

# The impact of commercial press notifications on real earnings management

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## Abstract

Nowadays, financial information is an important strategic tool in economic decision making and certainly, the quality of decisions depends on the accuracy, precision and timeliness of the information. The commercial press has an important role in disseminating information to market participants and affecting the financial performance of companies. From the investors' point of view, covering the news related to earnings announcements and raising capital by the commercial press is so important, because of their help to assess the future perspective of the company. In order to investigate the effect of commercial press notifications on earnings management based on accruals, the data of 147 manufacturing companies listed on Tehran exchanges and the OTC market from 2011 to 2019 are examined and tested through panel data. The results show that there is a negative and significant relationship between raising capital and earnings announcement news coverage by the commercial press and real earnings management. However, there was no significance in examining the role of commercial press publishing in raising capital and earnings announcements on real earnings management. It was found that there is a negative and significant relationship between the creating role of the commercial press in earnings announcements and real earnings management. Also, there was no relationship between the creating role of the commercial press in raising capital and real earnings management.

Keywords: Creating Role of Commercial Press, Dissemination Role of Commercial Press, Raising Capital, Earnings Announcement, Real Earnings Management

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## 1 Introduction

Earnings management is one of the most challenging and controversial topics in accounting research. Because earnings is one of the criteria that investors pay special attention to their decision making. Earnings management can be done with opportunistic motives or with the motivation of information transfer. But the most accounting researches literature indicates that it is opportunistic. That it is believed that earnings management can reduce the earnings quality and thus misleads external users [4]. In previous studies, several factors have been examined that indicating the motivation of managers to manipulate financial information. The raising capital of companies is one of

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the factors that affects on earnings management. The findings of Harakeh et al. [11] show that firms which submit financial statements in accordance with International Financial Accounting Standards prior to the issuance of new shares have reduced earnings management activities and faced less information asymmetry. But one of the subjects that has not been considered by researchers in previous studies is the effect of commercial press notifications on earnings management based on real items. The financial aspect and revealing of financial information have always been fully considered in financial statements. But today, in order to identify different aspects of corporate activity, in addition to financial information and even more so, non-financial information is emphasized, information that reveals some aspects of firms, gives a different perspective and a new perspective to users of information.

Disclosure of information by companies is an important and valuable source of information for investors, creditors and other stakeholders to have conscious economic decisions. It has also a valuable contribution in the processing of data received by users which will be effective in their decision models for value creation [10].

One of the most prominent disclosure tools for companies and any enterprise unit is the commercial press. The commercial press as one of the most accessible tools for financial information about the status of companies allows decision makers easily and in the shortest possible time to provide the most complete information. This tool can fill financial decision makers (including investors, contributors, creditors, banks, etc.) with useful and necessary information so that the financial decisions of these beneficiaries are completely based on this disseminated information. On the other hand, the commercial press can play the role of a tool in the hand of the managers of companies through which they can influence the capital market. It is very clear that the companies and enterprise units have an insatiable desire to raise capital and also to create a reputation for themselves. Based on this, company managers can provide their company information to decision makers and economic actors easily and at the lowest cost by using the commercial press. Theoretically, the commercial press can influence management operational decisions in two ways. Firstly, the media can play a watchdog and restrictive role, that is, their attention causes the managers to consider that they are being monitored and not to pursue their personal interests and motivations [6]. And second, it can increase expectations from managers leading them to make decisions meeting these expectations that in short term show the results of their management very favorable. Evidence from previous studies such as Rangan [25], DuCharme et al. [8], Cohen and Zarowin [3] and Kothari et al. [16] has shown that both types of earnings management can occur during periods of raising capital. Past literature shows that financial information is published in the form of two ways of short news and full news articles by the media and the commercial press. Short news usually contains summaries of information. In the full news articles that information is published which is obtained from sources such as managers, analysts and activists in other markets. In these articles, information which goes beyond the information disclosed by companies is usually conveyed to investors [7, 20]. Therefore, these two types of information may have different effects on earnings management.

The commercial press, as part of the link between shareholders and companies, can influence the capital market in two separate ways. First, the press as the discriminator of corporate information can operate better than any other source. Second, the press as the information creators, can play an important role for capital market participants by creating new information. Given the role that the commercial press plays on creating and disseminating information, it is not clear yet how they can influence companies' earnings management strategies. On the one hand, the widespread dissemination of important accounting information should lead to increased news transparency, which in turn will reduce the cost of obtaining information for investors and have a better impact of information on the prices. Therefore, the widespread dissemination of accounting information by the press should increase the number of knowledgeable investors who are aware of the news and information and, consequently, have a reducing effect on companies' earnings management. The present study intends that the commercial press can have a powerful and significant impact on the way people think and behave. Many companies use the commercial press to gain credibility, highlight the company's performance, and ultimately get the attention of various decision makers (investors, banks, creditors, credit rating agencies, etc.). Given the above, the main question of the study is that what is the effect of short and full news publication about companies raising capital and earnings announcement on real earnings management? The purpose of this article is also to provide a correct understanding about the impact of the commercial press on earnings management.

The results of the present research, in addition to developing theoretical foundations, can be used in the capital market. The users of this research can be the Stock Exchange Organizations as the capital market leaders as well as all capital market activists, financial analysts and the students of finance and accounting and other interested parties.

## 2 Literature Review

Earnings management is a practice that makes reported earnings more reflect management's demands than the firm's core financial performance. Earnings management is a purposeful management intervention in the financial reporting process with the intention of gaining some personal benefits [27]. In the opportunistic approach that is accepted in the accounting literature, it is believed that the managers with deceptive motivations engage in manipulation and this will reduce the information content of the numbers of accounting reports [13].

In general, earnings management is committed in two ways: accrual-based earnings management and real earnings management [4]. Accrual-based earnings management refers to the ways in which accruals are underestimated or overstated by making changes in procedures and estimates, thereby leads to reporting earnings different from the actual amounts. But real earnings management refers to the ways in which the earnings is manipulated by changing the actual activities of the company. Reducing or postponing R&D activities with the aim of increasing earnings is an example of real earnings management [14]. According to agency theory, managers are reluctant to maximize shareholder wealth. This theory clearly showed that managers use decision-making power to carry out their personal plans to consolidate their position and do not pay attention to the value of the company. They consolidate their position through special, low-risk investments, and appear to play a valuable role in the interests of shareholders [22].

