CEO OVERCONFIDENCE, BUSINESS STRATEGY AND EARNINGS MANAGEMENT

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Abstract

This study aims to examine whether CEO overconfidence influences the relationship of business strategy and market competition to real earnings management. The sample used in this study is manufacturing companies listed on the Indonesia Stock Exchange in the period 2014-2016. The results of this study indicate that the cost leadership strategy has a positive effect on real earnings management while the differentiation strategy has a negative effect on real earnings management. The use of cost leadership strategies and high market competition will improve real earnings management but do not affect the differentiation strategy. Whereas CEO overconfidence strengthens the relationship between strategy differentiation and real earnings management. However, the results of this study also show that the interaction between business strategy, market competition and CEO overconfidence has no influence on real earnings management.

Keywords: CEO overconfidence, cost leadership, differentiation, market competition, real earnings management

Abstrak

Penelitian ini bertujuan untuk menguji apakah CEO overconfidence berpengaruh terhadap hubungan strategi bisnis dan kompetisi pasar terhadap manajemen laba riil. Sampel yang digunakan dalam penelitian ini adalah perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia pada periode tahun 2014-2016. Hasil penelitian ini menunjukkan bahwa strategi cost leadership berpengaruh positif terhadap manajemen laba riil sedangkan strategi differentiation berpengaruh negatif terhadap manajemen laba riil. Penggunaan strategi cost leadership dan tingginya kompetisi pasar akan meningkatkan manajemen laba riil namun tidak berpengaruh pada strategi differentiation. Sedangkan CEO overconfidence memperkuat hubungan antara

1 Penulis sedang menempuh studi di Universitas Indonesia
strategi differentiation dan manajemen laba riil. Namun demikian hasil penelitian ini juga menunjukkan bahwa interaksi antara strategi bisnis, kompetisi pasar dan CEO overconfidence tidak memiliki pengaruh terhadap manajemen laba riil.

Kata kunci: CEO overconfidence, cost leadership, differentiation, kompetisi pasar, manajemen laba riil

INTRODUCTION

Porter's (1980) business strategy typology is commonly used by companies and is recognized as the dominant paradigm used in the literature related to competitive strategies, namely business cost leadership and differentiation strategies (Campbell-Hunt 2000; David et al. 2002; Kald 2003; Kim et al. 2004; Banker et al. 2011). The cost leadership strategy places more emphasis on investment in production facilities, conservative and cautious supervision in controlling total operating costs, as well as tight control of costs by suspending costs related to innovation or marketing, even cutting prices in selling their products (Porter 1985; Valipour 2012). The differentiation of business strategy is to develop a unique product or service to maintain customer loyalty and to create a brand. Companies that offer high-quality products or services, as well as unique characteristics will have prices that tend to be high (Valiapour 2012).

Business strategy is a factor that influences the company's operating style can encourage management to make earnings management. This was proved by Wu et al. (2015) which shows that the selection of business strategies coupled with the pressure of market competition causes the tendency of high levels of real earnings management. In this research shows that companies with cost leadership business strategies tend to do real earnings management while companies with differentiation business strategies are less like doing real earnings management. This is because the business differentiation strategy requires innovation and high investment in research and development activities compared to the cost leadership strategy which emphasizes more on spending efficiency. Miller (1987) shows that companies with differentiation business strategies tend to invest in high research and development activities to increase innovation and enhance the ability to compete with competitors' innovation strategies. The existence of market competition will cause a high level of real earnings management if the company uses the cost leadership business strategy, but does not affect the company with a differentiation strategy (Wu et al. 2015).

This is an important issue to be investigated because the survey conducted by Graham et al. (2005) show that 80% of US financial executives do like the practice of real earnings management by cutting discretionary expenditure budgets to achieve certain earnings targets in the current period. Real earnings management is earnings manipulation that tends to be favored by company management because its existence is difficult to detect by external parties and does not concern the auditor to detect it compared to accrual earnings management because it does not violate applicable accounting standards, however real earnings management has sufficient negative impacts significant for the company going forward (Kim and Sohn 2013). Companies that do real earnings management will lose competitive power because of the reduced innovation strategies undertaken by the company so as to reduce the company's operational performance going forward (Gunny 2010; Tabassum et al. 2015).

This study developed a previous study conducted by Wu et al. (2015) which
examines the relationship of business strategy and market competition to real earnings management in manufacturing companies in China. Porter (1980) reveals that there are internal factors that can influence the choice of a company's business strategy or a decision on the act of doing real earnings management (Kouaib and Jarboui 2016, 2017). Shefrin (2001) shows that the characteristics of psychology and sociology CEO as corporate leaders will influence the decisions taken. This study aims to examine whether CEO overconfidence affects the relationship of the company's business strategy and market competition to real earnings management.

