Does Realization of Earnings Forecast Result in Fraudulent Financial Reporting?

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Abstract. This article studies a situation in which corporate managers publish fraudulent financial statements facing the risk of non-realization of management earnings forecast. In particular, if the managers fail to realize the earnings forecast through other common methods in use, they will try to use unauthorized methods, especially using opportunistic restatement, to enhance the reported earnings to the forecasted level. One thing that may indicate management restrictions in using conventional methods to achieve forecasted earnings is bloated balance sheet. Bloated balance sheet is realized through the use of discretionary accruals in the previous period and the accumulation of these items in the net operating assets of the firm. To test this prediction, data from 240 companies, including 2,200 firm-year observations during the 2001-2012 and logistic regression were used. The results show that at time when corporate balance sheets is bloated by the use of discretionary accruals, the possibility of increased restatements (initial reported earnings higher than restated earnings) as well as opportunistic restatement (restatements led to the realization of forecasted earnings) increases so as the companies avoid a negative unexpected earnings report.

Keywords: Opportunistic restatement, fraudulent financial reporting, management forecast, negative unexpected forecast

1. INTRODUCTION

Previous research has shown that a large number of companies have reported earnings per share that is consistent with the forecasts or is slightly higher (e.g., deGeorge et al., 1999). This drew attention of the researchers to the issue that why the realization of earnings forecast is so important for corporate managers, and which methods the managers use to achieve this.

Review of literature suggests that researchers had previously focused mainly on three approaches and management tools in order to achieve the forecasted earnings. These tools include (1) Earnings management through discretionary accruals (Abrabanel and Lahavi, 2003; Bradstcher and Eames 2006; Dichew et al. 2003), (2) expectations management (Kasznik and Liu 1995; Matsumoto, 2002) and (3) real earnings management (Rechawdry 2006, Gani, 2010).

Previous studies (e.g., Brown and Keillor, 2005; Matsumoto, 2002, Bartov et al., 2002; Brown, 2001) have shown that managers want the earnings the firm earn at the end of the reporting period to be at least equal to earlier predictions of the management or financial analysts. Since the real earnings lower than forecast (known as "unexpected negative earnings") will result in adverse market reaction, and consideration of poor assessment of management performance, companies often use three methods mentioned above to reduce the non-realization of earnings forecast (Hu et al., 2012).

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1. One of these methods is the use of discretionary accruals to manipulate earnings which is known as the accrual-based earnings management.

2. The second method refers to the real earnings management according to which managers take real economic measures to achieve the desired level of earnings. These measures include reduction in avoidable costs in the field of research and development (R & D), advertising and maintenance, as well as reduction in cost of goods sold through the increased production in the current period.

3. One of the other ways of achieving the earnings forecast is managing market and investors’ expectations by providing low forecasts (decreased earnings forecast).

Most of the literature consider three ways of earnings management through discretionary accruals, real earnings management, and decreased earnings forecasts as complementary mechanisms that managers use simultaneously trying to avoid negative unexpected earnings (Bartov et al., 2002; Matsumoto, 2002; Barton and Simko 2002; Brugstler and Eames 2006).

However, due to limitations in the use of accruals for increased earnings management as well as the reversal of accruals management during future periods, the important costs and negative consequences of real earnings management and negative reaction of the market and investors to decreased expectations management cause managers to be limited in applying these methods to avoid unexpected negative earnings.

For example, using increased earnings management through discretionary accruals for the previous period(s) lead to overstatement of net operational assets on the balance sheet (bloated balance sheet). Therefore, bloated the balance sheet can be known as a sign of earnings management in the previous periods, and can be used as a measure to assess the restriction on the use of discretionary accruals to manage earnings in the current period.

When managers fail to avoid negative unexpected earnings through discretionary accruals, actual events and investors expectations management, they try to reduce costs and realize earnings forecast through unauthorized methods in contrary to accepted accounting principles, and in particular fraudulent reporting.

This study focuses on such a situation trying to address the that do corporate managers resort fraudulent financial reporting to avoid unexpected negative earnings, especially at a time when the use of discretionary accruals is a costly solution to realize the earnings forecast due to the bloated balance sheet. This study considers increased restatements (i.e. restatements where the initial reported earnings is higher than the restated reported earnings) and opportunistic restatement (i.e. restatements where the initial reported earnings cause realization of the earnings forecast, but the restated earnings does not provide this feature) as fraudulent financial reporting.

