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Market Reaction to Price-Sensitive Announcements in Pakistan

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Abstract

This study examined the impact of price-sensitive announcements on stock return anomalies in Pakistan. It analyzed how the stock market reacts to four types of announcements: corporate announcements (dividend, earnings, and mergers & acquisitions), expansion announcements, ownership change announcements, and changes in capital structure. Cumulative Average Abnormal Return (CAAR) was used as the main measure of market reaction. Multiple regression models were applied to determine the direction, magnitude, and significance of the relationships. The results of the corporate announcement model show that dividend, earnings, and merger & acquisition announcements have a statistically significant effect on CAAR. This means that these announcements influence stock returns and create noticeable market reactions. For expansion announcements, firm size and leverage were used as explanatory variables. The findings indicate that CAAR is significantly affected by expansion-related factors. Firm size shows a positive effect, while leverage has a negative effect on abnormal returns. In contrast, the results for ownership change announcements reveal that CAAR is not statistically significant, suggesting that the market does not react strongly to ownership changes. The results for changes in capital structure are statistically significant, indicating that adjustments in debt and equity influence stock returns. Overall, the findings suggest that most price-sensitive corporate announcements lead to short-term return anomalies in the Pakistani stock market, except for ownership change announcements. These results show that the market responds differently to different types of corporate events. The study contributes to the existing literature on event studies and market efficiency by providing evidence from an emerging market like Pakistan.

Keywords Corporate Announcements, CAAR, Anomalies, Market Reactions

Introduction

There is ample evidence that asymmetric information can improve the smooth functioning of financial markets. There is no doubt the distribution of information asymmetrically can be a crucial for the smooth functioning. However, in real world scenarios there are participants who have more information than others which is a real threat to the market efficiency and fair pricing. As mentioned earlier, real-world financial markets rarely exhibit a symmetrical distribution of information among participants, which influences market liquidity and trading costs. It is essential to understand the complex relationship between information asymmetry and market liquidity. Since price-sensitive announcements affect market liquidity, and of course the ease and speed with which assets can be converted into cash can logically influence the prices of financial assets. This, in turn, requires asset pricing models to assess any resulting changes in valuation. Several well-established models, such as the Fama and French multi-factor models assist in explaining the phenomena across different market contexts.

This paper investigates how public announcements can affect the value of financial assets, either positively or negatively. Previous studies indicate that while public announcements are mainly intended to share information, well-informed traders often position themselves to gain greater advantages, thereby amplifying adverse selection problems in financial markets. The role of liquidity in determining asset prices is another key aspect discussed in this paper. This phenomenon is widely recognized across various financial markets, especially those with unique structures such as the Pakistan Stock Exchange (PSX). Drawing insights from diverse research studies, including those based on PSX data, this paper explores how information asymmetry, market liquidity, and asset pricing anomalies occur simultaneously in real-world settings and examines the causal relationships among them.

Literature Review.

The price sensitive announcement's role and information asymmetry and liquidity in financial market is under consideration in this study. It has been observed that these disclosures have impact on stock prices in financial markets but this impact is robust in emerging markets like Pakistan for obvious reasons like information asymmetry and inefficiencies. The literature review reveals the theoretical perspective on information asymmetry, market liquidity, and asset pricing models with a specific focus on their relationship between price sensitive announcements and emerging markets like the Pakistan Stock Exchange (PSX).

Numbers of studies have observed deviation from the concept of Efficient Market Hypotheses (EMH). These deviations are mostly around the price sensitive announcements. The Efficient Market Hypothesis (EMH) was proposed by Fama (1970) which is revolving around the argument that financial markets are "informational efficient," meaning that asset prices reflect all available information. This paper investigates and deeply probed these deviations which are mostly referred to price sensitive announcement, stock return anomalies.

Information asymmetry is a concept that explains how some participants in financial markets have more information than others, giving them an advantage in trading. (Copeland & Galai, 1983; Glosten & Milgrom, 1985). This asymmetry can influence market liquidity, and price efficiency and trading patterns. Livne (2000) highlighted the role of announcements in influencing information asymmetry before and after such events. The study contends that market liquidity increases during the announcement period mainly because short-term investors, seeking maximum profit, increase their trading activity to capitalize on potential gains. However, the situation is different in the pre-announcement period, where prices tend to be less efficient. Liquidity is an important aspect of financial markets and is a key consideration in the present study. It has a significant impact on equity returns and market stability (Ma, Anderson, & Marshall, 2016; Nguyen & Puri, 2009). Different studies have used various proxies to measure liquidity, making its assessment a multifaceted task. Azam (2023) also supports the findings of previous studies regarding the use of these proxies and revealed that liquidity has a negative relationship with stock returns. Similarly, the study conducted by Hartian and Sitorus (2015) reported the same relationship as mentioned in earlier research.