The CEO in carrying out his role has the responsibility in deciding various business policies and strategies that will be carried out by the company. CEO characteristics will influence the strategic decisions taken on the company, in other words the success of a company cannot be separated from decisions, policies and management of strategies by the CEO as the company leader (Hambrick and Mason 1984; Donaldson and Davis 1991; Bertrand and Schoar 2003; Habib and Hossain 2013). The personality of the leader will be the best reflection and prediction of the company (Galvin et al. 2015; Amernic and Craig 2010; Kouaib and Jarboui 2016). One way to identify or assess a company is to observe the identity of someone who is the center of the company itself (Galvin et al. 2015).

CEOs with personality overconfidence tend to have optimism or an excessive level of trust in an investment return (Presley and Abbott 2013) and assess too low risk (Malmendier and Tate 2005; Kolasinski and Li 2013). CEO overconfidence like excessive investment, risk-taker, unwillingness to pay dividends, like external funding, and dare to innovate (Malmendier and Tate 2005; Ben-David et al. 2013; Malmendier et al. 2011; Hirshleifer et al. 2012; Humphery-Jenner et al. 2016; Bharati et al. 2016). CEO overconfidence also tends to carry out various innovations through research and development expenditures, advertising, training and employee education (Hirshleifer et al. 2012).

Kouaib and Jarboui (2016) and Kouaib and Jarboui (2017) show that CEO overconfidence also tends to practice real earnings management, one of which is cutting the research and development expenditure budget. CEO overconfidence manages real earnings to achieve certain earnings targets, maintains reputation and credibility of its ability to the public, achieves analyst forecasts, avoids reporting of losses or decreases in profits (Roychowdhury 2006; Cohen 2008; Zang 2012; Kouaib and Jarboui 2016; Kouaib and Jarboui 2017).

Based on the description, it can be concluded that CEO overconfidence characteristics that tend to like investment strategies, innovate courage, risk takers and like research and development activities will support differentiation business strategies that require high innovation, investment in promotional activities, research and development and supported by high market competition will have a low level of real earnings management. Whereas if a company with a cost leadership strategy with a high level of market competition and led by CEO overconfidence tends to do real earnings management to maintain reputation and credibility in the public eye.

The contribution of this research is to add a literature study related to the impact of CEO overconfidence on the relationship of business strategy and market competition to real earnings management. In addition, this study uses CEO overconfidence measurements by merging proxies (overinvestment, debt to equity, dividend yield) so that a more comprehensive measurement is obtained. This research focuses on the scope of business strategy and
market competition in a particular type of industry to reduce bias due to differences in industry characteristics.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Agency Theory
The agency theory stated by Jensen and Meckling (1976) explains that the shareholders (principal) and management (agent) will strive to maximize their welfare. Management as an internal party of the company has more information about the condition of the company than others so as to cause the state of information asymmetry. This state of information asymmetry is a necessary condition for the management of earnings management.

The state of information asymmetry and the characteristics of management or corporate leaders, in this case, CEOs who have high confidence (overconfidence) will affect the decisions and strategies taken on the company. Hribar and Yang (2016), Kouaib and Jarboui (2016, 2017) show that CEO overconfidence motivated conduct real earnings management to increase their credibility in the public. In addition, CEOs are motivated to perform real earnings management to achieve certain earnings targets so as to fit analyst forecasts, avoiding reporting losses and income decreasing (Graham et al. 2005; Roychowdhury 2006; Cohen et al. 2008; Gunny 2010).

Real Earnings Management
Roychowdhury (2006) states that real earnings management is a form of earnings manipulation carried out to achieve certain earnings targets such as avoiding reporting loss, reporting an earnings decrease, achieving conformity with analyst predictions. Some ways to do real earnings management are through giving large discounts to increase sales, overproduction by producing goods on a large scale so that it can reduce product prices and increase earnings for the period. Another way to do real earnings management is to cut discretionary expenditure budgets such as research and development, advertising, and employee training. However, several studies show that real earnings management has a negative impact in the future, namely a decrease in the company’s operational performance such as return on assets (Gunny 2010; Cupertino et al. 2016), operating cash flows (Gunny 2010). The findings of Tabassum et al. (2015) showed that real earnings management carried out through sales manipulation had a negative impact on return on equity, earnings per share (EPS), and a decrease in the price to earnings ratio (PER).

Porter’s Business Strategy
Porter (1985) revealed that companies that implement business strategy cost leadership, differentiation and focus will be able to increase the company’s competitive advantage. The adoption of differentiation strategy is characterized through the high promotion of product quality and involves high cost across functional areas that support differentiation strategies. Yamin et al. (1999) stated that high quality of products will show high market demand while companies adopting cost leadership strategy are achieved through high market share and production volume. However, Porter (1980) argues that the success of the company's business strategy is also influenced by the leadership style, corporate culture and environment.