2. THEORETICAL FRAMEWORK, RESEARCH LITERATURE, AND EXPLAINING THE HYPOTHESES

2-1. Unexpected earnings and its management incentives

Unexpected earnings rises when the corporate seasonal or annual earnings is above or below the official forecasts of the management or analysts. The unexpected earnings is also created when the implicit (implied) expectations of investors about the earnings is different from the amount reported by the firm. Usually, investors’ expectations and forecasts of managers and financial analysts are based on their experience and these experiences are rooted in earnings of previous seasons and years, current market conditions and the economic situation, (Brown, 1997).
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To avoid unexpected earnings, managers have many negative incentives, especially when the realized earnings is lower than earnings forecast, since unexpected negative earnings could be followed by negative market reaction (Brown & P., 2007). Bartov et al. (2002) and Doyle et al (2013) also showed the companies that have been able to realize a earnings forecast of analysts, have achieved a much higher return in contrast to companies that have experienced negative unexpected earnings. Also, Kasznik and Mac Nicholas (2002) showed that companies with positive unexpected earnings have achieved a higher market value and return in next seasons. In addition, Skinner and Sloan, (2002) showed that the market shows a symmetrical response to unexpected forecast, so that, the negative reaction of the market to unexpected negative earnings is greater than market reaction to unexpected positive earnings.

2-2. Mechanisms to avoid unexpected negative earnings

Due to the important consequences of unexpected negative earnings, corporate managers will try to avoid negative unexpected earnings, or in other words, manage it. Four main methods that companies use to avoid negative unexpected earnings reports include: (1) increased earnings management through discretionary accruals, (2) upward real earnings management, (3) decreased expectations management (forecasts) and (4) finally, violation of generally accepted accounting principles (GAAP).

Earnings management through discretionary accruals refers to conditions in which the firm uses accounting estimates and judgments (optional) to manage earnings (Schipper, 1989; Haley and Valen, 1999). When managers find that they cannot realize earnings forecast on the seasonal earnings through actual performance, they try to impose their authority through the use of discretionary accruals to reach the forecasted earnings and avoid the negative consequences of unexpected forecast (Matsumoto, 2002). Researchers such as Brugstaler and Eames (2006) showed that managers try to avoid the occurrence of negative unexpected earnings and even to achieve positive unexpected earnings through the use of increased discretionary accruals.

Chaudhry (2006) stated in his study that earnings management can be done through the real activities. This type of earnings management is done through changes in operational activities with the aim of misleading the stakeholders and is called real earnings management. Manipulation of real activities has impact on cash flows and in some cases on accruals and cause the management to achieve the desired earnings. Some real earnings management methods include unusual decrease in sales prices in order to increase sales and decrease discretionary spending during the economic crises. Several studies have shown that managers manipulate real activities to achieve targeted earnings (Hu et al., 2012).

An alternative mechanism for avoiding negative unexpected earnings, is earnings forecast management. The earnings forecast management is the process through which managers decrease expectations of investors about the amount of earnings in a period of time and thereby increase the chances of making a earnings forecasts. Research in this area suggests that managers try to avoid unexpected negative earnings by managing decreased expectations and forecasts. For example, Bartov et al (2002) demonstrated that companies that act to manage the reduced forecasts benefit from higher returns in contrast to companies that fail to do so. Brugstaler and Eames (2006) also showed that managers try to avoid the occurrence of negative unexpected earnings and even to achieve positive unexpected earnings through the use of increased discretionary accruals.

If for any reason managers fail to use these three approaches to avoid realization of unexpected negative earnings, they will try to go through violation of GAAP to achieve this goal. However, violation of accounting principles eventually force management to review the financial statements. Managers incentives in optional accounting choice can be fraudulent or non-fraudulent. In the first group, managers choose methods of accounting procedures that provide their
interests. In the second group, managers incentives in the choice of accounting methods is non-personal and in the interests of shareholders. In the future, managers may be forced to reconsider their options, whether the reconsiderations result from fraudulent motives or non-fraudulent motives. In the case that restatement is performed to provide opportunistic management incentives, undoubtedly, this restatement represents a fraud on financial reporting and it can be considered a sign of poor financial reporting. This type of restatement is mainly provided for the purpose of avoiding negative unexpected earnings and is considered as a last resort of management (Badertscher et al., 2012).

