

THE ARRIVAL OF PUBLIC INFORMATION AND ASSET PRICE BEHAVIOR IN EMERGING MARKETS: EVIDENCE FROM STOCK MARKET IN PAKISTAN

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Abstract

This study investigates the role of public information on stock market activity and asset return using daily data for the period January 2006 - July 2011. The role of information dissemination related to Semi-strong form of efficiency is tested. This study attempts to explore the relationship between publicly available information taken from KSE website and aggregate measures of market activity that is market returns and trading volume. The empirical result indicates that news is positively related to trading volume and the returns at market level. However, at firm level the results are mixed. The relationship is robust in case of trading volume but not with market returns. However, the observed relationship between news and market activity is not particularly strong. This shows the difficulty in linking volume and volatility to the observed measure of information. At the same time it implies the importance of factors other than public information in driving the stock market activity.

Keywords: Information, return, trading volume.

JEL Classification: C12, E44, G12, G14.

1. INTRODUCTION

Empirical tests of the efficient market hypothesis actually determine whether any new information relevant to the market is spontaneously reflected in the stock prices or not. This implies that the change in future prices depends only on the arrival of new information that was unpredictable today; hence, it is based on surprised³ information (Ali and Mustafa 2001). Another implication of this hypothesis is that an arbitrage opportunity is wiped

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³ Unexpected information.

out instantaneously. These empirical tests generally could not conclusively accept the random-walk hypothesis of stock returns even when GARCH effects were accounted for (Mitchell and Mulherin;1994). Many studies have found empirical irregularities that are contrary to the efficient market hypothesis. For example, the monthly, week day, and holiday effects (Ariel 1990) of daily returns on stocks tend to exhibit discernable patterns, such as seasonal effects, month of the year effect (Ariel 1987), day of the week effect (Cross 1973), etc. The existence of these systematic effects may imply informational inefficiency of the stock markets, as markets take a long time to adjust to new information. But there is another possible explanation, too, which states that the markets are informationally efficient and adjust quickly and fully to any new piece of information but the information arrives in a systematic pattern, hence the observed systematic pattern in stock returns (Mitchell and Mulherin 1994).

Many studies⁴ are undertaken in developed and underdeveloped nations, although each such study is subject to their own limitations. The most important study in this line of research is that of Mitchell and Mulherin (1994), which focused on market level aggregate variables of daily market returns and trading volume on one hand and on the other hand a broad-based information variable of a number of daily publicly announced news items. Another study with slightly different emphasis is that of Berry and Howe (1994), who looked for links in patterns of hourly public information arrival and aggregate measures of intraday market activity. An early seminal study was that of Rozeff and Kinney (1976), who investigated the relationship between information flow and stock market activity, stating that abnormal stock returns in the month of January may be due to an above-average flow of information generated by firms in that month. Other later studies include Penman (1987) and Atkin and Basu (1991), who looked at distribution of corporate earnings news and aggregate stock returns. Even the event study analysis in the context of financial markets pioneered by Fama (1965) can also be counted towards this line of research.

One fundamental issue in all such studies is the definition of what constitutes information and its measurement. Researcher bias⁵ is bound to come into play (Ali and Mustafa 2001). In order to minimize this bias we resorted to a broad measure of information that includes financial, macroeconomic, company own news, and so forth. To collect data on information, news informa-

⁴ Mehdian and Perry (Egyptian Market: (2004)), Blau, Ness, and Ness (US market: (2009)). Balaban, (Emerging Market: (1995)).

⁵ Based on researcher's own judgment in making decision.

tion has been collected from KSE website. Another issue in such studies is how to know the relative importance of various kinds of information because not all news items are equally important in the consideration of market participants. Moreover, some news announcements may be expected news and therefore these may not impact the market returns if the markets are efficient. To the extent that the announcement is already anticipated the probability of surprise news tends to zero and hence the affect of news on the market tends to zero. This creates an attenuation bias in the test of market efficiency. To take into account this factor we have extracted deviations from average information. And to account for differences in relative importance of various kinds of information we have used political and economic news as proxies for relative importance of information. Yet another issue is of the endogeneity of information, that some news items may be generated due to abnormal behaviour of the market. Our methodology does not provide control on this.

In case of Pakistani stock markets such effects are identified, such as the day of the week effect (Hussain 1999, Choudhry 2000; and Nishat and Mustafa 2002), *Ramadan* effect (Hussain 1998) and size effect and liquidity effect (Nishat, 1999). Further, the wide spread use of “technical analysis” among stock traders and their ability to predict to some extent the direction of movements in the prices of individual stocks over medium term testifies to the existence of patterns and seasonal trends. There are many influential investigations, but there are no studies in Pakistan linking public information arrival and stock market activity at firm level and hence on asset prices behaviour using daily data.

The main objective of study is to empirically investigate whether the amount of publicly available information affects daily stock returns and trading volume at firm level or not. A direct investigation of this possibility is to look for any link between pattern of information arrival and pattern of market activity variables. To capture this we need some measure of information as well as measures for market activity. The present study would be important from two perspectives. Firstly, it would provide a direct test of semi-strong form of efficient market hypothesis at firm level in context of an emerging stock market that of Pakistan. Secondly, it could be used to check the importance of publically available information – i.e. the information that is generated during the process of trade – in Pakistan’s stock markets.

The rest of the paper is organised as follows: section two explains the research methodology and data description, section three outlines evidence on systemic pattern in returns and volume, analysis of relation between information and market activity is given in section four, and conclusions, suggestions and recommendations are given in section five.

2. RESEARCH METHODOLOGY AND DATA DESCRIPTION

It assumes that successive returns are independently and identically distributed over time. In a fair game model the returns distributions in various periods are not necessary identical and do not imply that returns are independent through time. It implies that a firm could be increasing its debt and risk over successive periods of time and may show increasing actual returns. In this way it is observed that a correlation in the sequence of returns and past returns can be used to predict the future returns. However, this information cannot be used to earn excess return in the weak form efficient model.

Stock market is like a fair game model, in which there is no difference between actual and expected returns on stocks. To precede the fair game model, we first calculate the return of stock prices i.e.

$$R_t = LnP_t - LnP_{t-1} \quad (1)$$

Where R_t = Return on share prices

P_t = Stock prices

However, there is an issue regarding efficient market hypothesis: some parts of returns are predictable (Sharpe 1983). The return of the asset has two components. One is expected component of return and the other is unexpected component of the return.

$$R_t = E_{t-1} (R_t^e) + U_{t-1} \quad (2)$$

Where R_t = Expected return

E_{t-1} = the conditional expectations operator with the conditions sets consisting of information and including period.