Cost Leadership Strategy and Real Earnings Management
Porter (1980) offers a typology of business strategy that is commonly used to demonstrate the success of a business. Cost leadership strategy is usually a market leader
because it is more cost-less compared to competitors with similar products, is very concerned about the use of assets, concentrates on worker productivity and discretionary cost (Hambrick 1983). Companies with cost leadership strategy have high market effectiveness compared to companies with other business strategies (Yamin et al. 1999).

Jermias (2008), Valipour et al. (2012), Wu et al. (2015) states that companies using cost leadership strategies require strong external funding to achieve certain earnings or target costs by striving to achieve economies of scale and creating efficient operational activities and excellence. Firms with cost leadership strategies tend to have lower profit margins than firms using differentiation strategies and possible funding difficulties from their own internal business. Due to the low-profit margin, companies with cost leadership strategies will take time to maintain profitability at some level, which will encourage earnings management.

In addition, companies with cost leadership strategy will more focus on short-term performance (Govindarajan and Fisher 1990; Singh and Agrawal 2002) so that companies with cost leadership strategy is allegedly having a strong motivation to perform real earnings management to improve their financial performance. Wu et al. (2015) show that firms with cost leadership strategies will tend to perform real earnings management. Based on the description, this research hypothesis is:

H1a: Companies with a high level of cost leadership strategy will do real earnings management.

Differentiation Strategy and Real Earnings Management

Porter (1980) explains that firms with differentiation business strategies always try to find differences with other companies to get a premium price and try to sell more products at a certain price. Companies with differentiation business strategies usually have bargaining power over suppliers so as to increase profit margins. It shows that firms with differentiation business strategies tend to have lower demand for external financing than firms with cost leadership business strategies. Hambrick's (1983) show that companies with high profitability are dominantly derived from business strategy differentiation.

Business strategy differentiation has an advantage in creating unique value. It can be characterized by various forms such as the uniqueness of the brand image, service, distribution, quality and product characteristics. Companies that use business strategy differentiation does not mean to ignore costs, but costs are not key to companies. Phillip et al. (1983) stated that the business strategy differentiation tries to improve product quality so that it has a positive relationship to market share.

Research conducted by Govindarajan and Gupta (1985), Ittner et al. (1997), Simon (1987) suggests that companies with differentiation business strategies will love to innovate. Porter (1985), Jermias (2008), Wu et al. (2015) explains that firms with differentiation business strategies will exploit more new products and seek to create market opportunities that will increase the investment needs of research and development expenditures that lead to increased corporate risk. Banker et al. (2013) suggest that firms with differentiation business strategies will have a specific need for an asset due to meeting a particular design demand from customers. It can be concluded that firms with differentiation business strategies are less motivated to earn earnings management because firms with differentiation business strategies have high-profit margins and are less fond of external
funding that drives company management to earnings management. Based on the description, this research hypothesis is:

**H1b:** Companies with a high level of differentiation strategy will not do real earnings management.

**CEO Overconfidence, Business Strategy and Real Earnings Management**

The overwhelming optimism and confidence of corporate CEOs can lead to bias on decision making and the tendency to perform earnings management so that their credibility, reputation and competence are recognized by the public (Schrand and Zechman 2012; Hribar and Yang 2016). Research conducted by Habib et al. (2012), Hsieh et al. (2014), Kouaib and Jarboui (2016) show that CEO overconfidence tends to earn real earnings management through sales manipulation activities and discretionary spending budget cuts rather than accrual earnings management to achieve certain earnings targets. Real earnings management has a direct impact on corporate earnings and cash flows (Graham et al. 2005; Sutrisno 2017). The CEO of the company is more flexible in real earnings management because it does not violate the standard rules that apply and is not easy to be detected by others (Kim and Sohn 2013).

Porter (1980) states that the three business strategies of cost leadership, differentiation and focus can be used to position the company's strategy in the industry. Cost leadership strategy focuses on the efficiency of production and distribution of goods and services while business strategy differentiation is a business strategy that offers a certain uniqueness, the company's success using this strategy can be done by improving technological excellence or create a level of customer intimacy. One way companies to achieve business differentiation strategy is to make a lot of investment in research and development activities (Bentley et al. 2013).

