

## **Voluntary Disclosure and Informational Content of Share Price: Evidence from Tehran Stock Exchange**

**Hamzeh Didar\*, Sohrab Abdi, Vahid Mostafazade**

*Faculty of Economic and Management, Urmia University, Urmia, Iran*

(Received: July 17, 2017; Revised: December 28, 2017; Accepted: January 7, 2018)

### **Abstract**

The aim of this research was to determine the impact of voluntary information disclosure on informational content of share price. In this regard, future earnings response coefficient was used to determine the informational content of the share price about the future income information. Furthermore, share price synchronicity was used to evaluate the informational content of the share price about firm-specific information. To this end, it was attempted to select 98 firms listed in Tehran Stock Exchange (from 2005 to 2016). The analyses indicated that the voluntary information disclosure improved the informational content of share prices in terms of the future earnings. However, it was indicated that the voluntary information disclosure did not affect the informational content of share price in terms of firm-specific information. So, voluntary information disclosure increases the capability of the investors to predict the future income and, consequently, future income information will be reflected in the share price.

### **Keywords**

Voluntary disclosure, Informational content of share price, future earnings response coefficient, share price synchronicity.

---

\* Corresponding Author, Email: [h.didar@urmia.ac.ir](mailto:h.didar@urmia.ac.ir)

## Introduction

The investors primarily invest in the share market in order to gain appropriate returns resulting from changes in the share price and dividends (Setayesh & Shamseddini, 2016). Price changes in the capital market are the function of changes in the investors' expectations. The market receives information from different data sources and measures any given increase in dividends on this basis and reacts accordingly (Mehrani et al., 2016). In fact, information makes changes in investors' expectations and affects investment decisions. Consequently, information is exhibited in the share price and improves the informational content of prices. The informational content of share price calls attention to the reflection of information related to the future income and firm-specific or confidential information on the share price (returns) (Haw et al., 2012; Choi et al., 2015; Haggard et al., 2008). As share prices are embedded within informational content, the optimal allocation of scarce capital resources may be facilitated (Wang & Yu, 2015).

The informational content of share price about the future earnings is explained through future income response coefficient. Actually, the relationship among share returns and the future income is called *the future earnings response coefficient*, which represents the level of information regarding the future income in the share price (returns) (Drake et al., 2015; Haw et al., 2012). If more information is available to the investors, they will be able to predict the future earnings better, and if they decide to invest, this information will be exhibited in the share price. Accordingly, the relationship between share returns (price) and future income will be improved.

Furthermore, the level of firm-related information in the share price is discussed in comparison to market model and share price synchronicity. Hence, several studies have paid due attention to the notion of share price synchronicity in investigating informational content of price about firm-specific information (Sila et al., 2016; Wang & Yu, 2015; Haggard et al., 2008). The share price synchronicity reflects the level of changes in the firm's share returns

explained by the market and industry returns. As such, one can measure the relative amount of firm-related information (compared to information on the industry/market level) reflected in the share price (Piotroski & Roulstone, 2004). The existing literature (Durnev et al., 2004) indicates that the corporates embedded with low share price synchronicity represent high investment efficiency. The latter is due to this fact that low share price synchronicity is an index of more reflection of firm-related information in the firm's share prices (Piotroski & Roulstone, 2004; Haggard et al., 2008).

The significant impacts of information disclosure on the informational content of share price about the future earnings and firm-related information have been documented in the theoretical literature (Haw et al., 2012; Gelb & Zarowin, 2002; Song, 2015; Haggard et al., 2008). In particular, if firms adopt an appropriate information disclosure policy, external investors can easily (at a much lower cost) collect the firm-specific information. Therefore, the firms' shares will be embedded with more firm-specific informational content and low share price synchronicity (Haggard et al., 2008; Song, 2015). Also, high-quality information disclosure increases the capability of investors to forecast the future income and, consequently, information on future earnings is exhibited in the share price as well as improved future income response coefficient, and the informational content of share price will be improved thereof (Gelb & Zarowin, 2002; Lundholm & Myers, 2002; Haw et al., 2012).

The voluntary information disclosure is regarded among the approaches available to the users in the realm of information disclosure. Regarding the managers' goals and motivations in improving the informational environment of their own firms, it seems that the voluntary information disclosure can serve many useful functions. Given the agency theory of voluntary information disclosure and signaling theory, it seems that voluntary disclosure can be used as a tool in reducing the negative effects of agency and signaling investors in this domain. Haggard et al. (2008) found that voluntary information disclosure reduced the cost of gathering confidential and firm-related information, improved the firm

transparency and increased the informational content of share returns about firm-specific information. After the informational content of the share price is improved, it is observed that volatility and share price changes as well as share price crash have been reduced (Jin & Myers, 2006; Haggard et al., 2008).

Haggard et al. (2008) believe that low share price synchronicity is due to voluntary disclosure in that the latter leads to the increased level of informational content of share price. Given the Iranian Securities market, Foruqi and Qasemzad (2016) adopted a similar approach and indicated that low share price synchronicity was an index of informational content of share price about firm-related information. However, in the present study, it was attempted to regard the share price synchronicity and the future earnings response coefficient as two criteria in evaluating the informational content of share price so that (about the impact of voluntary information disclosure) a more comprehensive conclusion would be achieved.