Earnings management with different incentives such as increasing stock returns, better financing conditions, increasing stock prices in the first public offering of shares, non-breach of debt contracts, political incentives, tax cuts, informing investors, rules and regulations and raising capital is done [19]. While the general earnings management literature focused on accrual-based earnings management at the time of raising capital, Cohen and Zarowin [3]'s research was a turning point in this literature. Their research shows that the companies not only do real earnings management when they raise the capital, but the effects of this type of earnings management on post-capital gains are even more severe than accruals-based earnings management. In addition, they showed that the tendency of corporate executives to use real income management instead of accrual-based earnings management depends on factors such as the characteristics of the auditors, the likelihood of litigation against the company, and the flexibility of accrual management. One way to deal with agency theory is to inform the news through the commercial press. Due to the dimension of the commercial press and the availability of information at any time and place, the commercial press is used as a means of informing people about how to invest, legal issues, return on investment, minimum expected returns and so on. Therefore, many companies use the commercial press to gain a reputation, highlight the company's performance, and ultimately receive the attention of various decision makers (investors, banks, creditors, credit rating agencies, etc.). Regarding the role of the commercial press in the operational decisions of managers, two competing hypotheses of the Watchdog Hypothesis and Attention Pressure Hypothesis are theoretically proposed [12].

In the Watchdog hypothesis, it is believed that the attention of the commercial press reduces earnings management. The attention of the commercial press causes that managers consider to be monitored and not to pursue their personal interests and motivations, but proponents of the Attention Pressure Hypothesis believe that the attention of the commercial press will intensify earnings management or increase expectations from the managers. To meet these expectations, the managers make decisions that will show the desired short-term outcome of the operations under their management [12]. According to the Watchdog hypothesis, the widespread dissemination of corporate financial information causes companies to be closely monitored by supervisors, which in turn causes corporate executives to strive to provide accurate, correct, and timely information. Accordingly, due to the constant monitoring of the financial performance of companies by the commercial press, company managers try to gain the trust of various decision makers while showing themselves accurately and without problems, which can attract capital through creditors and economic actors. On the other hand, this extensive and so-called microscopic monitoring of companies' financial performance by the commercial press can be effective in reducing earnings management. Because, as mentioned, the basic financial statements of companies have been extensively researched by the commercial press, and any discovery of activities related to earnings management can lead to the discrediting of these companies. Therefore, according to this theory, the logical procedure for companies under the supervision of the commercial press would be to try to reduce earnings management activities by observing the basic principles of accounting and reporting, and so provide the means to attract capital from key decision makers by gaining credibility in the community (through the positive results of commercial press surveys) [6]. But the attention pressure Theory states that extensive oversight of the commercial press can lead companies' executives to manage earnings. The second theory states that the pressure resulting from the attention of the commercial press causes companies to manage earnings in order to justify their financial performance in society and also to escape the pressure of the company's stakeholders [4].

So far, none of these two theories has been fully accepted or rejected. For example, Dyck and Zingales [9]; Kuhnen and Niessen [17] have confirmed the theory of attention pressure in their research and on the other hand Miller [21]; Dai et al. [6] confirmed the watchdog hypothesis in their research. They found that the commercial press plays this role in

two ways: a) The commercial press republishes information from other intermediaries such as auditors and analysts; b) The commercial press itself reviews and analyzes and provides first-hand information. In this regard, Qi et al.'s [24] research confirm both theories. Regarding the role of commercial press and earnings announcements, Kim et al. [15] in examining the local and non-local effects of Chinese media and the gradual flow after earnings announcements showed that for sample companies, the relationship between the coverage of non-local media with the gradual flow after the earnings announcement is a negative relationship. However, there is no relationship between local media coverage and the gradual flow after the announcement of earnings, except for non-governmental companies. Also, in the year (2018), Comiran et al. [4], in examining the effect of press coverage of raising capital by the press on accrual and real earnings management, showed that the coverage of raising capital news by the press reduces real earnings management. But it does not have a significant effect on accrual-based earnings management.

Wu and Lin [29] in a study examined the impact of media coverage on investor behavior and stock returns. Using a comprehensive media coverage database of Taiwanese listed companies, they applied textual analysis to news content and categorized it into ten news categories. Among them, seven news items were identified as conveying a positive or negative tone, and the remaining three were news releases. Experimental results showed that the investor's business behavior is affected not only by the quantity but also by the quality of news ads. Different investors had different responses to the tone of media coverage, and the business behavior of foreign institutional investors was consistent with the tone of media coverage. In addition, the majority of classified positive or negative media coverage was significantly associated with abnormal returns. Dai et al. [6] also examined the role of the press in corporate governance, showing that the commercial press by publishing the news about the transactions of the intro-organizational parties (transactions of related parties) will reduce the future earnings of these individuals in the future. They found that the media played such a role through three ways: reducing information asymmetry, increasing the risk of legal action against such individuals, and influencing their reputation.

Liu et al. [18] in a study entitled "Harnessing Media Attention: Strategic Corporate Press Releases and Media Coverage around Earnings announcements" examined the media and commercial press mediation role on the New York Stock Exchange. The results showed that more than 80% of companies are reluctant to publish earnings-related news when faced with the possibility of negative earnings forecasts, and instead publish non-earnings news such as the launch of a new product line or earnings announcement of their Subsidiary companies. Examining the relationship between media coverage and managers' behavior, Qi et al. [24] found that managers typically reduce earnings management by increasing media attention. But when managers have financing plans such as raising capital, they become more involved in accrual-based earnings management as media attention increases. Their evidence showed that media attention can play different roles depending on the situation.

Curtis et al. [5] examined the impact of social media such as Twitter and Facebook on financial markets in a study entitled "Investor Attention and the Pricing of Earnings News". The results showed that on the day of the earnings announcement by the companies, the activity of social networks for those groups of companies which are under analysts' attention grows dramatically. Also, it was shown that Investors' attention is related to valuing earnings announcements and news activities on social media to cover corporate earnings announcements. Rogers et al. [26] in a study entitled "The Role of the Media in Disseminating Insider Trading News" concluded that the disclosure of intro-corporate information and its media coverage affect both prices and transaction volume.