CEO overconfidence has a tendency to overinvest and actively innovate in conducting research and development. This is in line with differentiation strategies that always strive to create unique products and services so that they are less motivated to do real earnings management. While companies led by CEO with characteristics of overconfidence who use the cost leadership strategy are more motivated to do real earnings management because they try to achieve certain earnings target by making expenditure efficiency and giving sales discounts. Based on the above background, this research hypothesis is:

**H2:** The interaction between CEO overconfidence and business strategy relates to real earnings management.

The selection of the company's business strategy is closely related to the level of market competition. Likewise, business competition shows a relationship to the level of earnings management (Karuna et al. 2012; Markarian and Santalo 2014). This is because the increasingly fierce competition in the business environment encourages corporate management to increasingly create conditions for information asymmetry by reducing the amount of information on the company to the public to limit competitors to know more information about the company (Bagnoli and Watts 2000).

However, Marciukaityte and Park (2009) show that market competition is negatively related to earnings management because market competition actually causes reduced information asymmetry because the market encourages management to be more open about company information. Wu et al. (2015) explained that high market competition causes companies to exert their
full potential to survive and even excel in the market, thus encouraging management to manage earnings to maintain their reputation.

The inconsistency of the results of previous studies is caused by ignoring the interaction between market competition and business strategy towards earnings management (Wu et al. 2015). The study shows that companies that perceive a cost leadership strategy prefer real earnings management supported by higher levels of market competition. However, the study failed to prove that the interaction between differentiation strategies and market competition is related to real earnings management. This is because companies with differentiation strategies tend to have low market competition because the products or services offered are unique that is not easily replicated and already have their own market share. Based on the description above, the hypothesis of this study is:

**H3:** The interaction relationship between business strategy and market competition will affect real earnings management.

**RESEARCH METHOD**

**Research Sample**

The sample of this study is a manufacturing company listed on the Indonesia Stock Exchange in the period 2014-2016. The selection of companies in the manufacturing industry because to obtain specific research results on certain industries and to overcome the measurement bias on the calculation of real earnings management related to overproduction that requires data on inventory, so it is more appropriate when using the type of manufacturing industry. In addition, manufacturing companies are an industry with a considerable number of companies and focus more on business strategies than firms in other industries (Li et al. 2007). The research data in the form of company annual report taken from web Indonesia Stock Exchange that is www.idx.co.id and datastream Thomson Reuters.

**Research Model**

The research framework or model is described as follows:

This research model can be written in the form of equations as follows:

\[
REM_{it} = \beta_0 + \beta_1 CL_{it} + \beta_2 DIFF_{it} + \beta_3 CEOOVER_{it} + \beta_4 HHI_{it} + \beta_5 CL_{it} \times CEOOVER_{it} + \beta_6 DIFF_{it} \times CEOOVER_{it} + \beta_7 CL_{it} \times HHI_{it} + \beta_8 DIFF_{it} \times HHI_{it} + \beta_9 CL_{it} \times HHI_{it} \times CEOOVER_{it} + \beta_{10} DIFF_{it} \times HHI_{it} \times CEOOVER_{it} + \beta_{11} SIZE_{it} + \beta_{12} LEV_{it} + \beta_{13} ROA_{it} + \beta_{14} PL_{it} + \epsilon
\]

**Information:**

- **REM** = Real Earnings Management
- **CL** = Operating Asset Turnover (Cost Leadership Strategy)
- **DIFF** = Profit Margin (Differentiation Strategy)
- **CEOOVER** = CEO Overconfidence
- **HHI** = Herfindahl – Hirschman Index
- **SIZE** = Firm Size (Ln Total Assets)
- **LEV** = Debt To Total Assets
- **ROA** = Return On Assets
- **PL** = Profit/Loss

**CEO Overconfidence**

The measurement of CEO overconfidence refers to the research of Kouaib and Jarboui (2016) by calculating the three components of CEO overconfidence that match data availability in Indonesia. The three components are (1) overinvestment:
how much investment is made by the company CEO formulated by reducing residuals regression of asset growth and sales growth with the median industry residual value of the year. A value of 1 if it shows the residual company is greater than the median residual industry, value 0 if the residual company is smaller than the median residual industry. CEO overconfidence will tend to have high levels of investment (Malmendier and Tate 2005, 2008; Ben-David et al. 2013). The overinvestment regression equation is as follows:

$$\Delta \text{Asset}_{i,t} / \text{Asset}_{i,t-1} = \alpha_0 + \beta_1 \Delta \text{Sales}_{i,t} / \text{Sales}_{i,t-1} + \varepsilon$$

(2) Debt to equity ratio (division between total liabilities and total equity). A value of 1 if the debt to equity ratio is higher than the industry median of the year, while the value 0 if the debt to equity ratio is lower than the industry median in the year. CEO overconfidence dares to take a high risk will be more to seek funding with debt than using cash owned (Malmendier 2011).