Regarding the high volatility and changes in share prices in emerging markets and low transparency of information in these economies (Li et al., 2014; Morck et al., 2000), it appears essential to pay due attention to the informational content of share prices and analyze the factors affecting this parameter (voluntary disclosure) in these markets (Song, 2015; Gul et al., 2010). In this regard, it seems that the Iranian Securities market is also an emerging market (Ebrahimi Kordler & Javani Qalandari, 2016). Given this emerging market, it is evident that numerous studies have primarily examined such notions as informational content of accounting information and, consequently, less attention has been paid to the informational content of share prices. Hence, the goal of this research is to determine the effect of voluntary information disclosure on informational content of share price in the Iranian Securities market.

### **Review of the Related Literature**

Collins et al. (1994) indicated that share returns contain information regarding the future income. In this line, it is evident that the information regarding the future income is reflected in the share prices

through communication channels, as the behavior of financial reporting or investors' predictions (Lundholm & Myers, 2002). However, Gelb and Zarowin (2002) investigated the relationship among corporate disclosure policy and informational content of share price and concluded that high-quality information disclosure could increase the capability of the investors to forecast the future income and, consequently, more information regarding the future income was exhibited in the share prices. Haw et al. (2012) concluded that more financial disclosure, high-quality earnings and more information release were correlated with share prices. Besides, they found that there was more informational content of share prices regarding the future income in the corporates with appropriate information disclosure policies. In the same vein, Cheng et al. (2014) found that there was much more future earnings response coefficient in the firms with strong informational environment. Besides, income smoothing in these firms would lead to more informational content of share prices. In a similar research in the realm of capital market of Iran, Imani Barandagh and Abdi (2016) paid due attention to the role of informational environment in future earnings response coefficient and concluded that income smoothing in diverse informational environments had a different impact on informational content of share price. More recently, Moumen et al. (2015) indicated that voluntary disclosure of firms' risk information improved the future earnings response coefficient and reinforced the ability of the market in predicting the future earnings.

Choi et al. (2011) investigated the impact of earnings predicted by managers on the reflection of future income information in share returns. Researchers found that those corporates with recurring and accurate earnings predictions on the part of managers yielded higher levels of future earnings response coefficient. Rahmani et al. (2012) conducted a similar study in Tehran Stock exchange and found that as the number of predictions increased and the rate of error decreased, its credibility was highlighted in the eyes of the investors.

Choi et al. (2015) declared that the financial statements comparability would provide affluent amount of information to the

investors. Besides, this could reduce the costs of collecting and processing information in this domain and, consequently, it would lead to an improved level of informational content of share price about the future earnings. Similarly, Foruqi and Qasemzad (2015) showed that the financial statements comparability promoted the future earnings response coefficient and it caused a greater rate of information to be exhibited in share prices. Conversely, the outcomes of a research conducted by Mehrvarz and Marfu (2016) specified that the financial statements comparability did not contribute to industry-related future earnings information as well as reflection of firm-related future income information in the share price.

Given the domain of share price synchronicity, Morck et al. (2000) argued that synchronous movements of share prices in weak economies were more robust than the same movements in rich economies. Furthermore, it was observed that there were high volumes of volatility of returns in emerging markets. Haggard et al. (2008) attempted to answer the question that whether voluntary disclosure improved the informational content of share price. As such, they confirmed that voluntary information disclosure reduced the costs of collecting firm-specific or confidential information, it promoted the firm transparency and, consequently, it could improve the informational content of share returns about the firm-specific information. Also, Tian (2014) evaluated the effect of voluntary information disclosure on the share price synchronicity and found that voluntary disclosure led to more informational transparency and it then led to reduced level of share price synchronicity in relation to industry and market indices. Song (2015) examined the relationship between accounting disclosure, share price synchronicity and share price crash risk and concluded that if firms adopted an appropriate accounting disclosure policy, they would benefit from a lower rate of share price synchronicity and share price crash risk. Besides, it was observed that those firms with more transparent information would pave the way for investors to easily (and less costly) collect firm-specific information.

Cheng et al. (2012) investigated the effect of earnings quality on

share price synchronicity and argued that, in the firms with high financial analysts' coverage, high-quality earnings led to more synchronous share price. However, for those firms with low financial analysts' coverage, earnings quality would pave the way for increased level of firm-related information in share price (reduced rate of synchronous share price). In this line, Ebrahimi Kordler and Javani Qalandari (2016) investigated Tehran Stock Exchange and argued that earnings quality negatively and significantly affected the share price synchronicity and that auditor's industry specialization functioned as a moderating variable to reinforce the aforementioned impact. Similarly, Ahmadpour and Peikarnegar Qale Rudkhani (2011) asserted that there was a direct relationship among discretionary accruals and share price synchronicity. More recently, Foruqi and Qasemzad (2016) stated that financial statements comparability could have a significantly negative impact on share price synchronicity.