2-3. Bloated balance sheet

As previously mentioned, in the face of unexpectedly negative earnings, the first mechanism to avoid it is increased earnings management through discretionary accruals. However, the use of discretionary accruals have significant limitations and costs. For example, Barton and Simko (2002) show that the balance sheet data limits earnings management through discretionary accruals. Due to the fact that the effect of discretionary accruals in the current period will reverse in the future financial period(s), through the use of discretionary accruals in the previous period, the ability of management for the use of discretionary accruals in the current period is limited. Also, since the balance sheet aggregates and accumulates the impact of accounting choices in the past, it reflects the net operating assets management during the past periods. Therefore, Barton and Simko (2002) show that overstatement of the net assets in the balance sheet limits the ability of managers to use increased discretionary accruals in the current period. This situation is called the bloated balance sheet. Bloated balance sheet reflects the likelihood of using fraudulent restatement in order to avoid unexpected negative earnings.

2-5. Research background

Dovil et al. (2013) showed that when companies fail to avoid negative unexpected earnings through discretionary accruals, actual events and investors expectations management, they try to reduce costs and realize earnings forecast through unauthorized methods in contrary to accepted accounting principles. They show that the costs associated with using too much discretionary accruals to manage increased earnings will cause the managers of these companies to replace real earnings management to increase earnings and avoid unexpected negative earnings.

Hu et al. (2012) in a similar survey showed that when bloated balance sheet as a result of the use of discretionary accruals limits the use of these items by management, managers will try to avoid the incidence of adverse unexpected earnings through real earnings management as well as decreased forecasts and earnings expectations management.

Brugstaler and Eames (2006) showed that companies use discretionary accruals and reduced forecast management to avoid unexpected negative earnings. Barton and Simko (2002) show that overstatement of the net assets in the balance sheet limits the ability of managers to use increased discretionary accruals. In that case, the companies try to achieve forecasts by decreased earnings expectations management.

Taghi Rahmani et al. (2012) showed that realization of management earnings forecast will increase the earnings reaction factor. So managers have an incentive to realize the forecasted earnings. Maham and Zolghadr (2012) showed that, when managers find they cannot realize their predictions, they try to avoid negative unexpected forecast reporting through increased discretionary accruals and management of real earnings, and show their performance is in accordance with the desired forecasts. Heidarpour and Khajeh Mahmoud (2014) also showed that investors pay special attention to achieved forecasted earnings per share and use these figures widely in their decision making models to exchange their shares. The evidence provided by the
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researchers implicitly suggests the high motivation of managers to avoid unexpected negative earnings.

2-6. Research hypotheses

When because of the bloated balance sheet, managers are limited to avoid unexpected earnings through discretionary accruals, as an alternative mechanism, they will try to achieve their goal by violation of GAAP, that will lead to opportunistic restatement of financial statements. Thus, the research hypotheses are as follows:

Hypothesis 1: Bloated balance sheet increases the correlation between increased restatement and the realization of earnings forecast.

Hypothesis 2: Bloated balance sheet increases the correlation between opportunistic restatement and the realization of earnings forecast.

3. RESEARCH METHODOLOGY

3-1. Statistical population and sample

The population of this research consists of all companies listed on Tehran Stock Exchange during the period 2002-2012. The sample includes all members of the population who meet the following criteria:

1) Their financial period ends on 21 of March and did not experience change in financial period during the study.
2) Their activities is manufacturing.
3) The information needed to calculate variables is available.

According to these criteria, 240 companies (including 2,200 firm-years) were selected as the final sample.

3-2. Research models and variables

In order to test research hypotheses, logistic model (1) is used. The model is estimated with fixed effects and using panel data. Using logistic regression with fixed effects provide the opportunity to precisely control the effects of unmeasured variables on the dependent variable.

Model (1):

The research hypotheses will be confirmed if the estimated factor (3α) for the independent variable ( ), the interaction of the bloated balance sheet and restatements positive and significant.

3-2-1. The dependent variable

The model (1), MBE is a dual variable that shows the value zero or one for the dependent variable. If the management earnings forecast at the end of the financial period (initial reported earnings) is achieved, MBE variable is equal to one and otherwise, it is zero.