Twedt [28] in a study examined the impact of the news coverage of management earnings forecasts by the media on the capital market. The results showed that the type of industry and institutional investors are among the factors that can draw more media attention to news coverage, which results in a large volume of stock exchanges and greater returns for shareholders. Kuhnen and Niessen [17] studied the effect of press coverage on the structure of payments to the managers. Evidence from their research showed that negative news coverage of managers' bonuses by the press changes the structure of payments. Evidence showed that the number of shares granted to managers has decreased with the intensification of the negative view of the media. Instead, companies have offset this reduced reward through other less controversial payments, such as salaries. Also, the decline in stock options has been more severe in the case of more reputation concerned executives. In a study entitled "The Role of the Business Press as an Information Intermediary", Bushee et al. [2] showed that news coverage of the commercial press is effective in reducing information asymmetry and reducing the gap between bid and ask share prices.

In Iran, several studies have been conducted in relation to earnings management, earnings announcement, raising capital. Nasiri and Ghaemi [23] in the study of raising capital and reporting quality showed that companies that have high free cash flow and low growth opportunities as well as the companies that have low free cash flow and high growth opportunities, increase reporting quality when raising capital. Also, companies with higher capital costs have a higher financial reporting quality than companies with lower capital costs. Also, Bekhradi Nasab and Zholá Nezhad [1] in examining "The Effect of Risk Management Quality on Volatility around Earnings announcements" showed that

the changes in the quality of earnings management reduce the implied volatility around earnings announcement. In other words, for every one percent increase in the quality of risk management, the implied fluctuations of the earnings announcement decrease by one percent. However, in relation to the commercial press, the only study conducted is the research of Mehrani et al. [20]. They examined the relationship between annual earnings announcements news coverage of companies listed on the Tehran Stock Exchange by the press and commercial media with the pricing of accounting information. Like Miller [21], these researchers considered the two roles of information; dissemination (republishing information from other information intermediaries) and; creating (producing and disseminating first-hand information) for the commercial press. Their results showed that the earnings announcements news coverage by the commercial press had no effect on the wrong valuation of cash and accrual components of earnings. In addition, the research evidence indicates that there is no significant relationship between the dissemination role of commercial press and wrong pricing of accruals. And there is a significant relationship between this role of the press and wrong pricing of cash flows. In addition, the evidence showed that there was a significant relationship between the creating role of commercial press with the wrong pricing of accruals. And also, there was no significant relationship between this role of the press and the wrong pricing of cash flows.

### 3 Research Hypotheses

Depending on the literature and research background, financial information is usually published in two forms of short news and full news articles by the media and the commercial press. Short news usually contains summaries of information and is published in complete news articles with information obtained from sources such as managers, analysts and activists in other markets. In these articles, information which goes beyond the information disclosed by companies is usually conveyed to investors [7, 20]. The research theoretical foundations and empirical evidence reviewed in the research literature indicate that media focus on companies' news, including raising capital and earnings announcement, can probably affect the managers' behavior and decisions and so the quality of accounting information. The commercial press, on the other hand, can carry out their media mission both through the republication of information provided by other information intermediaries such as analysts and auditors (the information dissemination role) and through the creation of first-hand information (the information creating role). According to previous research evidence, these two roles can have different effects. According to these cases, six hypotheses were formulated to answer the research problem and questions.

**Hypothesis 1:** There is a significant relationship between the coverage of the raising capital by the commercial press and the real earnings management.

**Hypothesis 2:** There is a significant relationship between the coverage of the earnings announcement by the commercial press and the real earnings management.

**Hypothesis 3:** There is a significant relationship between the dissemination role of the commercial press in raising capital and the real earnings management.

**Hypothesis 4:** There is a significant relationship between the dissemination role of the commercial press in earnings announcement and the real earnings management.

**Hypothesis 5:** There is a significant relationship between the creating role of the commercial press in raising capital and the real earnings management.

**Hypothesis 6:** There is a significant relationship between the creating role of the commercial press in earnings announcement and the real earnings management.

### 4 Research Methodology

The present research is a fundamental in terms of research purpose. Because researchers do not have personal business goals and it tries to develop and expand knowledge and theories in particular and so the immediate scientific application of research achievements is not considered. Also, the present study is causal research, because it studies the effect of a number of independent variables on a dependent variable. Rahavard Novin software (Developed by Parsportfolio), Codal system (Iranian Stock Exchange Market Reporting Website) and Iranian Stock Exchange Archive are used to collect the required data about accrual earnings management variables. In order to collect data related to press coverage, the archives of existing commercial press such as Donya-e-Eqtasad newspaper, ISNA news agency, Bourse Net news-analytical website, Bourse 24 news-analytical website, Bourse News news website, Iran Economist news website, And Iranian Securities and Exchange News Agency were used. These databases have already been used in the research of Mehrani et al. [20].

- The commercial press dissemination role in raising capital is the publication of short news articles that only include the amount of raising capital from cash inflows, revaluations, and so on. Also, the publication of short news articles on earnings announcements includes the level of dissemination of companies' earnings forecast information. Publishing short news articles is more about notices.
- The commercial press creating role in raising capital is to publish complete news articles that, in addition to the noticing aspects, fully address the purpose of raising capital. In relation to the earnings announcement, the articles are considered as full news articles which contain relevant information for investors to make decisions. This information includes the news published by the board of directors regarding the division of earnings among the shareholders, the reasons for the increase in the earnings forecast, and so on.

In order to test the research hypotheses, the required information was collected from manufacturing companies active in the Tehran Stock Exchanges, whose fiscal year ended on March 20, and whose trading symbol did not stop for more than six months during the period 2011 to 2019. Due to the restrictions imposed, the research sample includes 147 companies.