Hamrouni and SolanaDrasana (2013) indicated that there was a significant negative relationship between voluntary disclosure and information asymmetry. However, Khajavi and Alizadeh Talatapeh (2014) investigated the same parameters in Tehran Stock Exchange and refuted Hamrouni and SolanaDrasana's findings. Also, the results of a study conducted by Bashirimanesh et al. (2016) indicated that voluntary disclosure was considered as one of the mechanisms used in informational transparency and it could reduce the bid-ask spread. Besides, Bashirimanesh et al. (2015) conducted a research entitled "Voluntary Disclosure Pricing in Iranian Capital Market" and showed that firms' voluntary disclosure played a major role in decision making and firm valuation.

It should be noted that in the majority of domestic studies, researchers have examined the informational content of voluntary disclosure in general, and the impact of voluntary disclosure on investors' reactions in particular. However, the present study aimed to gauge the effect of voluntary disclosure on the informational content of share price in order to answer the following question: Does voluntary disclosure, as a determining factor in the decision-making process, improve the informational content of share price regarding

the future income and firm-related information?

### **Research Hypotheses**

The informational content of share price refers to the reflection of future earnings information and firm-related or confidential information in the share price (returns). In this line, future income response coefficient was used to determine the informational content of share price regarding future income and, then, the share price synchronicity was used to evaluate the informational content of share price about firm-specific information.

According to the theoretical foundations as well as overall aim of the study, the following hypotheses were formulated thereof:

**Hypothesis 1:** Voluntary information disclosure affects the informational content of share price about the future earnings.

**Hypothesis 2:** Voluntary information disclosure affects the informational content of share price about firm-specific information.

### **Research Methodology**

The required data and financial information were gathered from the financial statements of the listed firms in Iranian Securities market as well as “Rahavard Novin” Software (data bank). The research population encapsulated all the listed firms in the Tehran Stock Exchange and they were monitored from 2006 to 2013. Since the regression models used to analyze the data were embedded with information about the previous year and the following three years in terms of research variables, it was decided to gather the required information from 2005 to 2016. In the present study, the screened population size was equal to the firms included in the research population. Since data should be comparable, it was decided to select those firms whose fiscal years ended on March 20<sup>th</sup> and did not change their fiscal years during the research period. Besides, the firms' shares should not be ceased more than 3 months and all the data required for investigating the firms should be accessible. Finally, the firms should not be included among financial intermediary firms (e.g.,

banks, investment and leasing firms). Regarding the aforementioned limitations, it was decided to include 98 firms (out of 784 firm-years) as the research population. Since the screened population was limited, it was decided to examine all the firms included in the research population. Besides, it was attempted to make use of multivariate regression model as well as Eviews (8) and Stata (13) in order to test the research variables.

## Research Variables

### Research dependent variables

The informational content of the share price was considered as the dependent variable in this study. In this line, future income response coefficient was used to determine the informational content of share price regarding the future earnings and, then, the share price synchronicity was used to evaluate the informational content of share price about firm-specific information.

### The informational content of share price regarding the future income as the dependent variable

Similar to studies conducted by Haw et al. (2012), Choi et al. (2017), Drake et al. (2015), and Imani Barandagh and Abdi (2016), it was decided to make use of future earnings response coefficient for determining the informational content of share price about the future earnings. To this end, it was attempted to make use of the modified model proposed by Collins et al. (1994) and Lundholm and Myers (2002), which was originally used by Cheng et al. (2014), as indicated in Model 1:

$$R_{i,t} = \beta_0 + \beta_1 \Delta X_{i,t} + \beta_2 \Delta X_{i,t3} + \beta_3 R_{i,t3} + \varepsilon_{i,t} \quad \text{Model 1}$$

Where,

$R_{i,t}$  represents share returns for Firm  $i$ , calculated on the basis of enumerating the cumulative buy and hold share returns during 12 months (from June 22nd in Year  $t$  to June 21st in Year  $t+1$ ).

$\Delta X_{i,t}$  and  $\Delta X_{i,t3}$  are calculated on the basis of Relation 1 and Relation 2, as follows:

$$\Delta X_{i,t}: X_{i,t} - X_{i,t-1} \quad \text{Relation 1}$$

Where,

$X_{i,t}$  represents income before extraordinary items at the end of Year  $t$  divided by market value of shareholders' equity in the beginning of Year  $t$ .

$X_{i,t-1}$  represents income before extraordinary items at the end of Year  $t-1$  divided by market value of shareholders' equity in the beginning of Year  $t$ .

$$\Delta X_{i,t3}: \frac{X_{i,t3}}{3} - X_{i,t} \quad \text{Relation 2}$$

Where,

$X_{i,t3}$  represents total income in the future three years before extraordinary items, divided by market value of shareholders' equity in the beginning of Year  $t$ .

$R_{i,t3}$  represents future returns calculated on the basis of enumerating the cumulative buy and hold share returns in the future three years.

Regarding Model 1, it is indicated that  $\beta_2$  coefficient represents the impact of future earnings on the current share returns and it verily reflects the notion of future earnings response coefficient (Cheng et al., 2014; Gelb & Zarowin, 2002). According to the studies conducted by Haw et al. (2012), Choi et al. (2017), and Cheng et al. (2014), the researchers expected that the future earnings response coefficient would yield a positive value.