3-2-2. The independent variables

1. Bloated balance sheet (BBS) is measured using model (2). Thus, the larger amount of BBS represents more overstatement of the net assets of the firm and the more bloated balance sheet.

Model (2):
In model (2), NOA represents the firm's net operational assets that is equal to total assets and interest-bearing debt minus total cash and short-term investments.

2. Increased restatement (UR): If the earnings in the restatement is smaller than initially reported earnings, the variable is equal to one, and otherwise it is equal to zero.

3. Opportunistic restatement (FR): According to the model, if the restatement is deemed to be opportunistic, it is equal to one, and otherwise it is equal to zero.

According to the model, the firm resorts to fraudulent financial reporting if it restates its financial statement in the next period, and the restatement is a result of fraudulent incentives of management. In this case, the Fraud variable will take the value one.

According to the model, the financial statements are fraudulent if the initial reported earnings (i.e., managed or manipulated earnings) is larger than the restated earnings (actual earnings) (increased restatement), and the initial earnings is larger than or equal to management earnings forecast, while the restated earnings is lower than forecast. Model (3) shows this equation.

Model (3): \[ O_{ijt} - MF_{jt} > R_{ijt} \]

The model (1), OI is the initial earnings, RI is the restated earnings, and MF is the latest management earnings forecast for the year t, which is before the publication of financial statements of the year t. In other cases, the restated earnings will be considered non-fraudulent. For example, if the restatement does not result in change in earnings or the restated earnings is larger than the initial earnings (decreased restatement), the firm has not resorted to the fraudulent restatement (Badertscher et al., 2012).

Figure (1) shows the number of restatements for the two groups. According to the model, 167 firm-year observations have resorted to fraudulent financial reporting, while restatements of 1578 observations (difference between row 1 and 4) were non-fraudulent.

### Table 1. Categorization of restatements.

<table>
<thead>
<tr>
<th>Row</th>
<th>Description</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total number of restatements</td>
<td>(%100) 1745</td>
</tr>
<tr>
<td>2</td>
<td>Difference between restates and initial earnings</td>
<td>(%70) 1225</td>
</tr>
<tr>
<td>3</td>
<td>Increased restatements</td>
<td>(57%) 981</td>
</tr>
<tr>
<td>4</td>
<td>Fraudulent increased restatement</td>
<td>(%10) 167</td>
</tr>
<tr>
<td>5</td>
<td>Non-fraudulent increased restatement</td>
<td>(%47) 814</td>
</tr>
<tr>
<td>6</td>
<td>Decreased restatement</td>
<td>(%13) 224</td>
</tr>
</tbody>
</table>

3-2-3. The control variables

- Since institutional investors are more willing and have more power to put pressure on management to realize forecast earnings per share, it is expected that companies with higher share of institutional owners, managers try harder to avoid unexpected negative earnings. Institutional ownership (INST) is measured by the total percentage of institutional ownership (Matsomato, 2002).

- The market reaction to unexpected negative earnings of companies with greater growth opportunities is higher than other companies (Skinner & Ason, 2002). The ratio of market value to book value of equity is considered as a representative for growth opportunities (LTG).
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- Since managers of losing companies are less likely to have activities to avoid negative unexpected earnings, the losses report (LOSS) has been controlled in the past two years (Matsomato, 2002). If the firm has reported losses in the past two years, LOSS is one and otherwise it is zero.

- Larger companies are more likely to be seen by the participants in the capital market, especially investors. As a result, the managers of these companies are more motivated to achieve their forecasts and avoid unexpected negative earnings (Brown and Pinlo, 2007). Firm size (SIZE) is measured through the log of the firm's stock market value at the beginning of the period.

- The consequences of real earnings management is less for companies that have a larger share of the market for the product, so the managers of these companies are probably more willing to use real earnings management to avoid negative unexpected earnings (Doyle et al., 2013). Market share (MS) is calculated by dividing the firm's sales in year t divided by the total sales of the firm's activity in the industry in the year.

- Cost structure of the firm may influence the corporate willingness to use real earnings management. Managers of companies with greater operational leverage (higher fixed costs) are more likely to manage real earnings. Fixed cost (FC) is calculated as the tangible fixed assets dividing by the sales (Doyle et al., 2013).

- A dummy variable (INDUSTRY) for control of the industry effect based on industry classification.

- A dummy variable (YEAR) to control the effects of the financial period.