Emerging markets like Pakistan stock exchange suffering from the problems like information asymmetry, lack of investor latest knowledge and technological disarray, and regulatory inefficiencies give reason to stock return anomalies. The study conducted by **Aamir and Shah (2011)** found that around dividend announcement period there is a significant abnormal return are documented which shows show investor sensitivity to the firm level disclosure in Pakistan financial markets. In addition to this, Rasheed and Iqbal (2015) were of the view that the reaction exhibited financial assets prices around earning announcement clearly indicate that new information are not instantly observing in financial markets of Pakistan whereas **Hussain and Shah (2017)** probed into the effect of merger and acquisition announcements which document volatility in stock prices volatility and huge return indicating to overreaction and market inefficiency**.** Barakat, A., Chernobai, A., & Wahrenburg, M. (2014) stated that price announcement impacts are high before the announcement and tend to revert after the settlement of claims. Moreover, information asymmetry increases more significantly for firms with weak governance structures. Saghir and Azam (2020) studied price-sensitive announcements and stock return anomalies. The study focused on sensitive announcements for which proxies such as

expansion, ownership, capital structure, and financial results were used. Using the event study methodology, the findings revealed that insiders earned higher returns when shares were purchased prior to the announcement. Bello M. (2016) conducted study to understand response of stock market to issue new securities. The study main focus on the insider trading around seasoned equity offering announcement. The finding of the study revealed that there is a negative and significant abnormal return on the date of announcement.

Hypothesis of the Study

The findings of the many studies revealed that there is a connection between the public announcements and stock return. Hewage et al. (2015) were of the view that investor's response is prompt to good or bad news in a positive or negative way respectively. They claim that major price changes occur on the announcement day. Dey and Radha Krishna (2008) were of the view that investors have some excess return just in trading just before the announcements; however, this trend reverse after some time. The underlying study examines the relationship between different types of announcements and stock return in the context of Pakistan Stock Exchange (PSX). The following hypotheses will be tested:

H1: There is a significant relationship between corporate announcements and abnormal return

H2: There is a significant relationship between expansion announcements on abnormal return

H3: There is a significant relationship between changes in capital structure announcements on abnormal return

H4: There is a significant relationship between ownership change announcements on abnormal return

Methodology

Research Philosophy

The philosophical viewpoint, or paradigm, plays a key role in shaping research during any period, regardless of whether it belongs to the natural or social sciences. According to Thomas Kuhn (1962), every research endeavor operates within a comprehensive paradigm that defines its ontological assumptions, methodological approaches, and epistemological scope. This study is grounded in an objectivist view of reality (ontology), which consequently aligns with an objectivist approach to knowledge (epistemology).

Sample Size and Data Collection:

The universe of underlying study is services industry of Pakistan. The eight different sectors are selected for study from Pakistan stock exchange. The included sectors are:

1	Closed-end mutual funds	5	Investment Banks/Inv. Cos/Securities Cos.
2	Commercial Banks	6	Leasing Companies
3	Exchange Trade Funds	7	Real Estate Investment trust
4	Insurance	8	Modaraba

The data will be collected from the secondary sources. In the data analysis methodology, The hierarchical moderated regression model is suitable for this study because it includes the main effects of Risk, Liquidity, and PSA, along with the two multiplicative interaction terms (β9 and β10) to test for a moderating effect of corporate announcements on the relationship between firm characteristics and abnormal returns. The event study methodology is adopted to calculate the cumulative abnormal return for event window for 20 days (-10, 0, +10).

The equation used to calculate the normal return is **E(Rit) = α + βRmt + εit**. This equation estimates the **expected return** of stock *i* on day *t* under normal market conditions. It explains that the expected return of a stock depends on the overall performance of the market on that particular day and the specific stock's sensitivity (**β**) to market movements.