### **The informational content of share price about firm-specific information as the dependent variable**

Similar to the studies conducted by Sila et al. (2017), Haggard et al. (2008), and Foruqi and Qasemzad (2016), it was decided to make use of share price synchronicity for assessing the informational content of share price about firm-specific information. To this end, it was attempted to resort to monthly returns as well as the index proposed by Piotroski and Roulstone (2004). Accordingly, it was decided to calculate the impact of changes in monthly returns in the realm of market and industry on the monthly returns of the firms' share in each

year (through taking into account a specific interval) using time-series regression model (Model 2). Then, the share price synchronicity for each firm-year was calculated using its concerned coefficient of determination in accordance with Relation 3. It is worth mentioning that the latter trend was similar to the studies conducted by Choi et al. (2017) and Piotroski and Roulstone (2004).

$$R_{i,\theta} = \alpha_0 + \alpha_1 R_{m,\theta-1} + \alpha_2 R_{m,\theta} + \alpha_3 R_{Ind,\theta-1} + \alpha_4 R_{Ind,\theta} + \varepsilon_{i,\theta} \quad \text{Model 2}$$

Where,

$R_i$  represents the firm's monthly returns,

$R_m$  represents the market monthly returns,

$R_{Ind}$  represents the industry monthly returns, and

$\theta$  represents the months of any given year. Besides,  $\varepsilon_{i,\theta}$  represents the residual returns of firm's share in Month  $\theta$  manifested as the model residual.

$$\text{Synch}_{i,t} = \text{Ln}\left(\frac{R_{i,t}^2}{1-R_{i,t}^2}\right) \quad \text{Relation 3}$$

Where,

$\text{Synch}_{i,t}$  represents the share price synchronicity of Firm  $i$  in Year  $t$  and  $R_{i,t}^2$  shows the coefficient of determination of the regression in Model 2 in relation to Firm  $i$  in Year  $t$ . The values of  $R_{i,t}^2$  are indicative of the changes in share returns in Firm  $i$  which is explained by industry and market returns and, thus, it is related to information at industry/market level. Conversely,  $1-R_{i,t}^2$  is considered a part of changes in returns which may not be attributed to information on industry and market and, verily, it is related to firm-specific information of Firm  $i$ . Thus,  $\text{Synch}_{i,t}$  is considered an index that conversely measures the relative level of firm-specific of the given firm and, then, it is reflected in the share price.

### Research independent variable

The voluntary information disclosure was considered the independent variable in this study. As seen in the studies conducted by Setayesh et al. (2014) and Khajavi and Alizadeh Talatapeh (2014), the aforementioned variable has been examined on the basis of adjusted

checklist of indices proposed by Botosan (1997), which was later used by Kashanipoor (2009).

The voluntary information disclosure indicators were as follows: 17 indicators in the information background, 8 indicators in the summary of historical results, 10 indicators in the key non-financial statistics, 7 indicators in segments information, 10 indicators in projected information and 19 indicators in the management discussion and analysis.

The level of voluntary information disclosure at each firm can be calculated through Relation 4:

$$LVD_{i,t} = \frac{(\sum AS)}{(\sum TS)} \quad \text{Relation 4}$$

Where,

$LVD_{i,t}$  represents the level of voluntary information disclosure at Firm  $i$  in Year  $t$ .

$\sum AS$  represents the total of received scores at each firm on the basis of aforementioned six indicators.

$\sum TS$  represents the total of receivable scores across all firms on the basis of aforementioned six indicators. The indicator of each sector is embedded with different weights based on their importance in the decision-making process. Regarding the weighting of indicators of each sector, it is indicated that the total of receivable scores (the denominator) is equal to 134. In other words, the firms' maximum received disclosure score and disclosure level are 134 and 1, respectively. This measure is used because all the information required for rational decision making on the part of investors and other users of financial statements and reports has been duly inserted into voluntary information disclosure on the basis of appropriate weighting (Setayesh et al., 2014).

### Research control variables

Control variables in relation to the dependent variable (informational content of share price about the future earnings).

Similar to Haw et al. (2012), Choi et al. (2017), Cheng et al. (2014)

and Imani Barandagh and Abdi (2016), the control variables in relation to future earnings response coefficient have been designated as follows:

$Size_{i,t}$  represents the firm size. It is considered the natural logarithm of the market value of common shareholders' equity calculated at the beginning of Year  $t$ .

$Growth_{i,t}$  represents the growth in firm assets in Year  $t$ , calculated from Year  $t-1$  to Year  $t$ .

$Loss_{i,t}$  represents firm loss. If  $\Delta X_{i,t3}$  is negative, then the former will be equal to 1 and zero otherwise.

$EarnStd_{i,t}$  represents earnings standard deviation ( $X_{i,t}$ ) in a given firm in Year  $t$ , calculated from Year  $t+1$  to Year  $t+3$ .

Control variables in relation to dependent variable (informational content of share price about firm-specific information).