4. RESULTS

4-1. Descriptive statistics

This section presents descriptive statistics of the variables. Table 2 presents descriptive statistics of the variables except for the restatements. The results show that 71 percent of the sample members (equal to 1562 observations among 2200 firm-year) have experienced unexpected negative earnings avoidance. This means that their reported earnings have been at least equal to the forecasted amount of earnings. Mean 0.660 for the BTM variable means the major companies in the survey sample do not have much opportunity for growth. In other words, they are considered to be mature companies.

On average, the net operational assets of the firm is more than triple the firm's sales revenue (BBS=3.339). It should be noted that this variable indicates the degree of the balance sheet bloat. The greater value of this statistic means that the firm has used higher accruals in the previous periods, and will be faced with more restrictions in the future to use discretionary accruals for earnings management.

About 16% of the sample observations have reported losses during the previous years. In addition, the obtained value for the market share variable indicates the concentration in the product market.
Table 2. Descriptive statistics variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>%25</th>
<th>%75</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBE</td>
<td>0.710</td>
<td>0.454</td>
<td>1.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>BTM</td>
<td>0.660</td>
<td>0.582</td>
<td>0.525</td>
<td>0.298</td>
<td>0.890</td>
</tr>
<tr>
<td>Sales_Growth</td>
<td>0.203</td>
<td>0.495</td>
<td>0.158</td>
<td>0.009</td>
<td>0.323</td>
</tr>
<tr>
<td>BBS</td>
<td>3.339</td>
<td>4.892</td>
<td>2.118</td>
<td>1.212</td>
<td>3.591</td>
</tr>
<tr>
<td>ROA</td>
<td>0.092</td>
<td>0.155</td>
<td>0.084</td>
<td>0.025</td>
<td>0.166</td>
</tr>
<tr>
<td>LOSS</td>
<td>0.162</td>
<td>0.369</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>SIZE</td>
<td>5.445</td>
<td>0.689</td>
<td>5.393</td>
<td>5.024</td>
<td>5.825</td>
</tr>
</tbody>
</table>

MBE is avoidance of reporting unexpected earnings, it is a dual variable that is equal to one if the management earnings forecast at the end of the financial period is achieved, and otherwise, it is zero; BTM is ratio of book value to market value of equity; Sales_Growth is sales growth of current year compared to last year; BBS is the bloated balance sheet; LOSS is a dual variable that shows the reported losses, and the loss is reported by the firm, it will take value one, and otherwise, it will take the value of zero; SIZE is the logarithm of the market value of the shares at the beginning of the period. *, ** significant at 5% and 1% level, respectively.

Table 3 shows the correlation between research explanatory variables. Although most of the correlations between the explanatory variables are statistically significant, the low value of correlations indicates that the collinearity between the independent variables is not serious.

Table 3. Correlation between explanatory variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>BBS</th>
<th>INST</th>
<th>LTG</th>
<th>LOSS</th>
<th>SIZE</th>
<th>MS</th>
<th>FC</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBS</td>
<td>0.039*</td>
<td>0.051*</td>
<td>-0.151**</td>
<td>0.067**</td>
<td>-0.112**</td>
<td>0.474**</td>
<td></td>
</tr>
<tr>
<td>INST</td>
<td>0.043*</td>
<td>0.029</td>
<td>-0.378**</td>
<td>0.692**</td>
<td>0.312**</td>
<td>0.009</td>
<td></td>
</tr>
<tr>
<td>LTG</td>
<td>0.065**</td>
<td>0.041*</td>
<td>-0.063**</td>
<td>-0.224**</td>
<td>-0.002</td>
<td>0.045*</td>
<td></td>
</tr>
<tr>
<td>LOSS</td>
<td>0.187**</td>
<td>-0.472**</td>
<td>-0.071**</td>
<td>-0.267**</td>
<td>-0.311**</td>
<td>0.179**</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.084**</td>
<td>0.763**</td>
<td>-0.256**</td>
<td>-0.325**</td>
<td>0.634**</td>
<td>-0.057**</td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td>-0.125**</td>
<td>0.389**</td>
<td>-0.011</td>
<td>-0.393**</td>
<td>0.711**</td>
<td>-0.065**</td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>0.545**</td>
<td>0.018</td>
<td>0.068*</td>
<td>0.227**</td>
<td>-0.076</td>
<td>-0.089**</td>
<td></td>
</tr>
</tbody>
</table>