(3) The dividend yield measures the dividend payout of a company. CEO overconfidence tends to dislike dividend payouts because CEO overconfidence seeks to save cash reserves that will be used for future investments (Ben-David et al. 2013). Value 1 if the value of the dividend yield is zero and the value 0 otherwise.

The CEO overconfidence score is 1 if at least two of the above three components have a value of 1 and a value of 0 otherwise. This study conducts sensitivity testing by measuring CEO overconfidence using only proxy overinvestment. This is based on a number of previous studies which only used measurements of overinvestment as a proxy for overconfidence. Overinvestment is considered as a measurement that describes overconfidence because CEO who have characteristics of overconfidence tend to invest excessively.

Company's Strategy
The measures of company's strategy refers to Wu et al. (2015) and Banker et al. (2011) using accounting data in determining the business strategy undertaken by the firm, which is considered more appropriate to describe the proxy of business strategy as it demonstrates more realized strategies and can reduce perceptions bias (David et al. 2002; Mintzberg 1978). First, companies with cost leadership strategy will strive to achieve operational efficiency. Asset turnover reflects cost efficiency by calculating the ratio between the output (sales) and input (capital asset), the higher of ratio value is then associated company using cost leadership strategy (David et al. 2002; Hambrick 1983). The asset turnover formula as a measure for determining cost leadership strategy refers to previous research (Selling and Stickney 1989; Banker et al. 2011, 2013; Wang 2013; Wu et al. 2015):

Operating asset turnover (CL) = Sales / Average operating assets

Operating Assets = Total assets - cash - short-term investments

High operating asset turnover shows that companies use cost leadership strategies that emphasize the efficiency of business operations and good use of resources.

Second, Porter (1985) states that the business strategy of differentiation is achieved through expenditure related to promotion, research and development as well as spawning related to the improvement of product and service quality to support business strategy of differentiation. The calculation of business strategy differentiation refers to previous studies conducted by Hambrick (1983), Selling and Stickney (1989), Banker et al. (2011, 2013), Wu et al. (2015) which uses profit margin as a measure of strategy differentiation with the following formula:
Profit Margin (DIFF) = (Operating Profit + Selling, General & Administrative Expense) / Sales

Companies with high profit margins indicate that companies use differentiation strategies.

**Market Competition**

The size of market competition in this study uses the Herfindahl-Hirschman Index - the HHI index to measure industry-level market competition (Marchukaityte and Park 2009; Makarian and Santalo 2014; Wu et al. 2015) shown as follows:

$$HHI = \sum_{i=1}^{R} \left( \frac{Xi}{X} \right)^2$$

Information:

$Xi$ = sales company i on certain industries. $X$ = total sales in certain industries. The value of HHI shows the level of competition faced by companies against similar industries. If the ratio of HHI which is the ratio between company revenues and similar industries is getting lower, this indicates a high competitive level for the industry. For ease in interpretation of regression test results, this study multiplies -1 for HHI.

**Real Earnings Management**

The measurement of real earnings management refers to previous research (Roychowdhury 2006; Cohen et al. 2008; Kouaib and Jarboui 2017) measured using 3 proxies:

Sales Manipulation: $CFO_t / A_{t-1} = \alpha_1 (1/A_{t-1}) + \beta_1 (S_t/A_{t-1}) + \beta_2 (\Delta S_t / A_{t-1}) + \epsilon_t$

$CFO_t$ is a cash flow operating period, divided by total asset$_{t-1}$. $S_t$ is sales in the current period, and $\Delta S_t$ is the sales difference in the current period with the previous period. The negative residual value indicates that the company manipulates the sale by giving large discounts or providing soft loan facility.

Overproduction: $PROD_t / A_{t-1} = \alpha_1 (1/A_{t-1}) + \beta_1 (S_t/A_{t-1}) + \beta_2 (\Delta S_t / A_{t-1}) + \beta_3 (\Delta S_t/A_{t-1}) + \epsilon_t$

$PROD_t$ is the production cost of the period, divided by total asset$_{t-1}$. $PROD_t = COGS_t + \Delta NV_t$, $S_t$ is sales in the current period. $\Delta S_t$ is the difference between the current period sales with the previous period and $\Delta S_{t-1}$ is the sales difference in the period $t-1$ and $t-2$. The positive residual value means that the company is allegedly doing real earnings management by doing large-scale production to reduce the value of COGS.

Discretionary Expenditure: $DIEXP_t / A_{t-1} = \alpha_1 (1/A_{t-1}) + \beta_1 (S_t/A_{t-1}) + \epsilon_t$

$DIEXP_t$ is a discretionary expenditure (research and development, sales expenses, general and administrative expenses) in the period, divided by total asset$_{t-1}$. $S_{t-1}$ is sales in the previous period. The negative residual value indicates that the company is allegedly doing real earnings management by cutting discretionary spending budget.