Similar to studies conducted by Song (2015), Tian (2014), Utz (2016), Choi et al. (2017), Ebrahimi Kordler and Javani Qalandari (2016) and Kamyabi and Parhizgar (2016), the control variables in relation to share price synchronicity have been designated as follows:

$Roa_{i,t}$  represents returns on asset in a given firm which is defined as the ratio of net profit to total assets in a given firm in the beginning of Year  $t$ .

$TurnOver_{i,t}$  represents the volume of share turnovers in a given firm divided by the number of shares in the firm at the end of Year  $t$ .

$SizeAsset_{i,t}$  represents the natural logarithm of total assets of the firm at the end of Year  $t$ .

$Lev_{i,t}$  represents the financial leverage which is defined as the ratio of total debt to total assets of the firm at the end of Year  $t$ .

The mean ( $AvrSW_{i,t}$ ), standard deviation ( $StdSW_{i,t}$ ) and negative skewness ( $SkeSW_{i,t}$ ) of the monthly firm-specific returns during the Year  $t$ . The residuals of Model 2 represent the firm-specific returns in relation to market and industry returns. Then, Relation 5 has been used to close out their distribution to the normal distribution.

$$SW_{i,\theta} = Ln(1 + \varepsilon_{i,\theta}) \quad \text{Relation 5}$$

Where,

$\varepsilon_{i,0}$  and  $SW_{i,0}$  represent residuals of Model 2 and firm-specific returns, respectively.

### Models to Test Hypotheses

Similar to Cheng et al. (2014) and Imani Barandagh and Abdi (2016), it has been attempted to make use of Regression Model 3 in order to test the first research hypothesis.

$$R_{i,t} = \beta_0 + \beta_1 \Delta X_{i,t} + \beta_2 \Delta X_{i,t3} + \beta_3 R_{i,t3} + \beta_4 LVD_{i,t} + \beta_5 LVD_{i,t} * \Delta X_{i,t} + \beta_6 LVD_{i,t} * \Delta X_{i,t3} + \beta_7 LVD_{i,t} * R_{i,t3} + Ctrls + \varepsilon_{i,t} \quad \text{Model 3}$$

Where,

$Ctrl$ s represents the control variables in relation to informational content of share price about future earnings. If the  $\beta_6$  is significant at the desired confidence level (95%), the first research hypothesis may not be rejected.

Similar to Song (2015), Choi et al. (2017) and Foruqi and Qasemzad (2015), it has been attempted to make use of Regression Model 4 in order to test the second research hypothesis.

$$Synch_{i,t} = \beta_0 + \beta_1 LVD_{i,t} + Ctrls + \varepsilon_{i,t} \quad \text{Model 4}$$

Where,

$Ctrl$ s represents control variables in relation to informational content of share price regarding firm-related information.

The  $\beta_1$  coefficient in Model 4 has been used to evaluate the impact of voluntary information disclosure level on the informational content of share price about firm-specific information. If the aforementioned coefficient is significant at 95% confidence level, the second hypothesis may not be rejected.

## Results

### Descriptive Statistics and Its Analysis

The descriptive statistics of this study, which provide an overview of the distribution status of observations, are summarized in Table 1. The results indicate that the research statistics duly fit inferential statistics and research hypotheses tests.

Table 1 .Descriptive Statistics of Research Variables

Variables	Mean	Median	Maximum	Minimum	Std. Dev.
$R_{i,t}$	0.229	0.115	1.985	-0.672	0.47
$\Delta X_{i,t}$	0.022	0.015	1.276	-0.81	0.185
$\Delta X_{i,t3}$	0.059	0.039	1.548	-1.463	0.29
$R_{i,t3}$	1.214	0.83	7.569	-0.886	1.463
$Synch_{i,t}$	-0.51	-0.513	3.262	-3.866	1.103
$LVD_{i,t}$	0.333	0.328	0.5	0.134	0.076
$Size_{i,t}$	26.663	26.481	31.021	23.385	1.348
$Growth_{i,t}$	0.151	0.131	0.892	-0.49	0.194
$EarnStd_{i,t}$	0.146	0.099	1.362	0.003	0.156
$Roa_{i,t}$	0.148	0.118	0.979	-0.282	0.152
$Lev_{i,t}$	0.637	0.649	1.31	0.176	0.17
$SizeAsset_{i,t}$	13.516	13.336	18.454	10.997	1.267
$TurnOver_{i,t}$	0.133	0.072	1.439	0.001	0.18
$AvrSW_{i,t}$	-0.003	-0.001	-0.0001	-0.176	0.008
$StdSW_{i,t}$	0.069	0.061	0.516	0.001	0.048
$SkeSW_{i,t}$	-0.085	-0.1	3.177	-3.203	1.108
<b>Frequency of loss variable</b>					
$Loss_{i,t}$	One	Zero			Total
	303	481			784

### Research Hypotheses Tests

The results of the first research hypothesis test (voluntary information disclosure affects the informational content of share price about future earnings) are summarized in Table 2.