4-2. Results of the hypothesis tests

Table (4) shows the results of the first hypothesis test in the form of estimated coefficients for the logistic regression. In the regression model, the probability to avoid unexpected negative earnings is used as the dependent variable. The first hypothesis predicts that there is a significant positive correlation between the increased restatement and avoiding unexpected negative earnings in the bloated balance sheet. Figure (5) shows the results of logistic regression where the target variable (BBS × UR) is equal to 0.217 that according to the first hypothesis is positive and statistically significant at 0.01. This means that the more bloated the balance sheet, it is more probable to use opportunistic restatement to increase artificial earnings and thus avoid unexpected negative earnings. Thus, when managers face limitation in the use of discretionary accruals due to bloated balance sheet, they try to manipulate and artificially increase earnings to avoid the risk of unexpected negative earnings. In addition, the results of the estimated coefficients of the control variables for the first hypothesis test is shown in table (4).

Accordingly, as expected, there is a direct correlation between growth opportunities and managing earnings forecasts. Due to the fact that smaller amount of market value to book value of equity (MTB) represents higher opportunity for growth, the estimated negative coefficient for this variable shows that greater firm’s growth opportunities cause the firm management to work
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It is harder to avoid the incidence of adverse unexpected earnings through decreased management earnings forecast.

The estimated coefficient for the loss report (LOSS) variable is negative. This means the losses report, companies are less likely to offer decreased forecast management. At a time when the firm is losing, management will not be too motivated to achieve earnings forecast, since it will be followed by a negative market reaction. In addition, the estimated coefficient for the variable size (SIZE) also shows that there is a positive correlation between the decreased forecast management and the size of the firm, since larger companies due to more focus of participants in the capital market on their performance are more motivated to decrease expectations and avoid the incidence of adverse unexpected earnings.

Table 4. The results of logistic regression for the first hypothesis test.

<table>
<thead>
<tr>
<th>The expected sign</th>
<th>Coefficient</th>
<th>z statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>+/-</td>
<td>2/198**</td>
</tr>
<tr>
<td>UR</td>
<td>+</td>
<td>0/394**</td>
</tr>
<tr>
<td>BBS</td>
<td>+</td>
<td>0/128**</td>
</tr>
<tr>
<td>UR*BBS</td>
<td>+</td>
<td>0/217**</td>
</tr>
<tr>
<td>LOSS</td>
<td>-</td>
<td>-0/133**</td>
</tr>
<tr>
<td>SIZE</td>
<td>-</td>
<td>0/216**</td>
</tr>
<tr>
<td>BTM</td>
<td>-</td>
<td>0/442**</td>
</tr>
<tr>
<td>ROA</td>
<td>-</td>
<td>0/035*</td>
</tr>
<tr>
<td>Sales_Growth</td>
<td>-</td>
<td>-0/093*</td>
</tr>
<tr>
<td>Pseudo R²</td>
<td></td>
<td>0/074</td>
</tr>
</tbody>
</table>

The second hypothesis predicts that there is a significant positive correlation between the opportunistic restatement and avoiding unexpected negative earnings in the bloated balance sheet. Figure (5) shows the results of logistic regression where the dependent variable is to avoid unexpected negative earnings. As can be seen, the coefficient estimated for the target variable (BBS × UR) is equal to 0.311 that according to the second hypothesis is positive and statistically significant at 0.01. This means that the more bloated the balance sheet, it is more probable to use opportunistic restatement to increase artificial earnings and thus avoid unexpected negative earnings. In other words, at the time of limitation for the use of discretionary accruals, the managers will try to avoid the negative unexpected earnings through the manipulation and modification of the earnings in the following periods.

Interpretations provided for the control variables for the first research hypothesis are still standing for the second hypothesis.
Table 5. The results of logistic regression for the second hypothesis test.