## 4.1 Research Variables Description

### 4.1.1 The Dependent Variables

Real Earnings Management (R\_EM): Equation (4.1) is used to measure real earnings management [16]:

$$R\_EM = -Ab\_Exp + Ab\_Prod - Ab\_CFO \quad (4.1)$$

in which the:

*Ab\_Exp*: is the Abnormal Discretionary Costs that is formed from the remainder of Equation (4.2):

$$\frac{DISX_{i,t}}{TA_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{TA_{i,t-1}} + \beta_2 \frac{Sales_{i,t}}{TA_{i,t-1}} + \varepsilon_{i,t} \quad (4.2)$$

in which the:

*Ab\_Prod*: is the Abnormal Production Costs that is formed from the remainder of Equation(4.3):

$$\frac{PROD_{i,t}}{TA_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{TA_{i,t-1}} + \beta_2 \frac{Sales_{i,t}}{TA_{i,t-1}} + \beta_3 \frac{\Delta Sales_{i,t}}{TA_{i,t-1}} + \beta_4 \frac{\Delta Sales_{i,t-1}}{TA_{i,t-1}} + \varepsilon_{i,t} \quad (4.3)$$

in which the:

*Ab\_CFO*: is an Abnormal Operating Cash which is formed from the remainder of Equation (4.4).

$$\frac{CFO_{i,t}}{TA_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{TA_{i,t-1}} + \beta_2 \frac{Sales_{i,t}}{TA_{i,t-1}} + \beta_3 \frac{\Delta Sales_{i,t}}{TA_{i,t-1}} + \varepsilon_{i,t} \quad (4.4)$$

in which the:

$\Delta Sales_{i,t}$ ,  $Sales_{i,t}$  and  $\Delta Sales_{i,t-1}$ : is respectively, the symbol for the current period sales, current period sales changes, and past period sales changes.

$DISX_{i,t}$ : is the discretionary costs and is calculated from the sum of the research and development costs, advertising and other general-administrative-sales costs.

$PROD_{i,t}$ : is the production costs and is calculated from the sum of the sold goods total price and changes in inventory of goods in the current period

$CFO_{i,t}$ : is the operational cash flow of the current period, which is calculated from the sum of the first three parts of the cash flow statement, including the net cash flow from operating activities, the net cash flow from the return on investments, and the earnings paid on financing and income tax.



### 4.1.2 Independent Variables

1. Raising capital News Coverage ( $PressCov\_RC_{i,t}$ )  
If any news by the commercial press is published about the raising capital of the company on the same day of the raising capital or seven days after the raising capital, it will be considered as number one, otherwise it will be considered as number zero.
2. The Commercial press dissemination Role in raising capital ( $FlashCov\_RC_{i,t}$ ):  
If any short news by the commercial press is published about the raising capital of the company on the same day of the raising capital or seven days after the raising capital, it will be considered as number one, otherwise it will be considered as number zero. In order to identify and differentiate short news articles from full news articles the concepts mentioned in the research of Mehrani et al. [20] will be used.
3. The Commercial Press Creating Role in raising capital ( $FullCov\_RC_{i,t}$ ):  
If any full news articles by the commercial press is published about the raising capital of the company on the same day of the raising capital or seven days after the raising capital, it will be considered as number one, otherwise it will be considered as number zero.  
As mentioned previously, in order to identify and differentiate short news articles from full news articles the concepts mentioned in the research of Mehrani et al. [20] will be used.
4. Earnings Announcement News Coverage ( $PressCov\_EA_{i,t}$ ):  
If any news by the commercial press is published about the earnings announcement of the company on the same day of the earnings announcement or seven days after the earnings announcement, it will be considered as number one, otherwise it will be considered as number zero.
5. The Commercial Press Dissemination Role in the earnings Announcement ( $FlashCov\_EA_{i,t}$ ):  
If any short news articles by the commercial press is published about the earnings announcement of the company on the same day of the announcement or seven days after the announcement, it will be considered as number one, otherwise it will be considered as number zero.  
in order to identify and differentiate short news articles from full news articles the concepts mentioned in the research of Mehrani et al. [20] will be used.
6. The Commercial Press Creating Role in earnings Announcement ( $FullCov\_EA_{i,t}$ ):  
If any full news articles by the commercial press is published about the earnings announcement of the company on the same day of the announcement or seven days after the announcement, it will be considered as number one, otherwise it will be considered as number zero.  
in order to identify and differentiate short news articles from full news articles the concepts mentioned in the research of Mehrani et al. [20] will be used.

### 4.1.3 Control Variables

Auditing Quality (Aud Quality): The guidelines of reputable auditing firms have been used, and first-class firms are considered as large auditing firms. If the company is audited by the auditing organization and these large institutions, a score of one is assigned to the company and if not, a score of zero is assigned to the company.

Ratio of Market Value (Price) to Book Value (MTB): The sum of the total market value of the share and the book value of the company's liabilities divided by the book value of its assets at the end of the year.

Leverage: Long-term interest-bearing debts divided by the sum of assets.

Firm Size (Log Mcap): The natural logarithm of a company's market capitalization at the end of the year.

Return on Assets (ROA): The specific profit from ongoing operations divided by the sum of assets at the beginning of the period.

Loss: If the company is a loss-making firm, the amount of one and otherwise the amount of zero is assigned to it.

Sales Growth (SGR): This year's sales changes divided by last year's sales.

Auditor Tenure (Tenure): The natural logarithm of the number of consecutive years that an auditor has audited a company.

Institutional Ownership Ratio (INSTIT): The sum of the shares of the institutional shareholders divided by the total shares of the company.

Company Age (AGE): The natural logarithm of the number of years the company has been operating since its date of foundation.

Audit Report (AUDREP): A virtual variable that is assigned the number of one If the auditor has given an acceptable report on the financial statements for the year, otherwise the number of zero.

## 4.2 The Research Models

Regression models of research hypotheses were formulated as follows.