The estimation results of Model 3 (Table 2) indicate that the model is significant at a desired confidence level (95%). Besides, the adjusted coefficient of determination is equal to 0.259, which shows that almost 26 percent of the changes in dependent variable are explained by a set of independent and control variables. The estimated coefficient for this model is  $(LVD_t * \Delta X_{t3}) \beta_7$ , which is significant at the desired level (P-value = 0.001). Thus, the first research hypothesis

is confirmed (hence, the voluntary information disclosure affects the informational content of share price about future income). Besides, the positive  $\beta_7$  coefficient (2.412) indicates that voluntary information disclosure promotes investors' ability to forecast future income as well as increased rate of informational content of share price.

**Table 2. The Impact of Voluntary Information Disclosure on the Informational Content of Share Price**

Future Earnings Response Coefficient Criteria			
Variable	Coefficient	t-Statistic	Prob.
$\beta_0$	0.284	1.133	0.257
$\Delta X_t$	0.257	0.869	0.384
$\Delta X_{t3}$	-0.771	-0.571	0.567
$R_{t3}$	0.114	2.339	0.019
$LVD_t$	0.417	2.113	0.034
$LVD_t \times \Delta X_t$	1.071	1.163	0.245
$LVD_t \times \Delta X_{t3}$	2.412	3.123	0.001
$LVD_t \times R_{t3}$	-0.347	-2.442	0.014
$Size_t$	-0.01	-1.109	0.267
$Size_t \times \Delta X_{t3}$	0.018	0.346	0.729
$Growth_t$	0.288	3.605	0.000
$GROWTH_t \times \Delta X_{t3}$	0.236	0.507	0.612
$Loss_t$	0.043	1.095	0.273
$LOSS_t \times \Delta X_{t3}$	-0.395	-1.524	0.127
$EarnStd_t$	-0.273	-2.126	0.033
$EARNSTD_t \times \Delta X_{t3}$	-0.457	-3.217	0.001
F-Statistic	13.468 (0/000)	Chow Test	20.73(0.000)
R-Squared	0.28	Hausman Test	74.43 (0.000)
Adjusted R-Squared	0.259	Wooldridge Test	5.08 (0.058)
Durbin-Watson Stat	2.011	LR Test	84.45 (0.000)

The second research hypothesis evaluated the effect of the level of voluntary information disclosure on the informational content of share price about firm-specific information in accordance with Model 4. The summary of estimation of the regression model has been depicted in Table 3.

The estimation results of Model 4 (Table 3) indicate that the model is significant at a desired confidence level. Besides, the adjusted coefficient of determination is equal to 0.097 and it shows that almost 10 percent of changes in dependent variable are explained by a set of explanatory variables. The estimated coefficient ( $\beta_1$ ) for voluntary information disclosure is negative but not significant (P-value = 0.722). However, it indicates that voluntary information disclosure does not significantly affect share price synchronicity. In other words, voluntary information disclosure does not significantly affect the level of reflection of firm-related information on share price or improved level of informational content of share price about firm-specific information.

**Table 3 .The Effect of Voluntary Information Disclosure on Informational Content of Share Price**

Variable	Share Price Synchronicity Criteria		
	Coefficient	t-Statistic	Prob.
$\beta_0$	-0.021	-0.046	0.962
LVD <sub>t</sub>	-0.175	-0.355	0.722
AvrSW <sub>i,t</sub>	-18.119	-2.25	0.24
SkeSW <sub>i,t</sub>	0.07	2.037	0.041
StdSW <sub>i,t</sub>	-9.493	-6.781	0.000
Lev <sub>i,t</sub>	-0.353	-1.247	0.212
SizeAsset <sub>i,t</sub>	0.023	0.766	0.443
Roa <sub>i,t</sub>	0.132	0.422	0.673
TurnOver <sub>i,t</sub>	0.438	1.927	0.054
F-Statistic	6.648 (0.000)	Chow Test	2.23 (0.029)
R-Squared	0.114	Hausman Test	38.46 (0.000)
Adjusted R-Squared	0.097	Wooldridge Test	0.084 (0.781)
Durbin-Watson Stat	1.967	LR Test	6.79 (0.451)

## Conclusion

Given the very significant status of share price in the eyes of the investors, it appears that the informational content of share price is also of great importance. This is due to this fact that as the

informational content increases, lower levels of volatility are generated and, consequently, more real information is exhibited in the share price. Conclusively, the share price moves closer to its intrinsic value and this situation promotes the investors' confidence in the capital market and boosts the allocation of scarce capital resources. As such, this study aimed to evaluate the effect of voluntary information disclosure on informational content of share price.

Given the agency theory of voluntary information disclosure and signaling theory, the analyses of the first hypothesis test show that voluntary information disclosure in the Iranian capital market has increased the informational content of share price about the future earnings. As further information disclosure leads to appropriate information environment, so it increases the capability of investors to predict the future earnings and, consequently, leads to more accurate predictions on the part of investors and, finally, more future earnings information is exhibited in the share price. Thus, it seems that voluntary disclosure can be used as a tool in reducing the negative effects of agency and signaling investors in this domain. These results are in line with the findings of studies conducted by Gelb and Zarowin (2002), Lundholm and Myers (2002), Choi et al. (2011), Haw et al. (2012) and Cheng et al. (2014), in that more information disclosure increases the informational content of share price about the future income. Besides, these findings are consistent with the results of studies conducted by Wang and Hosseini (2013) and Moumen et al. (2015), in that voluntary information disclosure leads to the reflection of future income information in the share price.

