



The effect of a firm's size on investors' responses in short-term: Evidence from the Tehran stock exchange (TSE)

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Abstract

Financial anomalies are related to investors' ability to analyze financial statements and expected firms' prices. A firm's size is one of the main characteristics of each firm. This study shows investors of large firms respond quickly on the event day, while investors of smaller ones delay to response to new information. This study tests the effect of a firm's size on the short-term reaction of investors exposed to earnings announcements surprises in the Tehran stock Exchange (TSE) of Islamic Republic of Iran from 2003 to 2012. This study examines whether the observed patterns in stock returns after earnings announcements surprising are related to a firm's size in the short-term. The findings show market reaction to earnings announcements surprising for large capital stocks portfolio (LCSP) is consistent with the efficient market hypothesis on the event day, and there are no abnormal returns for LCSP in the short-term, while findings indicate under reaction and abnormal returns for small

capital stocks portfolio (SCSP) in the short-term.

Keywords : Market efficiency; Earnings announcements surprising; Abnormal returns

1. Introduction

Earnings information play an important role in how investors determine securities' prices. Obviously, market reaction is an important issue for market efficiency. The efficient market hypothesis indicates that in a semi-strong efficient market, investors instantaneously adjust their expectations with respect to new information. However, researchers have observed evidence inconsistent with this implication. Post earnings announcement drift is one of the most persistent anomalies that shows stock prices continue to drift for several weeks after earnings announcements surprises. Two other anomalies most related to the post earnings announcement drift are overreaction and underreaction. While some studies have shown overreaction to the some informative events, others provided evidence of underreaction in financial markets. These anomalies' behaviors are the main phenomena that challenge the Efficient Market Hypothesis(EMH).

Previous studies divide investors into two main groups, first group is contained professional investors that follow up news whenever, and second one is contained individual investors that might not be updated to new information as soon as professional investors. Predicting investors' reactions while exposing to new information is one of the most important requirements for anyone who wants to make profit in the market. Professional investors can earn abnormal returns by taking advantages of post earnings announcement drift and over/under reaction without bearing more risk. There is abundant research that examines the market reaction to earnings announcements. The majority of studies have shown positive relation between earnings announcement surprising and stock prices movement. Professional investors are continually looking for a way to predict stock prices based on their characteristics sooner than other investors.

Most studies try to find specific characteristics of each firm to explain why investors' reactions are different for them, firm's size is a main characteristic that make firms comparable. Some studies show that investors are more exposed to public information for large capital stocks portfolio (LCSP) rather than small capital stocks portfolio (SCSP), and

investors adjusted their expectations for LCSP sooner than SCSP. Thus, this study distinguishes firms by their capital and compares them to examine whether investors react differently to earnings announcements surprising for LCSP and SCSP. This paper focuses on investors' short-term reaction in earnings announcements' surprises for SCSP and LCSP. There is no investigates whether investors' short-term reactions are varied for different firms' sizes in the face of earnings announcements surprising. SCSP suffer from lack of information transparency and LCSP carry lower risks compare to the SCSP due to the availability of public information. Moreover, stock markets in various countries react differently regarding financial statements. Iran is one of those countries that needs more clarification regarding stock markets for international investors. After cancelation of the U.S. sanctions regarding Iran's market, many investors are willing to know more about Iran's stock market. This market is being very interesting for many international investors regarding its return. This main contribution of this study is to estimate investors' reactions regarding financial information at Iran's stock market regarding the size of firms. Thus, the aim of this study is to fill the gap that exists concerning short-term reaction of investors and firms' sizes in Iran's market.

This study is organized as follows : section 2 defines literature review and our motivation., section 3 describes data resource and defines methodology, section 4 reports the empirical results, and section 5 presents conclusions.