Equation (4.5): The model test of the first hypothesis

$$R_{EM_{i,t}} = \alpha_0 + \alpha_1 PressCov_{RC_{i,t}} + \sum_2^{11} \alpha Control_{i,t} + \varepsilon_{i,t} \quad (4.5)$$

Equation (4.6): The model test of the second hypothesis

$$R_{EM_{i,t}} = \alpha_0 + \alpha_1 PressCov_{EA_{i,t}} + \sum_2^{11} \alpha Control_{i,t} + \varepsilon_{i,t} \quad (4.6)$$

Equation (4.7): The model test of the third hypothesis

$$R_{EM_{i,t}} = \alpha_0 + \alpha_1 FlashCov_{RC_{i,t}} + \sum_2^{11} \alpha Control_{i,t} + \varepsilon_{i,t} \quad (4.7)$$

Equation (4.8): The model test of the fourth hypothesis

$$R_{EM_{i,t}} = \alpha_0 + \alpha_1 FlashCov_{EA_{i,t}} + \sum_2^{11} \alpha Control_{i,t} + \varepsilon_{i,t} \quad (4.8)$$

Equation (4.9): The model test of the fifth hypothesis

$$R_{EM_{i,t}} = \alpha_0 + \alpha_1 FullCov_{RC_{i,t}} + \sum_2^{11} \alpha Control_{i,t} + \varepsilon_{i,t} \quad (4.9)$$

Equation (4.10): The model test of the sixth hypothesis

$$R_{EM_{i,t}} = \alpha_0 + \alpha_1 FullCov_{EA_{i,t}} + \sum_2^{11} \alpha Control_{i,t} + \varepsilon_{i,t} \quad (4.10)$$

## 5 Research Findings

The results in Tables 1 and Table (2) show descriptive statistics and the frequency of qualitative data of research variables, respectively.

Table 1: Descriptive statistics of research variables

| Research Variables                      | Mean  | Median | Max   | Min    | S.D   | Skewness | Kurtosis | Number of Observations |
|---|-------|--------|-------|--------|-------|----------|----------|------------------------|
| Real Earnings Management                | 0.118 | 0.083  | 0.677 | 0.001  | 0.118 | 2.154    | 8.884    | 1176                   |
| Assets Return                           | 0.125 | 0.106  | 0.538 | -0.255 | 0.138 | 0.054    | 3.911    |                        |
| leverage                                | 0.569 | 0.581  | 0.924 | 0.067  | 0.199 | -0.304   | 2.526    |                        |
| The Ratio of Market Value to Book Value | 2.541 | 2.064  | 9.874 | 0.298  | 1.818 | 1.857    | 7.318    |                        |
| Firm Size                               | 6.164 | 6.075  | 8.192 | 4.766  | 0.706 | 0.741    | 3.689    |                        |
| Loss                                    | 0.901 | 1.000  | 1.000 | 0.000  | 0.299 | -2.672   | 8.162    |                        |
| Institutional Ownership Ratio           | 0.692 | 0.761  | 0.982 | 0.000  | 0.230 | -1.196   | 3.806    |                        |
| Firm Age                                | 1.208 | 1.230  | 1.672 | 0.602  | 0.206 | -0.192   | 3.396    |                        |
| Audit Quality                           | 0.851 | 1.000  | 1.000 | 0.000  | 0.356 | -1.974   | 4.895    |                        |
| Auditor Tenure                          | 0.461 | 0.477  | 1.230 | 0.000  | 0.368 | 0.471    | 2.318    |                        |
| Auditing Report                         | 0.519 | 1.000  | 1.000 | 0.000  | 0.500 | -0.075   | 1.006    |                        |

Table 1 shows the research variables. Considering the of the median and mean in most variables, it can be said that all research variables have a suitable and symmetrical statistical distribution, and also, the presence of low



standard deviation in the data indicates the close distribution of data from the average, which indicates less dispersion and homogeneity of data distribution. The real earnings management mean shows that a small number of sample companies have manipulated accruals. The average return on assets is 0.125 and shows that the sample companies earned an average return of about 12% per Rial of investment in assets. The highest and lowest returns belong to Khark Petrochemical Company 2011 and Pars Khodro 2018, respectively. The average financial leverage of the sample companies was 57%, which indicates that on average 57% of the assets of the sample companies consisted of their debts. The highest and lowest amount of financial leverage in 2018 belongs to Pars Khodro Company and Iran Fiber Company. The average ratio of market value to book value of equity of sample companies is approximately 2.5%. This indicates that the sample companies have a high growth opportunity. The highest and lowest growth opportunities in 2018 belong to Shazand Petrochemical Company and Kerman Cement Company. The average firm size is 6.16, which indicates that the selected sample companies are large. Pars Pamchal is the largest company in 2018 and the smallest company is Ayrka Part Sanat in 2012. Companies that are larger in size usually have less business risk due to access to more product markets and saving on the scale of the production factors impact. Also, the average institutional ownership of the sample companies is equal to 69%, which indicates that an average of 69% of the selected sample companies have institutional ownership. The highest percentage of institutional ownership belongs to Iran Daroo Company in 2013 and the lowest amount belongs to Razi Pharmaceutical Glass Company in 2011.

Table 2: Frequency analysis of qualitative research data

| Variable   | Symbol            | Number of Observations | Output   | Frequency | Frequency Percent |
|--|-------------------|------------------------|--|-----------|-------------------|
| raising capital News Coverage                                | <i>PressCovRC</i> | 1176                   | raising capital News Releasing by Commercial Press                 | 291       | 24.74             |
|  |                   |                        | raising capital News NON releasing By Commercial Press             | 885       | 75.25             |
| Commercial Press Dissemination on raising capital            | <i>FlashCovRC</i> | 1176                   | raising capital Short News Releasing By Commercial Press           | 291       | 24.74             |
|  |                   |                        | raising capital Short News NON releasing By Commercial Press       | 885       | 75.25             |
| Commercial Press Creating Role in raising capital            | <i>FullCovRC</i>  | 1176                   | raising capital Full News Releasing by Commercial Press            | 160       | 13.60             |
|  |                   |                        | raising capital Full News NON releasing By Commercial Press        | 1016      | 86.39             |
| Earnings announcement News Coverage                          | <i>PressCovEA</i> | 1176                   | Earnings announcement News Releasing by Commercial Press           | 758       | 64.45             |
|  |                   |                        | Earnings announcement News NON-Releasing by Commercial Press       | 418       | 35.54             |
| Commercial Press Dissemination Role in Earnings announcement | <i>FlashCovEA</i> | 1176                   | Earnings announcement Short News Releasing by Commercial Press     | 566       | 48.12             |
|  |                   |                        | Earnings announcement Short News NON-Releasing by Commercial Press | 610       | 51.87             |
| Commercial Press Creating Role in Earnings announcement      | <i>FullCovEA</i>  | 1176                   | Earnings announcement Full News Releasing by Commercial Press      | 608       | 51.70             |
|  |                   |                        | Earnings announcement Full News NON-Releasing by Commercial Press  | 568       | 48.29             |

### 5.1 Test Results of the First Research Hypothesis

The results of testing the first hypothesis of the research that "there is a significant relationship between the raising capital news coverage by commercial press and the real earnings management" using regression models are as follows.