U_{t-1} = unexpected return or stochastic term or predication on stock prices in period t-1. However,

$$E_{t-1} (R_t^e) = E \left(\frac{R_t^e}{V_{t-1}} \right) \quad (3)$$

Where V_{t-1} is the available information in $t-1$ period.

But the component of unexpected returns also depends on the set of information i.e. $E \left(\frac{U_t}{V_{t-1}} \right)$. Thus equation (2) becomes

$$R_t = E_{t-1} (R_t^e) = E \left(\frac{U_t}{V_{t-1}} \right) \quad (4)$$

If the market is informationally efficient then

$$E\left(\frac{U_t}{V_{t-1}}\right) = 0 \quad (5)$$

If V_{t-1} contains only past returns then equation (5) becomes as

$$E\left(\frac{U_t}{V_{t-1}}\right) = E\left(\frac{U_t}{R_{t-1}, R_{t-2}, \dots, R_{t-n}}\right) \quad (6)$$

The equation (6) represents that the market is weakly efficient. In a fair game model, stock market behaves in such a way that there is no difference between actual and expected returns on stocks. Mathematically fair game model can be written as

$$R_{i,t+1} = E\left(\frac{R_{i,t+1}}{V_t}\right) + U_{i,t+1} \quad (7)$$

Where $R_{i,t+1}$: Actual returns on stock i in period $t+1$, $\frac{R_{i,t+1}}{V_t}$ Expected returns on stock i , in period $t+1$, if the set of information is available. $U_{i,t+1}$ stochastic term or prediction error or nonsystematic error on stocks in period $t+1$.

2.1 The Information Variable

The informational data is collected from the data base of Karachi stock exchange which covered the business, economic, non-economic news at firm's level from January 2006 to July 2011. The same provides various nature of news which is expected to capture the relative importance of market-relevant information. A total of 2737 news items are taken. During this sample period there were 1373 days in which the Karachi Stock exchange was opened and trading took place. However, for this study only those firms are selected which traded at least 1250 out of 1373 days (which is 85% of trading days).

This sample period is interesting due to the reasons that during this period diverse kinds of information were generated. Numerous major events that took place during this period had implications for the stock market. These are: suspension of Chief Justice of Supreme Court of Pakistan, incidence of Lal Masjid, continuous bomb blast in Islamabad, attack on Ex-prime minister, imposition of emergency in country and removal of Chief Justice, murder of Ex-prime minister, general election and formation of new government with new president, collapse of American banks which also re-

sulted an uncertainty in banking sector in Pakistan and freezing of KSE-100 at certain level (9500).

Summary statistics of news information is given in Table 1. In this statistics the mean of total daily news is 3.383 and standard deviation is 1.719. The total minimum news items on any day are 1 and the maximum on any day is 12. The standard deviation of total news shows that the arrival of news is quite variable on day-to-day basis. Adjusting the variance for differences in means by calculating the coefficient of variation, there is a considerable difference in the daily variability of news arrival. News information by day of the week is also highlighted in Table 1. The average news information rises from Monday to Wednesday and drops on Thursday and minimum on Friday. Friday is the last working day of the week and this day there is a minimum average number of news, which shows that the number of news announcements is lowest on the days before holidays. This concludes that there is a consistency in daily variability of news and that the daily average number of news/information exhibits some systematic pattern. Moreover, this pattern may have drawn the spurious results if a repeated news, that may be responsible for generating a pattern in information as well as stock price. To avoid such spurious results a general econometric technique is used to work with the difference of data.

Table: 1
Summary Statistics for Daily News Announcement and Day of the Week
News Announcement

The news was collected on day of the week basis to watch the trend of information.
We calculated the average news as well as average news of Business Recorder and Dawn

Days	Trading days	Number of News	Mean of news	Standard Deviation	Coefficient of Variation	Maximum News	Minimum News
Total Days	1373	2737	3.383	1.719	0.465	12	1
Monday	275	578	3.440	1.600	0.516	10	1
Tuesday	276	559	3.472	1.793	0.529	12	1
Wednesday	279	581	3.521	1.863	0.523	12	1
Thursday	275	513	3.128	1.636	0.508	09	1
Friday	268	496	3.329	1.690	0.508	10	1

However, there is a serious problem, as mentioned earlier, in using the raw data on number of daily news items as informational variable. As some news items may only be the publication of already anticipated news, which is not likely to impact market valuation of stocks on the day of publication.

The raw data on number of daily news items does not differentiate between anticipated and unanticipated announcements. Moreover, news around a certain event may come in clusters and sometimes repeated for more than one day. To account for all three factors information is defined as difference between numbers of daily news items from its twenty-day moving average. The idea is that this method will capture innovations or unanticipated element in news.

2.2. Descriptive Statistics

Table 2 shows the descriptive statistics of daily data for KSE-100 index and for selected firms. It indicates that the frequency distribution of the re-

Table: 2
Descriptive Statistics of Daily Market Return

In this table we calculated mean value, standard deviation, Minimum value, maximum value, Skewness, Kurtosis, Jorqe Bera and coefficient of variation of KSE-100 returns, and the returns of all selected firms during full sample period

Variable	Mean	SD	Min	Max	Skew	Kurtosis	JB	CV
KSE-100	0.000	0.015	-0.064	0.083	-0.381	5.526	398.155	89.119
ACBL	-0.002	0.038	-0.518	0.500	-1.480	73.719	275753.9	-19.842
AICL	-0.001	0.053	-0.718	0.62	-1.360	92.102	446655.7	-105.4
BOP	-0.002	0.042	-0.539	0.519	-0.560	48.567	113835.7	-19.905
DGK	-0.001	0.047	-0.763	0.825	0.770	147.799	1146309	-38.75
ENGRO	0.000	0.041	-0.716	0.713	-0.140	160.46	1363662	-412
FABL	-0.002	0.040	-0.450	0.585	1.610	57.417	164550.2	-26.533
FFL	0.000	0.152	-2.782	2.851	0.540	297.07	4763497	1522
HUBCO	0.000	0.048	-0.930	0.948	0.290	257.651	3553101	120.75
ICI	0.000	0.064	-1.108	1.091	0.240	249.204	3303612	639
KAPCO	0.000	0.021	-0.272	0.259	-0.140	51.540	110741	-5.998
KESC	-0.001	0.041	-0.436	0.323	-0.440	24.642	25940.3	-41.4
MCB	0.000	0.055	-1.050	1.047	-0.060	231.918	2879995	549
POL	0.000	0.122	-2.473	2.593	1.050	316.351	5224688	-1224
PSO	0.000	0.060	-1.063	1.105	0.440	257.954	3572416	-149.75
PTCL	0.003	0.120	-0.409	2.982	23.37	581.996	1855811	36.273
SNGC	-0.001	0.037	-0.734	0.717	-0.370	227.455	278562	-41
SSGC	0.000	0.035	-0.564	0.595	0.420	119.016	730784	-175