<table>
<thead>
<tr>
<th>The expected sign</th>
<th>Coefficient</th>
<th>z statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>+/-</td>
<td>2.352**</td>
</tr>
<tr>
<td>FR</td>
<td>+</td>
<td>0.286**</td>
</tr>
<tr>
<td>BBS</td>
<td>+</td>
<td>0.124**</td>
</tr>
<tr>
<td>FR*BBS</td>
<td>+</td>
<td>0.311**</td>
</tr>
<tr>
<td>LOSS</td>
<td>-</td>
<td>-0.175**</td>
</tr>
<tr>
<td>SIZE</td>
<td>-</td>
<td>0.209**</td>
</tr>
<tr>
<td>BTM</td>
<td>-</td>
<td>0.387**</td>
</tr>
<tr>
<td>ROA</td>
<td>-</td>
<td>0.041</td>
</tr>
<tr>
<td>Sales_Growth</td>
<td>-</td>
<td>-0.107*</td>
</tr>
<tr>
<td>Pseudo R²</td>
<td></td>
<td>0.074</td>
</tr>
</tbody>
</table>

\[ \text{Prob} (\text{MBE}_{it}) = \alpha_0 + \alpha_1 \text{FR}_{it} + \alpha_2 \text{BBS}_{it} + \alpha_3 \text{FR} \times \text{BBS}_{it} + \text{Controls} \]

MBE is avoidance of reporting unexpected earnings, it is a dual variable that is equal to one if the management earnings forecast at the end of the financial period is achieved, and otherwise, it is zero; BTM is ratio of book value to market value of equity; Sales_Growth is sales growth of current year compared to last year; BBS is the bloated balance sheet; LOSS is a dual variable that shows the reported losses, and the loss is reported by the firm, it will take value one, and otherwise, it will take the value of zero; SIZE is the logarithm of the market value of the shares at the beginning of the period.

*, ** significant at 5% and 1% level, respectively.

5. CONCLUSION

In this study, the role of the balance sheet was studied as a limiting factor in the earnings management through discretionary accruals and managers’ tendency to fraudulent financial reporting in the face of these limitations.

Previous studies, including Barton and Simko (2002) and Ho et al. (2012) showed that due to limitations imposed by GAAP, corporate managers do not benefit from the infinite ability to use discretionary accruals to artificially manipulate earnings, especially considering that the use of discretionary accruals are reflected in the balance sheet and this will narrow the ability of managers to use accruals.

Accruals nature is such that their effects will be reversed in later periods. As a result of these factors, he ability and willingness of management in the use of discretionary accruals will be inversely related to the use of these items in the previous periods. According to the forecasts, results of logistic regression models with fixed effects revealed the more bloated balance sheet through the use of discretionary accruals will increase the probability of using fraudulent financial reporting by the firm to avoid reporting an unexpected negative earnings. This fraudulent financial reporting will be shown in the form of increased restatements and opportunistic restatements.

The results obtained in this study are compatible theoretically and consistent with other studies in this area. For example, Hu et al. (2012) showed that when corporate managers are limited in the use of increased discretionary accruals, will use other methods of avoiding unexpected negative earnings reporting to avoid unexpected negative earnings.

Doyle et al. (2013) showed that when companies fail to avoid negative unexpected earnings through discretionary accruals, actual events and investors expectations management, they try to reduce costs and realize earnings forecast through unauthorized methods in contrary to accepted accounting principles. They show that the costs associated with using too much discretionary accruals to manage increased earnings will cause the managers of these companies to replace real earnings management to increase earnings and avoid unexpected negative earnings. This finding is quite consistent with the results of the present study.
In a similar study, Bragstaler and Eames (2006) showed that companies use discretionary accruals and reduced forecast management to avoid unexpected negative earnings. Bartov and Simko (2002) showed that overstatement of the net assets in the balance sheet limits the ability of managers to use increased discretionary accruals. In that case, the companies try to achieve forecasts by decreased earnings expectations management.

The results obtained in this study also confirm the results of domestic research, such as a study by Taghi Rahmani et al. (2012) showed that realization of management earnings forecast will increase the earnings reaction factor. Therefore, managers have an incentive to realize the forecasted earnings.

The results obtained in this study is also consistent with findings by Maham and Zolghadr (2012), who showed that when managers find they cannot realize their predictions, they try to avoid negative unexpected forecast reporting through increased discretionary accruals and management of real earnings, and show their performance is in accordance with the desired forecasts.

Heidarpour and Khajeh Mahmoud (2014) also showed that investors pay special attention to achieved forecasted earnings per share and use these figures widely in their decision making models to exchange their shares. The evidence provided by the researchers implicitly suggests the high motivation of managers to avoid unexpected negative earnings, which is consistent with the results of the present study.

6. REFERENCES