According to the results of Table 3, the obtained coefficient of raising capital news coverage by commercial press is equal to  $-0.009$  and the probability of its statistic is 0.026. Therefore, it can be said that there is a negative and significant relationship between the raising capital news coverage by commercial press and the real earnings management. As a result, the first hypothesis of the research is confirmed at the 95% confidence level.

Table 3: Results of the first hypothesis test

| The Explanatory Variables                         |             | Estimated Coefficient | Standard Statistic | T      | Error |
|---|-------------|-----------------------|--------------------|--------|-------|
| Title   | Symbol      |                       |                    |        |       |
| raising capital News Coverage by Commercial Press | PRESSCOV RC | -0.009                | 0.007              | -1.266 | 0.026 |
| Return on the Assets                              | ROA         | 0.386                 | 0.047              | 8.182  | 0.000 |
| Leverage  | LEVERAGE    | 0.160                 | 0.039              | 4.154  | 0.000 |
| Market Value to Book Value Ratio                  | MTB         | -0.003                | 0.002              | -1.091 | 0.275 |
| Firm Size   | LOGMCAP     | 0.006                 | 0.014              | 0.410  | 0.682 |
| Loss  | LOSS        | -0.110                | 0.014              | -7.819 | 0.000 |
| Institutional Ownership Ratio                     | INSTIT      | -0.053                | 0.033              | -1.609 | 0.108 |
| Firm Age  | AGE         | 0.015                 | 0.056              | 0.262  | 0.794 |
| Auditing Quality                                  | AUDQUALITY  | 0.001                 | 0.010              | 0.082  | 0.934 |
| Auditor Tenure                                    | TENURE      | -0.002                | 0.012              | -0.163 | 0.871 |
| Auditing Report                                   | AUDREP      | -0.005                | 0.009              | -0.530 | 0.596 |
| Y-Intercept                                       | C           | 0.072                 | 0.084              | 0.851  | 0.395 |
| The Coefficient of Determination                  |             | 0.362                 |                    | f      | 3.680 |
| Adjusted Coefficient of Determination             |             | 0.264                 |                    | F      | 0.000 |
| Durbin-Watson Statistic                           |             | 2.025                 |                    |        |       |

## 5.2 Results of the Second Research Hypothesis Test

The results of testing the second hypothesis of the research that "there is a significant relationship between the earnings announcement news coverage by commercial press and the real earnings management" using regression models are as follows.

Table 4: Results of the second hypothesis test

| The Explanatory Variables                               |             | Estimated Coefficient | Standard Statistic | T      | Error |
|---|-------------|-----------------------|--------------------|--------|-------|
| Title   | Symbol      |                       |                    |        |       |
| Earnings announcement News Coverage by Commercial Press | PRESSCOV EA | -0.005                | 0.008              | -0.676 | 0.039 |
| Return on the Assess                                    | ROA         | 0.382                 | 0.47               | 8.115  | 0.000 |
| Leverage  | LEVERAGE    | 0.157                 | 0.038              | 4.080  | 0.000 |
| Market Value to Book Value Ratio                        | MTB         | -0.003                | 0.002              | -1.141 | 0.254 |
| Firm Size   | LOGMCAP     | 0.007                 | 0.014              | 0.485  | 0.628 |
| Loss  | LOSS        | -0.110                | 0.014              | -7.786 | 0.000 |
| Institutional Ownership Ratio                           | INSTIT      | -0.053                | 0.033              | -1.592 | 0.112 |
| Firm Age  | AGE         | 0.017                 | 0.056              | 0.301  | 0.763 |
| Auditing Quality  | AUDQUALITY  | 0.002                 | 0.010              | 0.164  | 0.870 |
| Auditor Tenure  | TENURE      | -0.002                | 0.012              | -0.143 | 0.886 |
| Auditing Report   | AUDREP      | -0.005                | 0.009              | -0.526 | 0.599 |
| Y-Intercept   | C           | 0.065                 | 0.084              | 0.767  | 0.443 |
| The Coefficient of Determination                        |             | 0.361                 |                    | f      | 3.668 |
| Adjusted Coefficient of Determination                   |             | 0.263                 |                    | F      | 0.000 |
| Durbin-Watson Statistic                                 |             | 2.024                 |                    |        |       |

As Table 4 shows, the obtained coefficient of earnings announcement news coverage by commercial press is equal to  $-0.0058$  and the probability of its statistic is 0.039. Therefore, it can be said that there is a negative and significant relationship between the earnings announcement coverage by the commercial press and the real earnings management. As a result, the second hypothesis of the research is confirmed at a 95% confidence level.

## 5.3 The Results of the Third Research Hypothesis Test

The results of testing the third hypothesis of the research that "there is a significant relationship between the commercial press dissemination role in raising capital and the real earnings management" using regression models are as follows.

As Table 5 shows, the obtained coefficient of commercial press dissemination role in raising capital is equal to  $-0.007$  and its statistical probability is 0.491. Therefore, it can be said that there is a negative and insignificant relationship between the commercial press dissemination role in raising capital and the real earnings management. As a result, the third hypothesis of the research is rejected at the 95% confidence level.