2. Literature review and Motivation

There are numerous studies over the past four decades that have demonstrated there are predictable abnormal returns after earnings announcements. Post earnings announcement drift indicates that investors continued their reactions to the adjustment of the stock prices after earnings surprises for several weeks. How investors perceive, interpret and react to news has been an active area of research since the seminal work of Ball and Brown (1968). They empirically investigate the association between accounting earnings as the core information in financial statement and stock returns in order to assess the usefulness of accounting information. They conclude that negative (positive) earnings announcements changes resulted in cumulative average abnormal returns drifting downward (upward). Bernard and Thomas (1989, Bernard and Thomas (1990) provide evidence that post earnings announcement drift is due to naive investors who fail to recognize the implications of current earnings for future

earnings; they show post earnings announcement drift is related to the speed of investors' responses to new information.

Griffin and Tversky (1992), Barberis et al. (1998) and Daniel et al. (1998) conclude that market reaction is consistent with conservatism literature; they believe investors slow updating their beliefs in the face of new information. They show that people pay more attention to the strength of the evidence they receive and care less about statistical weight, so investors overweight the value of their own private signals and underweight the public information such as earnings announcements. This assumption can result in post earnings announcement drift and over/under reaction to the new updated information.

Increased interest for more research on post earnings announcement drift have led to studies such as Geoffrey Booth et al. (1997), Jegadeesh and Livnat (2006), Brown and Han (2000), Truong (2010, Truong (2011) that employed different samples and methods to examine the drift. The large body of these studies indicates that financial markets react differently when exposed to new information: Some cases overreact and others underreact to the new information. Both of these anomalies present a significant challenge to market efficiency. The overreaction hypothesis assumes that investors respond too strongly to new information, while the underreaction hypothesis supposes that investors do not respond enough to updated information. Bloomfield et al. (2000) and Larson and Madura (2003) conclude that overreaction and underreaction to new information depends on the reliability of information. They indicate prices underreact to reliable information and overreact to unreliable information. Su (2003) shows that domestic investors cannot react quickly and fail to anticipate prices. Therefore, domestic investors can earn abnormal returns, while international investors can predict stock prices quickly and no abnormal returns exist among them.

Bartov et al. (2000) show that there are two types of investors in market. Some of investors who participate in market are sophisticated and they are experts in gathering and analyzing public information, while others are unsophisticated and they are not professional compared to sophisticated ones. Security returns around earnings announcements reflect the unbiased estimation for sophisticated investors, while biased one for unsophisticated investors. Security prices are determined by the trading activities of both sophisticated and unsophisticated investors, while most post earnings announcements drift will be pronounced by unsophisticated investors. This study expects that mispricing after earnings announcements surprising positively related to unsophisticated investors and negatively related to

sophisticated investors. Mikhail et al. (2003) conclude that financial anomalies are related to investor's ability to analyze historical earnings. They show firms followed by more experienced analysts exhibit less anomalies, thus the efficiency of a firm's market price is influenced by the level of analyst's experience that following the firm. Battalio and Mendenhall (2005) show those investors who initiate small trades have more bias in earnings signals and they make decisions on less sophisticated information compared to other investors who initiate large trades. Larger traders use more completed information set that is more accurate than smaller ones.

Wallace et al. (1994), Naser (1998), Chakraborty (2010) and Chang (2013) investigate the differences in the level of disclosing information related to the difference in firms' characteristics. They provide evidence that indicates the amount of information is increasing according to a firm size; larger firms show more detailed reporting to outsiders compared to small ones. They indicate the degree of firms' information transparency is lower for small firms rather than larger ones. Cready (1988) and Bartov et al. (2000) test whether the observed patterns in stock returns after quarterly earnings announcements are related to the proportion of firm shares held by institutional investors. Their findings indicate that the institutional holdings variable is negatively correlated with the observed post announcement abnormal returns. Also, information drift is smaller for companies with larger share proportions held by institutional investors. Spyrou et al. (2007) examine short-term investor reaction to extreme market shocks in equity market. They find that investors react rationally to market shocks for large capitalization stock portfolios and irrationally underreact to medium and small capitalization stock portfolios.