The results of the second hypothesis test show that voluntary information disclosure does not have a significant effect on share price synchronicity. However, the theoretical foundations led the researchers to assume that voluntary information disclosure can avail more firm-related information to investors and that more reflection of firm-related and confidential information on share returns as well as reduced rate of correlation among firm's share returns and industry / market returns lead to reduced rate of share price synchronicity. On the contrary, the results of tests indicated that voluntary information

disclosure does not have a significant contribution in this regard. In other words, it was indicated that voluntary information disclosure does not affect the informational content of share price (in Tehran Stock Exchange) about firm-related information. These findings are in contrast with the findings of the studies conducted by Haggard et al. (2008) and Tian (2014), in that voluntary information disclosure reduces the cost of gathering firm-related and confidential information, increases the firm transparency, reduces the share price synchronicity and improves the informational content of share price. However, these results are not in line with the results of the study conducted by Song (2015). in that if firms adopt an appropriate disclosure policy, they can benefit from a lower rate of share price synchronicity.

In sum, the results of this study indicate that voluntary information disclosure improves the informational content of share price about the future earnings (improved level of future earnings response coefficient), but it does not improve the informational content of share price about firm-specific information (reduced level of share price synchronicity). Since investors' expectations on the future trend of firms are based on available information, firms active in stock exchange are recommended to adopt appropriate information disclosure policy and, thus, provide a conducive informational environment to the investors. Actually, if realities are realized in the future, they become more confident in investing in the capital market. As such, more capital resources will be attracted and the allocation of scarce capital resources is facilitated thereof.

## References

- Ahmadpour, A., & Peykarnegar Ghale Roodkhani, S. (2011). The relationship between components of accruals quality and price synchronicity in Tehran Stock Exchange companies. *Quarterly Journal of Securities Exchange*, 4(16), 137-151. (Persian)
- Bashirimanesh, N., Rahmani, A., & Mosavi, M. (2016). Consequences of voluntary disclosure: Structural equation modeling approach. *Journal of Empirical Research in Accounting*, 5(4), 161-186. (Persian)
- Bashirimanesh, N., Rahmani, A., Hosseini, S. A., & Mosavi, M. (2015). Value relevance of voluntary disclosure in capital market of Iran. *Journal of Accounting and Auditing Review*, 22(3), 279-300. (Persian)
- Botosan, C. A. (1997). Disclosure level and the cost of equity capital. *The Accounting Review*, 72(3), 323-349.
- Cheng, C. S. A., Johnston, J., & Li, S. (2014). Higher ERC or higher future ERC from income smoothness? The role of information environment. *American Accounting Association Annual Meeting and Conference on Teaching and Learning in Accounting*, Atlanta, GA, August 2-6, 2014.
- Cheng, C. S., Johnston, J. A., & Zhou, L. (2012). *Earnings quality and price synchronicity: Industry-wide and firm-specific information*. Available at <http://ssrn.com>.
- Choi, J. H., Choi, S., Myers, L. A., & Ziebart, D. (2017). *Financial statement comparability and the informativeness of share prices about future earnings*. Available at: <http://www.ssrn.com>.
- Choi, J. H., Myers, L. A., Zang, Y., & Ziebart, D. (2011). Do management EPS forecasts allow returns to reflect future earnings? Implications for the continuation of management's quarterly earnings guidance. *Review of Accounting Studies*, 16(1), 143-182.
- Collins, D. W., Kothari, S. P., Shanken, J., & Sloan, R. G. (1994). Lack of timeliness and noise as explanations for the low contemporaneous return-earnings association. *Journal of Accounting & Economics*, 18(3), 289-324.

- Drake, M. S., Myers, N., Myers, L. A., & Stuart, M. D. (2015). Short sellers and the informativeness of share prices with respect to future earnings. *Review of Accounting Studies*, 20(2), 747-774.
- Durnev, A., Morck, R., & Yeung, B. (2004). Value-enhancing capital budgeting and firm-specific share return variation. *Journal of Finance*, 59(1), 65-105.
- Ebrahimi kordlar, A. & Javani Ghalandari, M. (2016). The effect of auditor expertise on earnings quality and share price synchronicity. *Journal of Accounting and Auditing Review*, 23(2), 137-154. (Persian)
- Foruqi, D., & Qasemzad, P. (2015). The effect of financial statement comparability on future earnings response coefficients. *Journal of Accounting and Auditing Review*, 22(4), 479-500. (Persian)
- Foruqi, D., & Qasemzad, P. (2016). The effect of financial statements comparability on share price synchronicity. *Financial Accounting Researches*, 8(1), 39-54. (Persian)
- Gelb, D. S., & Zarowin, P. A. (2002). Corporate disclosure policy and the informativeness of share prices. *Review of Accounting Studies*, 7(1), 33-52.
- Gul, F. A., Kim, J. B., & Qiu, A. A. (2010). Ownership concentration, foreign shareholding, audit quality, and share price synchronicity: Evidence from China. *Journal of Financial Economics*, 95(3), 425-442.
- Haggard, K. S., Matrin, X., & Pereira, R. (2008). Does voluntary disclosure improve share price informativeness? *Journal of Financial Management*, (37), 747-768.
- Hamrouni, A., & Solonandrasana, B. (2013). A study of the relationship between the extent of voluntary disclosure and information asymmetry in stock exchange market. *Conference de l'Association Française de la Finance (AFFI)*, Lyon, France.
- Haw, I. M., Hu, B., Lee, J. J., & Wu, H. (2012). Investor protection and price informativeness about future earnings: International evidence. *Review of Accounting Studies*, 17(2), 389-419.
- Imani Barandagh, M., & Abdi, S. (2016). The impact of income smoothing on the future earnings response coefficient with the