This study combines the value of real earnings management (sales manipulation, overproduction, discretionary spending budget cuts) to obtain the total value of the proxy of real earnings management by adding the standardized residual value of the three real manipulation activities (Cohen et al. 2008; Zang 2012, Kouaib and Jarboui 2017) in the following way:

$$REM = (-1)*AbnCFO + AbnOP + (-1)*AbnDE$$

**RESULT AND ANALYSIS**

**Descriptive Statistics**

This study tested the manufacturing companies listed on the Indonesia Stock Exchange period 2014 - 2016. The number of observations in this study was 342 (144 companies). Here is a description of the descriptive statistics in this study:

Table 1 Descriptive statistics in this study shows the mean REM (combined third proxy: sales manipulation, overproduction, discretionary expenditure) of 0.00000026. This illustrates that on average the manufacturing companies listed on the Indonesia Stock Exchange in the period of study perform real earnings management.
Table 1
Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>REM</td>
<td>342</td>
<td>-0.00000026</td>
<td>2.106279</td>
<td>-7.55523</td>
<td>8.70538</td>
</tr>
<tr>
<td>CL</td>
<td>342</td>
<td>1.192306</td>
<td>0.796141</td>
<td>0.013769</td>
<td>7.51669</td>
</tr>
<tr>
<td>DIFF</td>
<td>342</td>
<td>0.1842494</td>
<td>0.175722</td>
<td>-1.17827</td>
<td>0.693477</td>
</tr>
<tr>
<td>CEOOVER</td>
<td>342</td>
<td>0.4561404</td>
<td>0.498802</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>HHI</td>
<td>342</td>
<td>-0.3393544</td>
<td>0.169999</td>
<td>-1</td>
<td>-0.12184</td>
</tr>
<tr>
<td>SIZE</td>
<td>342</td>
<td>9,474,008,535</td>
<td>26,482,499,817</td>
<td>79,243,086</td>
<td>257,875,000,000</td>
</tr>
<tr>
<td>LEV</td>
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<td>0.511766</td>
<td>0</td>
<td>4.780508</td>
</tr>
<tr>
<td>ROA</td>
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<td>0.0904363</td>
<td>0.132062</td>
<td>-0.35619</td>
<td>0.677195</td>
</tr>
<tr>
<td>PL</td>
<td>342</td>
<td>0.7368421</td>
<td>0.440993</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

REM = real earnings management, CL = operating asset turnover (cost leadership strategy), DIFF = profit margin (differentiation strategy), CEOOVER = CEO overconfidence, HHI = Herfindahl-Hirschman Index, SIZE = firm size (Ln total assets); LEV = debt to total assets; ROA = return on assets, PL = profit / loss.

income decreasing. This is shown from the negative marked average value. The mean value of CL (operating asset turnover) is 1.192306. Companies with high asset turnover are suspected as companies that use cost leadership business strategy. The mean value of DIFF (Profit Margin) of manufacturing companies listed on the Indonesia Stock Exchange is 0.1842494. Companies that have a high-profit margin value is suspected as a company that uses business strategy differentiation. The value of CEOOVER shows 156 observations that have CEO overconfidence and the remaining 186 observations do not have CEO overconfidence. The number indicates that firms headed by CEO overconfidence are fewer than not. The mean value of HHI (Herfindahl - Hirschman Index) manufacturing companies listed on the Indonesia Stock Exchange is -0.3393544. The value indicates that competition in the manufacturing industry is quite tight.

Hypothesis Testing

This study examines the influence of CEO overconfidence on the relationship of business strategy, market competition to earnings management. Table 2 shows the results of testing the research hypothesis. The value of F in each test indicates a significant result with prob ≤ 0.01 which means there is a regresional relationship between independent variables with the dependent variable.

The results of testing hypotheses 1a and 1b show that the cost leadership strategy has a positive effect on real earnings management while the differentiation strategy has a negative effect on real earnings management. This is indicated by p-value ≤ 0.01, so it can be concluded that H1a and H1b cannot be statistically rejected (see the five regression equations in table 2 - hypothesis testing results). Companies that use the cost leadership strategy tend to do real earnings management because this business strategy emphasizes spending efficiency to generate high profits. This is in line with the way that management uses real earnings management. Companies with differentiation business strategies tend not to do real earnings management because companies that implement this business strategy actually need high innovation so that they do not overproduction or budgetary discretionary expenditure cuts, but instead will be more interested in doing a number of expenditure...
Table 2
Hypothesis Testing Results

