38	0.23
P-Value	0.44	0.66	0.17	0.16	0.38		

Table11: Regression Results of KSE 100(Pakistan)

	$R_t = \beta_0 + \beta_1 D_{1t} + \beta_2 D_{2t} + \beta_3 D_{3t} + \beta_4 D_{4t} + \mu t$					F-Stat.	F-Sig.
	β_0	β_1	β_2	β_3	β_4		
2008	-0.0011***	0.0051	0.0030	0.0036	0.0023	0.60	0.65
P-Value	0.01	0.13	0.37	0.30	0.51		
2009	0.0004	0.0011	0.0006	-0.0009	0.0071***	1.56	0.18
P-Value	0.87	0.73	0.85	0.80	0.05		
2010	-0.0027***	0.0041***	0.0051****	0.0041***	0.0053***	2.67	0.03***
P-Value	0.04	0.02	0.00	0.03	0.01		
2011	-0.0014	0.0021	0.0015	0.0015	0.0002	0.56	0.68

<i>P-Value</i>	0.35	0.20	0.45	0.46	0.93		
2012	0.0018	0.0000	0.0005	-0.0019	0.0006	1.04	0.38
<i>P-Value</i>	0.07	0.98	0.69	0.17	0.67		
2008-12	-0.0017***	0.0028****	0.0023	0.0014	0.0032***	2.25	0.06
<i>P-Value</i>	0.04	0.02	0.06	0.23	0.01		

Regression results of KSE (Pakistan) indicate lowest mean returns on Monday and positive coefficients on all other trading days for the whole sample period (2008-2012). The p-value of Monday (0.039) is less than 0.05 and Friday coefficients are statistically significant indicating negative trend of prices on Monday and positive trend of prices on Friday in the long run. If the years are individually analyzed results are mixed with maximum number of insignificant coefficients which shows no clear evidence of effect of days of week on returns. During (2008-2012) negative Monday effect and positive Tuesday and Friday effect exist. Investors usually show reluctance to invest on first trading day of week because they cannot get sufficient information from last day to first day of week (Marrett & Worthington 2008). Investors usually start to invest on Tuesday that leads to increase the number of trades on Tuesday as compared to Monday. Therefore positive Tuesday effect is statistically significant during the whole sample period (Berument & Kiyamaz 2001). Positive Friday effect has been observed during the whole sample period. The possible reason for more returns on Friday may be the existence of highest uncertainty about the release of bad news during the weekend and investors cannot respond to news released over weekend therefore investors usually liquidate their positions on Friday (Anwar & Mulyadi 2009).

OLS results in India indicate positive returns on Monday and negative Tuesday effect at individual level. F- Statistics is insignificant showing no weekly seasonal effect at all during the data period in BSESN. Mitra (2016) also revealed the absence of days of week effect in India during 2000-2015. When the years are individually analyzed the results are mixed with maximum number of insignificant coefficients indicating no impact of days of week in Bombay stock exchange. Positive returns on Monday may indicate the optimistic behavior of investors about future prospects that lead to positive market move in first day of week Ajayi *et al.* (2004).

Regression results in Malaysia reports negative returns on Monday and positive coefficients on Friday during the period 2008-2012. These negative coefficients have P-value more than 0.05 showing no effect of days of week on returns during that period when the years are individually analyzed for day of week effect results are mix with maximum number of insignificant coefficients which clearly show the absence of day of week effect in Malaysia. Research results are consistent with Georgantopoulos, Kenourgios & Tsamis (2011), Patel, Radadia & Dhawan (2012), Mitra (2016) and Zaid (2016)

Conclusion

Pakistan (Karachi Stock Exchange (KSE)), India (Bombay Stock Exchange (BSESN) and Malaysia (Kuala Lumpur stock exchange (KLSE)) have been analyzed to examine the presence of calendar anomaly week days effect on returns. Stock returns are regressed on the dummies for trading days to access the persistence of this anomaly in the three emerging markets during the data period starting from Jan 2008 to Dec 2012. Regression results show more insignificant coefficients as compared to significant coefficients concluding no obvious day of week effects in these emerging markets. It is generally inferred that anomalous behavior regarding return is not found in these emerging markets. The research result reject null hypothesis that there is no significant impact of days of week on returns. The results of the research are consistent with the recent studies conducted by Patel, Radadia & Dhawan (2012), Mitra (2016) and Zaidi (2016) that returns during trading days of week are not significantly different and provide evidence that abnormal returns cannot be earned by investors through timing their investment in these emerging markets during the study period. Moreover market behavior cannot be predicted. From the result it is concluded that market inefficiencies in these markets are not due to day of week effect.

Future Directions

Since this research does not study the aspect of conditional volatility for measuring the week days' effect; future studies can be conducted to explain the calendar anomaly in emerging markets in this context. As no research is able to explain the particular phenomena by including every evidence therefore future research can be done in order to verify the results of present study and try to find out other justifications that are responsible for the cause of specific returns on specific days in a week.

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