Research on emerging and frontier markets have been topics of interest in finance literature since the early 1990s. Knowing more about a frontier market such as Tehran stock exchange (TSE) is an interesting objective topic for both investors and financial scholars. Tehran stock exchange (TSE) of Islamic Republic of Iran is still a developing market. Since, the Tehran stock exchange is not a well-known market to the international investors; the present study provides some basic information about this market's characteristics. Iran is situated in west Asia (Middle East) with a population of more than 79 million people. Iran is a rich country with oil and gas resources, It holds about 10% of the total oil reservation in the world and is the second largest producer after Saudi Arabia within the OPEC countries. According to a report by the World Bank (2013), Iran is ranked second among Middle East and North Africa (MENA) countries in terms of GDP(after Saudi Arabia) and ranked 22 in the world in 2012.

Significant restrictions on Iran's economy led seriously limit international investors participation in this market. Jahan-Parvar and Mohammadi (2013) findings show that there is the positive performance and sustained positive growth for TSE in 2011-2012 in the face of increasing international pressure on the Iranian economy. So, TSE could provide good opportunity for international investors seeking a market to diversify their portfolios. Among the few studies that look at the Tehran stock exchange, Foster and Kharazi (2008) find little evidence of pervasive short-term predictability in Iran's TSE stock prices, although they observe strong evidence for medium-term momentum. Mahmoudi et al. (2011) examine the reaction of investors to earnings announcements surprising in the Tehran stock exchange. They observe underreaction for both positive and negative earnings announcements surprising. The main purpose of this study is to examine whether investors' reactions to exposed earnings announcements surprising are the same for different firm's sizes after the event day. The main expectation is that investors of SCSP treat differently compared to LCSP. This difference behavior be driven by the relative sophistication of investors. Professional investors representing institutions need to invest very large sums of money. Small companies are quite inefficient for these purposes in that (1) it may be as difficult to properly research a small company as a large company (2) even finding an undervalued small company it doesn't permit enough investment to make a substantial difference for the large investment fund (3) the investment of a large fund in a small company will damage returns due to the effects of the investment itself, i.e., large purchases will drive up share price and large sales will drive down share price. For these reasons, small companies tend to be avoided by professional investors, leaving them for individual investors who are likely more casual about following the news every single day, and thus could explain a lag in incorporating the news. This study uses the event study methodology to measure how investors of SCSP react differently from investors of LCSP.

3. Data and Methodology

The data on the Tehran stock exchange shows that this market is still being developed. This study uses daily data for the Tehran stock exchange for the period of 2003 to 2012. A firm size's measuring is vital in this study, and this study measures the size of a firm in relation to other firms at the same time. This study follows the Fama and French (1996) and Vijh and Yang (2013) procedure to rank all TSE-listed firms by market value of their equity at the

beginning of each year. This study determines the percentile rank of all firms each year, and then defines firms belonging to the three bottom quartiles as SCSP and firms belonging to the other quartiles as LCSP. An earnings per share (EPS) is an important variable representing the operation situation and investors rely on the EPS in financial statements more than other variables. This study uses the EPS to measure surprising in earnings announcements. In this current study, earnings announcements surprising is defined as changes more than 5% in annual EPS compared to the latest forecasting EPS. An announcement belongs to positive surprising if actual EPS exceeds last EPS and belongs to negative surprising while actual EPS is inferior to the latest EPS. Finally, the sample contains 181 earnings announcements surprising. Table 1 provides descriptive statistics for the sample firms. This study finds negative surprising on earnings announcements are more observed rather than positive ones. It shows that most managers initially are optimistic about forecasting their financial statements and negative surprising more likely to be observed compared to positive ones.

Table 1. Earnings announcements surprising throughout the period of our analysis.