<table>
<thead>
<tr>
<th>Variable Independent</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL</td>
<td>1.112029***</td>
<td>1.08542***</td>
<td>1.126658***</td>
<td>0.9523147***</td>
<td>1.589324***</td>
</tr>
<tr>
<td>DIFF</td>
<td>-5.609956***</td>
<td>-5.404191***</td>
<td>-5.23907***</td>
<td>-6.520761***</td>
<td>-5.06183***</td>
</tr>
<tr>
<td>HHI</td>
<td>0.9229874*</td>
<td>1.058095*</td>
<td>1.003388*</td>
<td>3.378482**</td>
<td></td>
</tr>
<tr>
<td>CEOOVER</td>
<td>0.41743***</td>
<td>-0.375484</td>
<td>0.30675</td>
<td>0.3521588</td>
<td></td>
</tr>
<tr>
<td>CL*CEOOVER</td>
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<td></td>
<td></td>
<td></td>
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<td>Adj R2</td>
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<td>342</td>
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</table>

REM = real earnings management, CL = operating asset turnover (cost leadership strategy), DIFF = profit margin (differentiation strategy), CEOOVER = CEO overconfidence, HHI = Herfindahl-Hirschman Index, SIZE = firm size (Ln total assets); LEV = debt to total assets; ROA = return on assets, PL = profit / loss.

*)10%, **5%, ***1%

activities such as advertising, employee training, research and development. In testing the research model without moderating variables or with a number of moderating variables, the results of testing business strategies against real earnings management show consistent results. The results also indicate that market competition has a positive effect on real earnings management. This shows that the higher competition in the business environment encourages management to make real earnings management because company management wants to achieve certain earnings targets or give a superior impression compared to its competitors.

The results of this study also show that CEO overconfidence has a positive effect on real earnings management (see the results of the third regression equation in table 2 - hypothesis testing results). This is due to CEO overconfidence trying to reach or exceed the expected earnings target and to demonstrate the ability and competence to the public. However, the results of testing the hypothesis of this study in the regression equations four and five (see table 2) indicate that CEO overconfidence does not moderate the relationship between business strategy (cost leadership) and real earnings management (p-value ≥ 0.05). This is because the selection and determination of a
company's business strategy is not only a CEO's decision but also influenced by other things such as business environment factors, market competition, the company's characteristics and competencies, as well as the presence of external auditors can reduce the level of real earnings management. Conversely, in the regression equation five (see table 2), CEO overconfidence strengthens the relationship between business strategy (differentiation) and real earnings management (p-value ≤ 0.05). This is because CEO overconfidence which tends to increase innovation and the uniqueness of the products or services offered will increase the number of expenses that can reduce corporate earnings so CEO overconfidence with differentiation strategies will do real earnings management to achieve certain earnings targets.

Testing of hypothesis three in the regression equation five (see table 2), the interaction between business strategy (cost leadership) and market competition is positively related to real earnings management (p-value ≤ 0.05). Companies that tend to use the cost leadership strategy with a competitive business environment motivate company management to do real earnings management by means of overproduction so that COGS values are low, cut discretionary expenditure budgets or provide large sales discounts. However, it needs to be aware that companies that carry out real earnings management will have low operational performance in the future because real earnings management leads to reduced innovation power and company competitive advantage (Gunny 2010; Tabassum et al. 2015). While the interaction between differentiation strategies and market competition does not show a relationship to real earnings management (p-value ≥ 0.05) in the regression equation five (see table 2). This is because companies that tend to use differentiation strategies usually tend not to have a high level of market competition because the products or services offered have their own uniqueness and superiority, making it difficult to imitate their competitors. Companies with differentiation strategies usually have their own market share and have high-profit margins so companies that implement differentiation strategies do not motivate management to do real earnings management. The results of this study are consistent with previous studies conducted by Wu et al. (2015).

Furthermore, in the regression equation five (see table 2) shows that the interaction between CEO overconfidence, business strategy (cost leadership and differentiation) and market competition does not affect real earnings management (p-value ≥ 0.05). This is because the company is usually not dominated by one particular business strategy but uses a variety of business strategies that are in line with the product line or service. Likewise, the application of a company's business strategy is influenced by various other factors, not only based on CEO characteristics or market competition alone, so that the interaction between CEO overconfidence, business strategy, market competition is not related to real earnings management.