turn series of KSE-100 index and selected firms are not normal. In a Gaussian distribution, one would expect that the kurtosis coefficient be 3. Kurtosis is generally either much higher or lower that indicates extreme Leptokurtic or extreme Platykurtic (Parkinson, 1987). The evidence of the coefficient of Kurtosis for KSE-100 index is 5.526. It falls under the Leptokurtic distribution at firm's level. The highest coefficient of Kurtosis is observed in PTCL (581.996) that indicates the extreme Leptokurtic. The lowest coefficient of Kurtosis is observed in KESC (24.642), which indicates that the series is slim and has long a tail. Jarque Bera (JB) test shows more clearly the normal distribution of series. If it is zero, it indicates that sequence of series is normally distributed. All return series including KSE-100 index show positive and higher value of Jarque Bera (JB). Generally, values for Skewness is zero, and Kurtosis value 3 and JB zero represent that observed distribution is perfectly normally distributed. Hence, Skewness and Leptokurtic frequency distribution of stock return series on the KSE-100 index and selected firms indicates that the distribution is not normal. In other words, the non-normal frequency distributions of the stock return series deviate from the prior condition of random walk model. The highest coefficient of variation is observed in ENGRO and the lowest in KAPCO. It indicates that the return in ENGRO firm is most volatile and in KAPCO firm is less volatile. The KSE-100 index and ten out of seventeen firms show positive mean returns. The remaining firms show the negative mean return. It implies that mostly investors in selected firms earn capital gains.

3. EVIDENCE ON SYSTEMATIC PATTERN IN RETURNS AND VOLUME

Before start the main task of relating information to returns of KSE-100 index and selected firms, it is important to check weak form efficiency of Pakistan's stock market and to check for systematic patterns in returns, e.g., the day of the week, in data. Such patterns are wide spread in other stock markets and reported extensively in economic literature. In the context of Pakistan, Hussain (1999), Choudhry (2000), and Nishat and Mustafa (2002) have shown the existence of day of the week effect, Hussain (1998) reported the existence of *Ramadan* effect, and Nishat (1999) pointed out the size effect and liquidity effect. This study constitutes sufficient evidence for the existence of day of the week patterns, but we want to know the existence of such patterns in the daily data. For this purpose we have examined random walk model.

According to random walk hypothesis the successive returns in an individual stock returns are independent. To test this hypothesis the differences of two successive prices in natural logarithms is computed, which is the stock returns at market level and firm level and then the correlates with different lags periods. Table 3 shows the correlation between stock returns with different lags. As shown in Table 3, there is serial dependence between two successive returns in KSE-100 index and all selected firms except FFC for different lags period. However, the coefficients of correlation are positive and statistically significant with lag 1 in case of KSE-100 index, PTCL, and SNGC. It implies that there is slow adjustment of prices of these stocks to new information and insider information. The coefficients of correlation are negative and statistically significant with same lag in remaining firms. It implies that the returns in these firms are wide fluctuations with price changes. It indicates that one-day-old return has predictive power for today's stock return where as the coefficients of correlation is statistically significant with lag 2 in some firms. These coefficients of correlation show that two-day-old return has predictive power for today's stock return. It is observed that the correlation coefficients are significant at higher lags in most of the firms. It is noted that 16 out of 17 selected firms and KSE-100 index returns have significant coefficient correlation. It indicates that the returns do not follow the random walk. This runs against the weak form efficiency of the stock market, which predicts that past returns should not have any explanatory power for current returns once immediate past returns are taken into consideration.

Table 4 shows day-of-week trend in the market activity at firm's level. It is estimated on the day-of-week dummy variables with trading volume and stock returns, which indicate the deviation of returns and volume on particular day from the mean value of the given variable. The trading volume exhibits a pattern that on Tuesday it is 14.4 percent higher relative to the average daily volume and on Fridays it is 11.6 percent lower than an average daily volume at market level. This result is statistically significant. The pattern in stock returns is such that the returns are 1 percent higher than average on Friday and 0.3 percent lower than average daily returns on Monday. The result is statistically significant. The consistently less than average daily trading volume on Friday may be attributed to short trading hours due to after larger break. No positive returns found on Monday at firm level and positive returns found on Wednesday.