Year	Total Observations	LCSP	LCSP	SCSP	SCSP
		(Positive surprising)	(negative surprising)	(Positive surprising)	(Negative Surprising)
2003	12	2	5	2	3
2004	15	4	5	2	3
2005	18	5	4	4	5
2006	16	3	7	2	4
2007	19	4	7	4	4
2008	18	3	6	4	5
2009	17	4	5	3	5
2010	21	5	7	3	6
2011	22	6	6	5	5
2012	24	8	6	4	6
Total	181	44	58	33	46

3.1. Event day

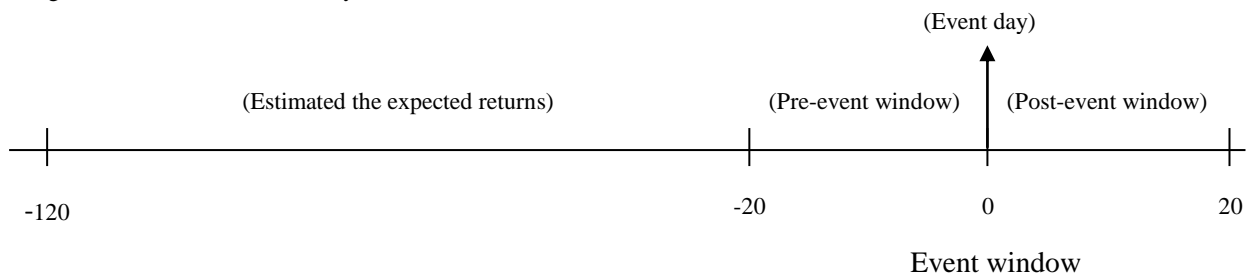
In the event study model, main assumption indicates that investors react immediately while receive new information. It uses to show the effect of any main event on the direction of stock prices. Fama et al. (1969) introduce event studies; it is used to measure the effect of a

financial event on firm's prices. This study applies an event study to examine the impact of a firms' size on investors' reactions since expose to earnings announcements surprising. This study defines an event day as a day when news about earnings announcement is published in the Tehran stock exchange. Sometimes, news is announced on the previous day, and reported the next day. In such situation, the event day is defined the day when investors actually can trade in the stock market.

3.2. Event window

The event window shows the number of days before and after earnings announcements surprising day (Event day). Konchitchki and O'Leary (2011) show an event window typically is defined as $[-B,+A]$, which B is the number of days before the event day and A is the number of days after the event day, and the event day is typically define as day 0. This study uses post-event day $[0, +20]$ to examine investors' reactions to earnings announcements surprising. The framework of an event study methodology shows in Fig 1.(based on MacKinlay (1997)).

Fig 1. Timeline for an event study



3.3. Market Reactions

Under the market hypothesis, the market is fully corporate to new earnings announcements on the event day and security prices should reflect all potential changes in the event day. This study calculates daily stock returns for the 20 days after the event day as follows:

$$R_{i,t} = \ln\left(\frac{P_{i,t}}{P_{i,t-1}}\right) \quad (1)$$

Where $R_{i,t}$ is the actual return on share i on day t, $P_{i,t}$ is the price of share i on day t and $P_{i,t-1}$ is the price of share i on day t-1.

For each day of the event window, this study computes the abnormal return as the difference between the security's actual post event window return and the security's return that would be expected in this period, according to the equation (2).

$$AR_{i,t} = R_{i,t} - E(\bar{R}_{i,t}) \quad (2)$$

Where $AR_{i,t}$ is the abnormal return on share i on day t and $E(\bar{R}_{i,t})$ is the expected return on share i on day t . Based on the mean adjusted returns of Brown and Warner (1985), MacKinlay (1997) and Su (2003), $E(\bar{R}_{i,t})$ is estimated from time-series of stock i 's in estimated the expected returns period ($t = -120, -119, -20$).

$$\bar{R}_{i,t} = \alpha_i + \beta_i R_{m,t} + e_i \quad (3)$$

Where $R_{m,t}$ is the return on the market portfolio on day t provided by the Tehran stock exchange (TSE), $e_{i,t}$ is the random error term for stock i on day t , and α_i and β_i are the market model intercept and slope parameters for firm i .