Table 5: Results of the third hypothesis test

| The Explanatory Variables                                  |             | Estimated Coefficient | Standard Statistic | T      | Error |
|--|-------------|-----------------------|--------------------|--------|-------|
| Title  | Symbol      |                       |                    |        |       |
| The Commercial Press Disseminating Role in raising capital | FLASHCOV RC | -0.007                | 0.010              | -0.689 | 0.491 |
| Return on the Assess                                       | ROA         | 0.383                 | 0.047              | 8.129  | 0.000 |
| Leverage   | LEVERAGE    | 0.158                 | 0.039              | 4.109  | 0.000 |
| Market Value to Book Value Ratio                           | MTB         | -0.003                | 0.002              | -1.129 | 0.259 |
| Firm Size  | LOGMCAP     | 0.007                 | 0.014              | 0.490  | 0.624 |
| Loss   | LOSS        | -0.110                | 0.014              | -7.799 | 0.000 |
| Institutional Ownership Ratio                              | INSTIT      | -0.052                | 0.033              | -1.570 | 0.117 |
| Firm Age   | AGE         | 0.016                 | 0.056              | 0.280  | 0.780 |
| Auditing Quality   | AUDQUALITY  | 0.001                 | 0.010              | 0.082  | 0.935 |
| Auditor Tenure   | TENURE      | -0.002                | 0.012              | -0.139 | 0.890 |
| Auditing Report  | AUDREP      | -0.005                | 0.009              | -0.544 | 0.587 |
| Y-Intercept  | C           | 0.062                 | 0.084              | 0.744  | 0.457 |
| The Coefficient of Determination                           |             | 0.361                 |                    | f      | 3.668 |
| Adjusted Coefficient of Determination                      |             | 0.263                 |                    | F      | 0.000 |
| Durbin-Watson Statistic                                    |             | 2.028                 |                    |        |       |

#### 5.4 Results of the Research Fourth Hypothesis Test

The results of testing the fourth hypothesis of the research that "there is a significant relationship between the commercial press dissemination role in earnings announcement and the real earnings management." are as follows.

Table 6: Results of the fourth hypothesis test

| The Explanatory Variables  |             | Estimated Coefficient | Standard Statistic | T      | Error |
|--|-------------|-----------------------|--------------------|--------|-------|
| Title  | Symbol      |                       |                    |        |       |
| The Commercial Press Disseminating Role in Earnings announcement | FLASHCOV EA | 0.002                 | 0.007              | 0.266  | 0.791 |
| Return on the Assess   | ROA         | 0.381                 | 0.047              | 8.097  | 0.000 |
| Leverage   | LEVERAGE    | 0.157                 | 0.038              | 4.079  | 0.000 |
| Market Value to Book Value Ratio                                 | MTB         | -0.003                | 0.002              | -1.149 | 0.251 |
| Firm Size  | LOGMCAP     | 0.007                 | 0.014              | 0.490  | 0.624 |
| Loss   | LOSS        | -0.110                | 0.014              | -7.787 | 0.000 |
| Institutional Ownership Ratio                                    | INSTIT      | -0.052                | 0.033              | -1.564 | 0.118 |
| Firm Age   | AGE         | 0.018                 | 0.056              | 0.313  | 0.754 |
| Auditing Quality   | AUDQUALITY  | 0.001                 | 0.010              | 0.131  | 0.896 |
| Auditor Tenure   | TENURE      | -0.002                | 0.012              | -0.120 | 0.904 |
| Auditing Report  | AUDREP      | -0.005                | 0.009              | -0.510 | 0.610 |
| Y-Intercept  | C           | 0.057                 | 0.084              | 0.685  | 0.493 |
| The Coefficient of Determination                                 |             | 0.361                 |                    | f      | 3.664 |
| Adjusted Coefficient of Determination                            |             | 0.263                 |                    | F      | 0.000 |
| Durbin-Watson Statistic  |             | 2.024                 |                    |        |       |

As shown in Table 6, the obtained coefficient of the commercial press dissemination role in earnings announcement is equal to 0.002 and its statistical probability is 0.791. Therefore, it can be said that there is no significant relationship between the commercial press dissemination role in earnings announcement and the real earnings management. As a result, the fourth hypothesis of the research is rejected at the 95% confidence level.

#### 5.5 The Results of the Fifth Research Hypothesis Test

The results of testing the research fifth hypothesis that "there is a significant relationship between the commercial press creating role in the raising capital and the real earnings management" are as follows.

As Table 7 shows, the obtained coefficient of the commercial press creating role in terms of raising capital is -0.010 and the probability of its statistic is 0.297. Therefore, it can be said that there is a negative and insignificant relationship between the commercial press creating role in raising capital and the real earnings management. As a result, the fifth hypothesis of the research is rejected at the 95% confidence level.

Table 7: Results of the fifth hypothesis test

| The Explanatory Variables                             |            | Estimated Coefficient | Standard Statistic | T      | Error |
|---|------------|-----------------------|--------------------|--------|-------|
| Title   | Symbol     |                       |                    |        |       |
| The Commercial Press Creating Role in Raising Capital | FULLCOV RC | -0.010                | 0.009              | -1.044 | 0.297 |
| Return on the Assess                                  | ROA        | 0.384                 | 0.047              | 8.158  | 0.000 |
| Leverage  | LEVERAGE   | 0.159                 | 0.038              | 4.121  | 0.000 |
| Market Value to Book Value Ratio                      | MTB        | -0.003                | 0.002              | -1.116 | 0.265 |
| Firm Size   | LOGMCAP    | 0.006                 | 0.014              | 0.428  | 0.669 |
| Loss  | LOSS       | -0.110                | 0.014              | -7.804 | 0.000 |
| Institutional Ownership Ratio                         | INSTIT     | -0.053                | 0.033              | -1.592 | 0.112 |
| Firm Age  | AGE        | 0.017                 | 0.056              | 0.300  | 0.764 |
| Auditing Quality                                      | AUDQUALITY | 0.001                 | 0.010              | 0.141  | 0.888 |
| Auditor Tenure  | TENURE     | -0.002                | 0.012              | -0.146 | 0.884 |
| Auditing Report                                       | AUDREP     | -0.005                | 0.009              | -0.496 | 0.620 |
| Y-Intercept   | C          | 0.066                 | 0.084              | 0.789  | 0.430 |
| The Coefficient of Determination                      |            | 0.362                 |                    | f      | 3.674 |
| Adjusted Coefficient of Determination                 |            | 0.263                 |                    | F      | 0.000 |
| Durbin-Watson Statistic                               |            | 2.021                 |                    |        |       |

## 5.6 The Results of the Sixth Hypothesis of the Research

The results of testing the sixth hypothesis of the research that "there is a significant relationship between the commercial press creating role in earnings announcement and the real earnings management" are as follows.