Table: 3
Random Walk Test. Correlation Coefficient of Successive Returns

Firms		Lags 1	Lags 2	Lags 3	Lags 4	Lags 5	Lags 6	Lags 7	Lags 8
KSE-100 index	Coeff.	0.151 ^a	0.068 ^a	0.021	0.024	0.022	-0.004	0.011	-0.010
	p-value	0.000	0.012	0.438	0.376	0.422	0.868	0.683	0.715
ACBL	Coeff.	-0.150 ^a	0.038	0.009	0.023	-0.060 ^b	-0.034	0.028	-0.014
	p-value	0.000	0.163	0.756	0.405	0.029	0.221	0.304	0.614
AICL	Coeff.	-0.240 ^a	0.055 ^c	-0.015	-0.009	-0.004	0.006	0.025	0.020
	p-value	0.000	0.042	0.581	0.751	0.890	0.822	0.368	0.467
BOP	Coeff.	-0.102 ^a	0.059 ^b	0.007	0.0058	-0.029	-0.028	0.044	-0.023
	p-value	0.000	0.030	0.783	0.828	0.293	0.313	0.110	0.391
DGK	Coeff.	-0.260 ^a	0.054 ^c	-0.038	0.014	-0.019	0.002	0.022	0.036
	p-value	0.000	0.052	0.170	0.614	0.492	0.922	0.421	0.192
ENGRO	Coeff.	-0.320 ^a	0.008	-0.002	0.040	-0.053 ^c	-0.036	0.017	0.017
	p-value	0.000	0.774	0.952	0.151	0.059	0.194	0.552	0.541
FABL	Coeff.	-0.115 ^a	0.046 ^c	0.001	-0.006	-0.084 ^a	-0.062 ^b	-0.025	-0.015
	p-value	0.000	0.095	0.969	0.816	0.002	0.025	0.375	0.589
FFC	Coeff.	-0.020	0.000	-0.001	0.000	-0.001	-0.007	0.006	-0.005
	p-value	0.477	0.999	0.965	0.994	0.975	0.802	0.832	0.854
HUBCO	Coeff.	-0.405 ^a	0.007	-0.014	0.025	-0.050 ^c	-0.015	0.018	0.007
	p-value	0.000	0.802	0.621	0.369	0.071	0.579	0.512	0.788
ICI	Coeff.	-0.437 ^a	0.007	0.017	0.024	0.005	-0.011	0.012	0.013
	p-value	0.000	0.792	0.549	0.387	0.858	0.690	0.653	0.642
KAPCO	Coeff.	-0.128 ^a	0.032	0.041	0.017	-0.025	-0.036	-0.027	0.018
	p-value	0.000	0.285	0.170	0.589	0.400	0.216	0.383	0.554
KESC	Coeff.	-0.047 ^c	-0.098 ^a	-0.077 ^a	0.024	0.010	-0.015	-0.052 ^b	0.042
	p-value	0.068	0.001	0.004	0.367	0.712	0.575	0.060	0.129
MCB	Coeff.	-0.352 ^a	0.008	0.006	0.003	-0.016	-0.006	-0.005	0.003
	p-value	0.000	0.767	0.817	0.912	0.557	0.840	0.860	0.909
POL	Coeff.	-0.133 ^a	-0.001	0.007	0.013	-0.008	-0.001	0.012	-0.004
	p-value	0.000	0.976	0.811	0.65	0.767	0.969	0.672	0.873
PSO	Coeff.	-0.432 ^a	0.027	-0.017	0.017	0.005	-0.015	0.018	0.023
	p-value	0.000	0.328	0.532	0.541	0.851	0.581	0.515	0.401
PTCL	Coeff.	0.638 ^a	0.018	-0.021	0.005	-0.023	-0.008	0.005	0.009
	p-value	0.000	0.509	0.449	0.867	0.408	0.781	0.857	0.756
SNGC	Coeff.	0.093 ^a	0.047 ^c	0.021	-0.025	-0.051 ^c	-0.019	0.001	-0.055 ^b
	p-value	0.001	0.091	0.454	0.361	0.065	0.479	0.984	0.047
SSGC	Coeff.	-0.218 ^a	0.039	0.009	0.035	-0.047 ^c	-0.029	-0.016	0.054 ^c
	p-value	0.000	0.162	0.743	0.207	0.087	0.288	0.574	0.052

^a Significant level at 1% ^b Significant level at 5% ^c Significant level at 10%

Table: 4
Days of the week Trends in Market Activity

		Monday		Tuesday		Wednesday	
		Returns	Volume	Returns	Volume	Returns	Volume
KSE-100	Coeff.	-0.003 ^a	-0.081 ^b	0.001	0.144 ^a	0.001	0.032
	t-value	-3.508	-2.210	1.215	3.944	1.260	0.880
ACBL	Coeff.	-0.005 ^b	0.135 ^b	-0.006 ^b	-0.020	0.000	-0.092
	t-value	-2.151	2.169	-2.524	-0.317	-0.038	-1.489
AICL	Coeff.	0.001	0.178 ^b	-0.008 ^b	-0.003	0.003	0.008
	t-value	0.248	2.860	-2.509	-0.053	0.963	0.121
BOP	Coeff.	-0.011 ^a	0.171 ^b	-0.003	0.061	0.004	-0.148 ^b
	t-value	-4.076	2.62	-1.006	0.932	1.375	-2.248
DGK	Coeff.	-0.004	0.123 ^c	-0.006 ^c	0.064	0.003	0.002
	t-value	-1.366	1.965	-1.962	1.018	0.923	0.031
ENGRO	Coeff.	-0.001	0.097	-0.003	0.092	0.002	0.030
	t-value	-0.350	1.695	-1.131	1.609	0.899	0.527
FABL	Coeff.	-0.004	0.107	-0.004	0.009	0.000	-0.025
	t-value	-1.540	1.640	-1.472	0.135	-0.192	-0.391
FFC	Coeff.	-0.010	0.108	-0.002	0.087	0.001	-0.083
	t-value	-1.083	1.878	-0.179	1.512	0.116	-1.435
HUBCO	Coeff.	0.004	-0.004	-0.004	0.002	0.002	-0.001
	t-value	1.435	-1.284	-1.284	0.722	0.722	-0.259
ICI	Coeff.	0.001	0.159 ^b	-0.010 ^b	0.032	0.007	0.058
	t-value	0.178	2.212	-2.518	0.448	1.659	0.809
KAPCO	Coeff.	-0.002	0.149	-0.001	0.128	0.002	-0.151
	t-value	-1.107	1.883	-0.699	1.625	1.373	-1.921
KESC	Coeff.	-0.004	-0.047	-0.004	-0.075	-0.002	0.023
	t-value	-1.461	-0.705	-1.492	-1.111	-0.953	0.343
MCB	Coeff.	0.000	0.220 ^a	-0.005	0.056	0.005	-0.063
	t-value	-0.105	4.065	-1.447	1.040	1.422	-1.154
POL	Coeff.	0.010	0.064	-0.007	0.127	0.006	-0.137
	t-value	1.258	0.791	-0.885	1.561	0.722	-1.667
PSO	Coeff.	0.001	0.064	-0.007	0.127	0.003	-0.137
	t-value	0.257	0.791	-1.873	1.561	0.908	-1.667
PTCL	Coeff.	-0.003	0.125 ^b	-0.002	0.111	0.000	-0.068
	t-value	-0.529	2.169	-0.377	1.916	-0.063	-1.187
SNGC	Coeff.	-0.002	0.078	0.000	-0.001	0.000	-0.063
	t-value	-0.889	0.953	-0.041	-0.018	0.210	-0.767
SSGC	Coeff.	0.000	0.000	-0.002	-0.002	0.000	0.000
	t-value	-0.003	-0.003	-1.035	-1.035	-0.103	-0.103

^a Significant level at 1% ^b Significant level at 5% ^c Significant level at 10%

Table: 4 (part b)
Days of the week Trends in Market Activity:

		Thursday		Friday	
		Returns	Volume	Returns	Volume
KSE-100	Coeff.	0.000	-0.016	0.001	-0.116 ^a
	t-value	0.264	-0.449	1.629	-3.122
ACBL	Coeff.	0.000	0.070	0.002	-0.062
	t-value	-0.102	1.105	0.741	-0.974
AICL	Coeff.	0.000	-0.128 ^b	0.002	-0.121
	t-value	0.013	-2.006	0.566	-1.820
BOP	Coeff.	-0.002	0.030	0.001	-0.143 ^b
	t-value	-0.892	0.450	0.448	-2.251
DGK	Coeff.	-0.001	-0.072	0.002	0.155 ^b
	t-value	-0.373	-1.131	0.532	2.247
ENGRO	Coeff.	0.001	-0.190 ^a	0.000	0.002
	t-value	0.218	-3.254	0.094	0.028
FABL	Coeff.	-0.001	-0.134 ^c	0.001	-0.114
	t-value	-0.574	-1.993	0.573	-1.952
FFC	Coeff.	0.011	-0.017	0.000	0.004
	t-value	1.124	-0.283	0.052	1.435
HUBCO	Coeff.	-0.001	0.000	0.000	-0.101
	t-value	-0.259	-0.028	-0.028	-1.382
ICI	Coeff.	0.001	-0.160 ^b	0.002	-0.005
	t-value	0.276	-2.170	0.422	-0.053
KAPCO	Coeff.	0.001	-0.110	0.000	0.146
	t-value	0.391	-1.348	0.153	2.131
KESC	Coeff.	0.003	-0.049	0.002	-0.128 ^b
	t-value	1.182	-0.712	0.696	-2.323
MCB	Coeff.	0.000	-0.030	0.001	0.118
	t-value	0.029	-0.537	0.390	1.116
POL	Coeff.	-0.009	0.024	0.000	-0.032
	t-value	-1.228	0.292	0.054	-0.381
PSO	Coeff.	0.000	0.024	0.001	-0.083
	t-value	-0.123	0.292	0.290	-1.427
PTCL	Coeff.	-0.001	-0.091	0.012	-0.177 ^b
	t-value	-0.195	-1.542	2.122	-2.653
SNGC	Coeff.	-0.004	-0.049	0.000	-0.060
	t-value	-1.607	-0.591	0.206	-0.720
SSGC	Coeff.	-0.001	-0.001	0.002	0.002
	t-value	-0.349	-0.349	0.884	0.884

^a Significant level at 1% ^b Significant level at 5% ^c Significant level at 10%

4. DISCUSSION OF RESULTS

4.1. Correlation between News Information and Market Activity

Most of the statistical tests for the stock market efficiency with respect to information are based on correlation coefficients and their transformations. A standard process is to test the null hypotheses that is

H_1 : Coefficient of correlation between information and stock market activity i.e. stock returns and trading volume is zero.

H_2 : Coefficient of correlation between information flow in day of the week and stock market activity i.e. stock returns and trading volume is zero.

If new information immediately is reflected in stock prices, then the correlation coefficient will be +1 (or -1) indicating that the market is fully efficient. The results of correlation coefficients are reported in Table 5. The coefficient of correlation for information and returns is statistically significant in KSE-100 index and BOP, DGK, KAPCO, KESC, MCB and PSO firms and remaining firms show no significant relation between information and returns. This indicates that total news have impact on return and have role in changing the prices in Karachi stock exchange. The coefficient of correlation for information and volume show significant relation at market level and all selected firms except ENGRO and PTCL.

To capture the day of the week effect, the correlation coefficients is calculated separately for each day of the week (see Table 6). The lowest number of firms has significant coefficient of correlation in stock returns on Monday, which are 2 out of 17 selected firms. However, the KSE-100 index shows the Monday effect. The implication of this finding is that there is accumulation of news from closing of the weeks to opening of the weeks. Usually on Monday the investors are reluctant about investment in stock market. However, these correlations are positive at firm level, which indicates that there is slow adjustment of price of these stocks with the new information and insider information on Monday. Positive correlation is found on Tuesday in PSO. This indicates that there is slow adjustment of price of these stocks to new information and insider information.

If we compare Table 4 with 6, it is found that the stock returns do not follow the systematic patterns in week days; however, arrival of information indicates a systematic pattern. As observed, the relationship is relatively weak between news information and stock returns. There are various reasons to explain namely; firstly, much of the news information may be firm specific and does not influence the performance of all the other firms. Secondly, public information news may not influence on particular firm. Thirdly, Karachi stock exchange is not link to foreign stock market, which has limited impact

Table: 5**Correlation Coefficient with News Announcement and Stock Market activity**

The table shows the correlation coefficients (a) between news surprises and stock returns and (b) between news surprises and trading volume. News surprises are defined as deviations of number of news from its past twenty-day moving average. Stock returns are difference between log of daily stock prices.

Firms		Returns	Volume
KSE-100	Coeff.	0.064 ^b	0.206 ^a
	p-value	0.017	0.000
ACBL	Coeff.	-0.002	0.072 ^a
	p-value	0.937	0.009
AICL	Coeff.	0.024	0.088 ^a
	p-value	0.395	0.001
BOP	Coeff.	0.046 ^c	0.165 ^a
	p-value	0.097	0.000
DGK	Coeff.	0.068 ^a	0.092 ^a
	p-value	0.014	0.001
ENGRO	Coeff.	0.030	0.017
	p-value	0.275	0.527
FABL	Coeff.	0.026	0.119 ^a
	p-value	0.341	0.000
FFC	Coeff.	-0.011	0.046
	p-value	0.679	0.097
HUBCO	Coeff.	-0.007	0.053 ^c
	p-value	0.790	0.056
ICI	Coeff.	0.000	0.051 ^c
	p-value	0.999	0.068
KAPCO	Coeff.	0.042 ^c	0.066 ^b
	p-value	0.081	0.017
KESC	Coeff.	-0.045 ^c	-0.121 ^a
	p-value	0.096	0.000
MCB	Coeff.	0.043 ^c	0.070 ^a
	p-value	0.096	0.011
POL	Coeff.	-0.009	0.105 ^a
	p-value	0.759	0.000
PSO	Coeff.	0.059 ^b	0.093 ^a
	p-value	0.032	0.001
PTCL	Coeff.	-0.009	0.028
	p-value	0.740	0.316
SNGC	Coeff.	-0.009	0.082 ^a
	p-value	0.754	0.003
SSGC	Coeff.	0.020	0.061 ^a
	p-value	0.469	0.028

^a Significant level at 1% ^b Significant level at 5% ^c Significant level at 10%

of news information and cannot be incorporated in stock returns at firm level. Fourthly, KSE is the emerging market, which casts down on the validity of the model regarding to information. Fifth, the data on information are collected from KSE website the news items therein are imperfect substitute for new information. That is, these news items are settled information hence can not convey sudden reaction on trading activity.