- effect of moderating different information environments. *Journal of Accounting and Auditing Review*, 23(3), 289-310. (Persian)
- Jin, L., & Myers, S. C. (2006). R2 around the world: New theory and new tests. *Journal of Financial Economics*, 79(2), 257-92.
- Kamyabi, Y., & Parhizgar, B. (2016). The study of the relationship between institutional investors and share price synchronicity in listed companies in Tehran Stock Exchange. *Journal of Investment knowledge*, 5(17), 165-186. (Persian)
- Kashanipoor, M., Rahmani, A., & Parchini Parchin, S. M. (2009). The relationship between voluntary disclosure and outside directors. *Journal of Accounting and Auditing Review*, 16(57), 85-100. (Persian)
- Khajavi, S., & Alizadeh Tala Tappe, V. (2014). Investigating the impacts of voluntary disclosure level on the information asymmetry of the companies listed in Tehran Stock Exchange. *Empirical Studies in Financial Accounting Quarterly*, 11(42), 89-115. (Persian)
- Li, D., Song, L., & Zhang, Z. (2014). Does the relationship between accounting disclosure and bank loan contracts vary with borrower characteristics? Evidence from emerging markets. *Asian Journal of Finance & Accounting*, 6(1), 440-463.
- Lundholm, R., & Myers, L. A. (2002). Bringing the future forward: The effect of disclosure on the returns-earnings relation. *Journal of Accounting Research*, 40 (3), 809-839.
- Mehrani, S., Karami, G. R., Seyyed Hosseini, M., & Jahroomi, M. (2016). *Accounting theory* (2nd Vol.). Tehran: Negahe Danesh Publications. (Persian)
- Mehrvarz, F., & Marfou, M. (2016). The relationship between financial statements comparability with share price in formativeness about future earnings. *Empirical Studies in Financial Accounting Quarterly*, 13(49), 83-110. (Persian)
- Morck, R., Yeung, B., & Yu, W. (2000). The information content of share markets: Why do emerging markets have synchronous share price movements. *Journal of Financial Economics*, 58 (1-2), 215-260.

- Moumen, N., Othman, H. B., & Hussainey, K. (2015). The value relevance of risk disclosure in annual reports: Evidence from MENA emerging markets. *Research in International Business and Finance*, 34(3), 96-112.
- Piotroski, J., & Roulstone, D. (2004). The influence of analysts, institutional investors and insiders on the incorporation of market, industry and firm-specific information into share prices. *The Accounting Review*, 79(4), 1119-1152.
- Rahmani, A., Bashirimanesh, N., & Shahrokhi, S. S. (2012). Investigate effect of the release of earnings forecast on future earnings response coefficient. *Journal of Accounting Knowledge*, 3 (10), 29-50. (Persian)
- Setayesh, M. H., & Shamseddini, K. (2016). An investigation of the relationship between investor sentiment and price shares in Tehran Stock Exchange (TSE). *Journal of Accounting Advances*, 8(1), 103-125. (Persian)
- Setayesh, M. H., Roosta, M., & Alizadeh Tala Tappe, V. (2014). The relation between voluntary disclosure and performance of firms listed in Tehran Stock Exchange. *Journal of Empirical Research in Accounting*, 4(1), 153-168. (Persian)
- Sila, V., Gonzalez, A., & Hagendor, J. (2017). *Independent director reputation incentives and share price informativeness*. Available at: <http://www.ssrn.com>.
- Song, L. (2015). Accounting disclosure, share price synchronicity and share crash risk an emerging-market perspective. *International Journal of Accounting & Information Management*, 23(4), 349-363.
- Tian, E. (2014). *Voluntary disclosures and the share price synchronicity evidence from New Zealand* (Doctoral dissertation). New Zealand, Auckland University of Technology.
- Utz, S. (2016). Share synchronicity, share price crash risk, and corporate social responsibility: Evidence from an international sample. Available at: <http://www.ssrn.com>.
- Wang, M. & Hussainey, K. (2013). Voluntary forward-looking statements driven by corporate governance and their value relevance. *Journal of Accounting and Public Policy*, 32(2), 26-49.

Wang, J. W., & YU., W. W. (2015). The information content of share prices, legal environments, and accounting standards: International evidence. *European Accounting Review*, 24(3), 471-493.