Average ARs for SCSP and LCSP in each trading day are calculated by

$$ARR_{p,t} = \left(\frac{1}{N}\right) \sum_{i=1}^n AR_{i,t} \quad (4)$$

Where $ARR_{p,t}$ is the equally weighted average portfolio abnormal return. N is the number of stocks with ARs during day t .

We compute the cumulative average abnormal returns (CAAR) for the next 1,2,3,...,20 days after earnings announcement surprising as below :

$$CAAR_{\text{Post}_A t} = \sum_{t=+1}^{t=+20} AAR_{it} \quad (5)$$

Finally, in order to investigate how investors behave on earnings announcements surprising for SCSP and LCSP, we run t-statistic test. If the CAAR observed during post earnings announcements surprising is significantly different from zero, it can conclude investors react irrationally to earnings announcements surprising and observed earnings announcements drift in The Tehran stock exchange, otherwise investors respond rationally and it shows market efficiency on the event day and there are no patterns for this group.

4. Empirical Results

The prior findings indicate that the market slowly incorporates to earnings announcement surprising over a short-term after the event day in the Tehran stock exchange. Table 2 displays abnormal returns after the event day for both SCSP and LCSP. The results in Table 2 show that there is considerable variation between investors of SCSP and LCSP. The mean reaction after the event day for SCSP is much greater than LCSPs' investors. To investigate

whether these apparent differences in investors' reactions to earnings announcements surprising are statically significant we apply t-statistic test. The results of the t-test are presented in Table 2, they indicate that there are statically significant differences behavior across investors of SCSP and LCSP.

Table 2. Testing market reaction after an event day

Portfolio	Earnings announcements	Mean	Std. Dev.	Min	Max	t-test
	Surprising					
LCSP	Positive	0.0023	0.0073	-0.0113	0.0178	(1.3874)
LCSP	Negative	-0.0019	0.0082	-0.0149	0.0103	(-1.0297)
SCSP	Positive	0.0651	0.0271	0.0050	0.1	(10.7670)**
SCSP	Negative	-0.0238	0.0180	-0.054	0	(-5.9583)**

**Statistical significance at the 1% level.

The results show existing post earnings announcements drift for SCSP in both positive and negative earnings announcements surprising, while this study hasn't observed any specific drifts for LCSP. The results are in line with our expectations about sophisticated investors and unsophisticated investors behavior in the Tehran stock exchange. Looking at the speed of the investor's behavior while expose to earnings announcements surprising show that there is lagging response for investors tend to invest in small firms compared larger ones.

Table 2 shows investors of LCSP cannot earn abnormal returns after earnings announcements surprising for both positive and negative ones, their investors react rationally compared to smaller ones and it supports efficient market hypothesis. Professional investors actively participated in market and they like to invest in large firms due to less liquidity risk and more availability of public information. Professional investors adjusted their expectations much quicker than individual investors when exposed to earnings announcements surprising.

The results show investors of SCSP underreact to earnings announcements surprising on the event day. Market reaction to earnings announcements surprising on the event day is not enough for SCSP, thus investors of SCSP continue their reactions after the event day to adjust their expectations. It seems that smaller firms are more attractive for individual investors compared to institutional investors, while institutional investors tend to invest in larger ones. There are negative abnormal returns for SCSPs' investors expose to negative earnings announcements surprising, while they can earn positive abnormal returns after positive