4.2. Regression Analysis between News Information and Market Activity

Regression shows the casual relationship between dependent variable and independent variable. Stock returns and trading volumes are taken as dependent variable at firm level and news information as independent variable. The regression analysis focuses on the following hypotheses.

H₃: The information has no impact on stock returns and trading volume at KSE-100 index as well as at firms' level returns.

H₄: The information has no impact on stock returns and trading volume in day of the week at KSE-100 index as well as at firm level returns.

Regression analysis result is given in Tables 7 to 8. The third columns of Table 7 show the uni-variate regression between stock returns and total news information. The coefficient of news is positive and significant in case of KSE-100 index, AICL, BOP, DGK, ENGRO, KAPCO, KESC, MCB and PSO at five percent level.

The day of the week effect regression indicates that the news and returns of selected firms for each day of the week. The results indicate a significant positive relationship between stock return and information on Monday in most of the firms. This infers that in KSE, like other markets, Monday effect is present in most firms. Some firms show negative and statistically significant relationship on Wednesdays. KSE-100 index and SEPCO show Tuesday effect; FFC and KESC show Thursday effect; and FABL, FFCJ and SNGC show Friday effect.

From the above analysis of correlation coefficients and regressions, it is evident that in some cases there is a direct relationship between news, return and trading volume. On a closer look it is observed that this relation explains the common day of the week pattern in information as well in stock returns and trading volume. The comparison of signs of coefficients for day of the week effect is presented in Tables 4, 6, and 8. Moreover, the results infer that the return is coherent with the change in pattern of information. In case of KSE the results indicate that in most cases the return on Monday is positive and, in general, investors prefer to sale their equity on this day. The results also indicate that the investors do not sale their equity on Wednesdays. The results observed day of the week pattern in stock returns on Mondays and

Table: 6
Correlation Coefficient with News Announcement and Stock Market activity
Days of the week Trends in Market Activity

		Monday		Tuesday		Wednesday	
		Returns	Volume	Returns	Volume	Returns	Volume
KSE-100	Coeff.	0.096 ^a	0.016	0.025	0.077 ^a	0.025	0.121 ^a
	p-value	0.000	0.574	0.363	0.007	0.351	0.000
ACBL	Coeff.	0.020	0.029	-0.022	0.001	-0.020	-0.013
	p-value	0.461	0.296	0.420	0.969	0.478	0.631
AICL	Coeff.	0.020	-0.012	-0.022	0.025	-0.020	0.050
	p-value	0.461	0.660	0.420	0.363	0.478	0.070
BOP	Coeff.	0.029	0.057	0.000	0.047	0.031	0.061
	p-value	0.287	0.038	0.993	0.092	0.263	0.026
DGK	Coeff.	0.078	0.001	0.039	0.046	0.042	0.068
	p-value	0.004	0.978	0.160	0.093	0.131	0.013
ENGRO	Coeff.	0.007	0.000	0.015	0.044	0.014	0.018
	p-value	0.801	0.989	0.582	0.113	0.615	0.506
FABL	Coeff.	0.000	0.050	0.044	0.028	0.018	0.076
	p-value	0.989	0.067	0.113	0.313	0.506	0.006
FFC	Coeff.	-0.010	-0.009	-0.006	0.011	-0.002	-0.003
	p-value	0.728	0.737	0.823	0.703	0.942	0.925
HUBCO	Coeff.	0.000	0.007	-0.004	0.031	-0.010	0.039
	p-value	0.988	0.809	0.896	0.269	0.715	0.158
ICI	Coeff.	-0.010	-0.035	0.012	0.046	0.002	0.020
	p-value	0.712	0.202	0.674	0.100	0.946	0.472
KAPCO	Coeff.	-0.008	0.005	0.034	-0.042	0.035	0.022
	p-value	0.763	0.842	0.217	0.124	0.202	0.414
KESC	Coeff.	0.014	-0.015	-0.016	-0.046	-0.031	-0.055
	p-value	0.620	0.577	0.563	0.093	0.261	0.046
MCB	Coeff.	0.040	0.050	-0.002	0.053	0.037	0.000
	p-value	0.145	0.068	0.937	0.056	0.183	0.989
POL	Coeff.	-0.011	0.035	-0.006	0.020	0.007	0.067
	p-value	0.704	0.206	0.827	0.484	0.795	0.017
PSO	Coeff.	-0.009	0.001	0.143	0.026	0.004	0.051
	p-value	0.752	0.968	0.000	0.350	0.873	0.067
PTCL	Coeff.	0.027	0.006	0.019	0.034	0.005	0.027
	p-value	0.332	0.818	0.482	0.217	0.865	0.321
SNGC	Coeff.	0.046	0.062	0.010	0.044	0.008	0.011
	p-value	0.091	0.024	0.717	0.111	0.763	0.682
SSGC	Coeff.	0.010	-0.009	0.015	0.050	0.020	0.050
	p-value	0.717	0.738	0.593	0.069	0.462	0.073

^a Significant level at 1% ^b Significant level at 5% ^c Significant level at 10%

Table: 6 (part b)
Correlation Coefficient with News Announcement and Stock Market activity
Days of the week Trends in Market Activity:

		Thursday		Friday	
		Returns	Volume	Returns	Volume
KSE-100	Coeff.	-0.024	0.113 ^a	-0.016	0.079 ^a
	p-value	0.383	0.000	0.554	0.006
ACBL	Coeff.	-0.014	0.091	0.013	0.029
	p-value	0.606	0.001	0.638	0.291
AICL	Coeff.	-0.014	0.074	0.013	0.047
	p-value	0.606	0.008	0.638	0.088
BOP	Coeff.	0.032	0.073	0.01	0.067
	p-value	0.253	0.008	0.715	0.016
DGK	Coeff.	0.013	0.071	-0.015	0.019
	p-value	0.638	0.01	0.578	0.494
ENGRO	Coeff.	0.039	0.022	-0.007	-0.051
	p-value	0.156	0.419	0.808	0.063
FABL	Coeff.	0.022	0.078	-0.051	0.037
	p-value	0.419	0.005	0.063	0.182
FFC	Coeff.	-0.003	0.007	-0.004	0.07
	p-value	0.911	0.812	0.889	0.011
HUBCO	Coeff.	0.012	0.021	-0.012	0.016
	p-value	0.655	0.458	0.668	0.554
ICI	Coeff.	0.002	0.041	-0.005	0.031
	p-value	0.952	0.139	0.865	0.256
KAPCO	Coeff.	-0.006	0.087	0.039	0.064
	p-value	0.83	0.002	0.159	0.019
KESC	Coeff.	-0.024	-0.058	-0.041	-0.084
	p-value	0.376	0.034	0.14	0.002
MCB	Coeff.	0.011	0.013	0.009	0.025
	p-value	0.683	0.635	0.741	0.37
POL	Coeff.	-0.003	0.057	-0.007	0.047
	p-value	0.91	0.044	0.803	0.092
PSO	Coeff.	-0.01	0.06	0.001	0.05
	p-value	0.708	0.03	0.979	0.07
PTCL	Coeff.	-0.011	0.007	-0.036	-0.01
	p-value	0.698	0.81	0.19	0.723
SNGC	Coeff.	0.008	0.034	0.022	0.021
	p-value	0.779	0.212	0.433	0.439
SSGC	Coeff.	-0.001	0.034	-0.006	0.004
	p-value	0.968	0.215	0.824	0.898

^a Significant level at 1% ^b Significant level at 5% ^c Significant level at 10%

Wednesdays due to publically available news. Our results are consistent with the literature (French-Roll 1986) which described that public information can be incorporated into prices without significant trading volume.

5. CONCLUSION

The study investigates the role of information on stock prices at firm's level in Pakistan. The information variable is derived from KSE website. The stock price movements capture the market activity in terms of stock and trading volume. The relationship between stock price movements and information is established using daily data from January 2006 to July 2011. Econometric techniques such as correlation coefficient and OLS regression models are used. The informational variable is constructed by taking the difference between number of daily news items and its twenty days moving average. This constructed information variable captures the unanticipated elements in information or news, avoids the loss of information around clustering of high levels of news over certain periods and eliminates the dependence on day of the week patterns. For empirical analysis data of market index, KSE-100 and twenty-one firms are used. These seventeen firms are selected on the basis of their higher relative trading frequency during trading days of stock market.

The results indicate that the arrival of information is quite variable on day-to-day basis. Regarding the impact of information on stock market, it is noted that the information has impact on returns of KSE-100 index and at most of the selected firms. Moreover, when day of the week effect relates to arrival of information with stock returns, it is considered as Monday effects and found in highest number of firms. It is compatible to over all information arrival on Monday.

It is concluded that Karachi stock market (KSE) is informationally efficient, as the investors might be influenced by news items in Pakistan. Moreover, KSE is influenced by non-informational factor such as anomalies like size, calendar effect, day of the week effect and thin trading. The findings of this research support the efficient market hypothesis in Pakistan. The Karachi stock exchange is a weak form efficient market, which implies that the role of information is poor on the stock market activity.

There is a need to enhance the role of public information and reduce the role of private information. The Karachi stock exchange should improve the quantity, quality and creditability of information companies disclose to investing public. The information may address the diversification, investor's participation, and minimisation of unanticipated practices. Such policy may protect the small investors' interest that is always challenge for developing and emerging stock markets.

Table: 7
Regression of News Information and Stock Market Activity

Table shows the results of univariate regressions of stock returns and trading volume on news surprises. News surprises are defined as deviations of number of news from its past twenty-day moving average. Stock returns are differences between log of daily stock prices and volumes are defined as Log of trading volume.

Firms		Returns	Volume
KSE-100	Coeff.	0.000 ^b	0.543 ^a
	t-value	2.391	14.188
ACBL	Coeff.	-0.001	0.711 ^a
	t-value	-0.079	2.628
AICL	Coeff.	0.005	0.717 ^a
	t-value	0.851	3.190
BOP	Coeff.	0.007 ^c	1.216 ^a
	t-value	1.659	5.051
DGK	Coeff.	0.011 ^a	0.585 ^a
	t-value	2.469	3.356
ENGRO	Coeff.	0.004	0.085
	t-value	1.092	0.633
FABL	Coeff.	0.005	1.210 ^a
	t-value	0.952	4.342
FFC	Coeff.	-0.008	0.275 ^c
	t-value	-0.414	1.663
Hub Co	Coeff.	-0.001	0.189 ^c
	t-value	-0.267	1.909
ICI	Coeff.	0.000	0.478 ^c
	t-value	0.000	1.828
KAPCO	Coeff.	0.004 ^c	0.538 ^b
	t-value	1.837	2.391
KESC	Coeff.	-0.003 ^c	-0.298 ^a
	t-value	-1.829	-4.455
MCB	Coeff.	0.007 ^c	0.826 ^a
	t-value	1.857	2.545
POL	Coeff.	-0.004	1.248 ^a
	t-values	-0.306	3.747
PSO	Coeff.	0.017 ^a	0.346 ^a
	t-value	10.147	3.371
PTCL	Coeff.	-0.002	0.140
	t-value	-0.332	1.002
SNGC	Coeff.	-0.002	0.821 ^a
	t-value	-0.313	3.005
SSGC	Coeff.	0.004	0.702 ^a
	t-value	0.724	2.197

^a Significant level at 1% ^b Significant level at 5% ^c Significant level at 10%

Table: 8. Regression of Total News Information and Market Activity

Table shows the results of univariate regressions of stock returns on total news and excess trading volume on total news with multiplicative dummies for each day of the week and without dummies. Stock market activity (Returns and Trading volume) = $a + b1$ (Total Number of News) * D1 + $b2$ (Total Number of News) * D2 + $b3$ (Total Number of News) * D3 + $b4$ (Total Number of News) * D4 + $b5$ (Total Number of News) * D5. Where D1 to D5 are dummy variables for each day of the week Monday to Friday.