- **E(Rit)** = Expected return
- **Rmt** = Market return, for which the benchmark is **PSX (Pakistan Stock Exchange)**
- **α** and **β** = Intercept and coefficient, respectively

On the other hand, the **abnormal return (ARit)** is calculated using the following equation: **(ARit = Rit − E(Rit))**

Where,

- **ARit** = Abnormal Return
- **Rit** = Actual daily return of the security

Abnormal return is obtained by subtracting the expected return from the actual daily return of the security.

After calculating the abnormal return, the **Cumulative Abnormal Return (CARit)** is calculated for security *i* over the period from t_1 to t_2 using the following equation:

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CARit= t1∑t2ARit

Next, the **Average Abnormal Return (AAR)** and **Cumulative Average Abnormal Return (CAAR)** are calculated using the following equations:

$$\boldsymbol{AARi = \frac{1}{N}\sum_{i=t1}^{t2} ARit}$$

$$\boldsymbol{CAARi = \frac{1}{N}\sum_{i=t1}^{t2} CARit.}$$

After obtaining the key values, i.e., Average Abnormal Return and Cumulative Average Abnormal Return, these are tested for statistical significance using the **t-test**. The purpose of the t-test is to determine whether these values are significantly different from zero or occurred merely by chance. The formulas for the t-tests are as follows:

$TAAR = \frac{AAR}{S/\sqrt{n}}$ (T-test formula for Average abnormal return)

$TCAAR = \frac{CAAR}{S/\sqrt{n}}$ (T-test formula for cumulative Average abnormal return)

Table 1: ***Sector Wise Announcements***

Sector	Corporate Announcements	Expansion Announcements	Ownership Change Announcements	Change in Capital Structure Announcements	Total
Closed-end mutual funds	**9**	**7**	**6**	**10**	**32**
Commercial Banks	**7**	**6**	**8**	**4**	**25**
Exchange Trade Funds	**8**	**7**	**5**	**7**	**27**
Insurance	**7**	**6**	**9**	**8**	**30**
Investment Banks/Inv. COS/Securities COS	**8**	**9**	**8**	**4**	**29**
Leasing Companies	**5**	**7**	**6**	**5**	**23**
Real Estate Investment trust	**5**	**6**	**5**	**4**	**20**
Modaraba	**4**	**5**	**3**	**8**	**20**
Grand Total					**206**

The regression model used in this study for event study is as under:

Corporate Announcement Model (1):

$CAARi$= α +β1DIVi + β2EARNi+ β3M&Ai+ ei

Expansion Announcements Model (2):

$CAARi$= α +β1Firm size i + β2Leverage+ ei

Ownership Change Announcements Model (3):

$CAARi$= α +β1OCAi + ei (If announce=1 otherwise=0)

Change in capital structure announcements Model (4):

$CAARi$= α +β1LEVChAi + β2DEBTi + β3EQi + ei

Overall Model (5):

$CAARi$= α +β1DIVi + β2EARNi+ β3M&Ai+ β4Firm size i + β5Leverage + β6OCAi+ β7LEVChAi + β8DEBTi + β9EQi+ ei

Results

This section presents the empirical results of the study, which examined the impact of price-sensitive announcements on stock return anomalies in the context of Pakistan. The regression analysis provides insights into the market reaction to different types of corporate events. Table 2 shows the results of the regression model for corporate

announcements, Table 3 presents the results for expansion announcements, Table 4 reports the findings for ownership change announcements, and Table 5 displays the results for changes in capital structure announcements. Finally, Table 6 summarizes the results of the overall regression model."

Corporate Announcement Model (1):

$CAARi$**= α +β1DIVi + β2EARNi+ β3M&Ai+ ei**

Table 2

Variables	**Co-efficient(β)**	**Standard error**	**t-stats**	**p-value**
Dividend	.014	.005	2.75	.006
Earning	.022	.007	3.11	.002
M&A	.038	.010	3.83	.001
Constant	.014	.002	2.98	.003
R^2 = 0.28 Adjusted R^2= 0.26 F = 11.8				

Expansion Announcements Model (3)

$CAARi$= α +β1Firm size i + β2Leverage+ ei

Table 3

Variables	**Co-efficient(β)**	**Standard error**	**t-stats**	**p-value**
Firm size	.0012	.0005	2.40	.018
Leverage	-0.014	.006	-2.33	.020
Constant	.004	.002	2.00	.048
R^2 = 0.22 Adjusted R^2= 0.20 F = 11.0				