Table 8: Results of the sixth hypothesis test

| The Explanatory Variables                                   |            | Estimated Coefficient | Standard Statistic | T      | Error |
|---|------------|-----------------------|--------------------|--------|-------|
| Title   | Symbol     |                       |                    |        |       |
| The Commercial Press Creating Role in Earnings Announcement | FULLCOV EA | -0.002                | 0.007              | -0.271 | 0.026 |
| Return on the Assess  | ROA        | 0.384                 | 0.047              | 8.093  | 0.000 |
| Leverage  | LEVERAGE   | 0.157                 | 0.038              | 4.074  | 0.000 |
| Market Value to Book Value Ratio                            | MTB        | -0.003                | 0.002              | -1.143 | 0.253 |
| Firm Size   | LOGMCAP    | 0.007                 | 0.014              | 0.496  | 0.620 |
| Loss  | LOSS       | -0.110                | 0.014              | -7.787 | 0.000 |
| Institutional Ownership Ratio                               | INSTIT     | -0.052                | 0.033              | -1.566 | 0.118 |
| Firm Age  | AGE        | 0.018                 | 0.056              | 0.316  | 0.752 |
| Auditing Quality  | AUDQUALITY | 0.001                 | 0.010              | 0.130  | 0.896 |
| Auditor Tenure  | TENURE     | -0.001                | 0.012              | -0.120 | 0.904 |
| Auditing Report   | AUDREP     | -0.005                | 0.009              | -0.510 | 0.610 |
| Y-Intercept   | C          | 0.060                 | 0.084              | 0.713  | 0.476 |
| The Coefficient of Determination                            |            | 0.361                 |                    | f      | 3.664 |
| Adjusted Coefficient of Determination                       |            | 0.263                 |                    | F      | 0.000 |
| Durbin-Watson Statistic                                     |            | 2.024                 |                    |        |       |

As Table 8 shows, the obtained coefficient of the commercial press creating role is equal to  $-0.002$  and the probability of its statistic is 0.026. Therefore, it can be said that there is a negative and significant relationship between the commercial press creating role in earnings announcement and the real earnings management. As a result, the sixth hypothesis of the research is confirmed at the 95% confidence level.

## 6 Conclusion and Suggestions

Today, financial information is an important strategic tool in economic decision-making, and certainly, the quality of decisions depends on the accuracy, precision and timeliness of the information. According to Signaling Theory, information can be reported to shareholders in the form of signs, symbols, news and various predictions from inside or outside the company and cause reactions and changes in stock prices. Meanwhile, the commercial press has an important role in disseminating information to market participants and influencing the financial performance of companies. From the investors' point of view, covering the news related to earnings announcements and raising capital by the commercial press because of their help in assessing the future perspective of the company is of special importance. In the previous literature, it was observed that the quality of financial information at the time of earnings announcement and raising capital is different because financial information published in the market often is prepared and presented by company managers and can have ambiguities such as earnings manipulation and earnings

management. For this purpose, in the present study, the role of the commercial press on companies' accrual earnings management was investigated.

Therefore, the purpose of the present study was to investigate the commercial press's dissemination and creating role in earnings announcements and raising capital and their impact on earnings management, which was presented in the form of research hypotheses. According to the research results, the reasons for rejecting the third, fourth and fifth hypotheses can be considered as the large volume of information published by the commercial press. Managers may not have a good understanding of the information being broadcast when there is a huge volume of news coverage on raising capital and earnings announcements by the commercial press. In this situation, they cannot show the company's earnings more than real in time and at the right time by choosing accounting ways. These results indicate the problem of information overload because the managers' and market's ability to absorb and use information is limited. Therefore, it is suggested that managers and users of financial information react more carefully to the news published about raising capital and earnings announcements in the commercial press and use other information sources to help in making investment decisions.

Also, according to the results of the first, second and sixth hypotheses, the relations between the variables can be analyzed using the Agency Theory and the Legitimacy Theory. According to Agency Theory, one way to reduce the level of information asymmetry between managers and the information environment is to use the commercial press. Due to their good news coverage, the commercial press can impose functional restrictions on the application of accounting procedures and preparation reports based on the company board specific opinions. Simply put, the commercial press prevents moving the board's reports from reality to artificiality, and the reports result in a true picture of the company's performance. Therefore, as news coverage of the commercial press increases, the possibility of the financial statements being manipulated by the board will decrease. The news coverage can reduce the conflict of interest between managers and shareholders by reducing the information gap between the parties to the contract. Also, according to the Legitimacy Theory, companies try to present a desirable and legitimate image in society as a unique enterprise unit that seeks to maximize shareholder earnings. This will enable the community to further support the board of directors and the performance of companies in the field of macroeconomics. Thus, according to the Legitimacy Theory, companies limit the possibility of manipulating financial statements based on the request of the board of directors by giving permission to the commercial press and news coverage of their performance, especially in the stock market. This restriction is not due to the reducing conflicts of interest, but to allow the commercial press to cover the news in order to gain community voting rights. Because in this way, companies can have a good history and good reputation in society. Therefore, the research hypotheses that resulted in a negative and significant relationship suggest the theory of legitimacy.

The results obtained in the present study showed that there is a series of positive and negative relationship between commercial press and real earnings management, while the role of Managerial Incentives was not examined, so it is suggested that the role of Managerial Incentives be investigated in future research. Also, the commercial press news coverage increases the pressure of public opinion on companies, and as a result, managers who are in the spotlight will try to eliminate the negative effects of commercial press news by manipulating financial information. As earnings management increases, the quality of financial reporting decreases. Auditors' liability in these situations increases and they are exposed to high audit risk. Therefore, it is suggested that in future research, the press role of noticing on audit risk be examined. In the present study on earnings announcement, the basis of commercial press news coverage is only focused on earnings forecast announcement. Considering the adjustments that companies usually make to their initial earnings announcements, the type of news coverage by the commercial press may also affect accruals-based earnings management, which may affect the results of this study. Also, in relation to the news coverage of the commercial press about the raising capital, it focused only on the news of the raising capital, and did not pay attention to the content of the news, where the raising capital is from. Also, in the present study, the effect of stimuli such as environmental factors such as rumors, political currents and macroeconomic variables that affect the stock returns of listed companies has not been considered, which it would be considered it can affect the results of the study. Therefore, researchers should consider these factors as limitations in interpreting the findings.

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