		Monday		Tuesday		Wednesday	
		Returns	Volume	Returns	Volume	Returns	Volume
KSE-100	Coeff.	0.003 ^a	-0.032 ^b	0.003 ^a	0.030 ^b	0.002 ^a	0.013
	t-value	12.160	-2.746	9.683	2.538	9.769	1.143
ACBL	Coeff.	0.023 ^c	-0.140	0.006	-0.456	0.008	-0.706
	t-value	1.933	-0.437	0.335	-0.899	0.417	-1.393
AICL	Coeff.	0.031 ^c	-0.447	0.037	0.399	0.042	1.007
	t-value	1.831	-1.422	1.837	1.063	2.381	3.041
BOP	Coeff.	0.034 ^b	-0.114	0.025	0.307	0.037	0.106
	t-value	3.174	-0.414	1.584	0.757	2.699	0.297
DGK	Coeff.	0.050 ^b	0.323	0.039	0.718	0.039	0.285
	t-value	4.419	1.233	3.190	2.646	3.478	1.156
ENGRO	Coeff.	0.016 ^c	0.102	0.020	0.354	0.021	-0.018
	t-value	1.832	0.514	2.728	2.079	2.507	-0.094
FABL	Coeff.	0.019	-0.029	0.031	-0.069	0.051	0.654
	t-value	1.603	-0.091	2.384	-0.194	3.147	1.502
FFC	Coeff.	0.008 ^c	0.471	0.014	0.414	0.018	0.307
	t-value	0.191	1.802	0.388	1.810	0.289	0.798
HUBCO	Coeff.	0.013	0.081	0.012	0.300	0.012	-0.071
	t-value	1.516	0.398	1.524	1.628	1.433	-0.369
ICI	Coeff.	0.007	-0.113	0.028	0.072	0.022	0.590
	t-value	0.239	-0.215	1.332	0.185	0.760	1.127
KAPCO	Coeff.	0.010	-0.548	0.018	-0.102	0.019	-0.414
	t-value	0.153	0.148	0.005	0.776	0.008	0.303
KESC	Coeff.	0.012 ^b	0.227	0.018	-0.196	0.017	-0.079
	t-value	3.568	2.443	3.517	-1.426	3.470	-0.583
MCB	Coeff.	0.035 ^b	0.061	0.021	0.291	0.038	0.487
	t-value	3.345	0.358	2.107	1.768	2.940	2.332
POL	Coeff.	0.013	-0.025	0.020	-0.186	0.033	0.442
	t-value	0.389	-0.071	0.740	-0.635	1.153	1.433
PSO	Coeff.	0.013	-0.142	0.064	0.007	0.018	0.234
	t-value	1.181	-0.782	6.543	0.046	1.853	1.534
PTCL	Coeff.	0.019	0.093	0.019	0.253	0.014	0.303
	t-value	1.117	0.441	1.222	1.311	0.870	1.495
SNGC	Coeff.	0.034 ^b	0.876	0.022	0.205	0.024	0.031
	t-value	3.206	2.280	1.901	0.488	1.130	0.041
SSGC	Coeff.	0.024	-0.603	0.025	-0.046	0.030	0.097
	t-value	1.686	-1.117	2.231	-0.111	1.74	0.147

^a Significant level at 1% ^b Significant level at 5%

Table: 8 (part b). Regression of Total News Information and Market Activity

Table shows the results of univariate regressions of stock returns on total news and excess trading volume on total news with multiplicative dummies for each day of the week and without dummies. Stock market activity (Returns and Trading volume) = $a + b_1$ (Total Number of News) * D1 + b_2 (Total Number of News) * D2 + b_3 (Total Number of News) * D3 + b_4 (Total Number of News) * D4 + b_5 (Total Number of News) * D5. Where D1 to D5 are dummy variables for each day of the week Monday to Friday.

		Thursday		Friday	
		Returns	Volume	Returns	Volume
KSE-100	Coeff.	0.002 ^a	-0.004	0.002 ^a	-0.009
	t-value	8.317	-0.331	8.144	-0.733
ACBL	Coeff.	0.014	0.13	0.021	0.389
	t-value	1.184	0.407	2.128	1.486
AICL	Coeff.	0.036	0.588	0.027	0.135
	t-value	2.642	2.292	2.194	0.576
BOP	Coeff.	0.037	0.313	0.027	0.272
	t-value	2.817	0.924	3.028	1.162
DGK	Coeff.	0.029	0.047	0.020	-0.182
	t-value	2.583	0.191	2.049	-0.862
ENGRO	Coeff.	0.032	0.174	0.017	-0.408
	t-value	3.204	0.768	1.997	-2.051
FABL	Coeff.	0.027	0.349	0.018	-0.106
	t-value	2.068	0.982	1.407	-0.315
FFC	Coeff.	0.017	0.47	0.018	0.044
	t-value	0.307	1.41	0.601	0.231
HUBCO	Coeff.	0.019	-0.035	0.013	-0.23
	t-value	1.862	-0.146	1.421	-1.087
ICI	Coeff.	0.021	0.236	0.017	0.124
	t-value	0.820	0.493	0.774	0.317
KAPCO	Coeff.	0.010	0.544	0.018	0.201
	t-value	0.133	0.151	0.001	0.493
KESC	Coeff.	0.017	0.064	0.009	-0.113
	t-value	3.214	0.434	3.024	-1.37
MCB	Coeff.	0.027	0.064	0.025	-0.073
	t-value	2.140	0.315	2.406	-0.43
POL	Coeff.	0.023	0.306	0.017	0.034
	t-value	0.818	1.019	0.813	0.151
PSO	Coeff.	0.014	-0.053	0.016	0.112
	t-value	1.522	-0.359	1.921	0.831
PTCL	Coeff.	0.013	-0.252	0.010	0.075
	t-value	0.797	-1.244	0.813	0.488
SNGC	Coeff.	0.022	-0.067	0.026	0.271
	t-value	1.471	-0.124	2.345	0.676
SSGC	Coeff.	0.019	0.347	0.017	-0.337
	t-value	1.351	0.643	1.201	-0.623

^a Significant level at 1% ^b Significant level at 5% ^c Significant level at 10%

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Résumé

Cette étude examine le rôle de l'information publique sur les activités des marchés boursiers et le rendement de l'actif en utilisant les données quotidiennes pour la période Janvier 2006 - Juillet 2011. Le rôle de la diffusion de l'information liée à une forme d'efficacité semi-forte est testé. Cette étude vise à explorer la relation entre les informations disponibles publiquement obtenues à partir du site KSE et mesures globales de l'activité du marché (rendements du marché et volume des transactions). Le résultat empirique indique que les nouvelles sont positivement liées au volume des transactions et aux rendements au niveau du marché. Cependant, au niveau des entreprises, les résultats sont différents. La relation est forte dans le cas du volume des transactions, mais pas avec les rendements du marché. La relation observée entre les nouvelles et l'activité du marché n'est pas particulièrement forte. Cela montre la difficulté de lier le volume et la volatilité observée à la mesure de l'information. Dans le même temps, cela implique l'importance de facteurs autres que l'information du public dans la conduite de l'activité du marché boursier.