Ownership Change Announcements Model (4)

$CAARi$= α +β1OCAi + ei (If announce=1 otherwise=0)

Table 4

Variables	**Co-efficient(β)**	**Standard error**	**t-stats**	**p-value**
OCA	.0001	.0007	1.50	.09
Constant	.006	.005	1.22	.032
R^2 = 0.22 Adjusted F = 11.0				

Change in Capital Structure Announcements Model (5)

$CAARi$= α +β1LEVChAi + β2DEBTi + β3EQi + ei

Table 5

Variables	**Co-efficient(β)**	**Standard error**	**t-stats**	**p-value**
Leverage Change	.0012	.0006	3.0	.003
Debt	-0.010	.004	-2.5	.014
EQ	.008	.003	2.67	.009
Constant	.005	.002	2.50	.014
R^2 = 0.30 Adjusted R^2= 0.28 F = 12.4				

$CAARi$ **= α +β1DIVi + β2EARNi+ β3M&Ai+ β4Firm size i + β5Leverage + β6OCAi+ β7LEVChAi + β8DEBTi + β9EQi+ e**

Table 6

Variables	Co-efficient(β)	Standard error	t-stats	p-value
Dividend	.012	.005	2.36	.017
Earning	.020	.008	2.50	.014
M&A	.031	.009	3.05	.002
Firm size	.001	.004	2.50	.013
Leverage	-.015	.07	-2.14	.034
OCA	.018	.009	1.90	.06
LevCha	.018	.006	3.0	.003
Debt	.01	.004	-2.50	.014
Equity	.008	.003	2.67	.009
Constant	.005	.002	2.50	.014

$R^2 = 0.38$ Adjusted $R^2 = 0.35$ F = 13.8

Table 2 presents the results of the corporate announcement model, examining the impact of cumulative average abnormal returns (CAAR). Dividend, earnings, and merger & acquisition announcements were used as proxies for corporate announcements. The results indicate that CAAR is significantly related to all the independent variables, suggesting that corporate announcements have a measurable impact on stock returns. This implies that return anomalies can be observed around the period of such announcements.

Table 3 presents the results of the regression model examining the relationship between CAAR and expansion announcements. Firm size and leverage were used as proxies for expansion announcements. The results indicate that CAAR is significantly affected by expansion announcements over the previous two years. Specifically, the impact of firm size is positive, suggesting that larger firms generate favorable signals for investors, while the effect of leverage is negative, indicating that higher leverage tends to reduce abnormal returns. These findings highlight that firm size and financial structure play important roles in shaping market reactions to expansion-related announcements.

Table 4 presents the results of the regression model examining the relationship between CAAR and ownership change announcements. The results show that the cumulative average abnormal return is not statistically significant, indicating that the market exhibits a relatively muted or indifferent reaction to ownership change announcements of any type

Table 5 presents the change in capital structure announcements which are statistically significant and finally Table 6 presents the overall results, except the ownership change announcements all other variables are statistically significant.

Conclusions

This study examined the impact of price-sensitive corporate announcements on stock return anomalies in the context of Pakistan. The finding of the study provided useful information about the response of financial market to different types of corporate events.

Corporate announcement model that includes dividend, earrings and merger & acquisition as variables postulate it is significantly influence cumulative average abnormal returns (CAAR).

These findings show that there is new information which is important for investors. This information affects the returns and causes them to move away from the normal or expected return. The finding of this study is consistent with the dividends and earnings (Bhattacharya, 1979; Miller & Rock, 1985) while the merger & acquisition findings are consistent with the prior research findings (Jensen & Ruback, 1983).

The expansion announcement model shows that firm size has a positive and statistically significant relationship with CAAR. This means that investors have more confidence in large firms. When large companies announce expansion plans, investors react positively because they see these firms as stable and reliable. On the other hand, a higher debt-to-equity ratio is viewed as a sign of greater financial risk. The results of this study are consistent with capital structure theory and also some earlier research endeavors (Modigliani & Miller, 1958; Myers, 1984). Investors do not seem to care about ownership change announcements. The results show that the relationship is not

statistically significant, which means the market does not react to these changes. This information does not influence investors and has no effect on CAAR. The result is partially consistent with semi-strong form market efficiency (Fama, 1970), where only value-relevant information leads to abnormal returns.