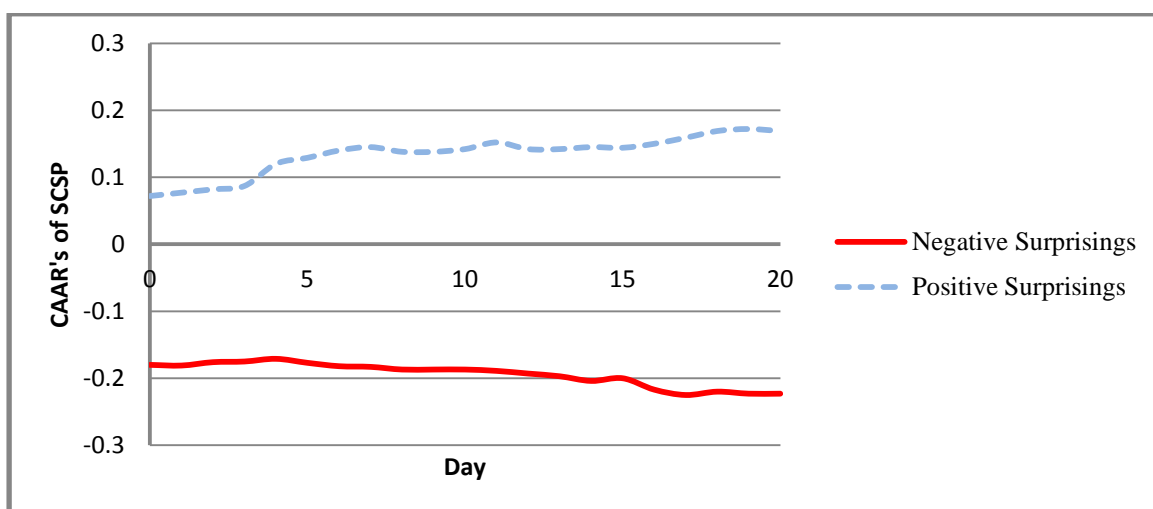
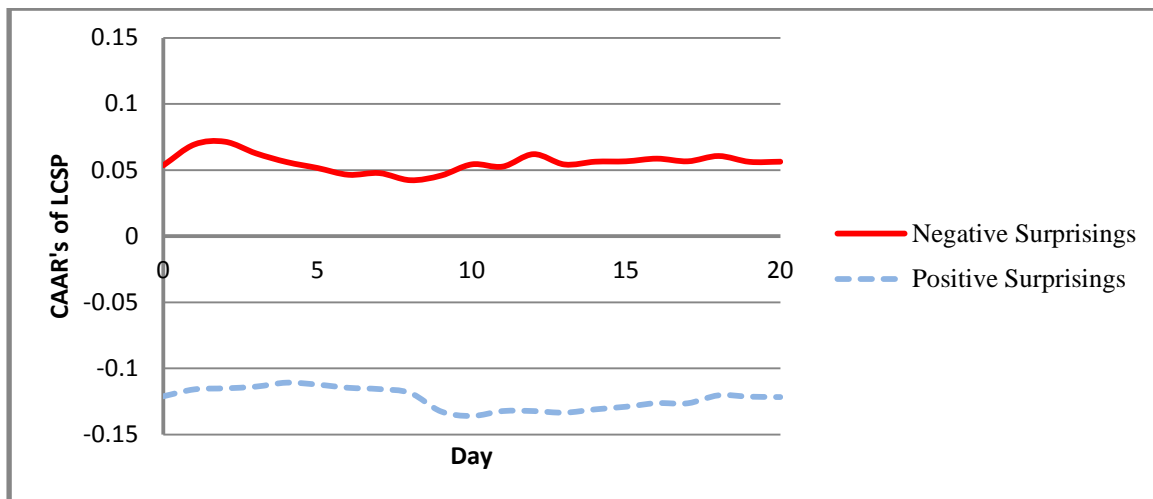
earnings announcements surprising.

Table 2 reports the positive earnings announcements surprising for LCSP. The mean cumulative abnormal returns is 2.37% for positive surprising and (1.9%) for negative ones in 20 days after the event day that both are not statically significant. LCSPs' investors cannot earn abnormal returns after earning announcements surprising (Event day). It seems investors of larger firms react rationally to earnings announcements in the event day and market is efficient for large firms.