Sensitivity Analysis

Sensitivity analysis in this research is done by testing the CEO overconfidence by using proxy overinvestment which is considered the most representative characteristic of overconfidence. The following sensitivity analysis results are shown in table 3: From the test results indicate that there is no significant change in results if CEO overconfidence is measured by using the combination of the three proxies into dummy variables and if the CEO overconfidence is measured using proxy overinvestment. Testing CEO overconfidence using proxy investment is
considered more appropriate than the two other CEO proxy overconfidence if done partially test (Debt to Total Assets and Dividend Yield). The results of testing sensitivity analysis show that companies that tend to use cost leadership strategies will do real earnings management compared to companies that tend to implement differentiation strategies. This is because companies that tend to use differentiation strategies will be motivated to carry out various innovations, research and development activities, employee training, and promotional activities and not overproduction which is a way to do real earnings management. The table also shows that market competition is positively related to real earnings management. Increasingly tight competition in the business environment will encourage management to carry out real earnings management. Likewise, the interaction between the cost leadership strategy and market competition shows a positive relationship to real earnings management. This shows that companies that tend to implement cost leadership business strategies coupled with high business competition will increase management motivation to do real earnings management. As the results of previous tests, the

Table 3
Sensitivity Analysis Test

<table>
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<th>Independent Variable</th>
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<tbody>
<tr>
<td>CL</td>
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<td>DIFF</td>
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<td>HHI</td>
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<tr>
<td>OVERINVEST</td>
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<td>CL*OVERINVEST</td>
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<td>ROA</td>
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<td>PL</td>
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<td>R2</td>
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<tr>
<td>Adj R2</td>
<td>0.5905</td>
<td>0.6099</td>
</tr>
</tbody>
</table>

Sample size: 342

REM = real earnings management, CL = operating asset turnover (business strategy cost leadership), DIFF = profit margin (business strategy differentiation), CEOOVER = CEO overconfidence, HHI = Herfindahl-Hirschman Index, SIZE = firm size (Ln total assets); LEV = debt to total assets; ROA = return on assets, PL = profit / loss.

*)10%, **)5%, ***)1%
interaction between differentiation strategies and market competition is not related to real earnings management because companies that use differentiation strategies have special market shares. The results of the sensitivity analysis also show that there are results that are consistent with the previous hypothesis testing, that is, testing of CEO overconfidence using a proxy overinvestment shows insignificant results. This is because overinvestment is only one proxy that cannot describe the characteristics of overall overconfidence.

CONCLUSION

This study examines the relationship between business strategy (cost leadership and differentiation), market competition, CEO overconfidence to real earnings management. The results of this study indicate that business strategy cost leadership has a positive effect on real earnings management, while business strategy differentiation negatively affects real earnings management. Business strategies cost leadership to strive for cost efficiency by increasing production volume to reduce COGS value, expanding market share by providing discounts, cutting discretionary spending expenditures (Porter 1980; Yamin et al. 1999) in harmony with real earnings management. Contrary to the differentiation strategy that emphasizes the innovation and uniqueness of the product or service so it tends not to do real earnings management. Companies led by CEO overconfidence have a positive effect on real earnings management. This is because CEO overconfidence seeks to demonstrate competence and ability by trying to achieve or exceed expectations of certain earnings targets (Hribar and Yang 2016; Kouaib and Jarboui 2016; Kouaib and Jarboui 2017). The study also shows that high market competition affects firms to perform real earnings management. The results of this study are consistent with Wu et al. (2015) stating that tight business competition will make the company's management more aggressive in doing earnings management to maintain the company's credibility and excel in market competition.

This study proves that CEO overconfidence does not moderate the relationship between cost leadership strategy and real earnings management. This is because there are many other factors that influence the selection of corporate strategy and the actions of CEO overconfidence to make real earnings management. Nevertheless, CEO overconfidence strengthens the relationship of the business strategy of differentiation and real earnings management. This is because CEO overconfidence tends to dare to take risks, conducting many innovations, promotions, employee training and research and development so as to influence its actions on real earnings management (Malmendier and Tate 2005; Malmendier et al. 2011; Hirshleifer et al. 2012; Ben-David et al. 2013; Bharati et al. 2016). Similarly, companies that use cost leadership strategy and high market competition have a tendency to perform real earnings management. The test results are in line with the research conducted by Wu et al. (2015). However, the interaction between firms with differentiation strategies and market competition has no effect on real earnings management because firms with differentiation strategies already have their own segmented market with low business competition environment that does not encourage the company's management to earn real earnings management. The results of this study also prove that the interaction between business strategy (cost leadership and differentiation), market competition, CEO overconfidence has no effect on real earnings management. This is due to the possibility of other factors that affect the
relationship between business strategy and real earnings management. The limitation of this study is the measurement of the CEO overconfidence that still does not accurately describe the existence of the CEO overconfidence itself. Future research may use longer research periods, e.g. five years to ten years to better understand the impact of business strategy on real earnings management.

REFERENCE


Kolasinski, Adam C.. & Xu Li. (2013). Can Strong Boards and Trading Their Own