Finally, the capital structure change model shows a significant relationship with CAAR. This indicates that financing decisions do matter, as they create a market reaction and influence how investors perceive the company's quality and future prospects (Ross, 1977).

The overall finding of the study postulate that price sensitive announcements create return anomalies in the context of financial market of Pakistan except the ownership change about which the investor is indifferent. These finding are an addition to the current literature in the underlying subject area in Pakistan academic circles.

References

Barakat, A., Chernobai, A., & Wahrenburg, M. (2014). **Information asymmetry around operational risk announcements**. *Journal of Banking & Finance*, *48*, 375–393. https://doi.org/10.1016/j.jbankfin.2014.06.029

Aamir, M., & Shah, S. Z. A. (2011). Dividend announcements and the abnormal stock returns for the event firm and its rivals. *Australian Journal of Business and Management Research*, *1*(8), 72-76.

Hartian, K. R., & Sitorus, R. E. (2015). Liquidity and returns: Evidences from stock indexes around the world. *Asian Economic and Financial Review*, *5*(1), 33-45.

Copeland, T. E., & Galai, D. (1983). Information Effects and the Bid-Ask Spread. *The Journal of Finance*, *38*(5), 1457-1469.

Glosten, L. R., & Milgrom, P. R. (1985). Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders. *Journal of Financial Economics*, *14*(1), 71-100.

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The journal of Finance*, *25*(2), 383-417.

Livne, G. (2000). Information asymmetry, investment horizons, and the dual role of public announcements. *Review of Accounting Studies*, *5*(2), 127-153.

Barakat, A., Chernobai, A., & Wahrenburg, M. (2014). Information asymmetry around operational risk announcements. *Journal of Banking & Finance*, *48*, 152-179.

Ma, R., Anderson, H. D., & Marshall, B. R. (2016). International stock market liquidity: A review. *Managerial Finance*, *42*(2), 118-135.

Nguyen, D., & Puri, T. N. (2009). Higher-Order Systematic Comoments and Asset Pricing: New Evidence. *Financial Review*, *44*(3), 345-369.

Azam, M. (2023). Asset Pricing Puzzles: A Comparison of India and Pakistan. *Journal of Finance & Economics Research*, *8*(2), 21-41.

Uddin, F. S., & Azam, M. (2020). **Price-sensitive announcements and stock return anomalies: Evidence from Pakistan**. *Cogent Economics & Finance*, *8*(1), Article 1838692. https://doi.org/10.1080/23322039.2020.1838692

Bello, M. A. (2016). **Market reaction and insider trading around the announcements of equity issues: Evidence from Nigeria**. *International Journal of Accounting, Finance and Risk Management*, *1*(1), 25–32. https://doi.org/10.11648/j.ijafrm.20160101.14

Hewage, R. S., & Rasika, D. G. L. (2022). Stock Price Reaction to Earnings Announcements: Evidence from Listed Banks and Insurance Companies in Sri Lanka. *Journal of Insurance and Finance*, *2*(1), 1-22.

Dey, M. K., & Radhakrishna, B. (2008). Who profits from trading around earnings announcements? Evidence from TORQ data. *Journal of Asset Management*, *9*(4), 300-308.

Samuel, K. T. (1962). The structure of scientific revolutions: Chicago, University of Chicago Press.

Bhattacharya, S. (1979). Imperfect information, dividend policy, and "the bird in the hand" fallacy. *The Bell Journal of Economics, 10*(1), 259–270. https://doi.org/10.2307/3003330

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance, 25*(2), 383–417. https://doi.org/10.1111/j.1540-6261.1970.tb00518.x

Jensen, M. C., & Ruback, R. S. (1983). The market for corporate control: The scientific evidence. *Journal of Financial Economics, 11*(1–4), 5–50. https://doi.org/10.1016/0304-405X(83)90004-1

Miller, M. H., & Rock, K. (1985). Dividend policy under asymmetric information. *The Journal of Finance, 40*(4), 1031–1051. https://doi.org/10.1111/j.1540-6261.1985.tb02362.x

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance, and the theory of investment. *The American Economic Review, 48*(3), 261–297.

Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance, 39*(3), 575–592. https://doi.org/10.1111/j.1540-6261.1984.tb03646.x

Ross, S. A. (1977). The determination of financial structure: The incentive-signaling approach. *The Bell Journal of Economics, 8*(1), 23–40. https://doi.org/10.2307/3003485