The mean cumulative average abnormal returns of SCSP for positive surprising is about 6.51% in 20 days after the event day, while in negative surprising, it would be around (2.38%). So, SCSPs' investors behave totally different after earnings announcements surprising for positive and negative ones compared to LCSPs' investors. Stocks' prices move upward for positive surprising and downward for negative surprising significantly after the event day for both groups in 20 days after the event day. The findings indicate that the cumulative abnormal returns for SCSP are statically significant and it shows individual investors undrreact to earnings announcements surprising in short-term. Figure 2 clearly demonstrates investors' behaviors are difference in short-term for LCSP and SCSP. So, SCSP's investors behavior is predictable and their investors can earn abnormal returns after the event day in short-term compared to the LCSP's investors.

The results imply that the trading activities for sophisticated investors are not predictable, while an individual investor's behavior is predictable in expose to earnings announcements surprising. Investors can use this lagging to earn abnormal returns after earnings announcements surprising for SCSP, while the investors' behavior for LCSP was not clear and there is no free lunch for its investors.

Figure2. Cumulative average abnormal returns for SCSP and LCSP



5. Conclusion

Market efficiency indicates that all available information is reflected in equity price. However, empirical studies show that there are no market exists under this condition. Iran's market has been improving, however it has long way to be matured as a developed markets. Recent studies focus on the degree of market efficiency that evaluated by the investors speed to adjustment stock prices when expose to new information.

While not the first study to analyze investors' reactions to earnings announcements surprising, this study is a first attempt to examine the effect of a firm's size to the react of investors to earnings announcements surprising. The event study methodology was adopted to examine the effect of firm's sizes to the earnings announcements. The results indicate that investors of LCSP react rationally and there are no specific patterns for returns after the event day, while investors of SCSP under react to the earnings announcements surprising.

It seems that research about small firms compared to larger ones take more time while exposing to new information, thus we observed abnormal drift after the event day among small firms rather than larger ones. Institutional investors tend to invest in the firms that are more liquid and known in the market, so larger firms are attracted for them, while smaller ones could be attractive for individual investors that expectations would be adjusted during time. So, investors of SCSP can earn abnormal returns after earnings announcements surprising, since individual investors need time to adjust their expectations.

References:

- [1] 2013. *Iran Overview* [Online]. World Bank. Available: <http://www.worldbank.org/en/country/iran/overview> [Accessed].
- [2] BALL, R. & BROWN, P. 1968. An empirical evaluation of accounting income numbers. *Journal of accounting research*, 159-178.
- [3] BARBERIS, N., SHLEIFER, A. & VISHNY, R. 1998. A model of investor sentiment. *Journal of financial economics*, 49, 307-343.
- [4] BARTOV, E., RADHAKRISHNAN, S. & KRINSKY, I. 2000. Investor sophistication and patterns in stock returns after earnings announcements. *The Accounting Review*, 75, 43-63.
- [5] BATTALIO, R. H. & MENDENHALL, R. R. 2005. Earnings expectations, investor trade size, and anomalous returns around earnings announcements. *Journal of financial economics*, 77, 289-319.
- [6] BERNARD, V. L. & THOMAS, J. K. 1989. Post-earnings-announcement drift: delayed price response or risk premium? *Journal of accounting research*, 27, 1-36.
- [7] BERNARD, V. L. & THOMAS, J. K. 1990. Evidence that stock prices do not fully reflect the implications of current earnings for future earnings. *Journal of Accounting and Economics*, 13, 305-340.
- [8] BLOOMFIELD, R., LIBBY, R. & NELSON, M. W. 2000. Underreactions, overreactions and moderated confidence. *Journal of Financial Markets*, 3, 113-137.
- [9] BROWN, L. D. & HAN, J. C. Y. 2000. Do stock prices fully reflect the implications of current earnings for future earnings for AR1 firms? *Journal of accounting research*, 38, 149-164.

- [10] BROWN, S. J. & WARNER, J. B. 1985. Using daily stock returns: The case of event studies. *Journal of financial economics*, 14, 3-31.
- [11] CHAKRABORTY, I. 2010. Capital structure in an emerging stock market: The case of India. *Research in international business and finance*, 24, 295-314.
- [12] CHANG, C.-Y. 2013. The Market Response of Insider Transferring Trades and Firm Characteristics in Taiwan. *Emerging Markets Review*.
- [13] CREADY, W. M. 1988. Information value and investor wealth: The case of earnings announcements. *Journal of accounting research*, 26, 1-27.
- [14] DANIEL, K., HIRSHLEIFER, D. & SUBRAHMANYAM, A. 1998. Investor psychology and security market under - and overreactions. *The Journal of finance*, 53, 1839-1885.
- [15] FAMA, E., FISHER, L., JENSEN, M. & ROLL, R. 1969. The adjustment of stock prices to new information. *International economic review*, 10.
- [16] FAMA, E. F. & FRENCH, K. R. 1996. Multifactor explanations of asset pricing anomalies. *The Journal of finance*, 51, 55-84.
- [17] FOSTER, K. R. & KHARAZI, A. 2008. Contrarian and momentum returns on Iran's Tehran Stock Exchange. *Journal of International Financial Markets, Institutions and Money*, 18, 16-30.
- [18] GEOFFREY BOOTH, G., KALLUNKI, J.-P. & MARTIKAINEN, T. 1997. Delayed price response to the announcements of earnings and its components in Finland. *European Accounting Review*, 6, 377-392.
- [19] GRIFFIN, D. & TVERSKY, A. 1992. The weighing of evidence and the determinants of confidence. *Cognitive psychology*, 24, 411-435.
- [20] JAHAN-PARVAR, M. R. & MOHAMMADI, H. 2013. Risk and Return in the Tehran Stock Exchange. *The Quarterly Review of Economics and Finance*.
- [21] JEGADEESH, N. & LIVNAT, J. 2006. Post-earnings-announcement drift: the role of revenue surprises. *Financial Analysts Journal*, 22-34.
- [22] KONCHITCHKI, Y. & O'LEARY, D. E. 2011. Event study methodologies in information systems research. *International Journal of Accounting Information Systems*, 12, 99-115.
- [23] LARSON, S. J. & MADURA, J. 2003. What Drives Stock Price Behavior Following Extreme One - Day Returns. *Journal of Financial Research*, 26, 113-127.
- [24] MACKINLAY, A. C. 1997. Event studies in economics and finance. *Journal of economic literature*, 35, 13-39.

- [25] MAHMOUDI, V., SHIRKAVAND, S. & SALARI, M. 2011. How do investors react to the earnings announcements? *International Research Journal of Finance and Economics*, 70, 145-152.
- [26] MIKHAIL, M. B., WALTHER, B. R. & WILLIS, R. H. 2003. Security analyst experience and post-earnings-announcement drift. *Journal of Accounting, Auditing & Finance*, 18, 529-550.
- [27] NASER, K. 1998. Comprehensiveness of disclosure of non-financial companies: Listed on the Amman financial market. *International Journal of Commerce and Management*, 8, 88-119.
- [28] SPYROU, S., KASSIMATIS, K. & GALARIOTIS, E. 2007. Short-term overreaction, underreaction and efficient reaction: evidence from the London Stock Exchange. *Applied Financial Economics*, 17, 221-235.
- [29] SU, D. 2003. Stock price reactions to earnings announcements: evidence from Chinese markets. *Review of Financial Economics*, 12, 271-286.
- [30] TRUONG, C. 2010. Post earnings announcement drift and the roles of drift-enhanced factors in New Zealand. *Pacific-Basin Finance Journal*, 18, 139-157.
- [31] TRUONG, C. 2011. Post-earnings announcement abnormal return in the Chinese equity market. *Journal of International Financial Markets, Institutions and Money*, 21, 637-661.
- [32] VIJH, A. M. & YANG, K. 2013. Are small firms less vulnerable to overpriced stock offers? *Journal of financial economics*.
- [33] WALLACE, R. O., NASER, K. & MORA, A. 1994. The relationship between the comprehensiveness of corporate annual reports and firm characteristics in Spain. *Accounting and business research*, 25, 41-53.